

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-32**

Sample Date: **8/2/21**

Dates Test Represents: **8/3/2021** through **8/9/2021**

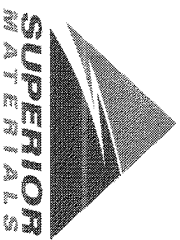
Concrete Grade: **P1M**

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	920	5.63	2.62	30.0
NNS	95-013	Smelter Bay	1250	7.56	2.65	40.7
Total Wt						18.69
						100.0

Sieve	CA	IA	NNS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.1	100.0	100.0	98.3	1.7	1.7
1"	46.4	100.0	100.0	84.3	14.0	15.7
3/4"	17.6	99.0	100.0	75.5	8.7	24.5
1/2"	4.9	72.0	100.0	63.7	11.8	36.3
3/8"	3.0	47.8	100.0	55.9	7.8	44.1
#4	2.0	10.7	96.5	43.1	12.8	56.9
#8	1.7	4.3	83.2	35.7	7.4	64.3
#16	1.5	2.6	66.8	28.4	7.2	71.6
#30	1.5	2.1	47.8	20.5	7.9	79.5
#50	1.4	1.9	22.7	10.2	10.3	89.8
#100	1.4	1.7	5.7	3.2	7.0	96.8
LBW	1.2	1.0	1.0	1.1	2.2	98.9

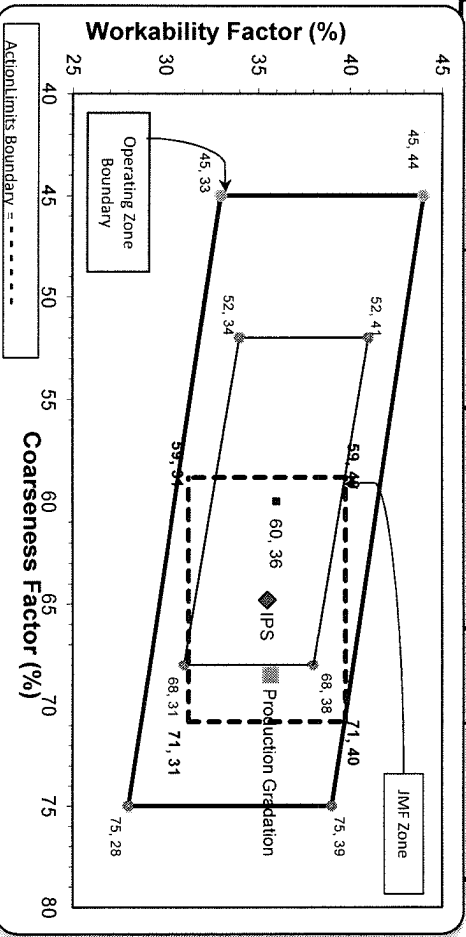


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30701 W. 10 Mile Rd.  
Suite 500  
Farmington Hills, MI 48336

\*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

Coarseness Factor: **69** Workability Factor: **36**



Initial Production Sample (IPS)

Coarseness Factor: **65** Workability Factor: **36**

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:  
SM, LLC Technical Service

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

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.5	%	95-100
	#8 (2.36mm)	83.2	%	65-95
	#16 (1.18mm)	66.8	%	35-75
	#30 (.6mm)	47.8	%	20-55
	#50 (.3mm)	22.7	%	10-30
	#100 (.15mm)	5.7	%	0-10
	#200 (75µm)	1.3	%	
	FM	2.77		2.6-3
	Wash Loss (#200/75um)	1.0	%	0-3
	Total Moisture	4.5	%	

Plant 958-JMT

Product 7920-INTERMED AGG P1M LS PI

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	99.0	%	
	1/2" (12.5mm)	72.0	%	
	3/8" (9.5mm)	47.8	%	
	#4 (4.75mm)	10.7	%	
	#8 (2.36mm)	4.3	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.1	%	
	#50 (.3mm)	1.9	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.4	%	
	Wash Loss (#200/75um)	1.0	%	0-3
ASTM C566	Total Moisture	0.4	%	

**Plant** 958-JMT

**Product** 7919-COARSE AGG P1M LS PI

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

**Period:** 08/01/2021 - 08/07/2021

**Report Date** 08/07/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS PI Target
	1 1/2" (37.5mm)	94.1	%	
	1" (25mm)	46.4	%	
	3/4" (19mm)	17.6	%	
	1/2" (12.5mm)	4.9	%	
	3/8" (9.5mm)	3.0	%	
	#4 (4.75mm)	2.0	%	
	#8 (2.36mm)	1.7	%	
	#16 (1.18mm)	1.5	%	
	#30 (.6mm)	1.5	%	
	#50 (.3mm)	1.4	%	
	#100 (.15mm)	1.4	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75um)	1.2	%	0-2
	Total Moisture	1.3	%	

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-35**

Sample Date: **8/2/21**

Dates Test Represents: **8/3/2021**

through **8/9/2021**

Concrete Grade: **P1M**

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

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

Agg. Class	Pit #	Source	Weight (ssd)	ft <sup>3</sup>	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
ZNS	81-093	Burnmeister	1200	7.26	2.65	38.5
Total Wt:			<b>3120</b>	<b>18.70</b>		<b>100.0</b>

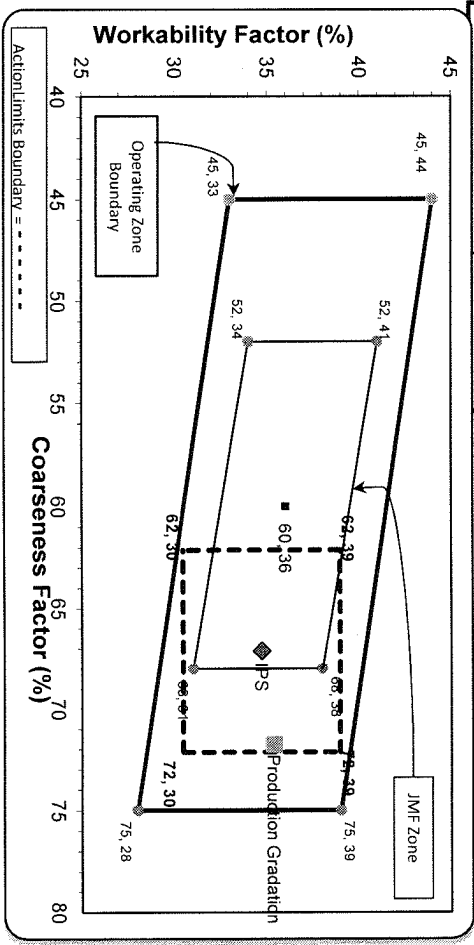
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Sieve	CA	IA	ZNS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	77.1	100.0	100.0	89.2	10.8	10.8
3/4"	39.6	100.0	100.0	71.5	17.7	28.5
1/2"	16.1	95.0	100.0	59.7	11.8	40.3
3/8"	7.3	81.2	100.0	53.6	6.1	46.4
#4	2.0	29.6	98.8	43.2	10.4	56.8
#8	1.4	8.0	87.2	35.4	7.9	64.6
#16	1.2	3.5	72.6	29.0	6.4	71.0
#30	1.1	2.3	48.6	19.5	9.5	80.5
#50	1.0	1.9	17.3	7.4	12.1	92.6
#100	0.9	1.8	3.4	2.0	5.4	98.0
LBW	0.6	1.6	1.2	1.0	1.0	99.0

\*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

Coarseness Factor: **72** Workability Factor: **35**



Initial Production Sample (IPS)

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"	86.9	13.1	13.1
3/4"	76.1	10.8	23.9
1/2"	63.7	12.4	36.3
3/8"	56.2	7.5	43.8
#4	43.2	13.0	56.8
#8	34.7	8.5	65.3
#16	27.5	7.2	72.5
#30	20.6	7.0	79.4
#50	9.0	11.6	91.0
#100	2.1	6.9	97.9
LBW	1.0	1.1	99.0

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



PREPARED BY:  
 SM, LLC Technical Service

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



Plant S35-Superior Romulus

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.8	%	95-100
	#8 (2.36mm)	87.2	%	65-95
	#16 (1.18mm)	72.6	%	35-75
	#30 (.6mm)	48.6	%	20-55
	#50 (.3mm)	17.3	%	10-30
	#100 (.15mm)	3.4	%	0-10
	#200 (75µm)	1.3	%	
	FM	2.72		2.6-3
AASHTO T11	#200 (75um)	1.34	%	
	Wash Loss (#200/75um)	1.2	%	0-3
ASTM C566	Total Moisture	4.54	%	



Plant S35-Superior Romulus

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	
	1/2" (12.5mm)	95.0	%	
	3/8" (9.5mm)	81.2	%	
	#4 (4.75mm)	29.6	%	
	#8 (2.36mm)	8.0	%	
	#16 (1.18mm)	3.5	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	1.9	%	
	#100 (.15mm)	1.8	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.6	%	0-3
ASTM C566	Total Moisture	2.71	%	



**Plant** S35-Superior Romulus

**Product** 7919-COARSE AGG P1M LS

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

**Period:** 08/01/2021 - 08/07/2021

**Report Date** 08/06/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	77.1	%	
	3/4" (19mm)	39.6	%	
	1/2" (12.5mm)	16.1	%	
	3/8" (9.5mm)	7.3	%	
	#4 (4.75mm)	2.0	%	
	#8 (2.36mm)	1.4	%	
	#16 (1.18mm)	1.2	%	
	#30 (.6mm)	1.1	%	
	#50 (.3mm)	1.0	%	
	#100 (.15mm)	0.9	%	
	#200 (75µm)	0.7	%	
	Wash Loss (#200/75um)	0.6	%	0-2
ASTM C566	Total Moisture	2.12	%	



# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-36**

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

Sample Date: **8/2/21**

Concrete Grade: **P1M**

Dates Test Represents: **8/3/2021** through **8/9/2021**

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

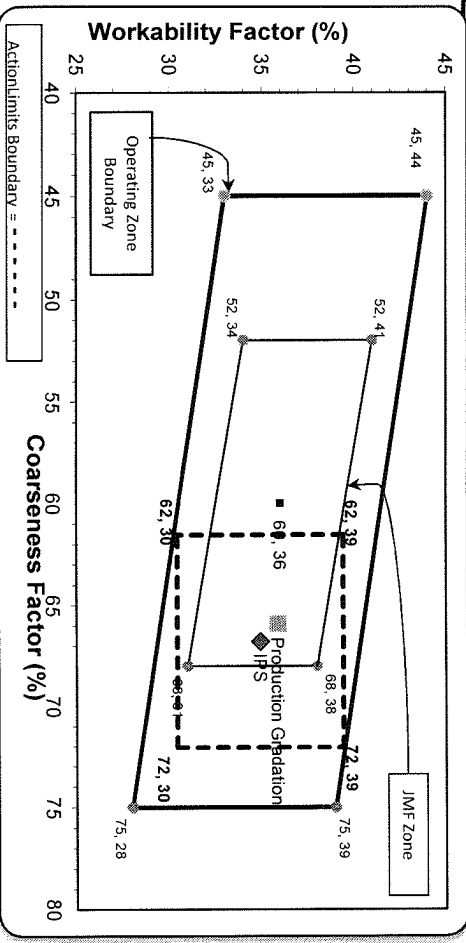
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
		<b>Total Wt</b>	<b>3070</b>	<b>18.70</b>		<b>100.0</b>

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.5	100.0	100.0	98.7	1.3	1.3
1"	30.9	100.0	100.0	79.3	19.4	20.7
3/4"	5.2	99.3	100.0	71.4	7.9	28.6
1/2"	2.8	81.1	100.0	65.0	6.4	35.0
3/8"	2.0	58.3	100.0	57.7	7.3	42.3
#4	1.6	16.6	98.3	44.0	13.7	56.0
#8	1.4	5.9	86.0	35.9	8.2	64.1
#16	1.3	3.6	70.0	28.9	7.0	71.1
#30	1.2	3.0	48.8	20.4	8.5	79.6
#50	1.1	2.7	20.3	9.1	11.3	90.9
#100	1.1	2.5	4.2	2.7	6.4	97.3
LBW	1.0	1.8	0.6	1.1	1.7	98.9

\*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  
 Coarseness Factor: **66** Workability Factor: **36**



Initial Production Sample (IPS)

Coarseness Factor:	Workability Factor:	% Retained	Cumulative % Retained
<b>67</b>	<b>35</b>		
		<b>% Retained</b>	<b>Cumulative % Retained</b>
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.0	15.0	15.0
3/4"	72.1	12.9	27.9
1/2"	64.5	7.6	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY:  
 SM, LLC Technical Service

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



Superior Auburn Hills  
2470 Auburn Road  
Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills  
Product 1022-2NS GR  
Period: 08/01/2021 - 08/07/2021

Name/Title Doug Storey / QC Technician  
Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.3	%	95-100
	#8 (2.36mm)	86.0	%	65-95
	#16 (1.18mm)	70.0	%	35-75
	#30 (.6mm)	48.8	%	20-55
	#50 (.3mm)	20.3	%	10-30
	#100 (.15mm)	4.2	%	0-10
	#200 (75µm)	0.9	%	
	FM	2.72		2.6-3
	Wash Loss (#200/75um)	0.6	%	0-3
	Total Moisture	3.60	%	



Superior Auburn Hills  
 2470 Auburn Road  
 Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	99.3	%	
	1/2" (12.5mm)	81.1	%	
	3/8" (9.5mm)	58.3	%	
	#4 (4.75mm)	16.6	%	
	#8 (2.36mm)	5.9	%	
	#16 (1.18mm)	3.6	%	
	#30 (.6mm)	3.0	%	
	#50 (.3mm)	2.7	%	
	#100 (.15mm)	2.5	%	
	#200 (75µm)	2.1	%	
	Wash Loss (#200/75um)	1.8	%	0-3
	Total Moisture	3.02	%	



Superior Auburn Hills  
 2470 Auburn Road  
 Auburn Hills, MI 48432

**Plant** S36-Superior Auburn Hills

**Product** 7919-COARSE AGG P1M LS

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

**Period:** 08/01/2021 - 08/07/2021

**Report Date** 08/06/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	95.5	%	
	1" (25mm)	30.9	%	
	3/4" (19mm)	5.2	%	
	1/2" (12.5mm)	2.8	%	
	3/8" (9.5mm)	2.0	%	
	#4 (4.75mm)	1.6	%	
	#8 (2.36mm)	1.4	%	
	#16 (1.18mm)	1.3	%	
	#30 (.6mm)	1.2	%	
	#50 (.3mm)	1.1	%	
	#100 (.15mm)	1.1	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	1.0	%	0-2
	Total Moisture	2.27	%	

# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: **P-101**

Sample Date: **8/2/21**

Dates Test Represents: **8/3/2021** through **8/9/2021**

Concrete Grade: **P1M**

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
NNS	75-051	Mid-Michigan	1200	7.23	2.66	39.1
Total Wt			3070	18.67		100.0

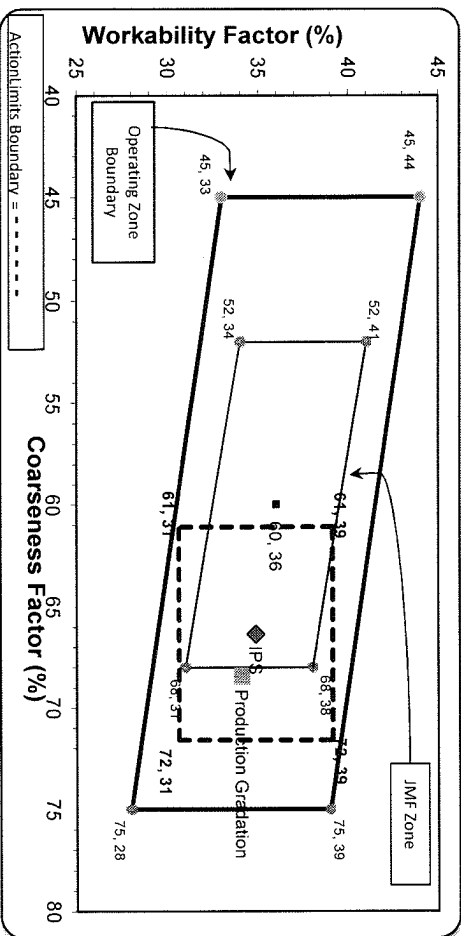
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Sieve	CA	IA	NNS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	47.2	100.0	100.0	81.6	18.4	18.4
3/4"	18.2	98.3	100.0	71.0	10.6	29.0
1/2"	8.8	77.7	100.0	62.4	8.6	37.6
3/8"	6.5	52.0	100.0	54.9	7.5	45.1
#4	3.9	11.2	98.8	42.9	12.0	57.1
#8	3.2	4.3	81.5	34.1	8.8	65.9
#16	2.9	2.8	64.5	27.0	7.1	73.0
#30	2.7	2.5	48.5	20.6	6.4	79.4
#50	2.4	2.3	25.5	11.4	9.1	88.6
#100	2.1	2.1	5.8	3.5	7.9	96.5
LBW	1.6	1.4	1.7	1.6	2.0	98.4

\*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

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

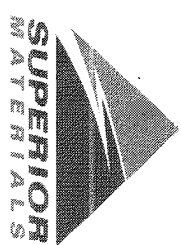


Initial Production Sample (IPS)

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: \_\_\_\_\_



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



Plant S101-Superior Mount Clemens

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.8	%	95-100
	#8 (2.36mm)	81.5	%	65-95
	#16 (1.18mm)	64.5	%	35-75
	#30 (.6mm)	48.5	%	20-55
	#50 (.3mm)	25.5	%	10-30
	#100 (.15mm)	5.8	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.75		2.6-3
	Wash Loss (#200/75um)	1.2	%	0-3
	Total Moisture	4.67	%	



Plant S101-Superior Mount Clemens

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/06/2021

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	98.3	%	
	1/2" (12.5mm)	77.7	%	
	3/8" (9.5mm)	52.0	%	
	#4 (4.75mm)	11.2	%	
	#8 (2.36mm)	4.3	%	
	#16 (1.18mm)	2.8	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	3.68	%	



**Plant** S101-Superior Mount Clemens

**Product** 7919-COARSE AGG P1M LS

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

**Period:** 08/01/2021 - 08/07/2021

**Report Date** 08/06/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	47.2	%	
	3/4" (19mm)	18.2	%	
	1/2" (12.5mm)	8.8	%	
	3/8" (9.5mm)	6.5	%	
	#4 (4.75mm)	3.9	%	
	#8 (2.36mm)	3.2	%	
	#16 (1.18mm)	2.9	%	
	#30 (.6mm)	2.7	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75um)	1.6	%	0-2
	Total Moisture	2.18	%	



# Aggregate Optimization Chart

# Production Gradation Report

PLANT #: P-02

Sample Date: 8/2/21

Dates Test Represents: 8/3/2021 through 8/9/2021

Concrete Grade: P1M

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	870	5.32	2.62	28.3
N2S	63-115	Ray Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

Verify this number is 100%

Sieve	CA	IA	N2S	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	92.9	100.0	100.0	97.8	2.2	2.2
1"	33.6	100.0	100.0	79.5	18.4	20.5
3/4"	9.6	97.3	100.0	71.3	8.2	28.7
1/2"	2.9	75.7	100.0	63.1	8.2	36.9
3/8"	2.2	53.4	100.0	56.5	6.5	43.5
#4	1.7	14.6	96.6	44.0	12.5	56.0
#8	1.6	5.5	80.5	34.8	9.2	65.2
#16	1.6	3.4	63.6	27.4	7.5	72.6
#30	1.5	2.8	43.5	19.0	8.4	81.0
#50	1.4	2.5	24.1	11.0	8.0	89.0
#100	1.2	2.2	6.4	3.6	7.4	96.4
LBW	0.8	1.4	0.8	1.0	2.6	99.0

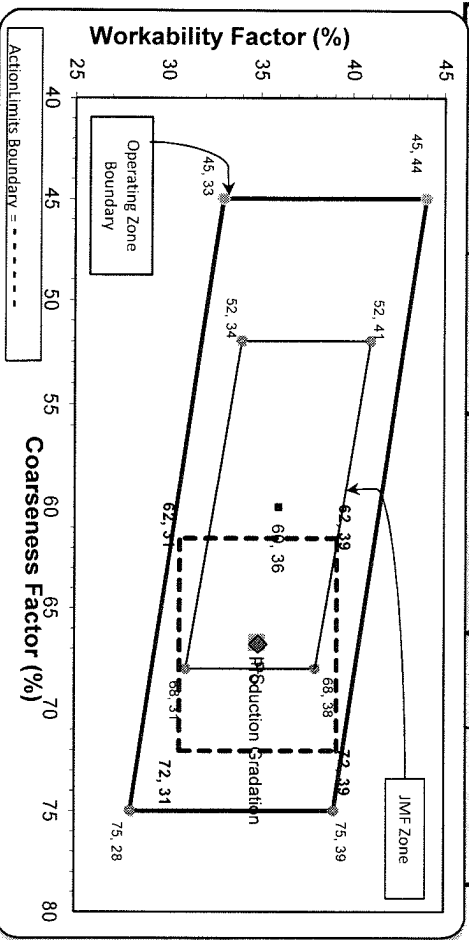
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max.  
 nom. max. #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max.  
 nom. max. #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when  
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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

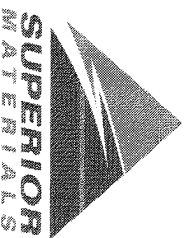
Initial Production Sample (IPS)

Coarseness Factor: 67 Workability Factor: 35

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"	85.0	15.0	15.0
3/4"	72.3	12.7	27.7
1/2"	64.5	7.8	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3



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

PREPARED BY:  
 SM, LLC Technical Service

Approved By:



Plant S02-Superior Hoover

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/07/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.6	%	95-100
	#8 (2.36mm)	80.5	%	65-95
	#16 (1.18mm)	63.6	%	35-75
	#30 (.6mm)	43.5	%	20-55
	#50 (.3mm)	24.1	%	10-30
	#100 (.15mm)	6.4	%	0-10
	#200 (75µm)	1.1	%	
	FM	2.85		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	4.21	%	



Plant S02-Superior Hoover

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/07/2021

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	97.3	%	
	1/2" (12.5mm)	75.7	%	
	3/8" (9.5mm)	53.4	%	
	#4 (4.75mm)	14.6	%	
	#8 (2.36mm)	5.5	%	
	#16 (1.18mm)	3.4	%	
	#30 (.6mm)	2.8	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	2.94	%	



Plant S02-Superior Hoover

Product 7919-COARSE AGG P1M

Name/Title Doug Storey / QC Technician

Period: 08/01/2021 - 08/07/2021

Report Date 08/07/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	92.9	%	
	1" (25mm)	33.6	%	
	3/4" (19mm)	9.6	%	
	1/2" (12.5mm)	2.9	%	
	3/8" (9.5mm)	2.2	%	
	#4 (4.75mm)	1.7	%	
	#8 (2.36mm)	1.6	%	
	#16 (1.18mm)	1.6	%	
	#30 (.6mm)	1.5	%	
	#50 (.3mm)	1.4	%	
	#100 (.15mm)	1.2	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	0.8	%	0-2
	Total Moisture	1.06	%	