Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-39

Sample Date: 8/3/20

Concrete Grade: S2M

Dates Test Represents: 8/4/2020 through 8/10/2020

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	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	**3050**	**18.57**		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"	99.6	100.0	100.0	99.8	0.2	0.2
3/4"	79.0	100.0	100.0	88.6	11.1	11.4
1/2"	45.0	99.0	100.0	70.2	18.4	29.8
3/8"	25.0	86.0	100.0	58.7	11.5	41.3
#4	4.8	28.0	96.0	43.3	15.4	56.7
#8	2.5	9.0	78.0	33.8	9.6	66.2
#16	2.2	4.7	62.0	26.8	6.9	73.2
#30	2.1	3.7	47.0	20.6	6.3	79.4
#50	2.0	3.4	22.0	10.3	10.3	89.7
#100	1.9	3.1	6.7	3.9	6.3	96.1
LBW	1.5	2.6	2.5	2.0	2.0	98.0

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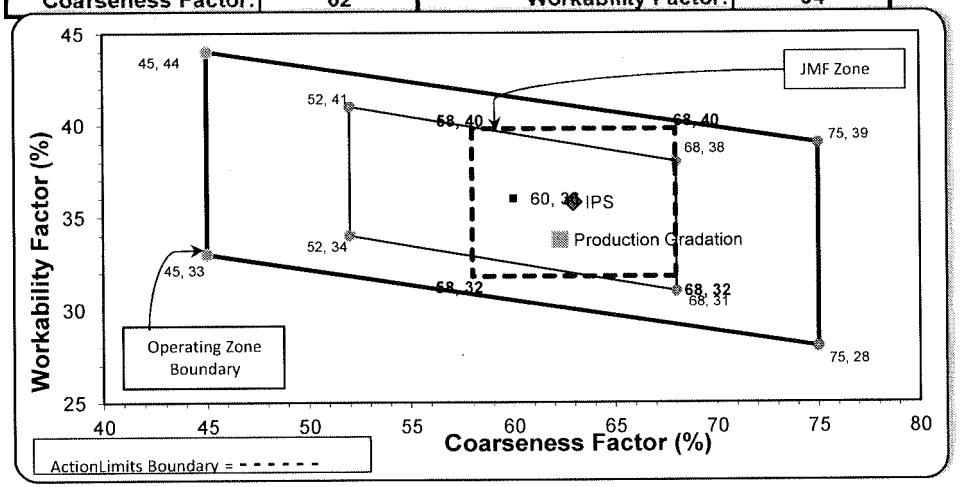
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	62	Workability Factor:	34



Intial Production Sample (IPS)

Coarseness Factor:	63
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"	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:

Basic Quality Statistical Summary Report

Plant S39-Superior Sterling Heights
Product 1051-6AA LS
Specification 6AA LS
Period 08/02/2020 - 08/07/2020

Sieve/Test	Tests	Average	St Dev	Target	Specification
2" (50mm)	1	100.0			
1 1/2" (37.5mm)	1	100.0			100-100
1" (25mm)	1	99.6			95-100
3/4" (19mm)	1	78.6			
1/2" (12.5mm)	1	44.5			30-60
3/8" (9.5mm)	1	25.1			
#4 (4.75mm)	1	4.8			0-8
#8 (2.36mm)	1	2.5			
#16 (1.18mm)	1	2.2			
#30 (.6mm)	1	2.1			
#50 (.3mm)	1	2.0			
#100 (.15mm)	1	1.9			
#200 (75µm)	1	1.57			
Pan	1	0.00			
Wash Loss (#200/75um)	1	1.5			0-2
Total Moisture	1	3.33			

Basic Quality Statistical Summary Report

Plant S39-Superior Sterling Heights
Product 1067-26A Mod LS
Specification 26A LS Spec
Period 08/02/2020 - 08/07/2020

Sieve/Test	Tests	Average	St Dev	Target	Specification
2" (50mm)	1	100.0			
1 1/2" (37.5mm)	1	100.0			
1" (25mm)	1	100.0			
3/4" (19mm)	1	100.0			100-100
1/2" (12.5mm)	1	99.0			95-100
3/8" (9.5mm)	1	86.4			60-95
#4 (4.75mm)	1	27.9			5-30
#8 (2.36mm)	1	9.0			0-12
#16 (1.18mm)	1	4.7			
#30 (.6mm)	1	3.7			
#50 (.3mm)	1	3.4			
#100 (.15mm)	1	3.1			
#200 (75µm)	1	2.8			
Pan	1	0.0			
Wash Loss (#200/75um)	1	2.6			0-3
Total Moisture	1	3.87			

Basic Quality Statistical Summary Report

Plant S39-Superior Sterling Heights
Product 1022-2NS GR
Specification 2NS GR Spec
Period 08/02/2020 - 08/07/2020

Sieve/Test	Tests	Average	St Dev	Target	Specification
3/8" (9.5mm)	1	100.0			100-100
#4 (4.75mm)	1	96.2			95-100
#8 (2.36mm)	1	77.8			65-95
#16 (1.18mm)	1	62.1			35-75
#30 (.6mm)	1	46.9		40-50	20-55
#50 (.3mm)	1	22.4			10-30
#100 (.15mm)	1	6.7			0-10
#200 (75µm)	1	2.5			
Pan	1	0.0			
FM	1	2.88		2.7-2.9	2.6-3
Wash Loss (#200/75um)	1	2.5			0-3
Total Moisture	1	4.36			