

# Aggregate Optimization Chart

MIX ID'S: DDD0K7E7 and DDD0K7E9

Production Gradation Report

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

Sample Date: 11/21/16

Concrete Grade: **DM**

Contractor: \_\_\_\_\_

Dates Test Represents: \_\_\_\_\_ to \_\_\_\_\_

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1405	8.37	2.69	47.1
26A	71-47	Presque Isle	380	2.32	2.62	12.7
2NS	63-92	AA Grange Hall	1200	7.26	2.65	40.2
<b>Total Wt</b>			<b>2985</b>	<b>17.95</b>		<b>100.0</b>

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



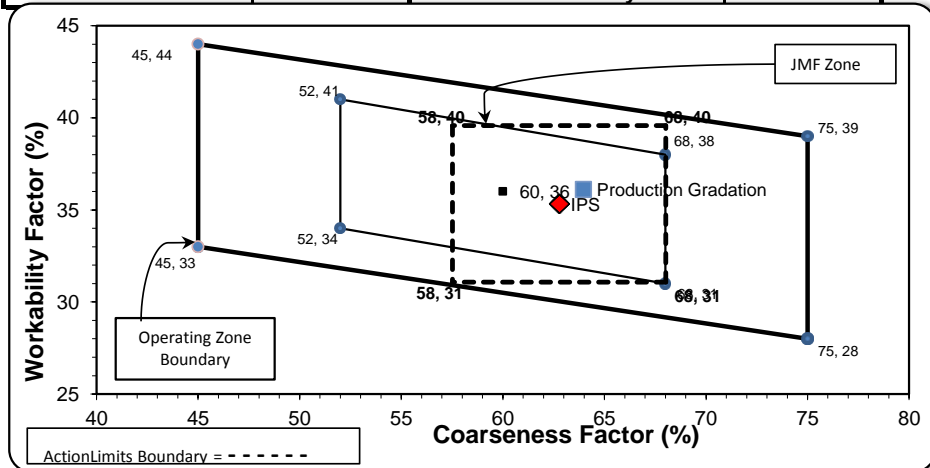
**Superior Materials, LLC**  
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Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.9	100.0	100.0	100.0	0.0	0.0
3/4"	82.1	100.0	100.0	91.6	8.4	8.4
1/2"	37.7	99.0	100.0	70.5	21.0	29.5
3/8"	15.3	92.1	100.0	59.1	11.4	40.9
#4	2.6	22.5	98.0	43.5	15.6	56.5
#8	1.5	6.5	86.0	36.1	7.4	63.9
#16	1.4	3.6	70.0	29.3	6.8	70.7
#30	1.1	3.0	49.0	20.6	8.7	79.4
#50	0.9	2.7	17.7	7.9	12.7	92.1
#100	0.8	2.4	2.5	1.7	6.2	98.3
LBW	0.9	1.7	0.5	0.8	0.8	99.2

\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 13% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 5% 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 Gradations  Aggregate Supplier Gradations

Coarseness Factor: **64**      Workability Factor: **36**



Initial Production Sample (IPS)

Coarseness Factor: **63**  
 Workability Factor: **35**

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.9	0.1	0.1
3/4"	89.1	10.8	10.9
1/2"	71.3	17.8	28.7
3/8"	59.4	11.9	40.6
#4	42.6	16.8	57.4
#8	35.3	7.3	64.7
#16	28.5	6.8	71.5
#30	20.9	7.6	79.1
#50	9.0	12.0	91.0
#100	1.7	7.3	98.3
LBW	0.7	1.0	99.3

PREPARED BY:  
 SM, LLC Technical Service

Approved By: