PLANT #: P-102

6AA

100.0

100.0

100.0

84.9

44.8

21.9

3.4

1.5

1.3

1.2

1.1

1.0

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

5/11/20 S<sub>2</sub>M Concrete Grade: 5/12/2020 5/18/2020

		ı
;	%	

Cumulative

% Passing

100.0

100.0

100.0

92.0

70.8

57.5

42.2

32.8

25.0

17.8

7.8

2.0

2NS

100.0

100.0

100.0

100.0

100.0

100.0

99.1

81.0

61.8

43.6

18.2

3.5

Dates Test F	Represents:	5/12/2020	through	5/18/2020		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1640	9.77	2.69	52.9
26A	58-003	Stoneco	250	1.49	2.69	8.1
2NS	63-114	Highland	1210	7.32	2.65	39.0
Total Wt			3100	18.58		100.0

26A

100.0

100.0

100.0

100.0

99.6

85.6

21.6

4.3

2.0

1.6

1.4

1.4

MDOT No.:

Cumulative

% Retained

0.0

0.0

0.0

8.0

29.2

42.5

57.8

67.2

75.0

82.2

92.2

98.0

99.4

---- Verify this number is 100%

Contractor:

% Retained

0.0

0.0

0.0

8.0

21.2

13.2

15.3

9.5

7.8

7.2

10.0

5.8

1.4

**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.,

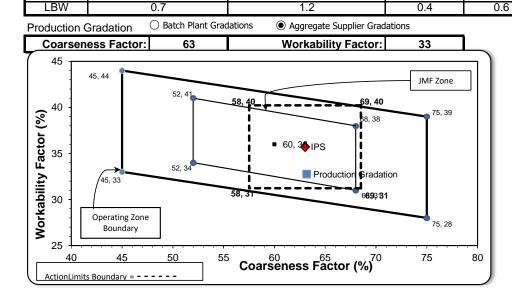
nom. max., #100 and #200 sieves.

\*% 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)

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"	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 #:** P-12

Sample Date:

5/11/20 Concrete Grade: 5/18/2020

S<sub>2</sub>M

Dates Test F	Represents:	5/12/2020	through	5/18/2020		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1700	10.40	2.62	55.7
26A	71-47	Presque Isle	120	0.73	2.62	3.9
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	2050	19.57		100.0

MDOT No.:

Contractor:

Verify this number is 100%

SUPERIOR

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

	TOTAL WI	3030 16.37		100.0	< verify this n	umber 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"	97.0	100.0	100.0	98.3	1.7	1.7
3/4"	78.3	100.0	100.0	87.9	10.4	12.1
1/2"	42.7	97.1	100.0	67.9	20.0	32.1
3/8"	26.8	85.7	100.0	58.6	9.3	41.4
#4	6.4	26.6	98.4	44.3	14.3	55.7
#8	3.3	8.2	78.9	34.0	10.3	66.0
#16	2.6	4.3	61.0	26.2	7.8	73.8
#30	2.4	3.6	45.6	19.9	6.3	80.1
#50	2.1	3.4	23.4	10.7	9.1	89.3
#100	1.8	3.2	4.5	2.9	7.8	97.1
LBW	1.4	2.7	0.9	1.2	1.7	98.8

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

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

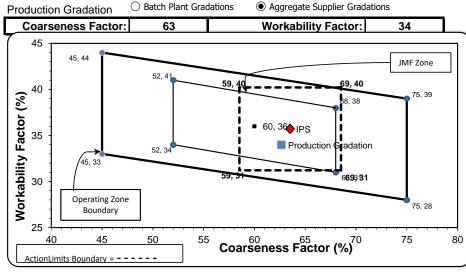
nom. max., #100 and #200 sieves.

\*% 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:		
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"	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 #:** P-32 Sample Date:

Dates Test Represents:

5/11/20 S<sub>2</sub>M Concrete Grade: 5/12/2020

through	5/18/2020		
Weight (SSD)	ft <sup>3</sup>	Specific	%
Weight (SSD)	π	Gravity	Contribution
1420	8 69	2 62	46.6

Contractor:

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.1
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
	_	Total Wt	3050	18.57		100.0

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

	l otal Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	<b>A</b>	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"	98.7	10	0.0	100.0	99.4	0.6	0.6
3/4"	72.1	10	100.0		87.0	12.4	13.0
1/2"	30.8	97	<b>7.1</b>	100.0	67.4	19.6	32.6
3/8"	14.6	85	5.7	100.0	58.4	9.0	41.6
#4	3.4	26	5.6	95.4	43.5	14.8	56.5
#8	2.2	8.	.2	83.3	35.7	7.9	64.3
#16	1.9	4.	.3	68.4	29.0	6.7	71.0
#30	1.5	3.	.6	48.8	20.9	8.2	79.1
#50	1.4	3	4	21.6	9.8	11.0	90.2
#100	1.3	3	2	5.5	3.2	6.6	96.8
LBW	1.0	2	.7	1.5	1.4	1.8	98.6

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

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

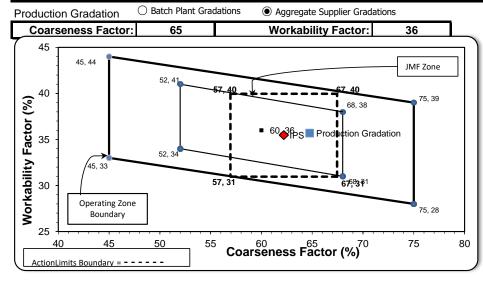
nom. max., #100 and #200 sieves.

\*% 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	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"	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 Approved By:

6AA

100.0

100.0

97.0

78.3

42.7

26.8

6.4

3.3

2.6

2.4

2.1

1.8

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

PLANT #: P-36 Contractor: 5/11/20 S<sub>2</sub>M Sample Date: Concrete Grade:

26A

100.0

100.0

100.0

100.0

97.1

85.7

26.6

8.2

4.3

3.6

3.4

3.2

5/18/2020 through

2NS

100.0

100.0

100.0

100.0

100.0

100.0

97.3

84.7

69.7

50.9

23.3

3.2

Dates Test F	Represents:	5/12/2020	through	5/18/2020		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	250	1.53	2.62	8.2
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3
		Total Wt	3050	18.57		100.0

MDOT No.:

Cumulative

% Retained

0.0

0.0

1.6

11.4

30.3

39.6

56.2

64.3

70.9

78.4

89.5

97.5

---- Verify this number is 100%

% Retained

0.0

0.0

1.6

9.8

18.9

9.3

16.6

8.1

6.6

7.6

11.0

8.1

Cumulative

% Passing

100.0

100.0

98.4

88.6

69.7

60.4

43.8

35.7

29.1

21.6

10.5

2.5

Superior N	Materials, LLC
30701 W. 1	0 Mile Rd.
Suite 500	
F	LUIL - NAL 4000C

Farmington Hills, MI 48336

*Maximum % Retained must be

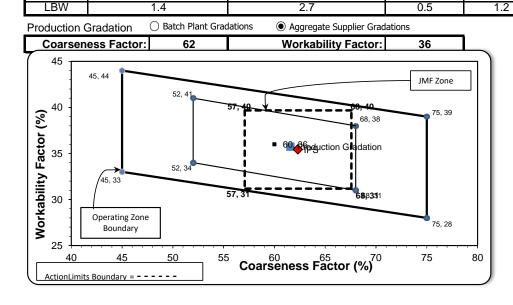
e above the 3/8" sieve. \*Any two adjacent sieves must equal 10% except max.,

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:		62	
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"	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

PLANT #: P-39
Sample Date: 5/11/20

Dates Test Represents:

5/11/20 Concrete Grade: **S2M** 5/12/2020 through 5/18/2020

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	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	44-051	Krake Willis Rd	1200	7.26	2.65	39.3
		Total Wt	3050	18.57		100.0

MDOT No.:

<---- Verify this number is 100%

Contractor:

SUPERIOR MATERIALS

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

	i otai wt	3030 16.37		100.0	< verify this n	umber 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"	97.1	100.0	100.0	98.4	1.6	1.6
3/4"	82.3	100.0	100.0	90.1	8.2	9.9
1/2"	43.4	97.5	100.0	68.3	21.8	31.7
3/8"	26.1	87.7	100.0	58.2	10.1	41.8
#4	4.3	23.8	97.6	42.0	16.2	58.0
#8	2.4	6.1	84.8	35.0	7.0	65.0
#16	2.0	2.6	70.0	28.8	6.2	71.2
#30	1.9	2.0	51.0	21.2	7.6	78.8
#50	1.8	1.9	23.4	10.3	10.9	89.7
#100	1.7	1.8	3.8	2.5	7.8	97.5
LBW	1.6	1.8	0.7	1.3	1.3	98.7
•	0 0 1 1 0 1 0 1			•		

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

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

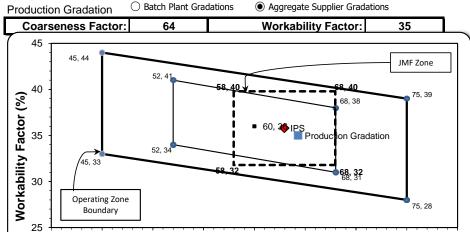
nom. max., #100 and #200 sieves.

\*% 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.



Coarseness Factor (%) $^{70}$ 

75

80

## 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"	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

50

45

ActionLimits Boundary = - - - - -

Approved By:

**PLANT #:** P-02 Sample Date:

Dates Test Represents:

5/11/20 S<sub>2</sub>M Concrete Grade: 5/12/2020 5/18/2020

MDOT No.:

Contractor:

	_					
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	63-115	Ray Rd	1300	7.86	2.65	42.6
		Total Wt	3050	18.57		100.0

through

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"         97.0         100.0         100.0         98.4         1.6         1.6           3/4"         78.3         100.0         100.0         88.6         9.8         11.4           1/2"         42.7         97.1         100.0         69.8         18.8         30.2           3/8"         26.8         85.7         100.0         60.9         8.9         39.1           #4         6.4         26.6         98.4         46.6         14.3         53.4           #8         3.3         8.2         78.9         35.8         10.8         64.2           #16         2.6         4.3         61.0         27.6         8.2         72.4           #30         2.4         3.6         45.6         20.9         6.7         79.1           #50         2.1         3.4         23.4         11.2         9.6 <th></th> <th>Total Wt</th> <th>3050</th> <th>18.57</th> <th></th> <th>100.0</th> <th>&lt; Verify this n</th> <th>umber is 100%</th>		Total Wt	3050	18.57		100.0	< Verify this n	umber is 100%
1.5"         100.0         100.0         100.0         0.0         0.0           1"         97.0         100.0         100.0         98.4         1.6         1.6           3/4"         78.3         100.0         100.0         88.6         9.8         11.4           1/2"         42.7         97.1         100.0         69.8         18.8         30.2           3/8"         26.8         85.7         100.0         60.9         8.9         39.1           #4         6.4         26.6         98.4         46.6         14.3         53.4           #8         3.3         8.2         78.9         35.8         10.8         64.2           #16         2.6         4.3         61.0         27.6         8.2         72.4           #30         2.4         3.6         45.6         20.9         6.7         79.1           #50         2.1         3.4         23.4         11.2         9.6         88.8           #100         1.8         3.2         4.5         3.0         8.2         97.0	Sieve	6AA	26	6A	2NS		% Retained	
1"     97.0     100.0     100.0     98.4     1.6     1.6       3/4"     78.3     100.0     100.0     88.6     9.8     11.4       1/2"     42.7     97.1     100.0     69.8     18.8     30.2       3/8"     26.8     85.7     100.0     60.9     8.9     39.1       #4     6.4     26.6     98.4     46.6     14.3     53.4       #8     3.3     8.2     78.9     35.8     10.8     64.2       #16     2.6     4.3     61.0     27.6     8.2     72.4       #30     2.4     3.6     45.6     20.9     6.7     79.1       #50     2.1     3.4     23.4     11.2     9.6     88.8       #100     1.8     3.2     4.5     3.0     8.2     97.0	2"	100.0	10	0.0	100.0	100.0	0.0	0.0
3/4"         78.3         100.0         100.0         88.6         9.8         11.4           1/2"         42.7         97.1         100.0         69.8         18.8         30.2           3/8"         26.8         85.7         100.0         60.9         8.9         39.1           #4         6.4         26.6         98.4         46.6         14.3         53.4           #8         3.3         8.2         78.9         35.8         10.8         64.2           #16         2.6         4.3         61.0         27.6         8.2         72.4           #30         2.4         3.6         45.6         20.9         6.7         79.1           #50         2.1         3.4         23.4         11.2         9.6         88.8           #100         1.8         3.2         4.5         3.0         8.2         97.0	1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1/2"       42.7       97.1       100.0       69.8       18.8       30.2         3/8"       26.8       85.7       100.0       60.9       8.9       39.1         #4       6.4       26.6       98.4       46.6       14.3       53.4         #8       3.3       8.2       78.9       35.8       10.8       64.2         #16       2.6       4.3       61.0       27.6       8.2       72.4         #30       2.4       3.6       45.6       20.9       6.7       79.1         #50       2.1       3.4       23.4       11.2       9.6       88.8         #100       1.8       3.2       4.5       3.0       8.2       97.0	1"	97.0	10	0.0	100.0	98.4	1.6	1.6
3/8"     26.8     85.7     100.0     60.9     8.9     39.1       #4     6.4     26.6     98.4     46.6     14.3     53.4       #8     3.3     8.2     78.9     35.8     10.8     64.2       #16     2.6     4.3     61.0     27.6     8.2     72.4       #30     2.4     3.6     45.6     20.9     6.7     79.1       #50     2.1     3.4     23.4     11.2     9.6     88.8       #100     1.8     3.2     4.5     3.0     8.2     97.0	3/4"	78.3	10	0.0	100.0	88.6	9.8	11.4
#4       6.4       26.6       98.4       46.6       14.3       53.4         #8       3.3       8.2       78.9       35.8       10.8       64.2         #16       2.6       4.3       61.0       27.6       8.2       72.4         #30       2.4       3.6       45.6       20.9       6.7       79.1         #50       2.1       3.4       23.4       11.2       9.6       88.8         #100       1.8       3.2       4.5       3.0       8.2       97.0	1/2"	42.7	97	<b>'</b> .1	100.0	69.8	18.8	30.2
#8     3.3     8.2     78.9     35.8     10.8     64.2       #16     2.6     4.3     61.0     27.6     8.2     72.4       #30     2.4     3.6     45.6     20.9     6.7     79.1       #50     2.1     3.4     23.4     11.2     9.6     88.8       #100     1.8     3.2     4.5     3.0     8.2     97.0	3/8"	26.8	85	5.7	100.0	60.9	8.9	39.1
#16 2.6 4.3 61.0 27.6 8.2 72.4 #30 2.4 3.6 45.6 20.9 6.7 79.1 #50 2.1 3.4 23.4 11.2 9.6 88.8 #100 1.8 3.2 4.5 3.0 8.2 97.0	#4	6.4	26	6.6	98.4	46.6	14.3	53.4
#30     2.4     3.6     45.6     20.9     6.7     79.1       #50     2.1     3.4     23.4     11.2     9.6     88.8       #100     1.8     3.2     4.5     3.0     8.2     97.0	#8	3.3	8	.2	78.9	35.8	10.8	64.2
#50 2.1 3.4 23.4 11.2 9.6 88.8 #100 1.8 3.2 4.5 3.0 8.2 97.0	#16	2.6	4	.3	61.0	27.6	8.2	72.4
#100 1.8 3.2 4.5 3.0 <b>8.2</b> 97.0	#30	2.4	3	.6	45.6	20.9	6.7	79.1
	#50	2.1	3	.4	23.4	11.2	9.6	88.8
LBW 1.4 2.7 0.9 1.3 1.8 98.7	#100	1.8	3	.2	4.5	3.0	8.2	97.0
	LBW	1.4	2	.7	0.9	1.3	1.8	98.7

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

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

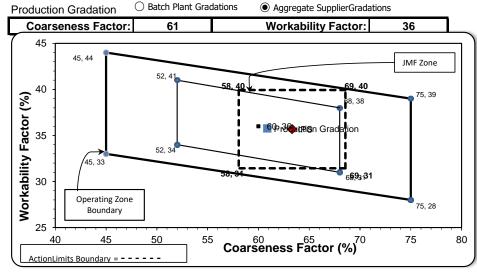
nom. max., #100 and #200 sieves.

\*% 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.



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	

PREPARED BY: SM, LLC Technical Service Approved By: