

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: 11/22/21

Dates Test Represents: 11/23/2021 through 11/29/2021

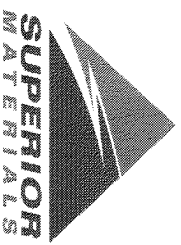
Concrete Grade: **P1M**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	870	5.32	2.62	28.3
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
		Total Wt	3070	18.69		100.0

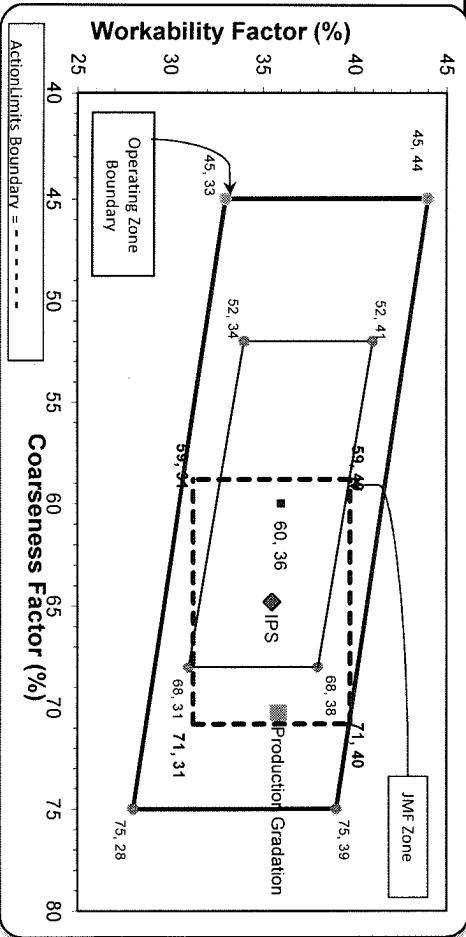
Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	98.4	100.0	100.0	99.5	0.5	0.5
1"	49.2	100.0	100.0	84.3	15.2	15.7
3/4"	14.9	96.1	100.0	72.6	11.7	27.4
1/2"	4.6	70.2	100.0	62.0	10.5	38.0
3/8"	3.4	46.5	100.0	54.9	7.1	45.1
#4	3.0	11.1	95.7	43.0	11.9	57.0
#8	2.9	5.0	82.4	35.9	7.2	64.1
#16	2.8	3.5	67.1	29.2	6.7	70.8
#30	2.7	3.1	48.1	21.3	7.9	78.7
#50	2.5	2.8	24.4	11.5	9.8	88.5
#100	2.2	2.6	7.0	4.3	7.2	95.7
LBW	1.7	2.1	1.4	1.7	2.6	98.3



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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: **70** Workability Factor: **36**



Initial Production Sample (IPS)

Sieve	% Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 11/21/2021 - 11/27/2021

Report Date 11/24/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.7	%	95-100
	#8 (2.36mm)	82.4	%	65-95
	#16 (1.18mm)	67.1	%	35-75
	#30 (.6mm)	48.1	%	20-55
	#50 (.3mm)	24.4	%	10-30
	#100 (.15mm)	7.0	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.75		2.6-3
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	2.0	%	

Plant 958-JMT

Product 7920-INTERMED AGG P1M LS PI

Name/Title Doug Storey / QC Technician

Period: 11/21/2021 - 11/27/2021

Report Date 11/24/2021

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	96.1	%	
	1/2" (12.5mm)	70.2	%	
	3/8" (9.5mm)	46.5	%	
	#4 (4.75mm)	11.1	%	
	#8 (2.36mm)	5.0	%	
	#16 (1.18mm)	3.5	%	
	#30 (.6mm)	3.1	%	
	#50 (.3mm)	2.8	%	
	#100 (.15mm)	2.6	%	
	#200 (75µm)	2.3	%	
	Wash Loss (#200/75um)	2.1	%	0-3
	Total Moisture	3.2	%	

Edw. C. Levy Co.

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Plant 958-JMT

Product 7919-COARSE AGG P1M LS PI

Name/Title Doug Storey / QC Technician

Period: 11/21/2021 - 11/27/2021

Report Date 11/24/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	98.4	%	
	1" (25mm)	49.2	%	
	3/4" (19mm)	14.9	%	
	1/2" (12.5mm)	4.6	%	
	3/8" (9.5mm)	3.4	%	
	#4 (4.75mm)	3.0	%	
	#8 (2.36mm)	2.9	%	
	#16 (1.18mm)	2.8	%	
	#30 (.6mm)	2.7	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.7	%	0-2
	Total Moisture	2.0	%	