# Aggregate Optimization Chart

Production Gradation Report

**PLANT #:** **P-36**

Contractor: _____

Sample Date: 10/28/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 10/29/2026 through 11/4/2026

MDOT No.: _____

| Agg. Class | Pit # | Source | Weight (SSD) | ft³ | Specific Gravity | % Contribution |
|---|---|---|---|---|---|---|
| 6AA | 71-47 | Presque Isle | 1210 | 7.55 | 2.57 | 40.7 |
| 26A | 71-47 | Presque Isle | 580 | 3.62 | 2.57 | 19.5 |
| 2NS | 63-115 | Ray Rd | 1180 | 7.08 | 2.67 | 39.7 |
| | | **Total Wt** | **2970** | **18.24** | | 100.0 |

<----- Verify this number 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" | 99.6 | 100.0 | 100.0 | 99.8 | 0.2 | 0.2 |
| 3/4" | 85.8 | 100.0 | 100.0 | 94.2 | 5.6 | 5.8 |
| 1/2" | 35.4 | 97.4 | 100.0 | 73.2 | 21.0 | 26.8 |
| 3/8" | 16.4 | 83.4 | 100.0 | 62.7 | 10.5 | 37.3 |
| #4 | 2.9 | 18.2 | 97.2 | 43.4 | 19.3 | 56.6 |
| #8 | 2.0 | 5.6 | 85.5 | 35.9 | 7.5 | 64.1 |
| #16 | 1.8 | 3.1 | 65.2 | 27.2 | 8.6 | 72.8 |
| #30 | 1.7 | 2.3 | 48.8 | 20.5 | 6.7 | 79.5 |
| #50 | 1.6 | 2.2 | 24.8 | 10.9 | 9.6 | 89.1 |
| #100 | 1.6 | 1.9 | 4.9 | 3.0 | 8.0 | 97.0 |
| LBW | 1.2 | 1.7 | 0.7 | 1.1 | 1.9 | 98.9 |


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*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

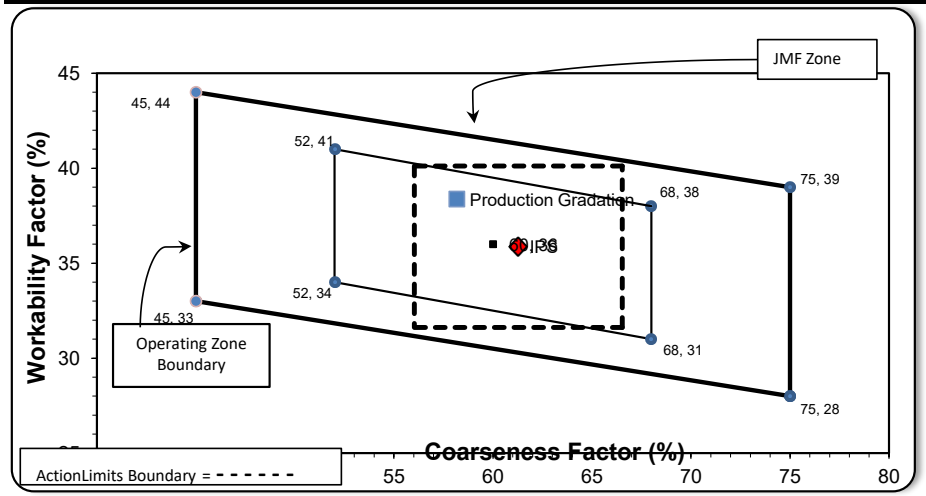
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

| Coarseness Factor: | 58 | Workability Factor: | 36 | Adjusted WF 38.4 |
|---|---|---|---|---|

Intial Production Sample (IPS)

| Coarseness Factor: | 61 |
|---|---|
| Workability Factor: | 36 |

| Sieve | Cumulative % Passing | % Retained | Cumulative % Retained |
|---|---|---|---|
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 100.0 | 0.0 | 0.0 |
| 1" | 99.3 | 0.7 | 0.7 |
| 3/4" | 89.2 | 10.1 | 10.8 |
| 1/2" | 70.7 | 18.5 | 29.3 |
| 3/8" | 60.7 | 10.0 | 39.3 |
| #4 | 44.4 | 16.3 | 55.6 |
| #8 | 35.9 | 8.5 | 64.1 |
| #16 | 27.3 | 8.6 | 72.7 |
| #30 | 19.1 | 8.2 | 80.9 |
| #50 | 7.4 | 11.7 | 92.6 |
| #100 | 1.9 | 5.6 | 98.1 |
| LBW | 0.7 | 1.2 | 99.3 |




PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

# Aggregate Optimization Chart

Production Gradation Report

**PLANT #:** **P-39**

Contractor:

Sample Date: 10/28/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 10/29/2026 through 11/4/2026

MDOT No.:

| Agg. Class | Pit # | Source | Weight (SSD) | ft³ | Specific Gravity | % Contribution |
|---|---|---|---|---|---|---|
| 6AA | 71-47 | Presque Isle | 1360 | 8.48 | 2.57 | 44.4 |
| 26A | 71-47 | Presque Isle | 500 | 3.12 | 2.57 | 16.3 |
| 2NS | 63-0009 | Koenig | 1200 | 7.26 | 2.65 | 39.2 |
| | | **Total Wt** | **3060** | **18.86** | | 100.0 |

<----- Verify this number is 100%

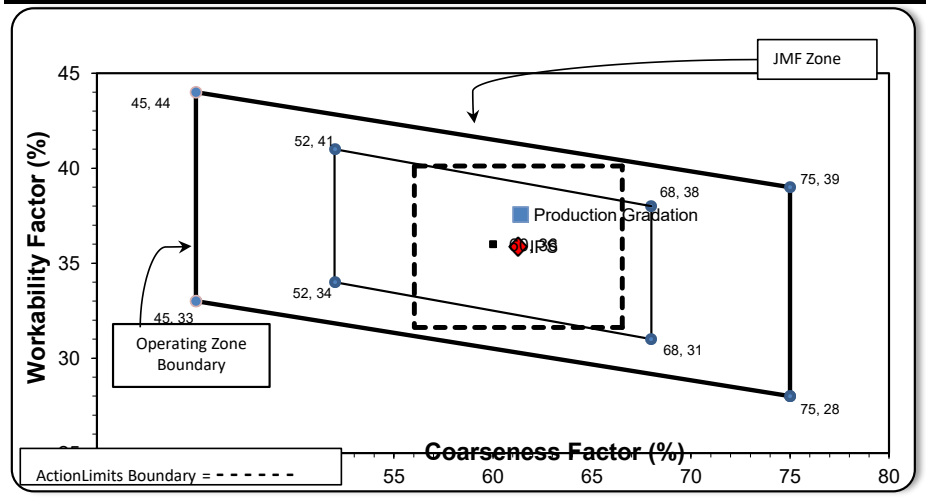
| Sieve | 6AA | 26A | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
|---|---|---|---|---|---|---|
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1" | 99.6 | 100.0 | 100.0 | 99.8 | 0.2 | 0.2 |
| 3/4" | 85.8 | 100.0 | 100.0 | 93.7 | 6.1 | 6.3 |
| 1/2" | 35.4 | 97.4 | 100.0 | 70.9 | 22.8 | 29.1 |
| 3/8" | 16.4 | 83.4 | 100.0 | 60.1 | 10.7 | 39.9 |
| #4 | 2.9 | 18.2 | 97.2 | 42.4 | 17.8 | 57.6 |
| #8 | 2.0 | 5.6 | 84.8 | 35.1 | 7.3 | 64.9 |
| #16 | 1.8 | 3.1 | 70.2 | 28.8 | 6.2 | 71.2 |
| #30 | 1.7 | 2.3 | 51.2 | 21.2 | 7.6 | 78.8 |
| #50 | 1.6 | 2.2 | 25.0 | 10.9 | 10.3 | 89.1 |
| #100 | 1.6 | 1.9 | 5.3 | 3.1 | 7.8 | 96.9 |
| LBW | 1.2 | 1.7 | 0.3 | 0.9 | 2.2 | 99.1 |


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*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

| Coarseness Factor: | 61 | Workability Factor: | 35 | Adjusted WF 37.6 |
|---|---|---|---|---|




Intial Production Sample (IPS)

| Coarseness Factor: | 61 |
|---|---|
| Workability Factor: | 36 |

| Sieve | Cumulative % Passing | % Retained | Cumulative % Retained |
|---|---|---|---|
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 100.0 | 0.0 | 0.0 |
| 1" | 99.3 | 0.7 | 0.7 |
| 3/4" | 89.2 | 10.1 | 10.8 |
| 1/2" | 70.7 | 18.5 | 29.3 |
| 3/8" | 60.7 | 10.0 | 39.3 |
| #4 | 44.4 | 16.3 | 55.6 |
| #8 | 35.9 | 8.5 | 64.1 |
| #16 | 27.3 | 8.6 | 72.7 |
| #30 | 19.1 | 8.2 | 80.9 |
| #50 | 7.4 | 11.7 | 92.6 |
| #100 | 1.9 | 5.6 | 98.1 |
| LBW | 0.7 | 1.2 | 99.3 |

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