

# Aggregate Optimization Chart

**PLANT #:** **P-101**

Sample Date: 4/10/23

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/11/2023 through 4/17/2023

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	75-051	Mid Michigan	1200	7.23	2.66	39.1
<b>Total Wt</b>			<b>3070</b>	<b>18.67</b>		<b>100.0</b>

<---- Verify this number is 100%



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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.6	100.0	100.0	98.5	1.5	1.5
1"	35.2	100.0	100.0	77.4	21.1	22.6
3/4"	9.5	98.5	100.0	68.1	9.3	31.9
1/2"	2.8	83.2	100.0	61.7	6.3	38.3
3/8"	2.4	63.7	100.0	56.5	5.2	43.5
#4	2.1	17.3	98.0	43.5	13.0	56.5
#8	1.9	4.5	82.9	34.2	9.3	65.8
#16	1.8	2.7	67.7	27.8	6.4	72.2
#30	1.8	2.3	51.4	21.3	6.5	78.7
#50	1.7	2.1	25.7	11.2	10.1	88.8
#100	1.6	1.9	7.5	4.0	7.2	96.0
LBW	1.3	1.7	1.1	1.3	2.7	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.

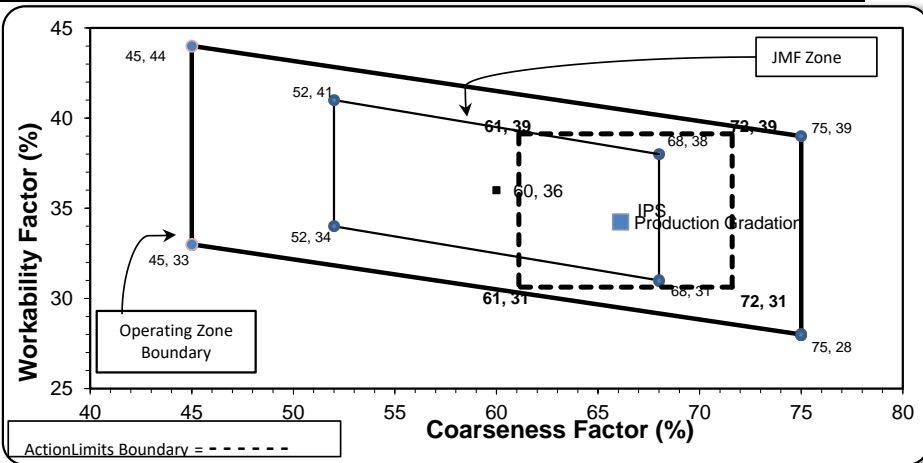
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>34</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>66</b>
<b>Workability Factor:</b>	<b>35</b>

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	84.3	15.3	15.7
3/4"	74.8	9.6	25.2
1/2"	64.3	10.4	35.7
3/8"	56.8	7.5	43.2
#4	43.0	13.8	57.0
#8	34.9	8.1	65.1
#16	26.4	8.5	73.6
#30	19.9	6.5	80.1
#50	10.4	9.5	89.6
#100	3.4	7.0	96.6
LBW	1.2	2.2	98.8



PREPARED BY:  
 SM, LLC Technical Service

Approved By: