PLANT #: P-101

Sample Date:

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

| Dates Test F | Represents: | 5/16/2023 | tnrougn | 5/22/2023 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| 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 |
| | | T-4-1 \A/4 | 2055 | 40 F7 | | 4000 |

Contractor:

MDOT No.:



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

| | i otai wt | 3055 | 18.5 <i>1</i> | | 100.0 | < Verify this n | umber is 100% |
|-------|-----------|------|---------------|-------|----------------------|-----------------|--------------------------|
| Sieve | 6AA | 26 | 6A | 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" | 98.1 | 10 | 0.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 3/4" | 79.2 | 10 | 0.0 | 100.0 | 89.3 | 9.7 | 10.7 |
| 1/2" | 37.7 | 96 | 5.1 | 100.0 | 67.6 | 21.7 | 32.4 |
| 3/8" | 20.4 | 87 | 7.7 | 100.0 | 58.0 | 9.6 | 42.0 |
| #4 | 2.6 | 23 | 3.2 | 97.3 | 42.4 | 15.5 | 57.6 |
| #8 | 1.4 | 6 | .2 | 82.1 | 34.3 | 8.1 | 65.7 |
| #16 | 1.2 | 3 | .4 | 66.8 | 27.8 | 6.5 | 72.2 |
| #30 | 1.2 | 2 | .9 | 50.7 | 21.3 | 6.5 | 78.7 |
| #50 | 1.2 | 2 | .7 | 23.2 | 10.2 | 11.1 | 89.8 |
| #100 | 1.1 | 2 | .5 | 6.7 | 3.5 | 6.7 | 96.5 |
| LBW | 1.0 | 2 | .3 | 1.3 | 1.2 | 2.2 | 98.8 |

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

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

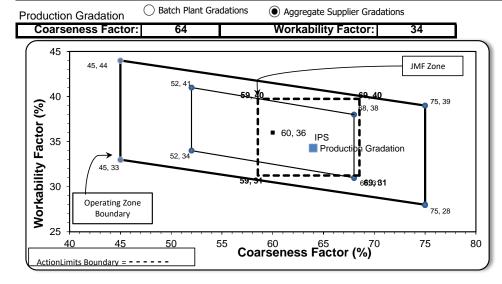
nom. max., #100 and #200 sieves.

*% 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 | eness Factor: | 64 | |
|-------|-----------------|----------|------------|
| 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" | 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 Approved By:

PLANT #: P-102

Sample Date:

5/15/23 Concrete Grade: **S2M**, **3500HP**

| Dates Test F | represents: | 5/16/2023 | tnrougn | 5/22/2023 | | |
|--------------|-------------|---------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| 6AA | 58-003 | Stoneco | 1725 | 10.28 | 2.69 | 55.6 |
| 26A | 58-003 | Stoneco | 175 | 1.04 | 2.69 | 5.6 |
| 2NS | 81-019 | Pleasant Lake | 1200 | 7.26 | 2.65 | 38.7 |
| | | Total Wt | 3100 | 18.58 | | 100.0 |

Contractor:

MDOT No.:



---- Verify this number is 100%

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

| 7010.111 | | 0.00 | | 100.0 | · voing and in | di 11001 10 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" | 99.0 | 100.0 | 100.0 | 99.4 | 0.6 | 0.6 |
| 3/4" | 89.7 | 100.0 | 100.0 | 94.3 | 5.2 | 5.7 |
| 1/2" | 52.5 | 98.5 | 100.0 | 73.5 | 20.8 | 26.5 |
| 3/8" | 32.4 | 79.0 | 100.0 | 61.2 | 12.3 | 38.8 |
| #4 | 4.3 | 6.2 | 98.8 | 41.0 | 20.2 | 59.0 |
| #8 | 1.3 | 2.1 | 85.3 | 33.9 | 7.1 | 66.1 r |
| #16 | 1.1 | 1.6 | 67.4 | 26.8 | 7.1 | 73.2 |
| #30 | 0.9 | 1.5 | 46.5 | 18.6 | 8.2 | 81.4 r |
| #50 | 0.8 | 1.4 | 21.7 | 8.9 | 9.7 | 91.1 |
| #100 | 0.8 | 1.3 | 5.8 | 2.8 | 6.2 | 97.2 a |
| LBW | 0.7 | 1.1 | 1.1 | 0.9 | 1.9 | 99.1 |

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

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

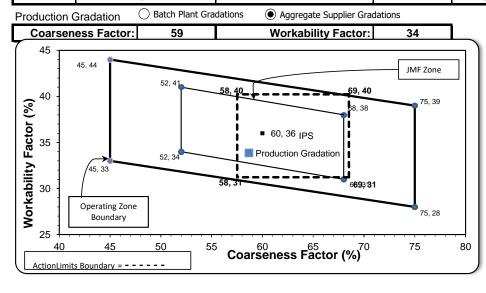
nom. max., #100 and #200 sieves.

*% 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 | 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" | 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 Approved By

PLANT #: P-103

6AA

100.0

100.0

99.0

89.7

52.5

32.4

4.3

1.3

1.1

0.9

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

Concrete Grade: S2M, 3500HP

| Dates Test F | Represents: | 5/16/2023 | through | 5/22/2023 | | |
|--------------|-------------|-----------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| 6AA | 58-003 | Stoneco | 1725 | 10.28 | 2.69 | 55.6 |
| 26A | 58-003 | Stoneco | 175 | 1.04 | 2.69 | 5.6 |

26A

100.0

100.0

100.0

100.0

98.5

79.0

6.2

2.1

1.6

1.5

Contractor:

Cumulative

% Retained

0.0

0.0

0.6

5.7

26.5

38.8

59.0

66.1

73.2

81.4

91.1

97.2

MDOT No.:

% Retained

0.0

0.0

0.6

5.2

20.8

12.3

20.2

7.1

7.1

8.2

9.7

6.2

Cumulative

% Passing

100.0

100.0

99.4

94.3

73.5

61.2

41.0

33.9

26.8

18.6

2NS

100.0

100.0

100.0

100.0

100.0

100.0

98.8

85.3

67.4

46.5

| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
|------------|--------|---------------|--------------|-----------------|---------------------|-------------------|
| | | _ | | | | |
| 6AA | 58-003 | Stoneco | 1725 | 10.28 | 2.69 | 55.6 |
| 26A | 58-003 | Stoneco | 175 | 1.04 | 2.69 | 5.6 |
| 2NS | 81-019 | Pleasant Lake | 1200 | 7.26 | 2.65 | 38.7 |
| | | Total Wt | 3100 | 18.58 | | 100.0 |

---- Verify this number is 100%

| , | | | | |
|---|----|------|----|----------|
| S | AT | PE F | RI | OR LS |

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.,

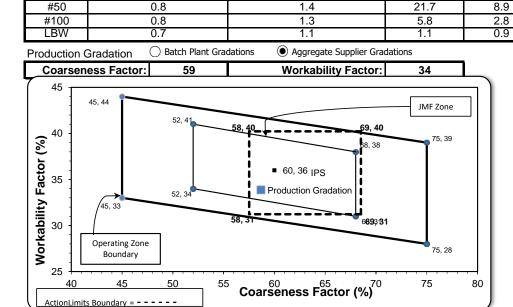
nom. max., #100 and #200 sieves.

*% 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 | 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" | 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 Approved BY:

PLANT #: Contractor: Concrete Grade: S2M, 3500HP Sample Date: 5/15/23

Dates Test Represents: 5/16/2023 5/22/2023 through

MDOT No.:

| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
|------------|--------|----------|--------------|-----------------|---------------------|-------------------|
| 6AA | 58-003 | Stoneco | 1725 | 10.28 | 2.69 | 55.5 |
| 26A | 58-003 | Stoneco | 175 | 1.04 | 2.69 | 5.6 |
| 2NS | 19-04 | Schlegel | 1210 | 7.26 | 2.67 | 38.9 |
| | | Total Wt | 3110 | 18.58 | _ | 100.0 |

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

Farmington Hills, MI 48336

| | Total Wt | 3110 1 | 8.58 | 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" | 99.0 | 100.0 | 100.0 | 99.4 | 0.6 | 0.6 |
| 3/4" | 89.7 | 100.0 | 100.0 | 94.3 | 5.2 | 5.7 |
| 1/2" | 52.5 | 98.5 | 100.0 | 73.6 | 20.7 | 26.4 |
| 3/8" | 32.4 | 79.0 | 100.0 | 61.3 | 12.2 | 38.7 |
| #4 | 4.3 | 6.2 | 99.9 | 41.6 | 19.7 | 58.4 |
| #8 | 1.3 | 2.1 | 90.1 | 35.9 | 5.7 | 64.1 |
| #16 | 1.1 | 1.6 | 69.4 | 27.7 | 8.2 | 72.3 |
| #30 | 0.9 | 1.5 | 44.5 | 17.9 | 9.8 | 82.1 |
| #50 | 0.8 | 1.4 | 14.3 | 6.1 | 11.8 | 93.9 |
| #100 | 0.8 | 1.3 | 2.7 | 1.6 | 4.5 | 98.4 |
| LBW | 0.7 | 1.1 | 0.2 | 0.5 | 1.0 | 99.5 |

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

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

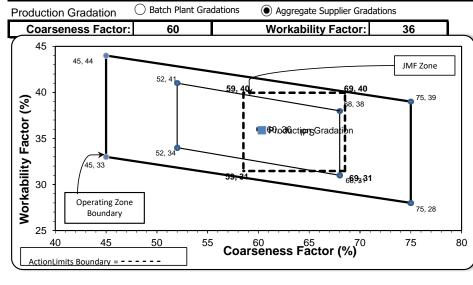
nom. max., #100 and #200 sieves.

*% 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 | 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 |

PLANT #: 12

Sample Date:

5/15/23

Contractor:

Concrete Grade: S2M, 3500HP

MDOT No.:

| Dates Test F | Represents: | 5/16/2023 | through | 5/22/2023 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| 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 |
| | | Total Wt | 3050 | 18 57 | | 100.0 |

-- Verify this number is 100%

| SIN | UF | E | R | 10 | PR |
|-----|----|---|---|----|----|

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

| | TOTAL VVI | 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" | 98.2 | 100.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 3/4" | 86.1 | 100.0 | 100.0 | 92.2 | 6.8 | 7.8 |
| 1/2" | 41.5 | 97.0 | 100.0 | 66.9 | 25.2 | 33.1 |
| 3/8" | 22.1 | 87.6 | 100.0 | 55.7 | 11.2 | 44.3 |
| #4 | 2.9 | 17.6 | 96.6 | 41.2 | 14.5 | 58.8 |
| #8 | 1.3 | 4.2 | 80.0 | 33.1 | 8.0 | 66.9 r |
| #16 | 1.1 | 2.1 | 64.0 | 26.5 | 6.6 | 73.5 |
| #30 | 1.1 | 1.6 | 48.2 | 20.1 | 6.4 | 7 9.9 r |
| #50 | 1.1 | 1.5 | 25.1 | 10.8 | 9.3 | 89.2 |
| #100 | 1.0 | 1.4 | 3.9 | 2.2 | 8.6 | 97.8 a |
| LBW | 0.8 | 1.2 | 0.5 | 0.7 | 1.5 | 99.3 |

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

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

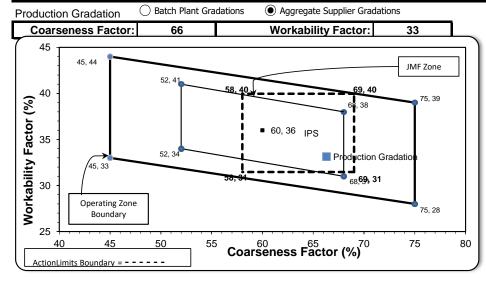
nom. max., #100 and #200 sieves.

*% 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 |

PLANT #: p11

Sample Date:

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

| Dates Test F | Represents: | 5/16/2023 | through | 5/22/2023 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| 6AA | 71-47 | Presque Isle | 1670 | 10.21 | 2.62 | 54.8 |
| 26A | 71-47 | Presque Isle | 150 | 0.92 | 2.62 | 4.9 |
| 2NS | 95-013 | Smelter Bay | 1230 | 7.44 | 2.65 | 40.3 |

Contractor:

MDOT No.:



| Retained | Cumulative % Retained | |
|----------|-----------------------|--|
|----------|-----------------------|--|

30701 W. 10 Mile Rd. Suite 500

Farmington Hills, MI 48336

Superior Materials, LLC

| | Total Wt | 3050 | 18.57 | | 100.0 | < Verify this n | umber is 100% |
|-------|----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | 6AA | 26 | 6A | 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" | 99.1 | 10 | 0.0 | 100.0 | 99.5 | 0.5 | 0.5 |
| 3/4" | 86.8 | 10 | 0.0 | 100.0 | 92.8 | 6.7 | 7.2 |
| 1/2" | 51.4 | 97 | 7.0 | 100.0 | 73.2 | 19.5 | 26.8 |
| 3/8" | 32.3 | 87 | 7.6 | 100.0 | 62.3 | 10.9 | 37.7 |
| #4 | 7.0 | 17 | 7.6 | 96.9 | 43.8 | 18.5 | 56.2 |
| #8 | 2.0 | 4. | .2 | 84.3 | 35.3 | 8.5 | 64.7 |
| #16 | 1.6 | 2 | .1 | 68.7 | 28.7 | 6.6 | 71.3 |
| #30 | 1.5 | 1. | .6 | 48.6 | 20.5 | 8.2 | 79.5 |
| #50 | 1.5 | 1. | .5 | 23.1 | 10.2 | 10.3 | 89.8 |
| #100 | 1.4 | 1. | .4 | 6.7 | 3.5 | 6.7 | 96.5 |
| LBW | 1.2 | 1. | .2 | 1.1 | 1.2 | 2.4 | 98.8 |
| | 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.

| Production Gradation | Batch Plant Grad | dations | lier Gradations |
|----------------------|------------------|---------------------|-----------------|
| Coarseness Facto | or: 58 | Workability Factor: | 35 |
| 45 | | | |
| 45, 44 | | | JMF Zone |
| 1 40 | 52, 41 | 7 40 | |

75. 39 Workability Factor (%) 52, 34 Operating Zone 75, 28 Boundary Coarseness Factor (%) 70 45 50 75 80 ActionLimits Boundary = - - - - -

Intial Production Sample (IPS)

| Coars | seness Factor: | 62 | |
|-------|------------------|----------|------------|
| Wor | kability 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 Approved By:

PLANT #: P-32

Sieve

6AA

100.0

0HP

2NS

100.0

Cumulative

% Passing

100.0

| Sample Date: | 5/15/23 | | Concrete Grade: S2M, 3500 |
|------------------------|-----------|---------|---------------------------|
| Dates Test Represents: | 5/16/2023 | through | 5/22/2023 |

| 2 4100 10011 | 100.00001 | 0, 10, 2020 | o a.g | 0,22,2020 | | |
|--------------|-----------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| 6AA | 71-47 | Presque Isle | 1670 | 10.21 | 2.62 | 54.8 |
| 26A | 71-47 | Presque Isle | 150 | 0.92 | 2.62 | 4.9 |
| 2NS | 95-013 | Smelter Bay | 1230 | 7.44 | 2.65 | 40.3 |
| | <u> </u> | Total Wt | 3050 | 18.57 | | 100.0 |

26A

100.0

Contractor:

Cumulative

% Retained

0.0

MDOT No.:

% Retained

0.0

---- Verify this number is 100%

| 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.

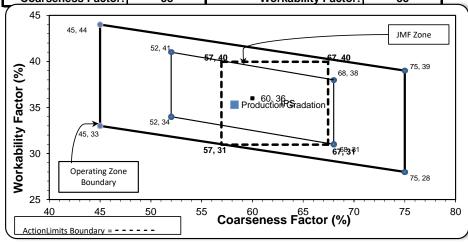
*% Retained must be at least 4% for each sieve except max.,

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 — | 45 | | | | | | | |
|------------|--|-------|-----------------------------|-------|------|-------------|--|--|
| Coarse | Coarseness Factor: 58 Workability Factor: 35 | | | | | eness Facto | | |
| Production | Gradation O Batch Plant Gra | · | Intial Production Sample (I | | | | | |
| LBW | 1.2 | 1.2 | 1.1 | 1.2 | 2.4 | 98.8 | | |
| #100 | 1.4 | 1.4 | 6.7 | 3.5 | 6.7 | 96.5 | | |
| #50 | 1.5 | 1.5 | 23.1 | 10.2 | 10.3 | 89.8 | | |
| #30 | 1.5 | 1.6 | 48.6 | 20.5 | 8.2 | 79.5 | | |
| #16 | 1.6 | 2.1 | 68.7 | 28.7 | 6.6 | 71.3 | | |
| #8 | 2.0 | 4.2 | 84.3 | 35.3 | 8.5 | 64.7 | | |
| #4 | 7.0 | 17.6 | 96.9 | 43.8 | 18.5 | 56.2 | | |
| 3/8" | 32.3 | 87.6 | 100.0 | 62.3 | 10.9 | 37.7 | | |
| 1/2" | 51.4 | 97.0 | 100.0 | 73.2 | 19.5 | 26.8 | | |
| 3/4" | 86.8 | 100.0 | 100.0 | 92.8 | 6.7 | 7.2 | | |
| 1" | 99.1 | 100.0 | 100.0 | 99.5 | 0.5 | 0.5 | | |
| 1.5" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | | |



| Coarseness Factor: | | 62 | |
|--------------------|------------------|----------|------------|
| Wor | kability 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 |

5/15/23

PLANT #: P-35

Sample Date:

Concrete Grade: S2M, 3500HP

Contractor:

Dates Test Represents: 5/16/2023 5/22/2023 through

| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
|------------|--------|---------------|--------------|-----------------|---------------------|-------------------|
| 6AA | 58-003 | Stoneco | 1725 | 10.28 | 2.69 | 55.6 |
| 26A | 58-003 | Stoneco | 175 | 1.04 | 2.69 | 5.6 |
| 2NS | 81-019 | Pleasant Lake | 1200 | 7.26 | 2.65 | 38.7 |
| | | Total Wt | 3100 | 18.58 | | 100.0 |

| Superior Materials, | L | L | <u>.c</u> | : |
|----------------------|---|---|-----------|---|
| 30701 W. 10 Mile Rd. | | | | |
| Suite 500 | | | | |
| | | | | |

Farmington Hills, MI 48336

| | I otal Wt | 3100 | 18.58 | | 100.0 | < Verify this n | umber is 100% |
|-------|-----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | 6AA | 26 | 6A | 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" | 99.0 | 10 | 0.0 | 100.0 | 99.4 | 0.6 | 0.6 |
| 3/4" | 89.7 | 10 | 0.0 | 100.0 | 94.3 | 5.2 | 5.7 |
| 1/2" | 52.5 | 98 | 3.5 | 100.0 | 73.5 | 20.8 | 26.5 |
| 3/8" | 32.4 | 79 | 0.0 | 100.0 | 61.2 | 12.3 | 38.8 |
| #4 | 4.3 | 6 | .2 | 98.8 | 41.0 | 20.2 | 59.0 |
| #8 | 1.3 | 2 | .1 | 85.3 | 33.9 | 7.1 | 66.1 |
| #16 | 1.1 | 1. | .6 | 67.4 | 26.8 | 7.1 | 73.2 |
| #30 | 0.9 | 1. | .5 | 46.5 | 18.6 | 8.2 | 81.4 |
| #50 | 0.8 | 1. | .4 | 21.7 | 8.9 | 9.7 | 91.1 |
| #100 | 0.8 | 1. | .3 | 5.8 | 2.8 | 6.2 | 97.2 |
| LBW | 0.7 | 1. | .1 | 1.1 | 0.9 | 1.9 | 99.1 |

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

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

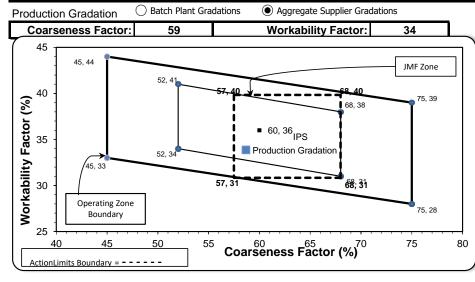
nom. max., #100 and #200 sieves.

*% 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 | 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 Approved By:

Total Wt

PLANT #: P-36

Sample Date:

5/15/23 Concrete Grade: **S2M**, **3500HP**

18.57

| Dates Test F | represents: | 5/16/2023 | through | 5/22/2023 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | 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 |

3050

Contractor:

MDOT No.:

100.0



<---- Verify this number is 100%

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

Cumulative 6AA 26A % Retair 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 98.2 100.0 100.0 99.1 0.9 0.9 3/4" 86.1 100.0 100.0 92.7 6.3 7.3 1/2' 41.5 97.0 100.0 69.1 23.6 30.9 3/8' 22.1 87.6 100.0 10.9 58.1 41.9 #4 2.9 17.6 97.7 41.4 16.7 58.6 #8 1.3 4.2 86.0 34.9 6.5 65.1 #16 1.1 2.1 71.7 29.0 5.9 71.0 #30 50.7 20.7 8.3 79.3 1.1 1.6 #50 1.1 1.5 22.2 9.4 11.2 90.6 #100 1.0 1.4 3.8 2.1 7.3 97.9 LBW 0.8 0.8

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

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

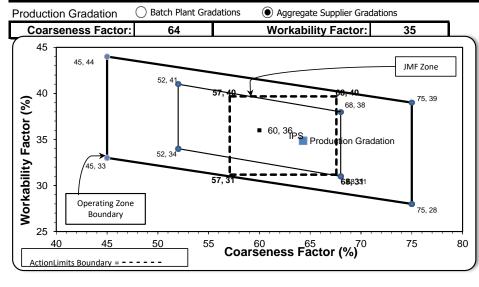
nom. max., #100 and #200 sieves.

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

PLANT #: P-39

Concrete Grade: S2M, 3500HP

Sample Date: 5/15/23
Dates Test Represents: 5/16/2023

5/16/2023 through 5/22/2023

| MDOT No.: | |
|-----------|--|
| | |

| 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 |
| 2NS | 44-051 | Krake Willis Rd | 1250 | 7.56 | 2.65 | 41.0 |
| | | Total Wt | 3050 | 18.57 | | 100.0 |

<---- Verify this number is 100%

Contractor:

| SUPERIOR |
|----------|

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 | 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" | 98.1 | 100.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 3/4" | 79.2 | 100.0 | 100.0 | 89.3 | 9.7 | 10.7 |
| 1/2" | 37.7 | 96.1 | 100.0 | 67.6 | 21.7 | 32.4 |
| 3/8" | 20.4 | 87.7 | 100.0 | 58.1 | 9.5 | 41.9 |
| #4 | 2.6 | 23.2 | 97.0 | 42.8 | 15.3 | 57.2 |
| #8 | 1.4 | 6.2 | 83.8 | 35.5 | 7.3 | 64.5 |
| #16 | 1.2 | 3.4 | 68.6 | 29.0 | 6.5 | 71.0 |
| #30 | 1.2 | 2.9 | 50.2 | 21.4 | 7.6 | 78.6 |
| #50 | 1.2 | 2.7 | 22.4 | 10.0 | 11.4 | 90.0 |
| #100 | 1.1 | 2.5 | 5.4 | 3.0 | 7.0 | 97.0 |
| LBW | 1.0 | 2.3 | 1.0 | 1.1 | 1.9 | 98.9 |
| · | O B + + B + + G + | | | · | | |

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

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

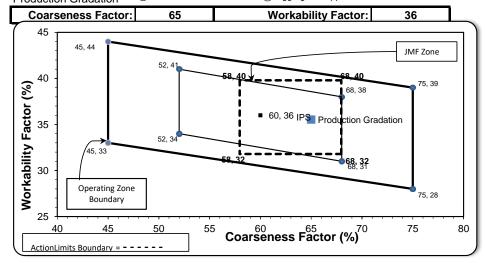
nom. max., #100 and #200 sieves.

*% 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)

| Coar | Coarseness Factor: | | |
|-------|---------------------|----------|------------|
| Wor | 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 Approved By

Total Wt

PLANT #: P-02

Sample Date:

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

18.57

| ates Test Represents: | | 5/16/2023 | tnrougn | 5/22/2023 | | |
|-----------------------|--------|--------------|--------------|-----------------|---------------------|-------------------|
| \gg. 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 |

3050

Contractor:

MDOT No.:

---- Verify this number is 100%

| | RIOR |
|---|------|
| _ | |

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" | 98.2 | 100.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 3/4" | 86.1 | 100.0 | 100.0 | 92.2 | 6.8 | 7.8 |
| 1/2" | 41.5 | 97.0 | 100.0 | 66.9 | 25.2 | 33.1 |
| 3/8" | 22.1 | 87.6 | 100.0 | 55.7 | 11.2 | 44.3 |
| #4 | 2.9 | 17.6 | 96.6 | 41.2 | 14.5 | 58.8 |
| #8 | 1.3 | 4.2 | 80.0 | 33.1 | 8.0 | 66.9 |
| #16 | 1.1 | 2.1 | 64.0 | 26.5 | 6.6 | 73.5 |
| #30 | 1.1 | 1.6 | 48.2 | 20.1 | 6.4 | 79.9 |
| #50 | 1.1 | 1.5 | 25.1 | 10.8 | 9.3 | 89.2 |
| #100 | 1.0 | 1.4 | 3.9 | 2.2 | 8.6 | 97.8 |
| LBW | 0.8 | 1.2 | 0.5 | 0.7 | 1.5 | 99.3 |

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

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

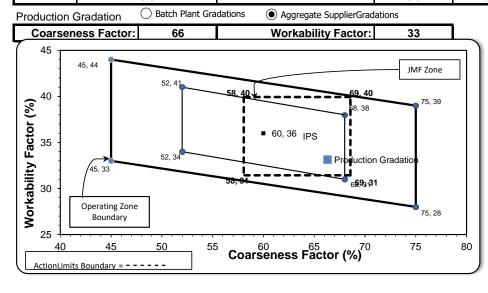
nom. max., #100 and #200 sieves.

*% 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 | 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" | 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 |