

Aggregate Optimization Chart

MIX ID'S: DDD0K7E7 and DDD0K7E9

Production Gradation Report

PLANT #: **P-103**

Sample Date: 6/5/17

Concrete Grade: **DM**

Contractor: _____

Dates Test Represents: 6/5/2017 to 6/11/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1525	9.09	2.69	51.0
26A	58-003	Stoneco	225	1.34	2.69	7.5
2NS	81-93	Burmeister	1240	7.53	2.64	41.5
Total Wt			2990	17.95		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	88.0	100.0	100.0	93.9	6.1	6.1
1/2"	51.9	99.4	100.0	75.4	18.5	24.6
3/8"	29.3	85.5	100.0	62.8	12.6	37.2
#4	4.2	20.5	98.7	44.6	18.2	55.4
#8	1.3	3.9	82.7	35.3	9.4	64.7
#16	0.7	1.8	64.7	27.3	7.9	72.7
#30	0.6	1.5	45.4	19.2	8.1	80.8
#50	0.6	1.4	19.5	8.5	10.7	91.5
#100	0.5	1.3	3.9	2.0	6.5	98.0
LBW	0.6	1.1	0.8	0.7	1.2	99.3

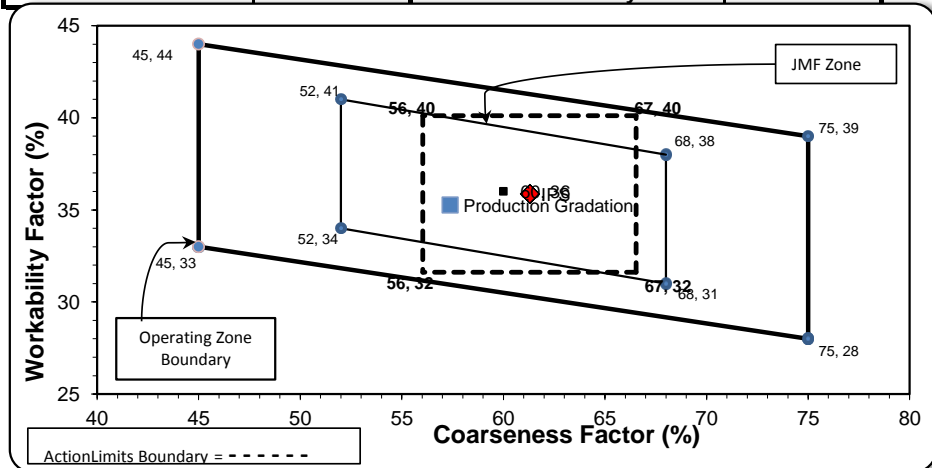
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.



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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	57	Workability Factor:	35
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Initial 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:

Aggregate Optimization Chart

MIX ID'S: DDD0K7E7 and DDD0K7E9

Production Gradation Report

PLANT #: **P-36**

Sample Date: 6/5/17

Concrete Grade: **DM**

Contractor: _____

Dates Test Represents: 6/5/2017 to 6/11/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1560	9.29	2.69	52.2
26A	71-47	Presque Isle	200	1.22	2.62	6.7
2NS	63-92	AA Grange Hall	1230	7.44	2.65	41.1
Total Wt			2990	17.96		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	88.0	100.0	100.0	93.7	6.3	6.3
1/2"	51.9	98.0	100.0	74.8	19.0	25.2
3/8"	29.3	83.8	100.0	62.0	12.7	38.0
#4	4.2	13.9	97.6	43.3	18.8	56.7
#8	1.3	3.5	85.6	36.1	7.1	63.9
#16	0.7	2.3	70.0	29.3	6.8	70.7
#30	0.6	2.1	49.9	21.0	8.3	79.0
#50	0.6	2.0	20.4	8.8	12.1	91.2
#100	0.5	1.9	2.6	1.5	7.4	98.5
LBW	0.6	1.6	0.3	0.5	0.9	99.5

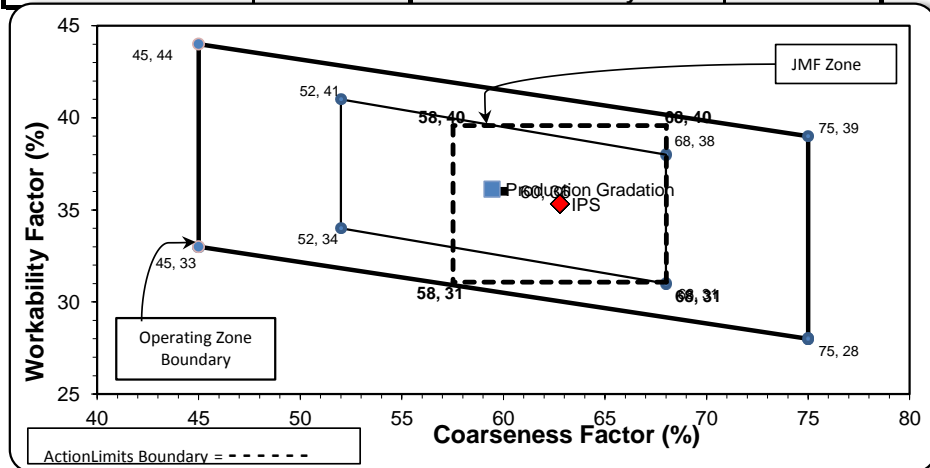


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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **59** **Workability Factor:** **36**



Initial Production Sample (IPS)

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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

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Aggregate Optimization Chart

MIX ID'S: DDD0K7E7 and DDD0K7E9

Production Gradation Report

PLANT #: **P-38**

Sample Date: 6/5/17

Concrete Grade: **DM**

Contractor: _____

Dates Test Represents: 6/5/2017 to 6/11/2017

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3/4"	88.0	100.0	100.0	93.9	6.1	6.1
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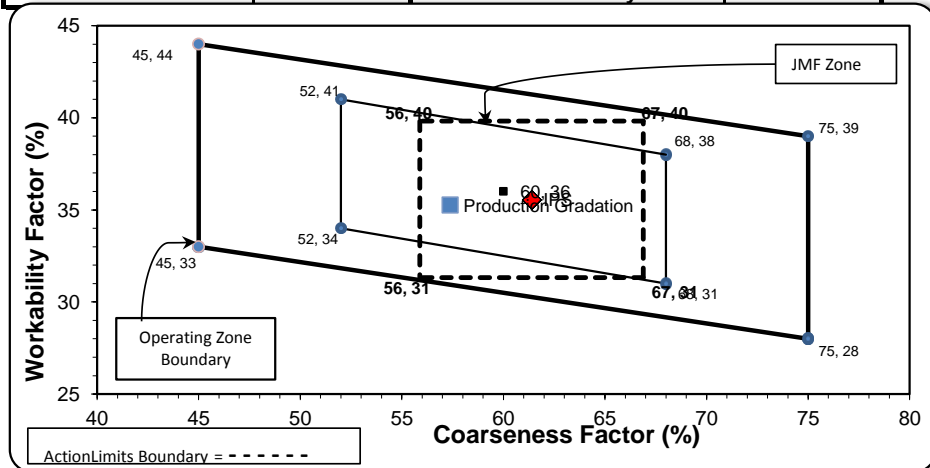


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#16	27.7	7.9	72.3
#30	20.6	7.1	79.4
#50	8.7	11.8	91.3
#100	1.6	7.1	98.4
LBW	1.1	0.6	98.9

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