PLANT #: P-101

Sample Date:

Concrete Grade: P1M, 3500HP 4/24/23

Dates Test F	Represents:	4/25/2023	through	5/1/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9

Contractor:

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	75-051	Mid Michigan	1200	7.23	2.66	39.1
		Total Wt	3070	18.67		100.0

-- Verify this number is 100%

SUPERIO	)R L S
Superior Materials	s, LLC

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

TOTAL VVI		3070 10.07		< Verily this number is 100		
Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.6	100.0	100.0	98.8	1.2	1.2
1"	48.9	100.0	100.0	82.2	16.6	17.8
3/4"	12.0	98.5	100.0	68.9	13.3	31.1
1/2"	1.9	83.2	100.0	61.4	7.5	38.6
3/8"	1.6	63.7	100.0	56.2	5.2	43.8
#4	1.6	17.3	97.9	43.3	12.9	56.7
#8	1.6	4.5	83.1	34.2	9.1	65.8
#16	1.6	2.7	68.7	28.1	6.1	71.9
#30	1.5	2.3	53.5	22.0	6.1	78.0
#50	1.5	2.1	28.5	12.2	9.8	87.8
#100	1.4	1.9	8.5	4.3	7.9	95.7
LBW	1.2	1.7	1.1	1.3	3.0	98.7

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

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

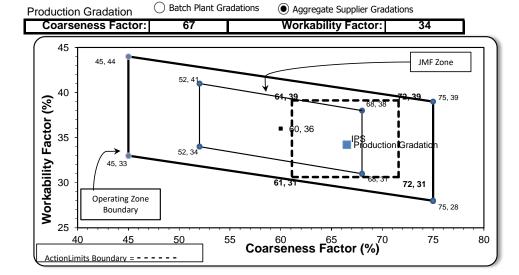
nom. max., #100 and #200 sieves.

\*% 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	eness Factor:	66	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	84.3	15.3	15.7
3/4"	74.8	9.6	25.2
1/2"	64.3	10.4	35.7
3/8"	56.8	7.5	43.2
#4	43.0	13.8	57.0
#8	34.9	8.1	65.1
#16	26.4	8.5	73.6
#30	19.9	6.5	80.1
#50	10.4	9.5	89.6
#100	3.4	7.0	96.6
LBW	1.2	2.2	98.8

PREPARED BY: SM, LLC Technical Service

PLANT #: P-102

Sample Date:

Concrete Grade: P1M, 3500HP 4/24/23 4/25/2023

Dates Test Represents:		4/25/2023	through	5/1/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1420	8.46	2.69	45.5
IA	58-003	Stoneco	500	2.98	2.69	16.0
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5

Contractor:

MDOT No.:

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

	Total Wt	3120	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	IA		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"	68.0	100	0.0	100.0	85.4	14.6	14.6
3/4"	42.5	100.0		100.0	73.8	11.6	26.2
1/2"	19.6	92.3		100.0	62.2	11.7	37.8
3/8"	10.9	75	.1	100.0	55.5	6.7	44.5
#4	2.5	17	.8	97.6	41.5	13.9	58.5
#8	1.5	4.	4	82.7	33.2	8.3	66.8
#16	1.4	2.4		65.7	26.3	6.9	73.7
#30	1.1	1.5		46.5	18.6	7.7	81.4
#50	1.1	1.3		22.7	9.4	9.2	90.6
#100	1.0	1.2		6.6	3.2	6.3	96.8
LBW	1.0	1.	1	1.3	1.1	2.1	98.9

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

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

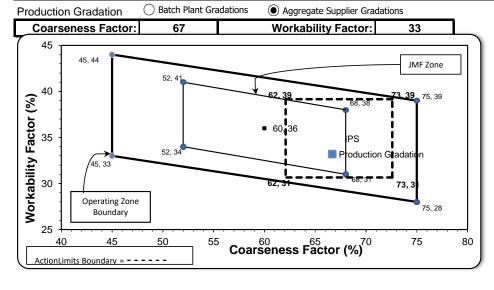
nom. max., #100 and #200 sieves.

\*% 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:	67	
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"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

PLANT #: P-103

Sample Date:

4/24/23 Concrete Grade: **P1M, 3500HP** 

Dates Test Represents:		4/25/2023	through	5/1/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1420	8.46	2.69	45.5
IA	58-003	Stoneco	500	2.98	2.69	16.0
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5

Contractor:

MDOT No.:



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

Total Wt		3120	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	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"	68.0	10	0.0	100.0	85.4	14.6	14.6
3/4"	42.5	10	100.0		73.8	11.6	26.2
1/2"	19.6	92	2.3	100.0	62.2	11.7	37.8
3/8"	10.9	75	5.1	100.0	55.5	6.7	44.5
#4	2.5	17	7.8	97.6	41.5	13.9	58.5
#8	1.5	4	.4	82.7	33.2	8.3	66.8
#16	1.4	2	2.4		26.3	6.9	73.7
#30	1.1	1.5		46.5	18.6	7.7	81.4
#50	1.1	1.3		22.7	9.4	9.2	90.6
#100	1.0	1.2		6.6	3.2	6.3	96.8
LBW	1.0	1	.1	1.3	1.1	2.1	98.9

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

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

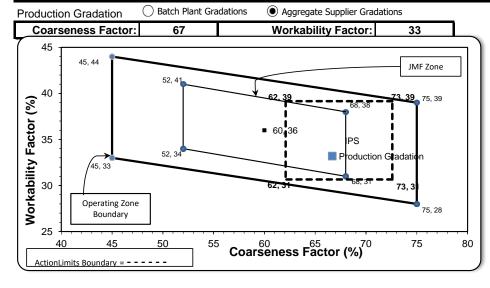
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$  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	Coarseness Factor:		
Work	Workability Factor:		
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

**PLANT #:** Contractor: Sample Date: 4/24/23 Concrete Grade: P1M, 3500HP

Dates Test Represents: 4/25/2023 5/1/2023 through

1.2

MDOT No.:

24.00 .001.	10010011101	.,,	u e u g	0/ 1/2020		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1400	8.34	2.69	44.9
IA	58-003	Stoneco	520	3.10	2.69	16.7
2NS	19-04	Schlegel	1200	7.20	2.67	38.5
		Total Wt	3120	18.64		100.0

--- Verify this number is 100%

Builders Redi-Mix
30701 W. 10 Mile Rd.
Suite 500
Earmington Hills MI 492

Farmington Hills, MI 48336

Sieve	CA	IA	2NS	% Passing	% Retained	% Retained	
2"	100.0	100.0	100.0	100.0	0.0	0.0	ı
1.5"	100.0	100.0	100.0	100.0	0.0	0.0	1
1"	68.0	100.0	100.0	85.6	14.4	14.4	ı
3/4"	42.5	100.0	100.0	74.2	11.4	25.8	1
1/2"	19.6	92.3	100.0	62.6	11.6	37.4	1
3/8"	10.9	75.1	100.0	55.9	6.8	44.1	*
#4	2.5	17.8	99.9	42.5	13.4	57.5	*
#8	1.5	4.4	90.1	36.1	6.5	63.9	nc
#16	1.4	2.4	69.4	27.7	8.3	72.3	*
#30	1.1	1.5	44.5	17.9	9.9	82.1	nc
#50	1.1	1.3	14.3	6.2	11.6	93.8	*

2.7

1.7

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

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

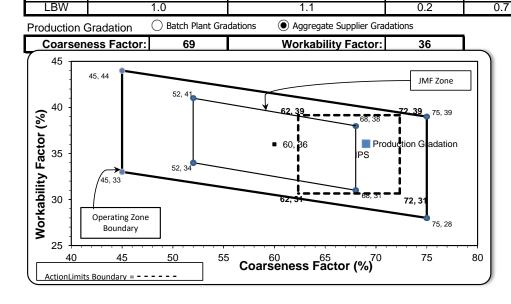
nom. max., #100 and #200 sieves.

\*% 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)

98.3

99.3

4.5

Coars	Coarseness Factor:		
Workability 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"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

1.0

#100

**PLANT #:** 

Sample Date:

4/24/23

Concrete Grade: P1M, 3500HP

MDOT No.:

Dates Test F	Represents:	4/25/2023	through	5/1/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
CA	11-41	Fresque isie	1070	0.54	2.02	34.9
IA	71-47	Presque Isle	750	4.59	2.62	24.4
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
		Total Wt	3070	18.69		100.0

lass	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
ı	71-47	Presque Isle	1070	6.54	2.62	34.9
	71-47	Presque Isle	750	4.59	2.62	24.4
3	63-115	Ray Rd	1250	7.56	2.65	40.7
	<u> </u>	Total Wt	3070	18.69		100.0

< \	Verify	this	number	is	100%
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Contractor:

SUPERIOR MATERIALS

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

	i otai vyt	3070 18.69		100.0	< Verify this n	umber is 100%
Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.5	100.0	100.0	98.8	1.2	1.2
1"	42.3	100.0	100.0	79.9	18.9	20.1
3/4"	11.6	97.0	100.0	68.5	11.4	31.5
1/2"	3.9	71.3	100.0	59.5	9.0	40.5
3/8"	2.3	46.0	100.0	52.8	6.7	47.2
#4	1.9	8.0	96.5	41.9	10.8	58.1
#8	1.8	3.1	80.3	34.1	7.8	65.9
#16	1.7	2.5	65.2	27.8	6.3	72.2
#30	1.7	2.4	49.8	21.5	6.3	78.5
#50	1.6	2.3	26.1	11.7	9.7	88.3
#100	1.5	2.2	3.7	2.6	9.2	97.4
LBW	1.3	1.9	0.5	1.1	1.4	98.9
	6					

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

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

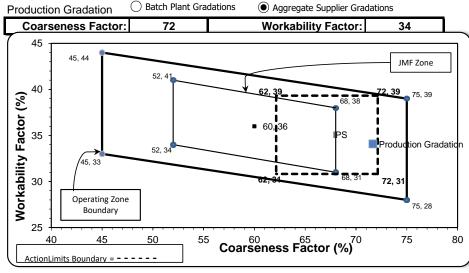
nom. max., #100 and #200 sieves.

\*% 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	Coarseness Factor:		
Work	Workability Factor:		
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.0	9.8	26.0
1/2"	63.7	10.3	36.3
3/8"	56.4	7.3	43.6
#4	43.0	13.4	57.0
#8	35.1	7.9	64.9
#16	29.0	6.1	71.0
#30	20.9	8.0	79.1
#50	8.1	12.8	91.9
#100	1.6	6.5	98.4
LBW	0.9	0.8	99.1

PREPARED BY: SM, LLC Technical Service

**PLANT #:** P11

Sample Date:

4/24/23 Concrete Grade: P1M, 3500HP 5/1/2023

Dates Test I	Represents:	4/25/2023	through	5/1/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	870	5.32	2.62	28.3
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
		Total Wt	3070	18.69		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
F

Farmington Hills, MI 48336

					. ,	
Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.5	100.0	100.0	99.0	1.0	1.0
1"	42.3	100.0	100.0	83.6	15.4	16.4
3/4"	11.6	97.0	100.0	74.0	9.6	26.0
1/2"	3.9	71.3	100.0	63.9	10.1	36.1
3/8"	2.3	46.0	100.0	55.6	8.3	44.4
#4	1.9	8.0	96.8	42.4	13.2	57.6
#8	1.8	3.1	84.9	36.0	6.4	64.0
#16	1.7	2.5	69.3	29.5	6.6	70.5
#30	1.7	2.4	50.6	21.8	7.6	78.2
#50	1.6	2.3	24.9	11.3	10.5	88.7
#100	1.5	2.2	6.7	3.8	7.5	96.2
I RW	1.3	1 9	12	1 4	24	98.6

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

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

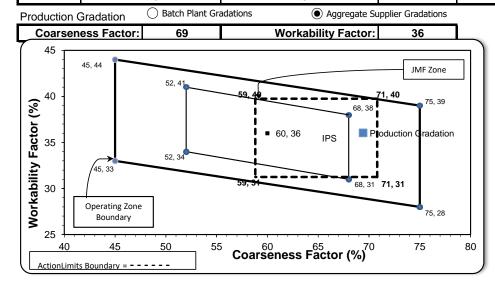
nom. max., #100 and #200 sieves.

\*% 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:	65	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY: SM, LLC Technical Service

PLANT #: P-32

Sample Date:

4/24/23 Concrete Grade: **P1M**, **3500HP** 

Dates Test F	Represents:	4/23/2023	through	5/1/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	870	5.32	2.62	28.3
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
		Total Wt	3070	18.69		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

ed	Cumulative % Retained	
	0.0	Suite 500
	1.0	Farmington Hills, MI 48336

Cumulative CA IΑ % Retaine Sieve 2NS % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 96.5 100.0 100.0 99.0 1.0 1.0 42.3 100.0 100.0 83.6 15.4 16.4 3/4" 11.6 97.0 100.0 74.0 9.6 26.0 1/2' 3.9 71.3 100.0 63.9 10.1 36.1 3/8' 2.3 46.0 100.0 55.6 8.3 44.4 #4 1.9 8.0 96.8 42.4 13.2 57.6 #8 1.8 3.1 84.9 36.0 6.4 64.0 #16 1.7 2.5 69.3 29.5 6.6 70.5 #30 50.6 21.8 78.2 1.7 2.4 7.6 #50 1.6 2.3 24.9 11.3 10.5 88.7 #100 1.5 2.2 6.7 3.8 7.5 96.2

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

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

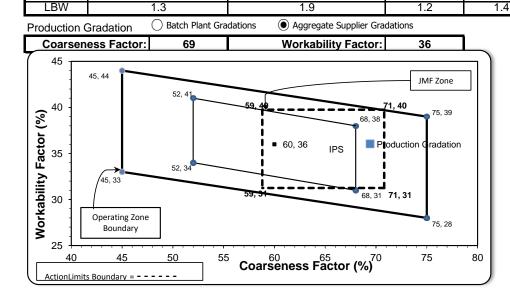
nom. max., #100 and #200 sieves.

 $^{\star}\%$  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)

2.4

Coars	eness Factor:	65	
Work	Workability Factor:		
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:
SM, LLC Technical Service

**Total Wt** 

PLANT #: P-35

Sample Date:

4/24/23 Concrete Grade: P1M, 3500HP

18.70

Dates Test Represents:		4/23/2023	through	5/1/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific	%
55			3 ( ( )		Gravity	Contribution
CA	58-003	Stoneco	1420	8.46	2.69	45.5
IA	58-003	Stoneco	500	2.98	2.69	16.0
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5

3120

MDOT No.:

<---- Verify this number is 100%

Contractor:

100.0

SUPERIOR MATERIALS

**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.,

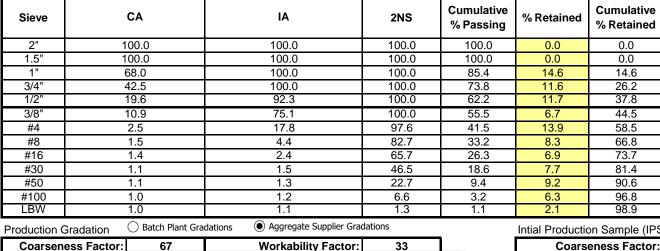
nom. max., #100 and #200 sieves.

\*% 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



JMF Zone Workability Factor (%) 52, 34 Production Gradation Operating Zone 75, 28 Boundary 45 50 Coarseness Factor (%)<sup>70</sup> 75 80 Intial Production Sample (IPS)

Coarseness Factor:		67	
Workability 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"	86.9	13.1	13.1
3/4"	76.1	10.8	23.9
1/2"	63.7	12.4	36.3
3/8"	56.2	7.5	43.8
#4	43.2	13.0	56.8
#8	34.7	8.5	65.3
#16	27.5	7.2	72.5
#30	20.6	7.0	79.4
#50	9.0	11.6	91.0
#100	2.1	6.9	97.9
LBW	1.0	1.1	99.0

PREPARED BY: SM, LLC Technical Service

ActionLimits Boundary = - - - - -

PLANT #: P-36

Sample Date:

4/24/23 Concrete Grade: P1M, 3500HP

Dates Test Represents:		4/25/2023	through	5/1/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1

Contractor:

MDOT No.:



tive ned
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**Superior Materials, LLC** 30701 W. 10 Mile Rd. Suite 500

Farmington Hills, MI 48336

	Total Wt	3070 18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.5	100.0	100.0	99.0	1.0	1.0
1"	42.3	100.0	100.0	82.7	16.2	17.3
3/4"	11.6	97.0	100.0	72.6	10.1	27.4
1/2"	3.9	71.3	100.0	62.3	10.3	37.7
3/8"	2.3	46.0	100.0	54.0	8.3	46.0
#4	1.9	8.0	97.9	41.3	12.7	58.7
#8	1.8	3.1	86.0	35.1	6.2	64.9 r
#16	1.7	2.5	71.6	29.3	5.8	70.7
#30	1.7	2.4	50.7	21.1	8.2	<b>78.9</b> r
#50	1.6	2.3	18.2	8.3	12.8	91.7
#100	1.5	2.2	2.9	2.3	6.0	97.7
LBW	1.3	1.9	0.6	1.2	1.1	98.8

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

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

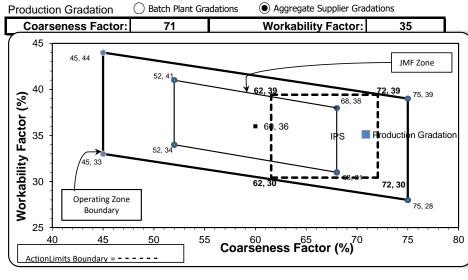
nom. max., #100 and #200 sieves.

\*% 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.



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
Workability 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"	85.0	15.0	15.0
3/4"	72.1	12.9	27.9
1/2"	64.5	7.6	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY: SM, LLC Technical Service

4/24/23

**PLANT #:** P-39

Sample Date:

Concrete Grade: P1M, 3500HP

Contractor:

Dates Test F	Represents:	4/25/2023	through	5/1/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
		Total M/s	2070	10.60		100.0

MDOT No.:

<---- Verify this number is 100%

SUPERIO	PR

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

	•				
CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
100.0	100.0	100.0	100.0	0.0	0.0
96.6	100.0	100.0	98.9	1.1	1.1
48.9	100.0	100.0	83.0	15.8	17.0
12.0	98.5	100.0	70.4	12.7	29.6
1.9	83.2	100.0	63.0	7.3	37.0
1.6	63.7	100.0	57.8	5.2	42.2
1.6	17.3	95.2	43.8	14.0	56.2
1.6	4.5	81.6	34.9	8.9	65.1
1.6	2.7	66.6	28.4	6.6	71.6
1.5	2.3	50.4	21.6	6.7	78.4
1.5	2.1	24.0	10.8	10.8	89.2
1.4	1.9	6.8	3.7	7.1	96.3
1.2	1.7	1.1	1.3	2.4	98.7
	100.0 96.6 48.9 12.0 1.9 1.6 1.6 1.6 1.5 1.5	100.0     100.0       96.6     100.0       48.9     100.0       12.0     98.5       1.9     83.2       1.6     63.7       1.6     17.3       1.6     4.5       1.6     2.7       1.5     2.3       1.5     2.1       1.4     1.9	100.0       100.0       100.0         96.6       100.0       100.0         48.9       100.0       100.0         12.0       98.5       100.0         1.9       83.2       100.0         1.6       63.7       100.0         1.6       17.3       95.2         1.6       4.5       81.6         1.6       2.7       66.6         1.5       2.3       50.4         1.5       2.1       24.0         1.4       1.9       6.8	CA         IA         2NS         % Passing           100.0         100.0         100.0         100.0           96.6         100.0         100.0         98.9           48.9         100.0         100.0         83.0           12.0         98.5         100.0         70.4           1.9         83.2         100.0         63.0           1.6         63.7         100.0         57.8           1.6         17.3         95.2         43.8           1.6         4.5         81.6         34.9           1.6         2.7         66.6         28.4           1.5         2.3         50.4         21.6           1.5         2.1         24.0         10.8           1.4         1.9         6.8         3.7	CA         IA         2NS         % Passing         % Retained           100.0         100.0         100.0         100.0         0.0           96.6         100.0         100.0         98.9         1.1           48.9         100.0         100.0         83.0         15.8           12.0         98.5         100.0         70.4         12.7           1.9         83.2         100.0         63.0         7.3           1.6         63.7         100.0         57.8         5.2           1.6         17.3         95.2         43.8         14.0           1.6         4.5         81.6         34.9         8.9           1.6         2.7         66.6         28.4         6.6           1.5         2.3         50.4         21.6         6.7           1.5         2.1         24.0         10.8         10.8           1.4         1.9         6.8         3.7         7.1

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

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

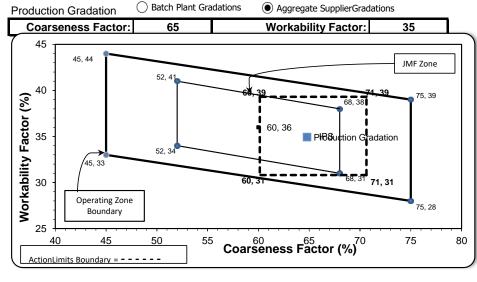
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$  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:	65	
Workability Factor:		35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.1	9.8	25.9
1/2"	64.3	9.7	35.7
3/8"	57.5	6.8	42.5
#4	44.5	13.1	55.5
#8	35.1	9.4	64.9
#16	27.9	7.2	72.1
#30	21.7	6.2	78.3
#50	12.6	9.1	87.4
#100	3.5	9.1	96.5
LBW	1.2	2.4	98.8

PREPARED BY: SM, LLC Technical Service

4/24/23

PLANT #: P-02

Sample Date:

Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	4/25/2023	through	5/1/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	970	5.93	2.62	31.6
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7

Contractor:

MDOT No.:



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

	i otai wt	3070	18.69		100.0	< Verify this n	umber is 100%
Sieve	CA	L	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	96.5	10	0.0	100.0	98.9	1.1	1.1
1"	42.3	10	0.0	100.0	81.8	17.1	18.2
3/4"	11.6	97	<b>'</b> .0	100.0	71.2	10.5	28.8
1/2"	3.9	71	.3	100.0	61.7	9.5	38.3
3/8"	2.3	46	6.0	100.0	54.2	7.5	45.8
#4	1.9	8	.0	96.5	42.1	12.1	57.9
#8	1.8	3	.1	80.3	34.1	8.0	65.9
#16	1.7	2	.5	65.2	27.8	6.3	72.2
#30	1.7	2	.4	49.8	21.5	6.3	78.5
#50	1.6	2	.3	26.1	11.8	9.7	88.2
#100	1.5	2	.2	3.7	2.6	9.2	97.4
LBW	1.3	1	.9	0.5	1.1	1.4	98.9

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

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

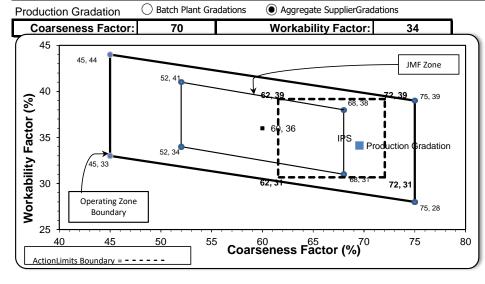
nom. max., #100 and #200 sieves.

\*% 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	Coarseness Factor:		
Workability 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"	85.0	15.0	15.0
3/4"	72.3	12.7	27.7
1/2"	64.5	7.8	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY: SM, LLC Technical Service