Sample Date:

12/26/22 Concrete Grade: **P1M**, **3500HP**

Dates Test F	Represents:	12/27/2022	tnrougn	1/2/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:



----- Verify this number is 100%

nulative Retained	
0.0	Suite 500
0.5	Farmington Hills, MI 48336

Cumulative Cum CA IΑ % Retained Sieve 2NS % Passing % R 2" 100.0 100.0 100.0 100.0 0.0 1.5" 98.7 100.0 100.0 99.5 0.5 0.5 47.5 100.0 100.0 81.7 17.8 18.3 3/4" 12.4 98.5 100.0 69.1 12.6 30.9 1/2' 3.0 83.2 100.0 61.8 7.3 38.2 3/8' 2.0 63.7 100.0 56.4 5.4 43.6 #4 1.6 17.3 97.7 43.3 13.1 56.7 #8 1.4 4.5 81.3 33.4 9.8 66.6 #16 1.4 2.7 65.7 26.9 6.6 73.1 #30 20.4 6.5 79.6 1.3 2.3 49.4 11.3 #50 1.2 2.1 26.5 9.0 88.7 #100 1.1 1.9 8.2 4.1 7.2 95.9 LBW 0.9 1.3

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

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

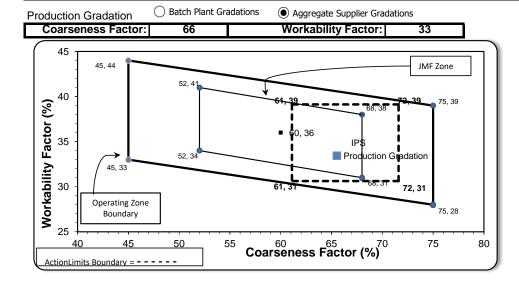
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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.



Initial Production Sample (IPS)

Coars	Coarseness Factor:		
Workability Factor:		35	
Siovo	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 Approved By:

Sample Date:

12/26/22 Concrete Grade: **P1M**, **3500HP**

Dates Test F	Represents:	12/27/2022	through	1/2/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5

Contractor:

MDOT No.:

SUPERIOR

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	1/	4	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"	63.1	100	0.0	100.0	83.8	16.2	16.2
3/4"	42.4	100	0.0	100.0	74.7	9.1	25.3
1/2"	11.2	91	.4	100.0	59.5	15.2	40.5
3/8"	4.3	73	.7	100.0	53.3	6.2	46.7
#4	2.0	15	.1	97.4	41.0	12.3	59.0
#8	1.7	4.	6	83.5	33.7	7.3	66.3 r
#16	1.5	2.	8	67.0	26.9	6.8	73.1
#30	1.3	2.	2	49.7	20.1	6.8	79.9 r
#50	1.2	2.	0	24.2	10.2	9.9	89.8
#100	1.2	1.	-	6.9	3.5	6.7	96.5
LBW	1.1	1.	6	1.8	1.5	2.1	98.5

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

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

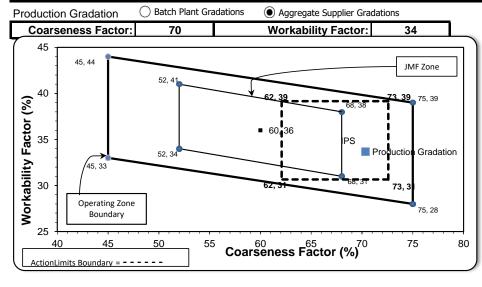
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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:		
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 Approved By

Sample Date:

12/26/22 Concrete Grade: P1M, 3500HP

MDOT No.:

Contractor:

Dates Test F	Represents:	12/27/2022	through	1/2/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
		Total Wt	3120	18 70		100.0

%	
tribution	
43.9	
17.6	
38.5	



Varificable estable at 1000/

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

	i otai wt	3120	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	L	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"	63.1	10	0.0	100.0	83.8	16.2	16.2
3/4"	42.4	10	0.0	100.0	74.7	9.1	25.3
1/2"	11.2	91	1.4	100.0	59.5	15.2	40.5
3/8"	4.3	73	3.7	100.0	53.3	6.2	46.7
#4	2.0	15	5.1	97.4	41.0	12.3	59.0
#8	1.7	4	.6	83.5	33.7	7.3	66.3
#16	1.5	2	.8	67.0	26.9	6.8	73.1
#30	1.3	2	.2	49.7	20.1	6.8	79.9
#50	1.2	2	.0	24.2	10.2	9.9	89.8
#100	1.2	1	.9	6.9	3.5	6.7	96.5
LBW	1.1	1	.6	1.8	1.5	2.1	98.5

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

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

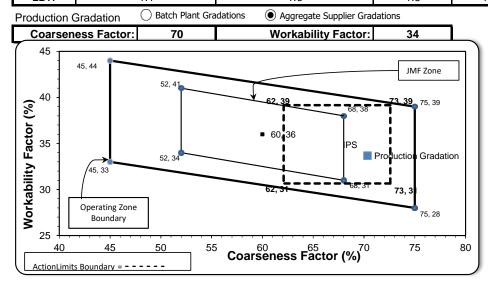
nom. max., #100 and #200 sieves.

*% 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"	85.5	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 Approved BY:

Schlegel

1200

PLANT #: P-14

Pit#

58-003

58-003

19-55

Sample Date:

Agg. Class

CA

IΑ

2NS

Dates Test Represents:

12/26/22 Concrete Grade: **P1M, 3500HP**

12/27/202	22	through	1/2/2023		
Source		Weight (SSD)	ft ³	Specific Gravity	% Contribution
Stoneco)	1300	7.74	2.69	41.7
Stoneco		620	3.69	2.69	19.9

7.20

2.67

38.5

Contractor:

MDOT No.:



Builders	Redi-Mix
30701 W.	10 Mile Rd.
Suite 500	

Farmington Hills, MI 48336

	i otai Wt	Wt 3120 18.64			100.0	< Verify this n	umber is 100%	
Sieve	CA	1/	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	
2"	100.0	100	0.0	100.0	100.0	0.0	0.0	ı
1.5"	100.0	100	0.0	100.0	100.0	0.0	0.0	ı
1"	63.1	100	0.0	100.0	84.6	15.4	15.4	ı
3/4"	42.4	100	0.0	100.0	76.0	8.6	24.0	i
1/2"	11.2	91	.4	100.0	61.3	14.7	38.7	ı
3/8"	4.3	73	.7	100.0	54.9	6.4	45.1	i
#4	2.0	15	.1	99.9	42.3	12.6	57.7	i
#8	1.7	4.	6	90.1	36.3	6.0	63.7	n
#16	1.5	2.	8	69.4	27.9	8.4	72.1	ı
#30	1.3	2.	2	44.5	18.1	9.8	81.9	n
#50	1.2	2.	0	14.3	6.4	11.7	93.6	ı
#100	1.2	1.	9	2.7	1.9	4.5	98.1	а
LBW	1.1	1.	6	0.2	0.9	1.1	99.1	ı

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

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

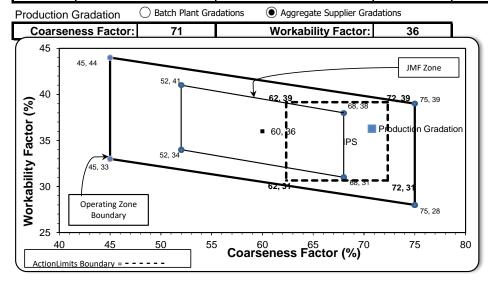
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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:	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 Approved By:

Sample Date:

12/26/22 Concrete Grade: **P1M, 3500HP**

Dates Test F	Represents:	12/21/2022	through	1/2/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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	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

	Total Wt	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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	66.6	100.0	100.0	88.9	11.1	11.1
3/4"	17.2	97.0	100.0	71.7	17.2	28.3
1/2"	4.4	72.8	100.0	61.1	10.6	38.9
3/8"	3.2	41.8	100.0	52.7	8.5	47.3
#4	2.1	6.2	96.6	41.6	11.0	58.4
#8	1.6	2.6	78.9	33.3	8.3	66.7 r
#16	1.5	1.9	62.2	26.3	7.0	73.7
#30	1.4	1.7	46.0	19.6	6.7	80.4 r
#50	1.4	1.6	23.6	10.5	9.1	89.5
#100	1.4	1.5	4.6	2.7	7.8	97.3 a
LBW	1.2	1.1	0.5	0.9	1.8	99.1

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

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

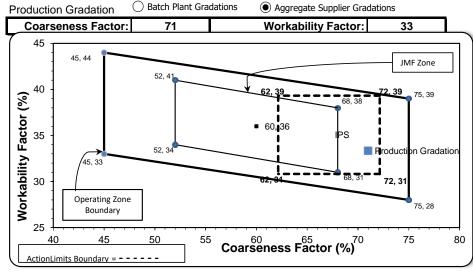
nom. max., #100 and #200 sieves.

*% 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)

Coarseness Factor:		67	
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

Approved By:

PREPARED BY: SM, LLC Technical Service

PLANT #: 11

Pit#

71-47

71-47

95-013

Sample Date:

Agg. Class

CA

IΑ

2NS

Dates Test Represents:

12/26/22

Smelter Bay

1250

Contractor:

Concrete Grade: P1M, 3500HP

2.65

12/27/2022 1/2/2023 through Specific ft³ Weight (SSD) Source Gravity Cont Presque Isle 870 5.32 2.62 Presque Isle 950 5.81 2.62

7.56

MDOT No.:

	IVIL
%	
tribution	
28.3	
30.9	

40.7

Varify this number is 1000/

SUPERIOR MATERIALS

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

Farmington Hills, MI 48336

	Total Wt	3070 18	3.69	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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	66.6	100.0	100.0	90.5	9.5	9.5
3/4"	17.2	97.0	100.0	75.6	14.9	24.4
1/2"	4.4	72.8	100.0	64.5	11.1	35.5
3/8"	3.2	41.8	100.0	54.6	9.9	45.4
#4	2.1	6.2	95.1	41.2	13.3	58.8
#8	1.6	2.6	83.2	35.1	6.1	64.9 r
#16	1.5	1.9	68.1	28.7	6.4	71.3
#30	1.4	1.7	49.2	21.0	7.8	79.0 r
#50	1.4	1.6	22.8	10.2	10.8	89.8
#100	1.4	1.5	6.4	3.5	6.7	96.5
LBW	1.2	1.1	1.0	1.1	2.4	98.9

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

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

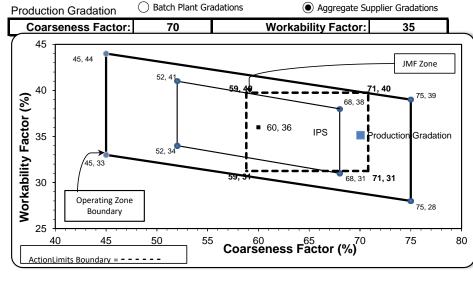
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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	
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

Approv
PREPARED BY:
SM, LLC Technical Service

Sample Date:

12/26/22 Concrete Grade: **P1M, 3500HP**

Dates Test F	Represents:	12/27/2022	through	1/2/2023			
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific	%	
igg. Olass	"	Course	rreignt (665)	" 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
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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	66.6	100.0	100.0	90.5	9.5	9.5
3/4"	17.2	97.0	100.0	75.6	14.9	24.4
1/2"	4.4	72.8	100.0	64.5	11.1	35.5
3/8"	3.2	41.8	100.0	54.6	9.9	45.4
#4	2.1	6.2	95.1	41.2	13.3	58.8
#8	1.6	2.6	83.2	35.1	6.1	64.9
#16	1.5	1.9	68.1	28.7	6.4	71.3
#30	1.4	1.7	49.2	21.0	7.8	79.0
#50	1.4	1.6	22.8	10.2	10.8	89.8
#100	1.4	1.5	6.4	3.5	6.7	96.5

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

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

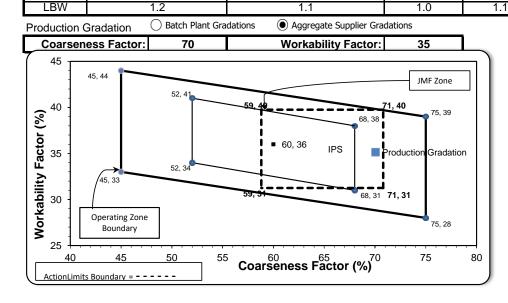
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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)

Coars	eness Factor:	65	
Workability 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 Approved By

Sample Date:

12/26/22 Concrete Grade: P1M, 3500HP

Dates Test Represents:		12/27/2022	through	1/2/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

ained	Cumulative % Retained	Superior ivialerials, LLC
0	0.0	Suite 500
0	0.0	Farmington Hills, MI 48336

Cumulative CA IΑ % Retai Sieve 2NS % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 100.0 100.0 100.0 100.0 0.0 0.0 63.1 100.0 100.0 83.8 16.2 16.2 3/4" 42.4 100.0 100.0 74.7 9.1 25.3 1/2' 11.2 91.4 100.0 59.5 15.2 40.5 3/8' 73.7 100.0 53.3 46.7 4.3 6.2 #4 2.0 15.1 97.4 41.0 12.3 59.0 #8 1.7 4.6 83.5 33.7 7.3 66.3 #16 1.5 2.8 67.0 26.9 6.8 73.1 #30 49.7 20.1 6.8 79.9 1.3 2.2 #50 1.2 2.0 24.2 10.2 9.9 89.8 #100 1.2 1.9 6.9 3.5 6.7 96.5 LBW 1.6 2.1

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

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

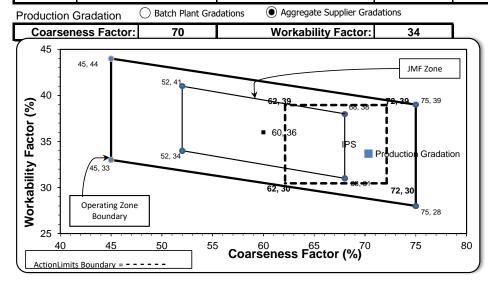
nom. max., #100 and #200 sieves.

*% 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:	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

Sample Date:

#100

12/26/22 Concrete Grade: P1M, 3500HP

Dates Test I	Represents:	12/21/2022	through	1/2/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
		Total Wt	3070	18.70	_	100.0

Contractor:

MDOT No.:

Cumulative

2.3



---- Verify this number is 100%

etained	Cumulative % Retained	Superior Materials, LLC
0.0	0.0	Suite 500

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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	66.6	100.0	100.0	90.2	9.8	9.8
3/4"	17.2	97.0	100.0	74.8	15.4	25.2
1/2"	4.4	72.8	100.0	63.4	11.4	36.6
3/8"	3.2	41.8	100.0	53.2	10.1	46.8
#4	2.1	6.2	97.6	40.7	12.5	59.3
#8	1.6	2.6	84.3	34.2	6.5	65.8
#16	1.5	1.9	70.6	28.6	5.6	71.4
#30	1.4	1.7	52.8	21.6	7.1	78.4
#50	1.4	1.6	24.1	10.3	11.2	89.7

3.5

1.5

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

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

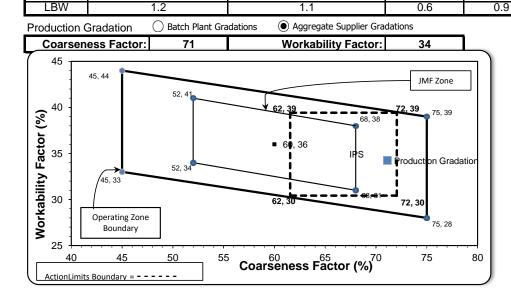
nom. max., #100 and #200 sieves.

*% 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)

97.7

99.1

8.1

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

1.4

Sample Date:

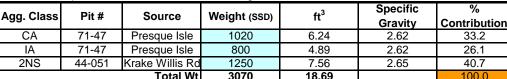
Dates Test Represents:

12/26/22 Concrete Grade: P1M, 3500HP

12/27/2022	through	1/2/2023		
Source	Weight (SSD)	ft ³	Specific	%
Jource	Weight (33b)	11	Gravity	Contribution
Presque Isle	1020	6.24	2.62	33.2
Presque Isla	800	1 80	2.62	26.1

Contractor:

MDOT No.:



SUPE	RIOR

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	IA		2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.	0	100.0	100.0	0.0	0.0
1.5"	98.7	100.	0	100.0	99.6	0.4	0.4
1"	47.5	100.	0	100.0	82.6	17.0	17.4
3/4"	12.4	98.5	5	100.0	70.5	12.1	29.5
1/2"	3.0	83.2	2	100.0	63.4	7.1	36.6
3/8"	2.0	63.7	7	100.0	58.0	5.4	42.0
#4	1.6	17.3	3	96.2	44.2	13.8	55.8
#8	1.4	4.5		80.4	34.4	9.8	65.6
#16	1.4	2.7		65.2	27.7	6.7	72.3
#30	1.3	2.3		49.4	21.1	6.6	78.9
#50	1.2	2.1		24.3	10.8	10.3	89.2
#100	1.1	1.9	_	9.0	4.5	6.3	95.5
LBW	0.9	1.7		0.8	1.1	3.5	98.9

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

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

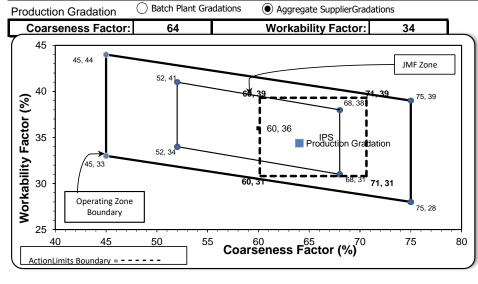
nom. max., #100 and #200 sieves.

*% 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)

Coarseness 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

Sample Date:

12/26/22 Concrete Grade: **P1M**, **3500HP**

Dates Test F	Represents:	12/27/2022	through	1/2/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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	63-115	Ray Rd	1250	7.56	2.65	40.7
		Total Wt	3070	18.69		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

Cumulative % Retained		Superior Materials, LLC
	0.0	Suite 500
	0.0	Farmington Hills, MI 48336

		30.0				· · · · · · · · · · · · · · · · · · ·	abo. 10 10070
Sieve	CA	L	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"	66.6	10	0.0	100.0	88.9	11.1	11.1
3/4"	17.2	97	7.0	100.0	71.7	17.2	28.3
1/2"	4.4	72	2.8	100.0	61.1	10.6	38.9
3/8"	3.2	41	1.8	100.0	52.7	8.5	47.3
#4	2.1	6	.2	96.6	41.6	11.0	58.4
#8	1.6	2	.6	78.9	33.3	8.3	66.7
#16	1.5	1	.9	62.2	26.3	7.0	73.7
#30	1.4	1	.7	46.0	19.6	6.7	80.4
#50	1.4	1	.6	23.6	10.5	9.1	89.5
#100	1.4	1	.5	4.6	2.7	7.8	97.3
LBW	1.2	1	.1	0.5	0.9	1.8	99.1

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

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

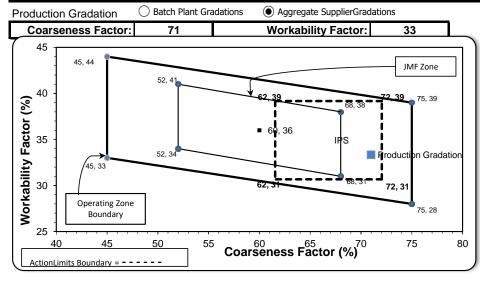
nom. max., #100 and #200 sieves.

 $^{*}\%$ 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)

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"	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 Approved By: