

Aggregate Optimization Chart

PLANT #: P11

Sample Date: 6/17/24

Concrete Grade: P1M, 3500HP

Dates Test Represents: 6/20/2024 through 6/24/2024

Contractor: _____

MDOT No.: _____



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

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	820	5.02	2.62	26.7
IA	71-47	Presque Isle	1050	6.42	2.62	34.2
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

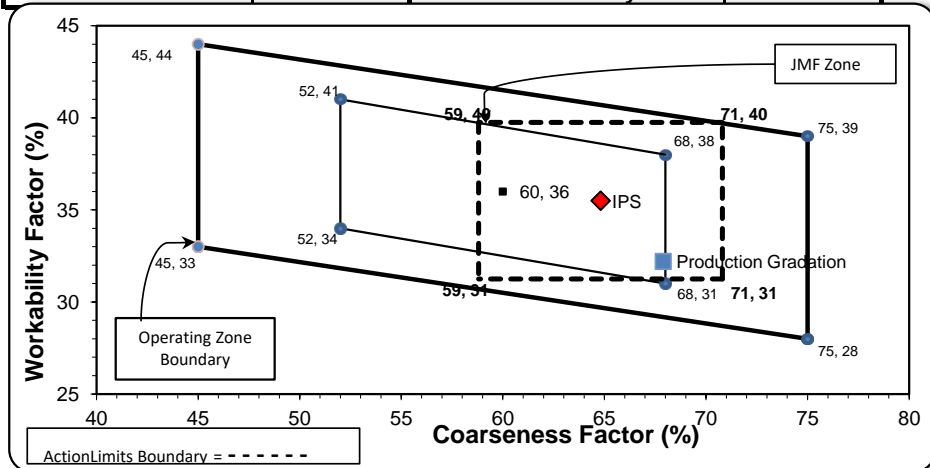
<----- Verify this number is 100%

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.8	100.0	100.0	98.3	1.7	1.7
1"	32.8	100.0	100.0	82.1	16.3	17.9
3/4"	9.4	97.5	100.0	74.9	7.1	25.1
1/2"	3.0	67.8	100.0	63.1	11.9	36.9
3/8"	2.6	41.5	100.0	54.0	9.1	46.0
#4	1.9	4.8	95.6	39.5	14.5	60.5
#8	1.9	1.6	79.7	32.2	7.3	67.8
#16	1.8	1.3	64.1	26.0	6.2	74.0
#30	1.8	1.2	48.6	19.9	6.1	80.1
#50	1.7	1.2	25.8	10.9	8.9	89.1
#100	1.6	1.0	6.1	3.2	7.8	96.8
LBW	1.2	0.8	1.0	1.0	2.2	99.0

*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:	68	Workability Factor:	32
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Initial Production Sample (IPS)

Coarseness Factor:	65		
Workability Factor:	36		
Sieve	Cumulative % Passing	% Retained	Cumulative % 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: