PLANT #: P-101

Sample Date:

6/27/22 Concrete Grade: P1M, 3500HP

| ٠. | , | |
|----|-------------|-----------|
| | | MDOT No.: |
| I | % | • |
| П | Camtulbtlan | |

| Dates Test F | Represents: | 6/28/2022 | through | 7/4/2022 | | |
|--------------|-------------|--------------|--------------|-----------------|----------|--------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific | % |
| Ayy. Class | FIL# | Source | weight (SSD) | 11 | 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:

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

| | Total Wt | 3070 | 18.67 | | 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" | 97.3 | 100 | 0.0 | 100.0 | 99.1 | 0.9 | 0.9 |
| 1" | 46.8 | 100 | 0.0 | 100.0 | 81.5 | 17.6 | 18.5 |
| 3/4" | 12.0 | 98 | .3 | 100.0 | 68.9 | 12.6 | 31.1 |
| 1/2" | 3.3 | 79 | .7 | 100.0 | 61.0 | 7.9 | 39.0 |
| 3/8" | 2.3 | 56 | .3 | 100.0 | 54.6 | 6.4 | 45.4 |
| #4 | 1.8 | 16 | .2 | 98.8 | 43.5 | 11.1 | 56.5 |
| #8 | 1.7 | 6. | 3 | 83.4 | 34.8 | 8.6 | 65.2 |
| #16 | 1.6 | 3. | 9 | 66.9 | 27.7 | 7.1 | 72.3 |
| #30 | 1.6 | 3. | 3 | 49.8 | 20.9 | 6.8 | 79.1 |
| #50 | 1.5 | 3. | 0 | 24.3 | 10.8 | 10.1 | 89.2 |
| #100 | 1.4 | 2. | 8 | 6.5 | 3.8 | 7.0 | 96.2 |
| LBW | 1.2 | 2. | 6 | 0.9 | 1.4 | 2.3 | 98.6 |

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

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

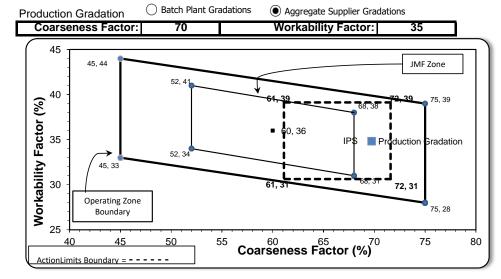
nom. max., #100 and #200 sieves.

*% 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.



Initial Production Sample (IPS)

| Coarseness Factor: | | 66 | |
|--------------------|--------------------|----------|------------|
| 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" | 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:

PLANT #: P-102

Sample Date:

6/27/22 Concrete Grade: P1M, 3500HP 7/4/2022

| Dates Test F | Represents: | 6/28/2022 | through | 7/4/2022 | | |
|--------------|-------------|---------------|--------------|-----------------|---------------------|-------------------|
| 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 |

MDOT No.:

Contractor:

---- Verify this number is 100%

| SUPERIOR MATERIALS |
|-----------------------|

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

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

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

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

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

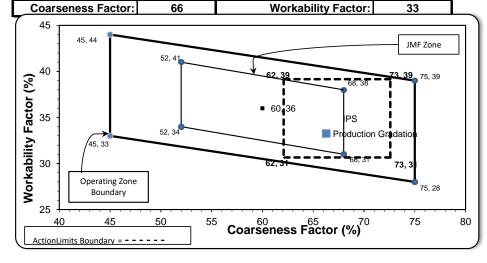
nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

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

| | Total We | 0120 | 10.70 | 100.0 | < verily tills if | umber 13 10070 |
|-------|----------|-------|-------|-------------------------|-------------------|--------------------------|
| 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" | 58.8 | 100.0 | 100.0 | 81.9 | 18.1 | 18.1 |
| 3/4" | 32.8 | 100.0 | 100.0 | 70.5 | 11.4 | 29.5 |
| 1/2" | 12.1 | 93.4 | 100.0 | 60.2 | 10.3 | 39.8 |
| 3/8" | 7.6 | 79.2 | 100.0 | 55.8 | 4.5 | 44.2 |
| #4 | 1.8 | 25.9 | 99.6 | 43.7 | 12.1 | 56.3 |
| #8 | 1.3 | 6.9 | 81.8 | 33.2 | 10.4 | 66.8 |
| #16 | 1.1 | 3.8 | 64.2 | 25.8 | 7.4 | 74.2 |
| #30 | 1.0 | 2.6 | 46.7 | 18.9 | 7.0 | 81.1 |
| #50 | 0.8 | 2.2 | 24.9 | 10.3 | 8.5 | 89.7 |
| #100 | 0.8 | 2.1 | 8.1 | 3.8 | 6.5 | 96.2 |
| LBW | 0.6 | 2.6 | 1.6 | 1.3 | 2.5 | 98.7 |

Production Gradation Aggregate Supplier Gradations



Intial Production Sample (IPS)

| Coars | Coarseness Factor: | | |
|-------|--------------------|----------|------------|
| Worl | 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" | 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 |

PLANT #: P-103

Sample Date:

6/27/22 Concrete Grade: **P1M, 3500HP**

18.70

| Jales Test F | represents: | 0/20/2022 | through | 7/4/2022 | | |
|--------------|-------------|---------------|--------------|-----------------|---------------------|-------------------|
| 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 |

3120

Contractor:

MDOT No.:

100.0

<---- Verify this number is 100%

| SUPERIOR MATERIALS |
|-----------------------|

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 | ĺ |
| 1.5" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | ĺ |
| 1" | 58.8 | 100.0 | 100.0 | 81.9 | 18.1 | 18.1 | ĺ |
| 3/4" | 32.8 | 100.0 | 100.0 | 70.5 | 11.4 | 29.5 | ĺ |
| 1/2" | 12.1 | 93.4 | 100.0 | 60.2 | 10.3 | 39.8 | ĺ |
| 3/8" | 7.6 | 79.2 | 100.0 | 55.8 | 4.5 | 44.2 | ĺ |
| #4 | 1.8 | 25.9 | 99.6 | 43.7 | 12.1 | 56.3 | ı |
| #8 | 1.3 | 6.9 | 81.8 | 33.2 | 10.4 | 66.8 | n |
| #16 | 1.1 | 3.8 | 64.2 | 25.8 | 7.4 | 74.2 | ı |
| #30 | 1.0 | 2.6 | 46.7 | 18.9 | 7.0 | 81.1 | n |
| #50 | 0.8 | 2.2 | 24.9 | 10.3 | 8.5 | 89.7 | ĺ |
| #100 | 0.8 | 2.1 | 8.1 | 3.8 | 6.5 | 96.2 | а |
| LBW | 0.6 | 2.6 | 1.6 | 1.3 | 2.5 | 98.7 | ĺ |

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

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

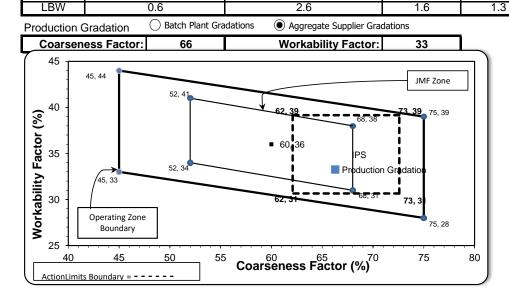
nom. max., #100 and #200 sieves.

 $^{*}\%$ 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 Approved BY:

PLANT #: P-12

Sample Date:

Concrete Grade: P1M, 3500HP 6/27/22

18.69

| Jales Test F | represents: | 0/20/2022 | through | 7/4/2022 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| 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 | 63-115 | Ray Rd | 1250 | 7.56 | 2.65 | 40.7 |

3070

Contractor:

MDOT No.:

100.0

<---- Verify this number is 100%

| 5 | SUPERIOR MATERIALS |
|----|-------------------------|
| ve | Superior Materials, LLC |
| ed | 30701 W. 10 Mile Rd. |

| 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.

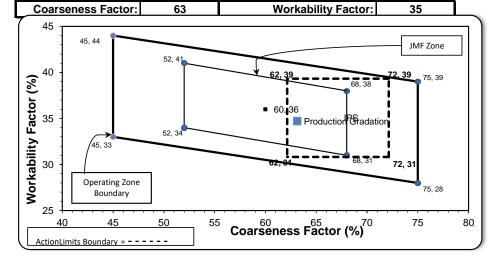
*% Retained must be at least 4% for each sieve except max.,

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.

| Sieve | CA | IA | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained | |
|--------------|----------------------|-------|-------|----------------------|------------|-----------------------|--|
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | |
| 1.5" | 94.5 | 100.0 | 100.0 | 98.3 | 1.7 | 1.7 | |
| 1" | 41.3 | 100.0 | 100.0 | 81.5 | 16.8 | 18.5 | |
| 3/4" | 6.1 | 100.0 | 100.0 | 70.3 | 11.1 | 29.7 | |
| 1/2" | 1.0 | 84.7 | 100.0 | 64.5 | 5.8 | 35.5 | |
| 3/8" | 1.0 | 64.1 | 100.0 | 58.8 | 5.7 | 41.2 | |
| #4 | 0.9 | 18.8 | 96.8 | 44.9 | 13.9 | 55.1 | |
| #8 | 0.9 | 6.7 | 80.0 | 34.7 | 10.2 | 65.3 | |
| #16 | 0.9 | 4.1 | 63.2 | 27.2 | 7.6 | 72.8 | |
| #30 | 0.8 | 3.4 | 47.4 | 20.5 | 6.7 | 79.5 | |
| #50 | 0.8 | 3.0 | 26.3 | 11.8 | 8.7 | 88.2 | |
| #100 | 0.8 | 2.7 | 5.3 | 3.2 | 8.6 | 96.8 | |
| LBW | 0.6 | 2.1 | 0.6 | 1.0 | 2.1 | 99.0 | |
| Production (| Production Gradation | | | | | | |



| Coars | Coarseness Factor: | | |
|-------|---------------------|----------|------------|
| Worl | 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 Approved By:

6/27/22

PLANT #: P-32

Sample Date:

Concrete Grade: P1M, 3500HP

| Dates Test F | Represents: | 6/28/2022 | through | 7/4/2022 | | |
|--------------|-------------|--------------|--------------|------------------------------|---------|--------------|
| Agg. Class | Pit # | Source | Weight (SSD) | Weight (SSD) ft ³ | | % |
| Ayy. Class | FIL# | Source | weight (SSD) | It | Gravity | Contribution |
| CA | 71-47 | Presque Isle | 950 | 5.81 | 2.62 | 30.9 |
| IA | 71-47 | Presque Isle | 870 | 5.32 | 2.62 | 28.3 |
| 2NS | 95-013 | Smelter Bay | 1250 | 7 56 | 2 65 | 40.7 |

3070

Contractor:

MDOT No.:



---- Verify this number is 100%

| ined | Cumulative % Retained | Superior Materials, LLC |
|------|-----------------------|----------------------------|
| | 0.0 | Suite 500 |
| | 1.7 | 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" | 94.5 | 100 | .0 | 100.0 | 98.3 | 1.7 | 1.7 |
| 1" | 41.3 | 100 | .0 | 100.0 | 81.8 | 16.5 | 18.2 |
| 3/4" | 6.1 | 100 | .0 | 100.0 | 70.9 | 10.9 | 29.1 |
| 1/2" | 1.0 | 84. | 7 | 100.0 | 65.0 | 5.9 | 35.0 |
| 3/8" | 1.0 | 64. | 1 | 100.0 | 59.2 | 5.8 | 40.8 |
| #4 | 0.9 | 18. | 8 | 96.7 | 45.0 | 14.2 | 55.0 |
| #8 | 0.9 | 6.7 | 7 | 84.5 | 36.6 | 8.4 | 63.4 |
| #16 | 0.9 | 4.1 | 1 | 69.5 | 29.7 | 6.8 | 70.3 |
| #30 | 0.8 | 3.4 | 1 | 49.8 | 21.5 | 8.3 | 78.5 |
| #50 | 0.8 | 3.0 |) | 24.3 | 11.0 | 10.5 | 89.0 |
| #100 | 0.8 | 2.7 | 7 | 6.7 | 3.7 | 7.3 | 96.3 |
| LBW | 0.6 | 2.1 | 1 | 1.1 | 1.2 | 2.5 | 98.8 |

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

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

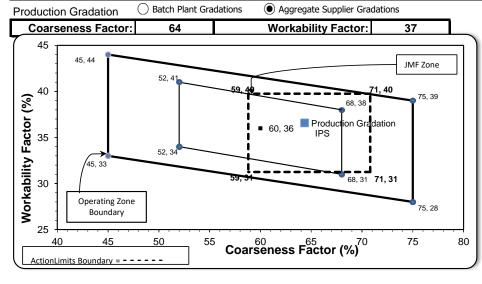
nom. max., #100 and #200 sieves.

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

PLANT #: P-35

Concrete Grade: P1M, 3500HP

Sample Date: 6/27/22
Dates Test Represents: 6/28/2022

6/28/2022 through 7/4/2022

| | MDOT |
|-------|------|
|) | |
| ution | |
| | |

Contractor:

No.:

Specific ft³ Agg. Class Pit# Source Weight (SSD) Gravity Contrib CA 58-003 Stoneco 1370 8.16 2.69 43.9 IΑ 58-003 Stoneco 550 3.28 2.69 17.6 2NS 81-019 Pleasant Lake 1200 7.26 2.65 38.5

<---- Verify this number is 100%

| SUPERIOR MATERIALS | |
|-----------------------|--|

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

| | Total Wt | 3120 | 18.70 | | 100.0 | < Verify this n | umber is 100% |
|-------|----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | CA | IA | 1 | 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" | 58.8 | 100 | 0.0 | 100.0 | 81.9 | 18.1 | 18.1 |
| 3/4" | 32.8 | 100 | 0.0 | 100.0 | 70.5 | 11.4 | 29.5 |
| 1/2" | 12.1 | 93 | .4 | 100.0 | 60.2 | 10.3 | 39.8 |
| 3/8" | 7.6 | 79 | .2 | 100.0 | 55.8 | 4.5 | 44.2 |
| #4 | 1.8 | 25 | .9 | 99.6 | 43.7 | 12.1 | 56.3 |
| #8 | 1.3 | 6. | 9 | 81.8 | 33.2 | 10.4 | 66.8 r |
| #16 | 1.1 | 3. | 8 | 64.2 | 25.8 | 7.4 | 74.2 |
| #30 | 1.0 | 2. | 6 | 46.7 | 18.9 | 7.0 | 81.1 r |
| #50 | 0.8 | 2.2 | | 24.9 | 10.3 | 8.5 | 89.7 |
| #100 | 0.8 | 2.1 | | 8.1 | 3.8 | 6.5 | 96.2 a |
| LBW | 0.6 | 2. | 6 | 1.6 | 1.3 | 2.5 | 98.7 |

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

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

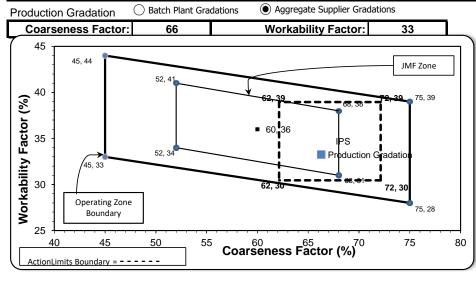
nom. max., #100 and #200 sieves.

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

PLANT #: P-36 Contractor:

6/27/22 Concrete Grade: P1M, 3500HP Sample Date: Dates Test Represents: 6/28/2022 7/4/2022 through

| 24100 10011 | 100.000 | 0,-0,-0- | u o u.g | ., ., | | |
|-------------|---------|--------------|--------------|-----------------|---------------------|-------------------|
| 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 |

MDOT No.:

--- Verify this number is 100%

| SUPE | RIOR |
|------|------|

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" | 94.5 | 100.0 | 100.0 | 98.4 | 1.6 | 1.6 |
| 1" | 41.3 | 100.0 | 100.0 | 82.8 | 15.6 | 17.2 |
| 3/4" | 6.1 | 100.0 | 100.0 | 72.5 | 10.3 | 27.5 |
| 1/2" | 1.0 | 84.7 | 100.0 | 66.1 | 6.3 | 33.9 |
| 3/8" | 1.0 | 64.1 | 100.0 | 59.6 | 6.5 | 40.4 |
| #4 | 0.9 | 18.8 | 97.9 | 44.5 | 15.2 | 55.5 |
| #8 | 0.9 | 6.7 | 84.5 | 35.4 | 9.1 | 64.6 |
| #16 | 0.9 | 4.1 | 70.5 | 29.1 | 6.3 | 70.9 |
| #30 | 0.8 | 3.4 | 53.6 | 22.3 | 6.9 | 77.7 |
| #50 | 0.8 | 3.0 | 26.7 | 11.6 | 10.6 | 88.4 |
| #100 | 0.8 | 2.7 | 4.0 | 2.7 | 9.0 | 97.3 |

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

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

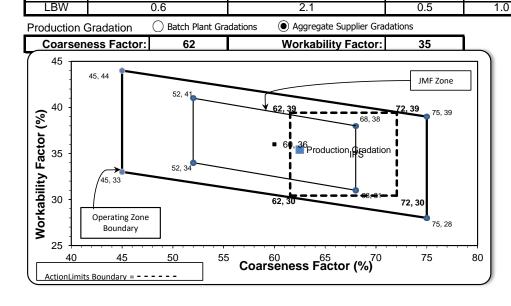
nom. max., #100 and #200 sieves.

*% 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)

99.0

| 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 |

6/27/22

Krake Willis Ro

PLANT #: P-39

44-051

Sample Date:

2NS

Concrete Grade: P1M, 3500HP

2.65

| ates Test F | Represents: | 6/28/2022 | through | 7/4/2022 | | |
|-------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| ∖gg. 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 |

1250

Contractor:

MDOT No.:



| SUPERI | |
|--------------------|----------|
| Superior Materia | |
| Superior iviateria | ais, 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/ | IA | | Cumulative % Passing | % Retained | Cumulative % Retained |
| 2" | 100.0 | 100 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 97.3 | 100 | 0.0 | 100.0 | 99.1 | 0.9 | 0.9 |
| 1" | 46.8 | 100 | 0.0 | 100.0 | 82.3 | 16.8 | 17.7 |
| 3/4" | 12.0 | 98 | 98.3 | | 70.3 | 12.0 | 29.7 |
| 1/2" | 3.3 | 79 | 79.7 | | 62.6 | 7.7 | 37.4 |
| 3/8" | 2.3 | 56 | 5.3 | 100.0 | 56.2 | 6.4 | 43.8 |
| #4 | 1.8 | 16 | 5.2 | 97.2 | 44.4 | 11.8 | 55.6 |
| #8 | 1.7 | 6. | .3 | 83.4 | 36.2 | 8.2 | 63.8 r |
| #16 | 1.6 | 3. | .9 | 68.0 | 29.2 | 6.9 | 70.8 |
| #30 | 1.6 | 3. | 3.3 | | 22.1 | 7.1 | 77.9 r |
| #50 | 1.5 | 3. | 3.0 | | 12.0 | 10.1 | 88.0 |
| #100 | 1.4 | | 2.8 | | 4.9 | 7.1 | 95.1 a |
| LBW | 1.2 | 2. | .6 | 2.0 | 1.9 | 3.1 | 98.1 |

7.56

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

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

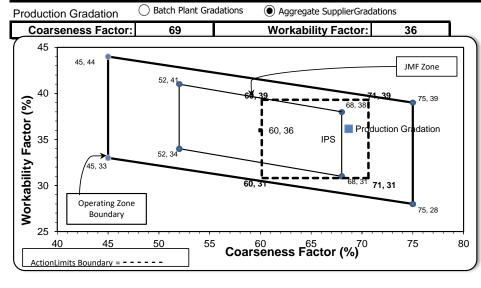
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 8% for the 1" sieve when

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



Intial Production Sample (IPS)

| Coars | eness Factor: | 65 | |
|-------|-----------------|----------|------------|
| Work | ability Factor: | 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 |

6/27/22

PLANT #: P-02

Sample Date:

Concrete Grade: P1M, 3500HP

| Dates Test F | Represents: | 6/28/2022 | through | 7/4/2022 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 71-47 | Presque Isle | 950 | 5.81 | 2.62 | 30.9 |
| IA | 71-47 | Presque Isle | 870 | 5.32 | 2.62 | 28.3 |
| 2NS | 63-115 | Ray Rd | 1250 | 7.56 | 2.65 | 40.7 |

3070

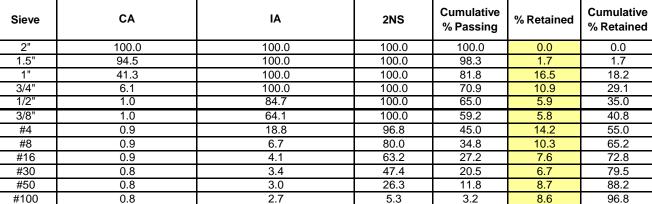
Contractor:

MDOT No.:



---- Verify this number is 100%

| tained | Cumulative % Retained | <u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd. |
|--------|--------------------------|--|
| 0.0 | 0.0 | Suite 500 |



18.69

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

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

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

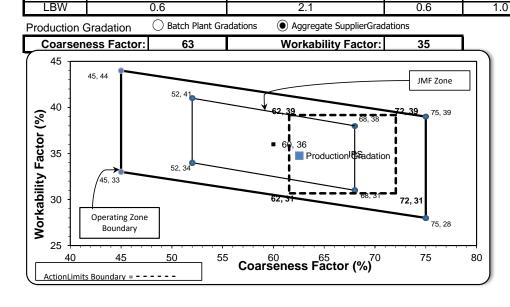
*% Retained must be at least 4% for each sieve except max.,

Farmington Hills, MI 48336

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)

99.0

2.1

| 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" | 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 |