Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-O2

Contractor: _____

Sample Date: 12/6/21

Concrete Grade: DM

Dates Test Represents: 12/7/2021 through 12/13/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1505	9.21	2.62	51.8
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1100	6.65	2.65	37.9
		Total Wt	**2905**	**17.69**		100.0

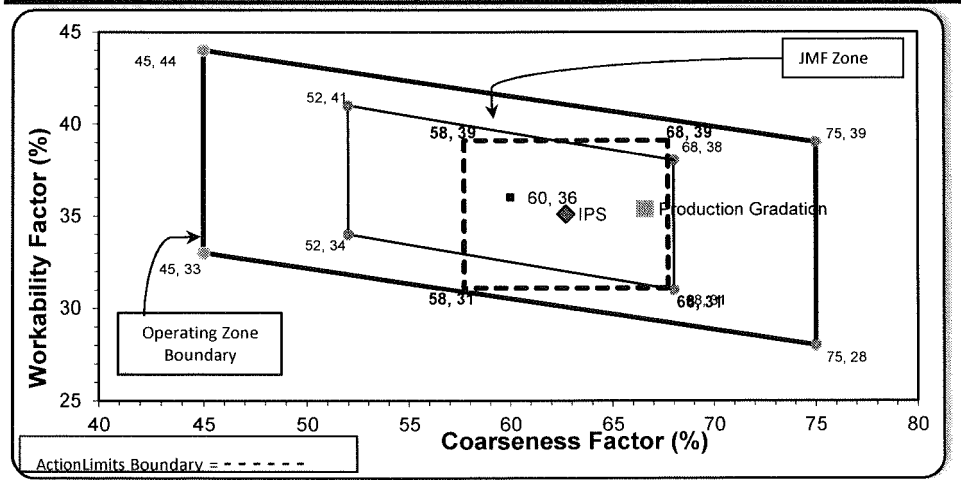
<----- Verify this number is 100%

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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	77.6	100.0	100.0	88.4	11.6	11.6
1/2"	30.4	98.0	100.0	63.7	24.7	36.3
3/8"	15.4	91.6	100.0	55.3	8.4	44.7
#4	4.2	28.8	98.3	42.4	12.9	57.6
#8	2.8	10.2	80.2	32.9	9.5	67.1
#16	2.4	4.6	63.3	25.7	7.2	74.3
#30	2.2	3.4	47.1	19.3	6.4	80.7
#50	2.1	3.0	24.3	10.6	8.7	89.4
#100	2.0	2.7	6.2	3.7	6.9	96.3
LBW	1.4	2.3	0.8	1.3	2.4	98.7

*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 SupplierGradations

Coarseness Factor:	67	Workability Factor:	33	Adjusted WF	35.4



Intial Production Sample (IPS)

Coarseness Factor:	63
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"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1

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PREPARED BY:
SM, LLC Technical Service

Approved By:

Plant S02-Superior Hoover

Product 1022-2NS GR

Period: 12/05/2021 - 12/11/2021

Name/Title Doug Storey / QC Technician

Report Date 12/11/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.3	%	95-100
	#8 (2.36mm)	80.2	%	65-95
	#16 (1.18mm)	63.3	%	35-75
	#30 (.6mm)	47.1	%	20-55
	#50 (.3mm)	24.3	%	10-30
	#100 (.15mm)	6.2	%	0-10
	#200 (75µm)	1.2	%	
	FM	2.80		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	3.62	%	

Plant S02-Superior Hoover

Product 1067-26A Mod LS

Period: 12/05/2021 - 12/11/2021

Name/Title Doug Storey / QC Technician

Report Date 12/11/2021

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)	98.0	%	95-100
	3/8" (9.5mm)	91.6	%	60-95
	#4 (4.75mm)	28.8	%	5-30
	#8 (2.36mm)	10.2	%	0-12
	#16 (1.18mm)	4.6	%	
	#30 (.6mm)	3.4	%	
	#50 (.3mm)	3.0	%	
	#100 (.15mm)	2.7	%	
	#200 (75µm)	2.4	%	
	Wash Loss (#200/75um)	2.3	%	0-3
	Total Moisture	4.52	%	

Plant S02-Superior Hoover

Product 1051-6AA LS

Period: 12/05/2021 - 12/11/2021

Name/Title Doug Storey / QC Technician

Report Date 12/11/2021

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	77.6	%	
	1/2" (12.5mm)	30.4	%	30-60
	3/8" (9.5mm)	15.4	%	
	#4 (4.75mm)	4.2	%	0-8
	#8 (2.36mm)	2.8	%	
	#16 (1.18mm)	2.4	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.74	%	
	Wash Loss (#200/75um)	1.4	%	0-2
	Total Moisture	3.94	%	