

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-39**

Sample Date: **8/24/20**

Dates Test Represents: **8/25/2020** through **8/31/2020**

Concrete Grade: **S2M**

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1650	10.09	2.62	54.1
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	41.0
Total Wt						100.0

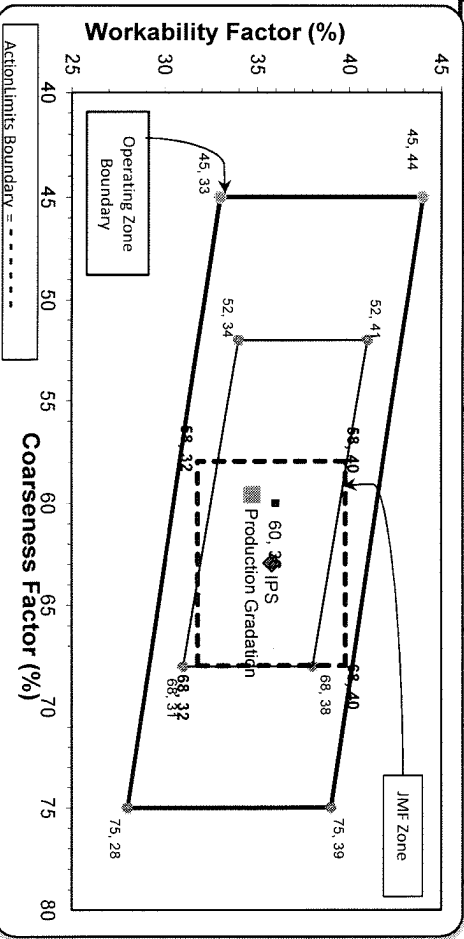
Verify this number is 100%

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"	98.2	100.0	100.0	99.0	1.0	1.0
3/4"	81.2	100.0	100.0	89.8	9.2	10.2
1/2"	48.0	100.0	100.0	97.0	18.1	28.3
3/8"	29.3	86.9	100.0	61.1	10.6	38.9
#4	6.3	28.0	95.6	44.0	17.1	56.0
#8	3.5	8.4	79.1	34.7	9.2	65.3
#16	3.0	3.5	64.4	28.2	6.5	71.8
#30	2.6	2.6	49.4	21.8	6.4	78.2
#50	2.5	2.3	24.3	11.4	10.4	88.6
#100	2.2	2.1	6.5	4.0	7.5	96.0
LBW	1.9	1.9	1.7	1.8	2.1	98.2

\*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

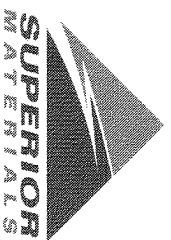
Initial Production Sample (IPS)



Sieve	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"	89.8	10.2	10.2
1/2"	70.7	19.1	29.3
3/8"	59.6	11.1	40.4
#4	43.2	16.4	56.8
#8	35.8	7.4	64.2
#16	29.2	6.6	70.8
#30	21.4	7.8	78.6
#50	9.8	11.6	90.2
#100	3.7	6.1	96.3
LBW	1.2	2.5	98.8

PREPARED BY:  
SM, LLC Technical Service

Approved By: \_\_\_\_\_



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Plant S39-Superior Sterling Heights

Product 1051-6AA LS

Name/Title Doug Storey / QC Technician

Period: 08/23/2020 - 08/29/2020

Report Date 08/29/2020

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.2	%	95-100
	3/4" (19mm)	81.2	%	
	1/2" (12.5mm)	48.0	%	30-60
	3/8" (9.5mm)	29.3	%	
	#4 (4.75mm)	6.3	%	0-8
	#8 (2.36mm)	3.5	%	
	#16 (1.18mm)	3.0	%	
	#30 (.6mm)	2.6	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	1.94	%	
	Wash Loss (#200/75um)	1.8	%	0-2
	Total Moisture	0.00	%	



Plant S39-Superior Sterling Heights

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 08/23/2020 - 08/29/2020

Report Date 08/29/2020

Procedure	Sieve/Test	Result	Unit	26A LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	97.0	%	95-100
	3/8" (9.5mm)	86.9	%	60-95
	#4 (4.75mm)	28.0	%	5-30
	#8 (2.36mm)	8.4	%	0-12
	#16 (1.18mm)	3.5	%	
	#30 (.6mm)	2.6	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	0.00	%	



**Plant** S39-Superior Sterling Heights

**Product** 1022-2NS GR

**Name/Title** Doug Storey / QC Technician

**Period:** 08/23/2020 - 08/29/2020

**Report Date** 08/29/2020

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.6	%	95-100
	#8 (2.36mm)	79.1	%	65-95
	#16 (1.18mm)	64.4	%	35-75
	#30 (.6mm)	49.4	%	20-55
	#50 (.3mm)	24.3	%	10-30
	#100 (.15mm)	6.5	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.81		2.6-3
	Wash Loss (#200/75µm)	1.2	%	0-3
	Total Moisture	2.79	%	