

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-20**

Sample Date: **5/3/21**

Dates Test Represents: **5/4/2021** through **5/10/2021**

Concrete Grade: **DM**

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

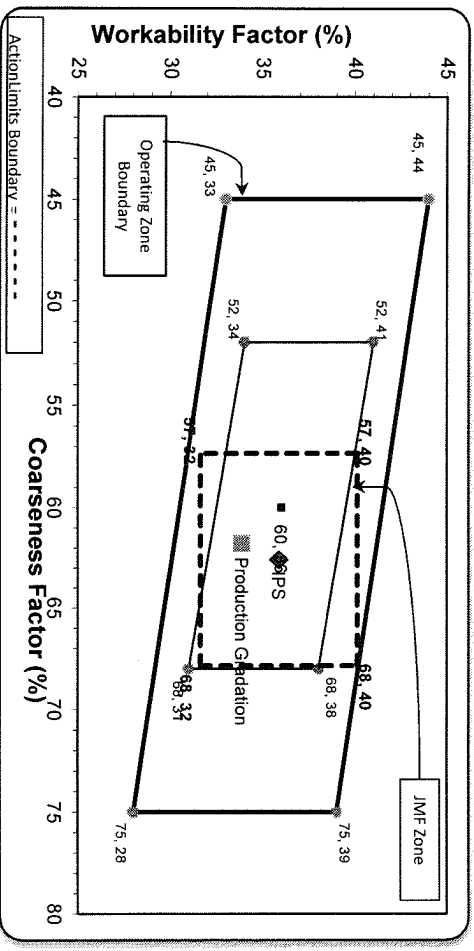
MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (ssd)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	63-92	Grange Hall	1100	6.65	2.65	37.9
<b>Total Wt</b>			<b>2905</b>	<b>17.69</b>		<b>100.0</b>

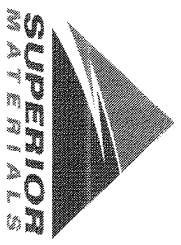
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.8	100.0	100.0	99.3	0.7	0.7
3/4"	83.0	100.0	100.0	90.6	8.7	9.4
1/2"	46.1	97.8	100.0	70.1	20.5	29.9
3/8"	24.1	93.3	100.0	57.6	12.5	42.4
#4	4.2	25.1	96.7	40.7	16.9	59.3
#8	2.6	6.4	77.9	31.4	9.3	68.6
#16	2.3	3.4	61.1	24.6	6.7	75.4
#30	2.2	3.1	46.3	19.0	5.7	81.0
#50	2.1	2.9	25.9	11.2	7.8	88.8
#100	2.0	2.6	6.9	3.9	7.3	96.1
LBW	1.7	2.4	1.0	1.5	2.4	98.5

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: **62** Workability Factor: **31** Adjusted WF: **33.9**



Sieve	Initial Production Sample (IPS)	Coarseness Factor:	Workability Factor:	Adjusted WF
2"	100.0	<b>63</b>	<b>36</b>	
1.5"	100.0			
1"	100.0			
3/4"	89.2			
1/2"	68.4			
3/8"	59.9			
#4	43.0			
#8	35.9			
#16	29.0			
#30	21.3			
#50	9.9			
#100	2.4			
LBW	1.2			



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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.

PREPARED BY:  
SM, LLC Technical Service

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



**Plant** S20-Superior Flint  
**Product** 1022-2NS GR  
**Period:** 05/02/2021 - 05/08/2021

**Name/Title** Doug Storey / QC Technician  
**Report Date** 05/08/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.7	%	95-100
	#8 (2.36mm)	77.9	%	65-95
	#16 (1.18mm)	61.1	%	35-75
	#30 (.6mm)	46.3	%	20-55
	#50 (.3mm)	25.9	%	10-30
	#100 (.15mm)	6.9	%	0-10
	#200 (75µm)	1.1	%	
	FM	2.85		2.6-3
	Wash Loss (#200/75um)	1.0	%	0-3
	Total Moisture	4.78	%	



Plant S20-Superior Flint  
 Product 1067-26A Mod LS  
 Period: 05/02/2021 - 05/08/2021

Name/Title Doug Storey / QC Technician  
 Report Date 05/08/2021

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)	97.8	%	95-100
	3/8" (9.5mm)	93.3	%	60-95
	#4 (4.75mm)	25.1	%	5-30
	#8 (2.36mm)	6.4	%	0-12
	#16 (1.18mm)	3.4	%	
	#30 (.6mm)	3.1	%	
	#50 (.3mm)	2.9	%	
	#100 (.15mm)	2.6	%	
	#200 (75µm)	2.5	%	
	Wash Loss (#200/75um)	2.4	%	0-3
	Total Moisture	3.13	%	



Plant S20-Superior Flint  
 Product 1054-6AA LS PI  
 Period: 05/02/2021 - 05/08/2021

Name/Title Doug Storey / QC Technician  
 Report Date 05/08/2021

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	98.8	%	95-100
	3/4" (19mm)	83.0	%	
	1/2" (12.5mm)	46.1	%	30-60
	3/8" (9.5mm)	24.1	%	
	#4 (4.75mm)	4.2	%	0-8
	#8 (2.36mm)	2.6	%	
	#16 (1.18mm)	2.3	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.84	%	
	Wash Loss (#200/75um)	1.7	%	0-2
	Total Moisture	3.18	%	