

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **6/13/22**

Dates Test Represents: **6/14/2022** through **6/20/2022**

Concrete Grade: **S2M, 3500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.56	2.62	45.9
26A	71-47	Presque Isle	420	2.57	2.62	13.8
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
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"	97.6	100.0	100.0	98.9	1.1	1.1
3/4"	83.6	100.0	100.0	92.5	6.4	7.5
1/2"	35.2	95.8	100.0	69.7	22.8	30.3
3/8"	15.6	88.3	100.0	59.6	10.0	40.4
#4	3.0	31.0	95.5	44.2	15.5	55.8
#8	2.1	9.9	82.9	35.8	8.4	64.2
#16	1.9	4.2	68.2	29.0	6.8	71.0
#30	1.8	2.8	48.9	20.9	8.0	79.1
#50	1.7	2.4	23.6	10.6	10.3	89.4
#100	1.6	2.3	6.4	3.6	7.0	96.4
LBW	1.2	2.0	0.6	1.1	2.6	98.9

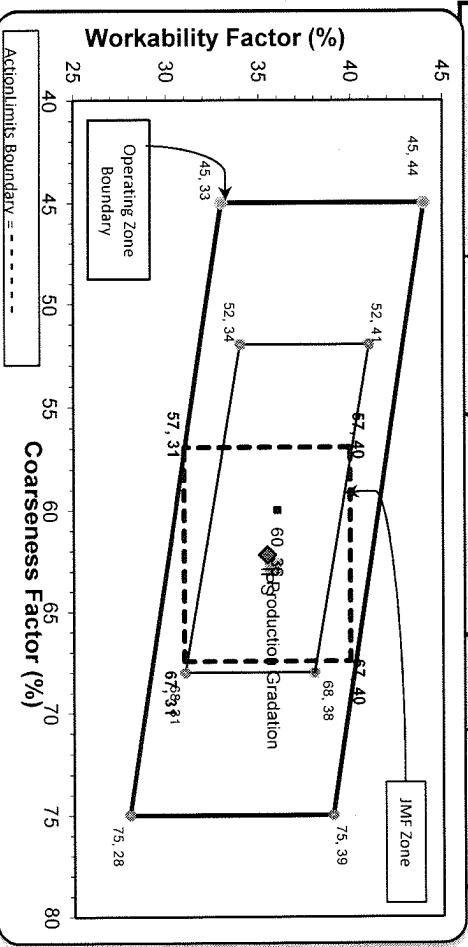
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when
 a 2" max. size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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)

Coarseness Factor: **63** Workability Factor: **36**

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"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



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Plant 958-JMT
 Product 1022-2NS GR - Smelter Bay
 Period: 06/12/2022 - 06/18/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/17/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.5	%	95-100
	#8 (2.36mm)	82.9	%	65-95
	#16 (1.18mm)	68.2	%	35-75
	#30 (.6mm)	48.9	%	20-55
	#50 (.3mm)	23.6	%	10-30
	#100 (.15mm)	6.4	%	0-10
	#200 (75µm)	1.2	%	
	FM	2.74		2.6-3
	Wash Loss (#200/75um)	0.6	%	0-3
	Total Moisture	4.4	%	

Plant 958-JMT
 Product 1067-26A Mod LS
 Period: 06/12/2022 - 06/18/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/17/2022

Procedure	Sieve/Test	Result	Unit	26A Mod 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)	95.8	%	95-100
	3/8" (9.5mm)	88.3	%	60-95
	#4 (4.75mm)	31.0	%	5-30
	#8 (2.36mm)	9.9	%	0-12
	#16 (1.18mm)	4.2	%	
	#30 (.6mm)	2.8	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	2.0	%	0-3
	Total Moisture	3.6	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 06/12/2022 - 06/18/2022

Report Date 06/17/2022

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.6	%	95-100
	3/4" (19mm)	83.6	%	
	1/2" (12.5mm)	35.2	%	30-60
	3/8" (9.5mm)	15.6	%	
	#4 (4.75mm)	3.0	%	0-8
	#8 (2.36mm)	2.1	%	
	#16 (1.18mm)	1.9	%	
	#30 (.6mm)	1.8	%	
	#50 (.3mm)	1.7	%	
	#100 (.15mm)	1.6	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	2.1	%	