

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **p11**

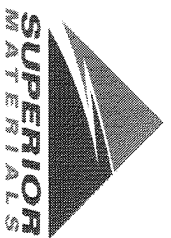
Sample Date: **7/22/24**

Dates Test Represents: **7/23/2024** through **7/29/2024**

Concrete Grade: **S2M, 3500HP**

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

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



**Superior Materials, LLC**  
30701 W. 10 Mile Rd.  
Suite 500  
Farmington Hills, MI 48336

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %	
6AA	71-47	Presque Isle	1670	10.21	2.62	54.8	
26A	71-47	Presque Isle	150	0.92	2.62	4.9	
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3	
Total Wt						<b>3050</b>	<b>100.0</b>

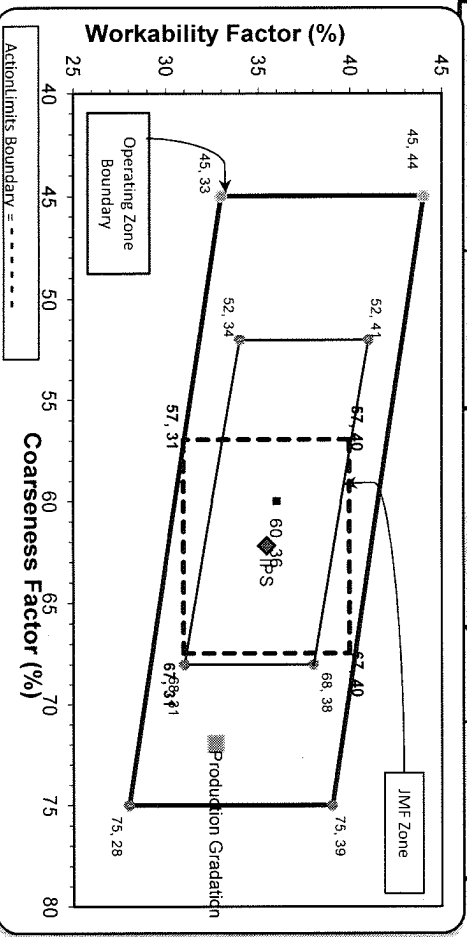
  

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	95.5	100.0	100.0	97.5	2.5	2.5
3/4"	74.0	100.0	100.0	85.8	11.8	14.2
1/2"	30.1	94.0	100.0	61.4	24.3	38.6
3/8"	13.3	81.1	100.0	51.6	9.8	48.4
#4	1.8	16.4	95.6	40.3	11.3	59.7
#8	1.4	4.8	78.6	32.7	7.6	67.3
#16	1.2	3.2	63.5	26.4	6.3	73.6
#30	1.1	2.9	48.9	20.5	6.0	79.5
#50	1.1	2.8	27.2	11.7	8.8	88.3
#100	1.0	2.7	71.1	29.4	-17.6	70.6
LBW	0.8	2.5	0.8	0.9	28.5	99.1

\*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: **72** Workability Factor: **33**



Initial Production Sample (IPS)

Sieve	Coarseness Factor:	Workability Factor:	% Cumulative Passing	% Retained	Cumulative % Retained
2"	<b>62</b>	<b>35</b>	100.0	0.0	0.0
1.5"			100.0	0.0	0.0
1"			100.0	0.0	0.0
3/4"			94.0	6.0	6.0
1/2"			70.2	23.7	29.8
3/8"			59.9	10.4	40.1
#4			42.7	17.2	57.3
#8			35.5	7.2	64.5
#16			28.4	7.0	71.6
#30			19.2	9.2	80.8
#50			8.9	10.3	91.1
#100			3.1	5.9	96.9
LBW			1.4	1.7	98.6

PREPARED BY:  
SM, LLC Technical Service

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

Superior QA Samples

Location: Onsite Jefferson

Date: 7/28/2024

Material Sieve	Coarse Agg	6AA	Inter. Agg Percent Passing	26Amod	2NS
2 in	100.0	100.0	100.0	100.0	100.0
1 1/2 in	95.0	100.0	100.0	100.0	100.0
1 in	31.8	95.5	100.0	100.0	100.0
3/4 in	6.0	74.0	100.0	100.0	100.0
1/2 in	2.8	30.1	71.5	94.0	100.0
3/8 in	2.4	13.3	44.2	81.1	100.0
No. 4	2.1	1.8	6.7	16.4	95.6
No. 8	2.0	1.4	2.4	4.8	78.6
No. 16	1.9	1.2	1.9	3.2	63.5
No. 30	1.8	1.1	1.8	2.9	48.9
No. 50	1.7	1.1	1.7	2.8	27.2
No. 100	1.5	1.0	1.7	2.7	7.1
No. 200	1.2	1.0	1.3	2.5	1.1
LBW	1.1	0.8	1.2	2.5	0.8
MO	0.9	2.7	2.1	2.3	4.1

Tested By: Douglas Storey