

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

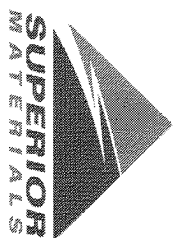
Sample Date: **6/8/20**

Dates Test Represents: **6/9/2020** through **6/15/2020**

Concrete Grade: **P1M**

Contractor: _____

MDOT No.: _____



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

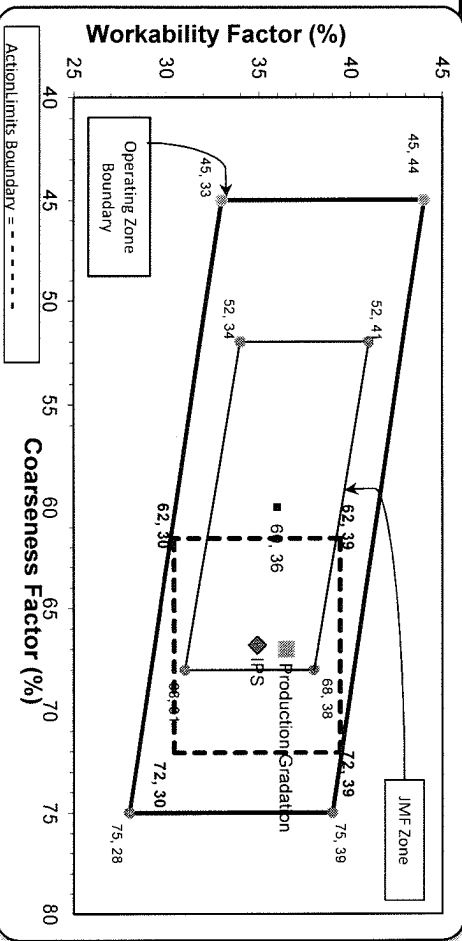
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	870	5.32	2.62	28.3
IA	71-47	Presque Isle	1000	6.12	2.62	32.6
NNS	63-92	Grange Hall	1200	7.26	2.65	39.1
		Total Wt	3070	18.70		100.0

Sieve	CA	IA	NNS	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"	33.1	100.0	100.0	81.0	19.0	19.0
3/4"	8.0	97.8	100.0	73.2	26.8	26.8
1/2"	2.7	78.2	100.0	65.3	34.7	34.7
3/8"	2.5	54.2	100.0	57.5	42.5	42.5
#4	2.5	14.1	97.8	43.5	56.5	56.5
#8	2.3	5.7	86.9	36.5	63.5	63.5
#16	2.3	4.0	73.0	30.5	69.5	69.5
#30	2.2	3.6	48.4	20.7	79.3	79.3
#50	2.2	3.2	17.4	8.5	91.5	91.5
#100	2.1	2.9	2.5	2.5	97.5	97.5
LBW	1.9	2.5	0.7	1.6	98.4	98.4

*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. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)



Sieve	Coarseness Factor:	Workability Factor:	% Retained	Cumulative % Retained
2"	67	35	0.0	0.0
1.5"	67	35	0.0	0.0
1"	67	35	15.0	15.0
3/4"	67	35	27.9	27.9
1/2"	67	35	35.5	35.5
3/8"	67	35	43.5	43.5
#4	67	35	57.3	57.3
#8	67	35	65.1	65.1
#16	67	35	71.0	71.0
#30	67	35	79.0	79.0
#50	67	35	91.8	91.8
#100	67	35	98.4	98.4
LBW	67	35	99.3	99.3

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Plant S36-Superior Auburn Hills

Product 7919-COARSE AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 06/07/2020 - 06/13/2020

Report Date 06/12/2020

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	33.1	%	
	3/4" (19mm)	8.0	%	
	1/2" (12.5mm)	2.7	%	
	3/8" (9.5mm)	2.5	%	
	#4 (4.75mm)	2.5	%	
	#8 (2.36mm)	2.3	%	
	#16 (1.18mm)	2.3	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.8	%	0-2
	Total Moisture	1.64	%	



Plant S36-Superior Auburn Hills

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 06/07/2020 - 06/13/2020

Report Date 06/12/2020

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	97.8	%	
	1/2" (12.5mm)	78.2	%	
	3/8" (9.5mm)	54.2	%	
	#4 (4.75mm)	14.1	%	
	#8 (2.36mm)	5.7	%	
	#16 (1.18mm)	4.0	%	
	#30 (.6mm)	3.6	%	
	#50 (.3mm)	3.2	%	
	#100 (.15mm)	2.9	%	
	#200 (75µm)	2.5	%	
	Wash Loss (#200/75um)	2.4	%	0-3
	Total Moisture	3.77	%	



Plant S36-Superior Auburn Hills

Product 1022-2NS GR

Period: 06/07/2020 - 06/13/2020

Name/Title Doug Storey / QC Technician

Report Date 06/11/2020

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.8	%	95-100
	#8 (2.36mm)	86.9	%	65-95
	#16 (1.18mm)	73.0	%	35-75
	#30 (.6mm)	48.4	%	20-55
	#50 (.3mm)	17.4	%	10-30
	#100 (.15mm)	2.5	%	0-10
	#200 (75µm)	0.7	%	
	FM	2.74		2.6-3
	Wash Loss (#200/75um)	0.4	%	0-3
	Total Moisture	3.56	%	