

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-32**

Sample Date: **9/27/21**

Dates Test Represents: **9/28/2021**

through **10/4/2021**

Concrete Grade: **DM**

Contractor: \_\_\_\_\_

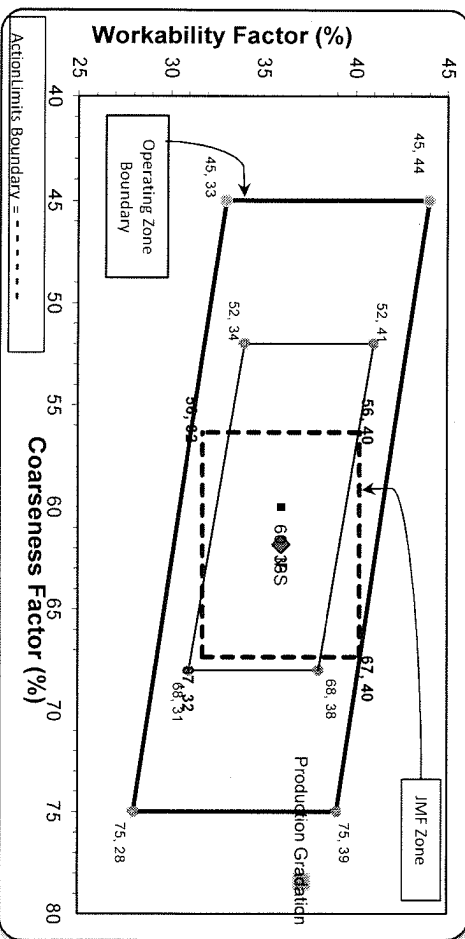
MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (ssd)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.1
26A	71-47	Presque Isle	155	0.95	2.62	5.3
ZNS	95-013	Smelter Bay	1150	6.95	2.65	39.6
<b>Total Wt:</b>			<b>2905</b>	<b>17.69</b>		<b>100.0</b>

Sieve	6AA	26A	ZNS	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"	97.8	100.0	100.0	98.8	1.2	1.2
3/4"	78.9	100.0	100.0	88.4	10.4	11.6
1/2"	30.6	98.1	100.0	61.7	26.7	38.3
3/8"	8.4	84.7	100.0	48.7	12.9	51.3
#4	1.2	18.9	96.2	39.8	9.0	60.2
#8	1.1	5.4	85.2	34.6	5.1	65.4
#16	1.0	2.7	71.2	28.9	5.7	71.1
#30	1.0	2.2	53.6	21.9	7.0	78.1
#50	1.0	2.1	26.0	11.0	10.9	89.0
#100	0.9	1.9	6.8	3.3	7.7	96.7
LBW	0.7	1.7	1.2	1.0	2.3	99.0

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: **78** Workability Factor: **35** Adjusted WF: **37.1**



Initial Production Sample (IPS)

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"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	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.



PREPARED BY:  
SM, LLC Technical Service

Approved By: \_\_\_\_\_

**Plant** 958-JMT

**Product** 1022-2NS GR - Smelter Bay

**Name/Title** Doug Storey / QC Technician

**Period:** 09/26/2021 - 10/02/2021

**Report Date** 10/01/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.2	%	95-100
	#8 (2.36mm)	85.2	%	65-95
	#16 (1.18mm)	71.2	%	35-75
	#30 (.6mm)	53.6	%	20-55
	#50 (.3mm)	26.0	%	10-30
	#100 (.15mm)	6.8	%	0-10
	#200 (75µm)	1.8	%	
	FM	2.61		2.6-3
	Wash Loss (#200/75um)	1.2	%	0-3
	Total Moisture	3.6	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 09/26/2021 - 10/02/2021

Report Date 10/01/2021

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)	98.1	%	95-100
	3/8" (9.5mm)	84.7	%	60-95
	#4 (4.75mm)	18.9	%	5-30
	#8 (2.36mm)	5.4	%	0-12
	#16 (1.18mm)	2.7	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	3.8	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 09/26/2021 - 10/02/2021

Report Date 10/01/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	97.8	%	95-100
	3/4" (19mm)	78.9	%	
	1/2" (12.5mm)	30.6	%	30-60
	3/8" (9.5mm)	8.4	%	
	#4 (4.75mm)	1.2	%	0-8
	#8 (2.36mm)	1.1	%	
	#16 (1.18mm)	1.0	%	
	#30 (.6mm)	1.0	%	
	#50 (.3mm)	1.0	%	
	#100 (.15mm)	0.9	%	
	#200 (75µm)	0.8	%	
	Wash Loss (#200/75um)	0.7	%	0-2
	Total Moisture	0.8	%	