

Aggregate Optimization Chart

Production Gradation Report

PLANT #: 20

Contractor: _____

Sample Date: 10/7/24

Concrete Grade: P1M, 3500HP

Dates Test Represents: 10/8/2024 through 10/14/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1000	6.12	2.62	32.6
IA	71-47	Presque Isle	870	5.32	2.62	28.3
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt						100.0

Verify this number is 100%

Sieve	CA	IA	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"	37.7	100.0	100.0	79.7	20.3	20.3
3/4"	9.0	97.2	100.0	69.6	10.1	30.4
1/2"	3.2	74.8	100.0	61.3	8.2	38.7
3/8"	2.5	55.1	100.0	55.5	5.8	44.5
#4	2.2	12.5	98.3	42.7	12.8	57.3
#8	2.1	5.1	82.4	34.3	8.3	65.7
#16	2.1	4.0	67.0	28.0	6.3	72.0
#30	2.1	3.6	48.7	20.7	7.3	79.3
#50	2.0	3.4	21.7	10.1	10.6	89.9
#100	1.9	3.1	3.2	2.7	7.3	97.3
LBW	1.5	2.4	0.8	1.5	1.3	98.5

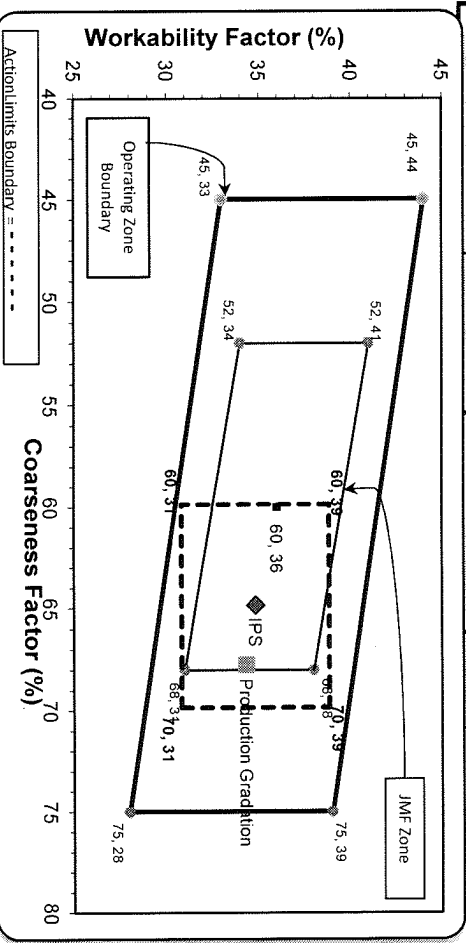
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

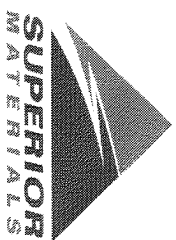
Initial Production Sample (IPS)

Coarseness Factor: **68** Workability Factor: **34**

Coarseness Factor: **65** Workability Factor: **35**



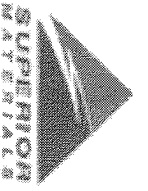
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.1	0.9	0.9
1"	80.8	18.2	19.2
3/4"	71.3	9.6	28.7
1/2"	64.0	7.3	36.0
3/8"	57.7	6.2	42.3
#4	42.8	15.0	57.2
#8	34.8	7.9	65.2
#16	28.4	6.4	71.6
#30	20.2	8.2	79.8
#50	7.6	12.6	92.4
#100	1.6	6.0	98.4
LBW	1.0	0.6	99.0



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PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Saturday, October 12, 2024

Sample Id	-674974335	-674903390	-674939108
Plant	S20 Superior Flint	S20 Superior Flint	S20 Superior Flint
Product	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS	1022 2NS GR
Specification	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target	2NS GR Spec
Sample Type	QA	QA	QA
Time	13:08	13:10	13:12
2" (50mm)	100.0	100.0	
1 1/2" (37.5mm)	100.0	100.0	100.0
1" (25mm)	37.7	100.0	98.3
3/4" (19mm)	9.0	97.2	82.4
1/2" (12.5mm)	3.2	74.8	67.0
3/8" (9.5mm)	2.5	55.1	48.7
#4 (4.75mm)	2.2	12.5	21.7
#8 (2.36mm)	2.1	5.1	3.2
#16 (1.18mm)	2.1	4.0	1.0
#30 (6mm)	2.1	3.6	0.0
#50 (3mm)	2.0	3.4	0.0
#100 (.15mm)	1.9	3.1	0.0
#200 (75µm)	1.6	2.8	0.8
Pan	0.0	0.0	2.79
FM			0.8
Wash Loss (#200/75µm)	1.5	2.4	3.65
Total Moisture	1.34	3.73	

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor: _____

Sample Date: **10/7/24**

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: **10/8/2024** through **10/14/2024**

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
NNS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt:			3120	18.70		100.0

Verify this number is 100%

Sieve	CA	IA	NNS	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"	63.2	100.0	100.0	82.7	17.3	17.3
3/4"	27.6	100.0	100.0	65.9	16.8	34.1
1/2"	16.9	94.8	100.0	60.1	5.8	39.9
3/8"	10.7	76.2	100.0	54.5	5.6	45.5
#4	4.6	20.8	99.6	43.5	11.0	56.5
#8	3.5	7.7	85.9	35.8	7.7	64.2
#16	3.1	4.1	67.0	27.8	8.0	72.2
#30	2.8	2.9	46.6	19.7	8.2	80.3
#50	2.6	2.4	21.2	9.7	9.9	90.3
#100	2.4	2.2	4.8	3.3	6.4	96.7
LBW	2.1	2.0	0.6	1.5	1.8	98.5

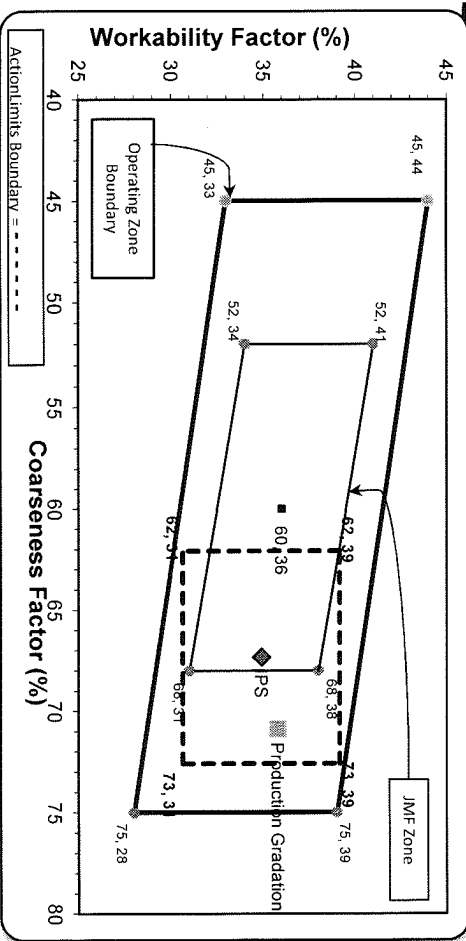
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 *% Retained must be at least 8% for the 1" sieve when
 a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)

Coarseness Factor: **71** Workability Factor: **36**

Coarseness Factor: **67** Workability Factor: **35**



Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

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