

Aggregate Optimization Chart

PLANT #: **P-36**

Sample Date: 2/24/20

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 2/25/2020 through 3/2/2020

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1690	10.34	2.62	58.5
26A	71-47	Presque Isle	100	0.61	2.62	3.5
2NS	63-92	Grange Hall	1100	6.65	2.65	38.1
Total Wt			2890	17.60		100.0

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



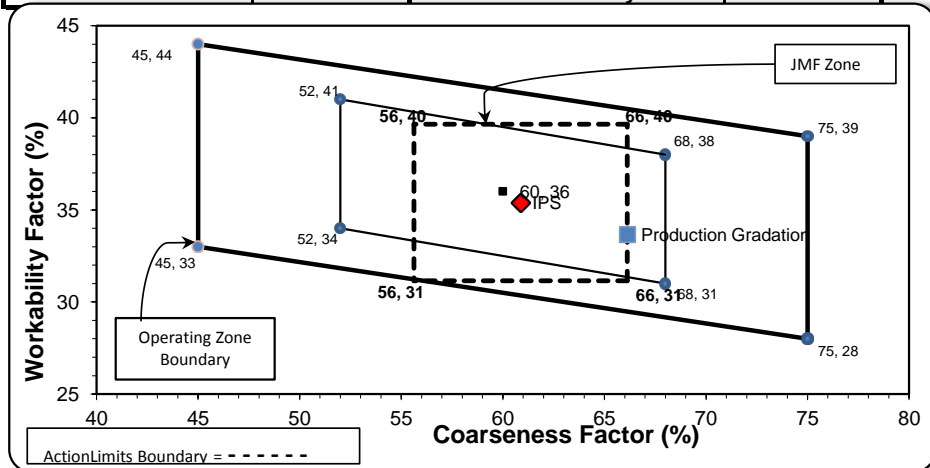
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	97.9	100.0	100.0	98.8	1.2	1.2
3/4"	86.3	100.0	100.0	92.0	6.8	8.0
1/2"	50.7	99.0	100.0	71.1	20.9	28.9
3/8"	26.6	72.3	100.0	56.1	15.0	43.9
#4	4.2	16.2	97.4	40.1	16.0	59.9
#8	2.3	6.6	84.3	33.7	6.4	66.3
#16	1.9	4.4	69.6	27.8	5.9	72.2
#30	1.7	4.0	49.3	19.9	7.9	80.1
#50	1.6	3.6	18.6	8.1	11.8	91.9
#100	1.5	3.4	2.6	2.0	6.2	98.0
LBW	1.1	2.8	0.3	0.9	1.1	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	66	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:		61	
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"	99.1	0.9	0.9
3/4"	90.8	8.3	9.2
1/2"	70.6	20.2	29.4
3/8"	60.7	9.9	39.3
#4	42.3	18.4	57.7
#8	35.4	6.9	64.6
#16	28.7	6.7	71.3
#30	21.3	7.4	78.7
#50	8.8	12.5	91.2
#100	1.8	7.0	98.2
LBW	0.8	1.0	99.2

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-39**

Sample Date: 2/24/20

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 2/25/2020 through 3/2/2020

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.4
26A	71-47	Presque Isle	140	0.86	2.62	4.8
2NS	63-92	Grange Hall	1150	6.95	2.65	39.8
Total Wt			2890	17.60		100.0

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



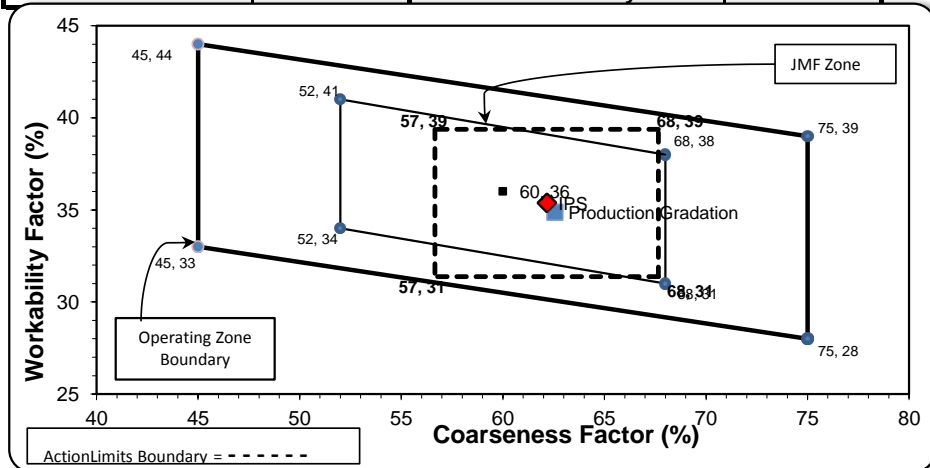
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	98.8	100.0	100.0	99.3	0.7	0.7
3/4"	89.0	100.0	100.0	93.9	5.4	6.1
1/2"	49.7	99.0	100.0	72.1	21.8	27.9
3/8"	28.8	72.3	100.0	59.2	12.9	40.8
#4	3.7	16.2	97.4	41.6	17.6	58.4
#8	1.8	6.6	84.3	34.9	6.7	65.1
#16	1.6	4.4	69.6	28.8	6.1	71.2
#30	1.5	4.0	49.3	20.6	8.2	79.4
#50	1.4	3.6	18.6	8.4	12.3	91.6
#100	1.4	3.4	2.6	2.0	6.4	98.0
LBW	1.2	2.8	0.3	0.9	1.1	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	63	Workability Factor:	35
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Initial Production Sample (IPS)

Coarseness Factor:	62		
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"	100.0	0.0	0.0
3/4"	89.9	10.1	10.1
1/2"	70.9	19.0	29.1
3/8"	59.8	11.1	40.2
#4	42.8	17.0	57.2
#8	35.4	7.4	64.6
#16	28.8	6.5	71.2
#30	21.1	7.7	78.9
#50	9.7	11.4	90.3
#100	3.7	6.1	96.3
LBW	1.2	2.4	98.8

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