11/22/2022

PLANT #: P-101

Sample Date:

Dates Test Represents:

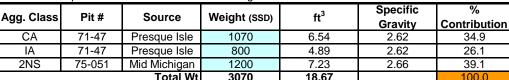
11/21/22 Concrete Grade: P1M, 3500HP

11/28/2022

		. [
ific	%	
ity	Contribution	
2	34.9	

Contractor:

MDOT No.:



through

Verify this number is 100%

SUPERIOR
MATERIALS

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

Farmington Hills, MI 48336

	i otai vyt	3070 10.07		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	99.5	0.5	0.5
1"	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	98.8	43.7	12.7	56.3
#8	1.4	4.5	84.8	34.8	8.9	65.2 n
#16	1.4	2.7	69.3	28.3	6.5	71.7
#30	1.3	2.3	51.6	21.2	7.1	7 8.8 n
#50	1.2	2.1	23.2	10.0	11.2	90.0
#100	1.1	1.9	4.7	2.7	7.3	97.3 a
LBW	0.9	1.7	0.8	1.1	1.6	98.9

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

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

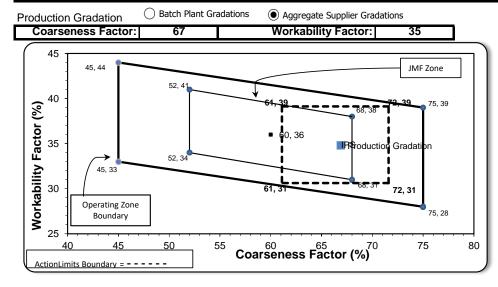
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 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:

11/21/22 Concrete Grade: **P1M**, **3500HP**

Dates Test Represents:		11/22/2022	through	11/28/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
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	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"	68.4	10	0.0	100.0	85.1	14.9	14.9
3/4"	38.2	10	0.0	100.0	70.9	14.2	29.1
1/2"	22.5	94	1.5	100.0	62.7	8.2	37.3
3/8"	13.8	76	6.0	100.0	55.9	6.8	44.1
#4	3.4	22	2.6	97.6	42.4	13.5	57.6
#8	2.0	7	.4	83.5	34.1	8.3	65.9
#16	1.6	4	.0	68.5	27.7	6.4	72.3
#30	1.5	3	.0	51.2	20.8	6.8	79.2
#50	1.4	2	.8	26.6	11.3	9.5	88.7
#100	1.3	2	.5	7.3	3.8	7.5	96.2
LBW	1.1	2	.4	1.3	1.4	2.4	98.6

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

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

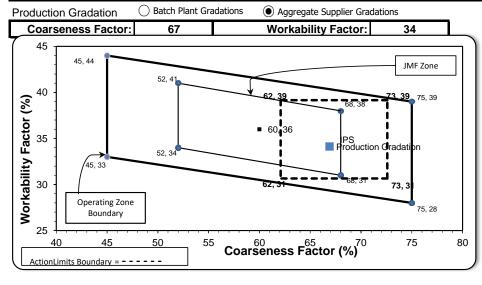
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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 #: P-103

Sample Date:

11/21/22 Concrete Grade: **P1M**, **3500HP**

Dates Test Represents:		11/22/2022	through	11/28/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
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	L	4	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"	68.4	10	0.0	100.0	85.1	14.9	14.9
3/4"	38.2	10	0.0	100.0	70.9	14.2	29.1
1/2"	22.5	94	.5	100.0	62.7	8.2	37.3
3/8"	13.8	76	6.0	100.0	55.9	6.8	44.1
#4	3.4	22	2.6	97.6	42.4	13.5	57.6
#8	2.0	7	.4	83.5	34.1	8.3	65.9
#16	1.6	4	.0	68.5	27.7	6.4	72.3
#30	1.5	3	.0	51.2	20.8	6.8	79.2
#50	1.4	2	.8	26.6	11.3	9.5	88.7
#100	1.3	2	.5	7.3	3.8	7.5	96.2
LBW	1.1	2	.4	1.3	1.4	2.4	98.6

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

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

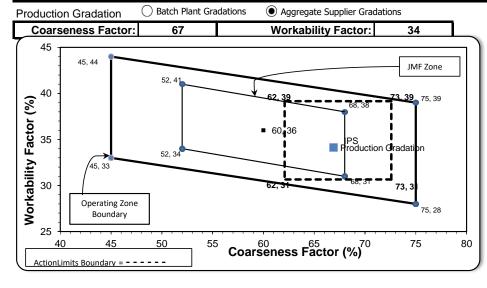
nom. max., #100 and #200 sieves.

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

Schlegel

PLANT #: P-14

Pit#

58-003

58-003

19-55

Sample Date:

Agg. Class

CA

IΑ

2NS

Dates Test Represents

11/21/22 Concrete Grade: P1M, 3500HP

3:	11/22/2022	through	11/28/2022		
	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
	Stoneco	1400	8.34	2.69	44.9
	Stoneco	520	3.10	2.69	16.7

7.20

2.67

1200

Contractor:

MDOT No.:



Builders'
Finish First With Builders*
Duildens Dedi Min

Builders Redi-Mix

30701 W. 10 Mile Rd. Suite 500

Farmington Hills, MI 48336

	Total 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
1.5"	100.0	100	0.0	100.0	100.0	0.0	0.0
1"	68.4	100	0.0	100.0	85.8	14.2	14.2
3/4"	38.2	100	0.0	100.0	72.3	13.6	27.7
1/2"	22.5	94	.5	100.0	64.3	8.0	35.7
3/8"	13.8	76	5.0	100.0	57.3	7.0	42.7
#4	3.4	22	6	100.0	43.8	13.6	56.2
#8	2.0	7.	4	90.8	37.1	6.7	62.9
#16	1.6	4.	0	71.2	28.8	8.3	71.2
#30	1.5	3.	0	48.1	19.7	9.1	80.3
#50	1.4	2.	8	16.9	7.6	12.1	92.4
#100	1.3	2.	5	3.2	2.2	5.4	97.8
LBW	1.1	2.	4	0.3	1.0	1.2	99.0
	_					•	

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

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

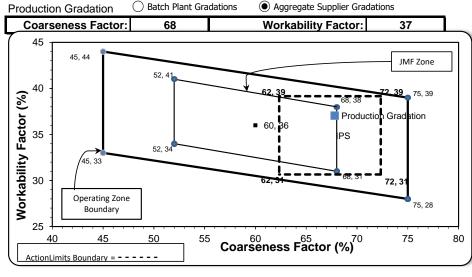
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 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

11/22/2022

PLANT #: P-12

Sample Date:

Dates Test Represents:

11/21/22 Concrete Grade: P1M, 3500HP

	through	11/28/2022		
	Weight (000)	ft ³	Specific	%
	Weight (SSD)	π	Gravity	Contribution
,	1020	6.24	2.62	22.2

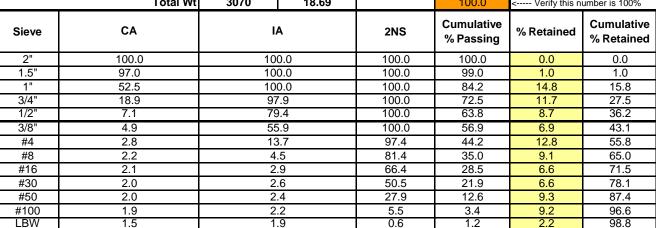
Contractor:

MDOT No.:

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

---- Verify this number is 100%

.,		MAIERIALS
ained	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
0	0.0	Suite 500
0	1.0	Farmington Hills, MI 48336
8	15.8	



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

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

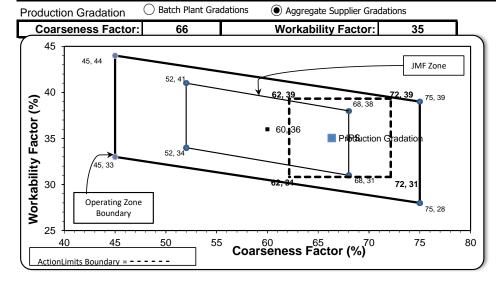
nom. max., #100 and #200 sieves.

*% 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:		
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 #:

Sample Date:

Sieve

Workability Factor (%)

11/21/22

Total Wt

CA

Contractor:

Cumulative

% Retained

Concrete Grade: P1M, 3500HP

Cumulative

% Passing

2NS

Dates Test F	represents:	11/22/2022	through	11/28/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific	%
Ayy. Class	FIL#	Source	weight (SSD)	11.	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	95-013	Smelter Bay	1250	7 56	2 65	40.7

IA

3070

MDOT No.:

---- Verify this number is 100%

% Retained

SUPERI	OR

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

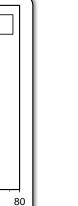
a 2" max. size (nom. Max. 1.5") aggregate is used.

45				Work	cability Fact
7	TTO: Nability 1 actor.			Ooars	,ciicos i act
Coarseness Factor: 66	Workability Factor:	36	1	Coars	seness Fact
Production Gradation	dations	pplier Gradations		Intial Producti	on Sample (
LBW 1.5	1.9	1.2	1.5	2.6	98.5
#100 1.9	2.2	7.1	4.1	7.2	95.9
#50 2.0	2.4	24.6	11.3	10.6	88.7
#30 2.0	2.6	50.4	21.9	7.7	78.1
#16 2.1	2.9	69.0	29.6	6.7	70.4
#8 2.2	4.5	84.2	36.2	7.7	63.8
#4 2.8	13.7	96.4	43.9	13.8	56.1
3/8" 4.9	55.9	100.0	57.7	7.2	42.3
1/2" 7.1	79.4	100.0	64.9	8.9	35.1
3/4" 18.9	97.9	100.0	73.8	11.2	26.2
1" 52.5	100.0	100.0	85.0	14.1	15.0
1.5" 97.0	100.0	100.0	99.1	0.9	0.9
2" 100.0	100.0	100.0	100.0	0.0	0.0

Coarseness Factor (%) 70

Production Gradation

18.69



75, 28

75

nple (IPS)

Coars	Coarseness Factor:		
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

Operating Zone

Boundary

45

ActionLimits Boundary = - - - - -

52, 34

50

PLANT #: P-32

Sample Date:

11/21/22 Concrete Grade: **P1M**, **3500HP**

Dates Test Represents:		11/22/2022	through	11/28/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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	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%

ined	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
	0.0	Suite 500
	0.9	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"	97.0	100.0	100.0	99.1	0.9	0.9
1"	52.5	100.0	100.0	85.0	14.1	15.0
3/4"	18.9	97.9	100.0	73.8	11.2	26.2
1/2"	7.1	79.4	100.0	64.9	8.9	35.1
3/8"	4.9	55.9	100.0	57.7	7.2	42.3
#4	2.8	13.7	96.4	43.9	13.8	56.1
#8	2.2	4.5	84.2	36.2	7.7	63.8
#16	2.1	2.9	69.0	29.6	6.7	70.4
#30	2.0	2.6	50.4	21.9	7.7	78.1
#50	2.0	2.4	24.6	11.3	10.6	88.7
#100	1.9	2.2	7.1	4.1	7.2	95.9
LBW	1.5	1.9	1.2	1.5	2.6	98.5

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

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

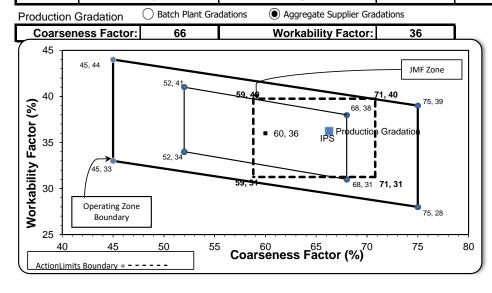
nom. max., #100 and #200 sieves.

 $\ensuremath{^{\star}\%}$ 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	
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

Total Wt

PLANT #: P-35

Sample Date:

CA IΑ 2NS 11/21/22 Concrete Grade: P1M, 3500HP

18.70

Dates Test F	Represents:	11/22/2022	through	11/28/2022		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
2NS	81-019	Pleasant Lake	1200	7 26	2 65	38.5

3120

Contractor:

MDOT No.:



---- Verify 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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	68.4	100.0	100.0	85.1	14.9	14.9
3/4"	38.2	100.0	100.0	70.9	14.2	29.1
1/2"	22.5	94.5	100.0	62.7	8.2	37.3
3/8"	13.8	76.0	100.0	55.9	6.8	44.1
#4	3.4	22.6	97.6	42.4	13.5	57.6
#8	2.0	7.4	83.5	34.1	8.3	65.9
#16	1.6	4.0	68.5	27.7	6.4	72.3
#30	1.5	3.0	51.2	20.8	6.8	79.2
#50	1.4	2.8	26.6	11.3	9.5	88.7
#100	1.3	2.5	7.3	3.8	7.5	96.2

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.,

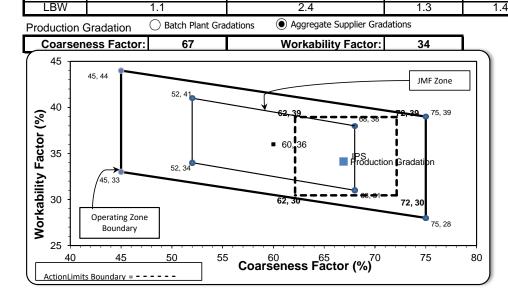
nom. max., #100 and #200 sieves.

*% 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.



Intial Production Sample (IPS)

Coarseness 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"	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

Approved By: PREPARED BY: SM, LLC Technical Service

PLANT #: P-36

Sample Date:

11/21/22 Concrete Grade: P1M, 3500HP

Dates Test Represents:		11/22/2022	through	11/28/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1000	6.12	2.62	32.6
IA	71-47	Presque Isle	870	5.32	2.62	28.3
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1

MDOT No.:

Contractor:



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	L	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	97.0	10	0.0	100.0	99.0	1.0	1.0
1"	52.5	10	0.0	100.0	84.5	14.5	15.5
3/4"	18.9	97	7.9	100.0	73.0	11.5	27.0
1/2"	7.1	79).4	100.0	63.9	9.1	36.1
3/8"	4.9	55	5.9	100.0	56.5	7.4	43.5
#4	2.8	13	3.7	97.3	42.8	13.7	57.2
#8	2.2	4	.5	83.1	34.5	8.4	65.5
#16	2.1	2	.9	68.3	28.2	6.3	71.8
#30	2.0	2	.6	50.4	21.1	7.1	78.9
#50	2.0	2	.4	23.1	10.4	10.7	89.6
#100	1.9	2	.2	3.2	2.5	7.9	97.5
LBW	1.5	1	.9	0.4	1.2	1.3	98.8

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

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

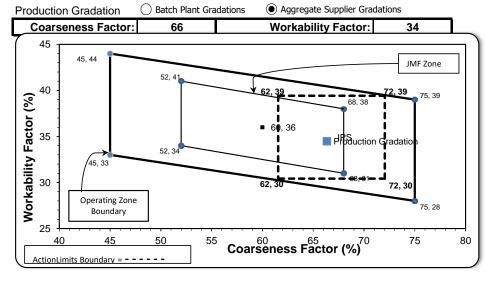
nom. max., #100 and #200 sieves.

*% 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)

Coarseness 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"	85.0	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

PLANT #: P-39

Sample Date:

11/21/22 Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	11/22/2022	through	11/28/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
1.0	71_17	Procauo Ielo	800	4 80	2.62	26.1

Contractor:

MDOT No.:

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	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

SUPERIOR MATERIALS

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	1/	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	98.7	10	0.0	100.0	99.6	0.4	0.4
1"	47.5	10	0.0	100.0	82.6	17.0	17.4
3/4"	12.4	98	3.5	100.0	70.5	12.1	29.5
1/2"	3.0	83	3.2	100.0	63.4	7.1	36.6
3/8"	2.0	63	3.7	100.0	58.0	5.4	42.0
#4	1.6	17	' .3	96.4	44.3	13.7	55.7
#8	1.4	4	5	80.6	34.5	9.8	65.5
#16	1.4	2	.7	65.7	27.9	6.5	72.1
#30	1.3	2	3	48.1	20.6	7.3	79.4
#50	1.2	2.	.1	23.7	10.6	10.0	89.4
#100	1.1	1.	9	7.2	3.8	6.8	96.2
LBW	0.9	1.	7	0.9	1.1	2.7	98.9

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

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

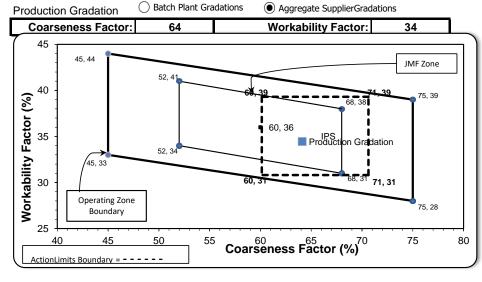
nom. max., #100 and #200 sieves.

*% 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

Presque Isle

Ray Rd

Total Wt

800

1250

3070

PLANT #: P-O2

Pit#

71-47

71-47

63-115

Sample Date:

Agg. Class

CA

IΑ

2NS

Dates Test Represents:

11/21/22 Concrete Grade: **P1M**, **3500HP**

 11/22/2022
 through
 11/28/2022

 Source
 Weight (ssp)
 ft³
 Specific Gravity
 % Contribution

 Presque Isle
 1020
 6.24
 2.62
 33.2

4.89

7.56

18.69

2.62

2.65

26.1

40.7

100.0

Contractor:

MDOT No.:



----- Verify this number is 100%

ed	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
	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" 97.0 100.0 100.0 99.0 1.0 1.0 52.5 100.0 100.0 84.2 14.8 15.8 3/4" 18.9 97.9 100.0 72.5 11.7 27.5 1/2' 7.1 79.4 100.0 63.8 8.7 36.2 3/8' 4.9 55.9 100.0 56.9 6.9 43.1 #4 2.8 13.7 97.4 44.2 12.8 55.8 #8 2.2 4.5 81.4 35.0 9.1 65.0 #16 2.1 2.9 66.4 28.5 6.6 71.5 #30 2.0 50.5 21.9 6.6 78.1 2.6 #50 2.0 2.4 27.9 12.6 9.3 87.4 #100 1.9 2.2 5.5 3.4 9.2 96.6 LBW 2.2

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

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

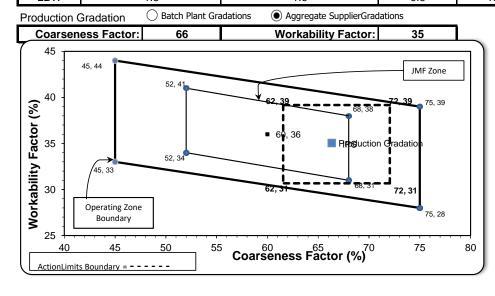
nom. max., #100 and #200 sieves.

*% 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)

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