Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-103

Sample Date: 3/18/24

Dates Test Represents: 3/19/2024 through 3/25/2024

Contractor: _____

Concrete Grade: P1M, 3500HP

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	63-114	Highland	1200	7.26	2.65	38.5
		Total Wt	**3120**	**18.70**		100.0

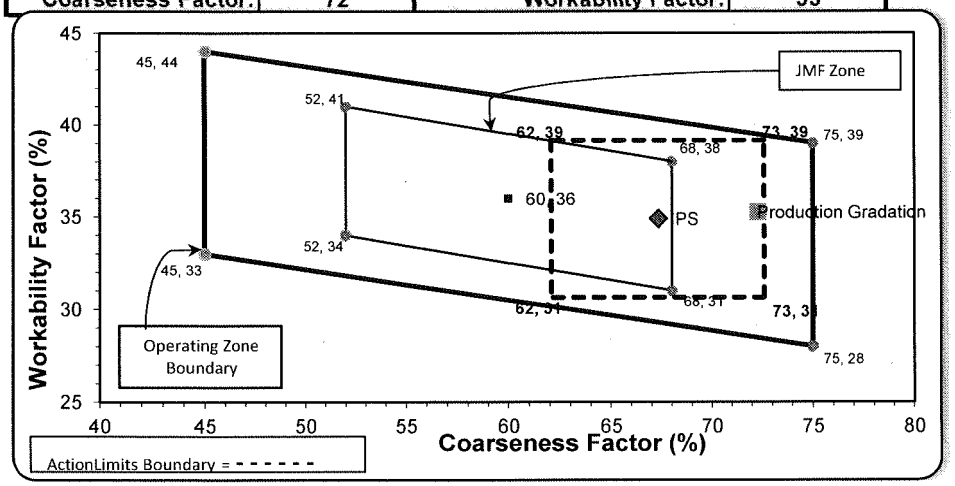
<---- Verify this number is 100%

Sieve	CA	IA	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"	57.2	100.0	100.0	81.2	18.8	18.8
3/4"	26.8	100.0	100.0	67.9	13.3	32.1
1/2"	9.1	89.4	100.0	58.2	9.6	41.8
3/8"	5.5	70.0	100.0	53.2	5.0	46.8
#4	2.6	17.5	99.3	42.4	10.8	57.6
#8	2.2	6.3	86.3	35.3	7.2	64.7
#16	2.1	4.0	68.5	28.0	7.3	72.0
#30	2.0	3.5	48.6	20.2	7.8	79.8
#50	1.9	3.0	20.4	9.2	11.0	90.8
#100	1.7	2.7	4.2	2.8	6.4	97.2
LBW	1.5	2.2	1.0	1.4	1.4	98.6

*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:	72	Workability Factor:	35



Intial Production Sample (IPS)

Coarseness Factor:	67
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"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

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PREPARED BY:
SM, LLC Technical Service

Approved BY:

Plant S103-Superior Brighton

Product 7919-COARSE AGG P1M LS

Period: 03/17/2024 - 03/23/2024

Name/Title Doug Storey / QC Technician

Report Date 03/22/2024

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	57.5	%	
	3/4" (19mm)	26.8	%	
	1/2" (12.5mm)	9.1	%	
	3/8" (9.5mm)	5.5	%	
	#4 (4.75mm)	2.6	%	
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	2.1	%	
	#30 (.6mm)	2.0	%	
	#50 (.3mm)	1.9	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.5	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	2.38	%	

Plant S103-Superior Brighton

Product 7920-INTERMED AGG P1M LS

Period: 03/17/2024 - 03/23/2024

Name/Title Doug Storey / QC Technician

Report Date 03/22/2024

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)	100.0	%	
	1/2" (12.5mm)	89.4	%	
	3/8" (9.5mm)	70.0	%	
	#4 (4.75mm)	17.5	%	
	#8 (2.36mm)	6.3	%	
	#16 (1.18mm)	4.0	%	
	#30 (.6mm)	3.5	%	
	#50 (.3mm)	3.0	%	
	#100 (.15mm)	2.7	%	
	#200 (75µm)	2.4	%	
	Wash Loss (#200/75um)	2.2	%	0-3
	Total Moisture	6.19	%	

Plant S103-Superior Brighton

Product 1022-2NS GR

Period: 03/17/2024 - 03/23/2024

Name/Title Doug Storey / QC Technician

Report Date 03/22/2024

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	99.3	%	95-100
	#8 (2.36mm)	86.3	%	65-95
	#16 (1.18mm)	68.5	%	35-75
	#30 (.6mm)	48.6	%	20-55
	#50 (.3mm)	20.4	%	10-30
	#100 (.15mm)	4.2	%	0-10
	#200 (75µm)	1.2	%	
	FM	2.73		2.6-3
	Wash Loss (#200/75um)	1.0	%	0-3
	Total Moisture	3.71	%	