

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: **5/30/22**

Dates Test Represents: **5/31/2022**

through **6/6/2022**

Concrete Grade: **P1M, 3500HP**

MIDOT No.:

Contractor:

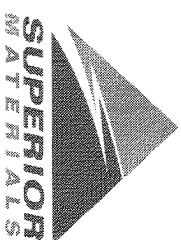
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	550	3.36	2.62	17.9
IA	71-47	Presque Isle	1270	7.77	2.62	41.4
NNS	95-013	Smelter Bay	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

<----- 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"	54.5	100.0	100.0	91.8	8.2	8.2
3/4"	11.1	97.9	100.0	83.2	8.6	16.8
1/2"	2.0	75.0	100.0	72.1	11.1	27.9
3/8"	1.4	52.1	100.0	62.5	9.6	37.5
#4	1.2	13.4	96.5	45.0	17.5	55.0
#8	1.2	5.9	84.5	37.1	8.0	62.9
#16	1.2	4.8	69.9	30.7	6.4	69.3
#30	1.2	4.4	50.6	22.6	8.0	77.4
#50	1.2	3.8	24.8	11.9	10.8	88.1
#100	1.1	3.2	6.9	4.3	7.6	95.7
LBW	0.9	2.5	1.6	1.8	2.5	98.2

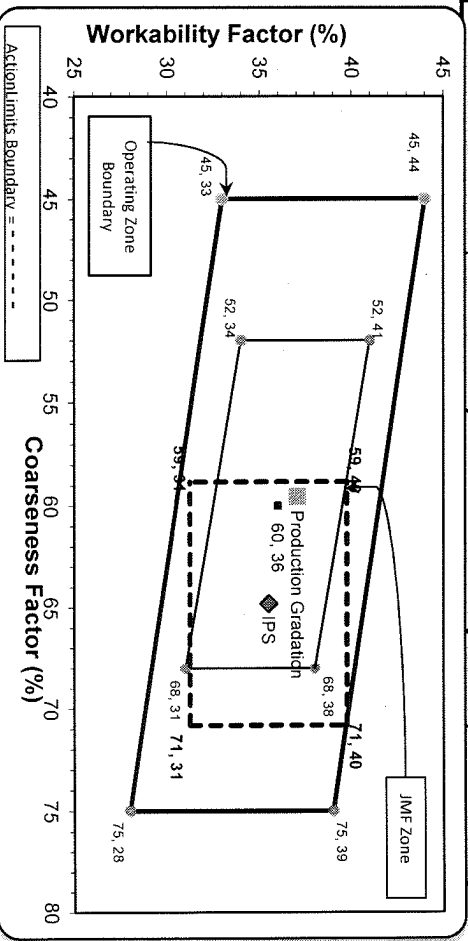
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max. #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

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



Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **60** Workability Factor: **37**



Initial Production Sample (IPS)

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
 Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/04/2022

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)	84.5	%	65-95
	#16 (1.18mm)	69.9	%	35-75
	#30 (.6mm)	50.6	%	20-55
	#50 (.3mm)	24.8	%	10-30
	#100 (.15mm)	6.9	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.67		2.6-3
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	5.2	%	

Plant 958-JMT
 Product 7920-INTERMED AGG P1M LS PI
 Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/04/2022

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)	97.9	%	
	1/2" (12.5mm)	75.0	%	
	3/8" (9.5mm)	52.1	%	
	#4 (4.75mm)	13.4	%	
	#8 (2.36mm)	5.9	%	
	#16 (1.18mm)	4.8	%	
	#30 (.6mm)	4.4	%	
	#50 (.3mm)	3.8	%	
	#100 (.15mm)	3.2	%	
	#200 (75µm)	2.8	%	
	Wash Loss (#200/75um)	2.5	%	0-3
	Total Moisture	1.5	%	

Plant 958-JMT
Product 7919-COARSE AGG P1M LS PI
Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS PI Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	54.5	%	
	3/4" (19mm)	11.1	%	
	1/2" (12.5mm)	2.0	%	
	3/8" (9.5mm)	1.4	%	
	#4 (4.75mm)	1.2	%	
	#8 (2.36mm)	1.2	%	
	#16 (1.18mm)	1.2	%	
	#30 (.6mm)	1.2	%	
	#50 (.3mm)	1.2	%	
	#100 (.15mm)	1.1	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	0.9	%	0-2
	Total Moisture	0.8	%	

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-35**

Contractor: _____

Sample Date: **5/30/22**

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: **5/31/2022** through **6/6/2022**

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
NNS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
Total Wt			3120	18.70		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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	64.4	100.0	100.0	84.4	15.6	15.6
3/4"	26.4	100.0	100.0	67.7	16.7	32.3
1/2"	13.7	96.5	100.0	61.5	6.2	38.5
3/8"	9.4	76.7	100.0	56.1	5.4	43.9
#4	2.1	23.7	97.7	42.7	13.4	57.3
#8	1.3	7.2	79.1	32.3	10.4	67.7
#16	1.1	3.7	60.8	24.5	7.7	75.5
#30	0.9	2.7	42.2	17.1	7.4	82.9
#50	0.8	2.3	20.4	8.6	8.5	91.4
#100	0.7	2.1	6.4	3.1	5.5	96.9
LBW	0.5	1.8	1.7	1.2	1.9	98.8

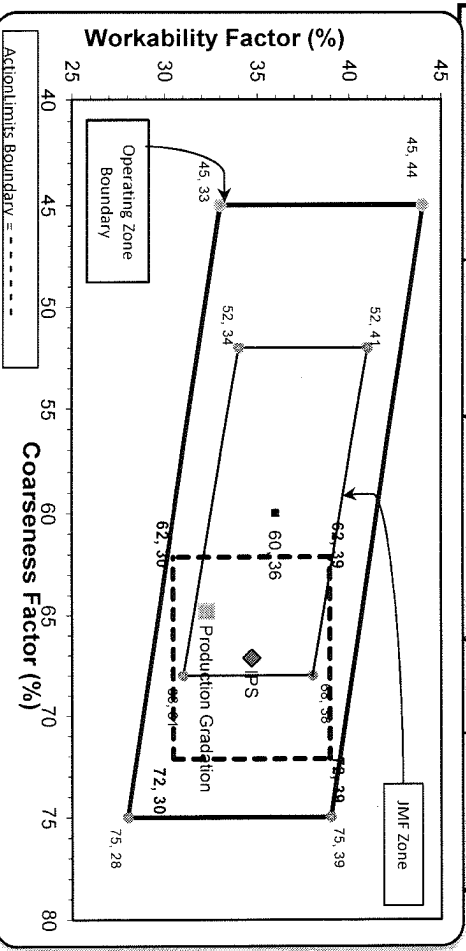
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 **Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 ***Retained must be at least 8% for the 1" sieve when a 2" max size (nom.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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)

Coarseness Factor: **65** Workability Factor: **32**

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

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



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



Plant S35-Superior Romulus

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.7	%	95-100
	#8 (2.36mm)	79.1	%	65-95
	#16 (1.18mm)	60.8	%	35-75
	#30 (.6mm)	42.2	%	20-55
	#50 (.3mm)	20.4	%	10-30
	#100 (.15mm)	6.4	%	0-10
	#200 (75µm)	2.0	%	
	FM	2.93		2.6-3
AASHTO T11	#200 (75µm)	1.98	%	
	Wash Loss (#200/75µm)	1.7	%	0-3
ASTM C566	Total Moisture	3.96	%	



Plant S35-Superior Romulus
 Product 7920-INTERMED AGG P1M LS
 Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/04/2022

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)	96.5	%	
	3/8" (9.5mm)	76.7	%	
	#4 (4.75mm)	23.7	%	
	#8 (2.36mm)	7.2	%	
	#16 (1.18mm)	3.7	%	
	#30 (.6mm)	2.7	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	2.0	%	
	Wash Loss (#200/75um)	1.8	%	0-3
ASTM C566	Total Moisture	4.62	%	



Plant S35-Superior Romulus

Product 7919-COARSE AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	64.4	%	
	3/4" (19mm)	26.4	%	
	1/2" (12.5mm)	13.7	%	
	3/8" (9.5mm)	9.4	%	
	#4 (4.75mm)	2.1	%	
	#8 (2.36mm)	1.3	%	
	#16 (1.18mm)	1.1	%	
	#30 (.6mm)	0.9	%	
	#50 (.3mm)	0.8	%	
	#100 (.15mm)	0.7	%	
	#200 (75µm)	0.6	%	
	Wash Loss (#200/75um)	0.5	%	0-2
ASTM C566	Total Moisture	2.16	%	

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

Sample Date: **5/30/22**

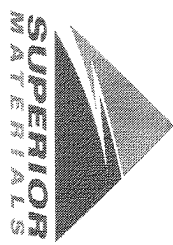
Dates Test Represents: **5/31/2022**

through **6/6/2022**

Concrete Grade: **P1M, 3500HP**

Contractor: _____

MDOT No.: _____



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

<----- Verify this number is 100%

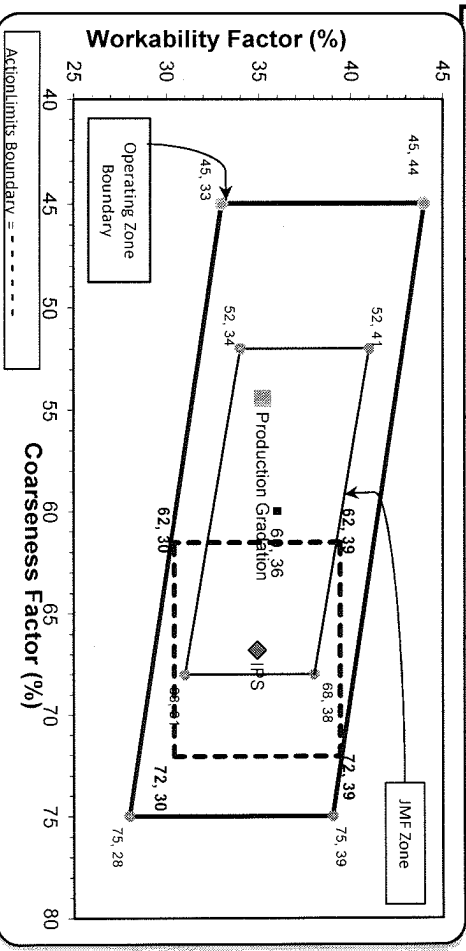
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	600	3.67	2.62	19.5
IA	71-47	Presque Isle	1270	7.77	2.62	41.4
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt:						3070
						18.70

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.7	100.0	100.0	99.2	0.8	0.8
1"	32.7	100.0	100.0	86.8	12.3	13.2
3/4"	5.6	99.3	100.0	81.3	5.6	18.7
1/2"	1.4	80.8	100.0	72.8	8.5	27.2
3/8"	1.3	61.4	100.0	64.7	8.0	35.3
#4	1.3	17.1	97.7	45.5	19.2	54.5
#8	1.3	6.3	82.8	35.2	10.3	64.8
#16	1.3	3.7	68.4	28.5	6.7	71.5
#30	1.3	3.1	51.3	21.6	6.9	78.4
#50	1.3	2.8	23.5	10.6	11.0	89.4
#100	1.2	2.5	3.3	2.6	8.0	97.4
LBW	0.8	2.0	0.3	1.1	1.5	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. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **54** Workability Factor: **35**



Initial Production Sample (IPS)

Sieve	Coarseness Factor:	Workability Factor:	Cumulative % Passing	% Retained	Cumulative % Retained
2"	67	35	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: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.7	%	95-100
	#8 (2.36mm)	82.8	%	65-95
	#16 (1.18mm)	68.4	%	35-75
	#30 (.6mm)	51.3	%	20-55
	#50 (.3mm)	23.5	%	10-30
	#100 (.15mm)	3.3	%	0-10
	#200 (75µm)	0.5	%	
	FM	2.73		2.6-3
	Wash Loss (#200/75um)	0.3	%	0-3
	Total Moisture	3.91	%	



Superior Auburn Hills
 2470 Auburn Road
 Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills
 Product 7920-INTERMED AGG P1M LS
 Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
 Report Date 06/04/2022

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)	80.8	%	
	3/8" (9.5mm)	61.4	%	
	#4 (4.75mm)	17.1	%	
	#8 (2.36mm)	6.3	%	
	#16 (1.18mm)	3.7	%	
	#30 (.6mm)	3.1	%	
	#50 (.3mm)	2.8	%	
	#100 (.15mm)	2.5	%	
	#200 (75µm)	2.2	%	
	Wash Loss (#200/75um)	2.0	%	0-3
	Total Moisture	3.47	%	



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: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	95.7	%	
	1" (25mm)	32.7	%	
	3/4" (19mm)	5.6	%	
	1/2" (12.5mm)	1.4	%	
	3/8" (9.5mm)	1.3	%	
	#4 (4.75mm)	1.3	%	
	#8 (2.36mm)	1.3	%	
	#16 (1.18mm)	1.3	%	
	#30 (.6mm)	1.3	%	
	#50 (.3mm)	1.3	%	
	#100 (.15mm)	1.2	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	0.8	%	0-2
	Total Moisture	1.00	%	

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-39**

Contractor: _____

Sample Date: **5/30/22**

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: **5/31/2022** through **6/6/2022**

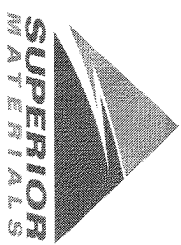
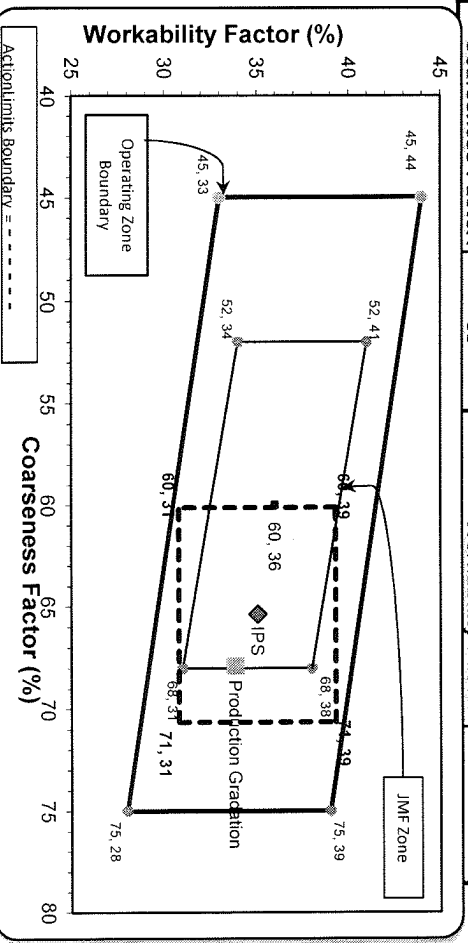
MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	800	4.89	2.62	26.1
NNS	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
Total Wt			3070	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"	97.4	100.0	100.0	99.1	0.9	0.9
1"	43.5	100.0	100.0	81.2	17.9	18.8
3/4"	15.8	98.8	100.0	71.7	9.5	28.3
1/2"	6.5	77.4	100.0	63.0	8.7	37.0
3/8"	4.5	49.4	100.0	55.1	8.0	44.9
#4	3.1	9.5	97.1	43.0	12.0	57.0
#8	2.7	4.1	78.3	33.8	9.2	66.2
#16	2.6	3.3	62.9	27.3	6.5	72.7
#30	2.5	3.0	47.3	20.9	6.5	79.1
#50	2.4	2.6	27.2	12.5	8.3	87.5
#100	2.2	2.3	11.5	6.0	6.5	94.0
LBW	1.7	1.7	2.4	2.0	4.0	98.0

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

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



Superior Materials, LLC
 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. 1.5") aggregate is used.

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"	83.9	15.7	16.1
3/4"	74.1	9.8	25.9
1/2"	64.3	9.7	35.7
3/8"	57.5	6.8	42.5
#4	44.5	13.1	55.5
#8	35.1	9.4	64.9
#16	27.9	7.2	72.1
#30	21.7	6.2	78.3
#50	12.6	9.1	87.4
#100	3.5	9.1	96.5
LBW	1.2	2.4	98.8

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

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Plant S39-Superior Sterling Heights

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.1	%	95-100
	#8 (2.36mm)	78.3	%	65-95
	#16 (1.18mm)	62.9	%	35-75
	#30 (.6mm)	47.3	%	20-55
	#50 (.3mm)	27.2	%	10-30
	#100 (.15mm)	11.5	%	0-10
	#200 (75µm)	3.2	%	
	FM	2.76		2.6-3
	Wash Loss (#200/75um)	2.4	%	0-3
	Total Moisture	4.15	%	



Plant S39-Superior Sterling Heights

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

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)	98.8	%	
	1/2" (12.5mm)	77.4	%	
	3/8" (9.5mm)	49.4	%	
	#4 (4.75mm)	9.5	%	
	#8 (2.36mm)	4.1	%	
	#16 (1.18mm)	3.3	%	
	#30 (.6mm)	3.0	%	
	#50 (.3mm)	2.6	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	1.9	%	
	Wash Loss (#200/75um)	1.7	%	0-3
	Total Moisture	2.81	%	



Plant S39-Superior Sterling Heights

Product 7919-COARSE AGG P1M LS

Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician

Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	97.4	%	
	1" (25mm)	43.5	%	
	3/4" (19mm)	15.8	%	
	1/2" (12.5mm)	6.5	%	
	3/8" (9.5mm)	4.5	%	
	#4 (4.75mm)	3.1	%	
	#8 (2.36mm)	2.7	%	
	#16 (1.18mm)	2.6	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.2	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75µm)	1.7	%	0-2
	Total Moisture	1.67	%	

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-02

Sample Date: 5/30/22

Dates Test Represents: 5/31/2022 through 6/6/2022

Concrete Grade: P1M, 3500HP

Contractor: _____

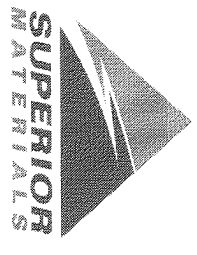
MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	550	3.36	2.62	17.9
IA	71-47	Presque Isle	1270	7.77	2.62	41.4
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
		Total Wt	3070			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"	98.4	100.0	100.0	99.7	0.3	0.3
1"	39.8	100.0	100.0	89.2	10.5	10.8
3/4"	9.1	98.8	100.0	83.2	6.0	16.8
1/2"	2.7	77.8	100.0	73.4	9.8	26.6
3/8"	2.4	57.1	100.0	64.8	8.6	35.2
#4	2.2	17.1	96.5	46.8	18.0	53.2
#8	2.2	6.5	78.8	35.2	11.6	64.8
#16	2.2	4.3	62.6	27.7	7.5	72.3
#30	2.2	3.6	46.9	21.0	6.7	79.0
#50	2.1	3.2	24.8	11.8	9.2	88.2
#100	1.9	2.8	5.8	3.9	7.9	96.1
LBW	1.5	2.1	0.9	1.5	2.4	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.



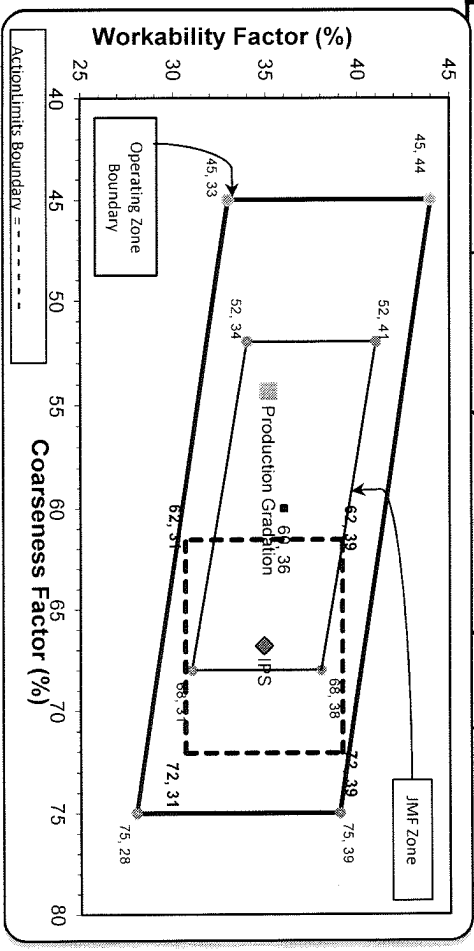
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **54** 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"	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

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Plant S02-Superior Hoover

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

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)	78.8	%	65-95
	#16 (1.18mm)	62.6	%	35-75
	#30 (.6mm)	46.9	%	20-55
	#50 (.3mm)	24.8	%	10-30
	#100 (.15mm)	5.8	%	0-10
	#200 (75µm)	1.3	%	
	FM	2.84		2.6-3
	Wash Loss (#200/75um)	0.9	%	0-3
	Total Moisture	3.92	%	



Plant S02-Superior Hoover

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 05/29/2022 - 06/04/2022

Report Date 06/04/2022

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)	98.8	%	
	1/2" (12.5mm)	77.8	%	
	3/8" (9.5mm)	57.1	%	
	#4 (4.75mm)	17.1	%	
	#8 (2.36mm)	6.5	%	
	#16 (1.18mm)	4.3	%	
	#30 (.6mm)	3.6	%	
	#50 (.3mm)	3.2	%	
	#100 (.15mm)	2.8	%	
	#200 (75µm)	2.3	%	
	Wash Loss (#200/75um)	2.1	%	0-3
	Total Moisture	2.43	%	



Plant S02-Superior Hoover
Product 7919-COARSE AGG P1M LS
Period: 05/29/2022 - 06/04/2022

Name/Title Doug Storey / QC Technician
Report Date 06/04/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	98.4	%	
	1" (25mm)	39.8	%	
	3/4" (19mm)	9.1	%	
	1/2" (12.5mm)	2.7	%	
	3/8" (9.5mm)	2.4	%	
	#4 (4.75mm)	2.2	%	
	#8 (2.36mm)	2.2	%	
	#16 (1.18mm)	2.2	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	2.11	%	