PLANT		P-102					Contractor:					
Sample Date	):	6/17/24		C	Concrete Grade	DM, 4500HP						
Dates Test F	Represents:	6/18/2024	through	6/24/2024	_		MDOT No.:					
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution						
6AA	58-003	Stoneco	1400	8.34	2.69	47.5						
26A	58-003	Stoneco	400	2.38	2.69	13.6						
2NS	63-114	Highland	1150	6.95	2.65	39.0				SUD	ERIOR	
		Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%	SUPERIOR MATERIALS			
Sieve	ę	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained			Materials, LLC	
0.1					100.0	, , , , , , , , , , , , , , , , , , ,			30701 W. 10 Mile Rd. Suite 500		10 Mile Rd.	
2"		00.0	10		100.0	100.0	0.0	0.0			n Hills MI 18336	
1.5" 1"		00.0	10 10		100.0 100.0	100.0 100.0	0.0	0.0	Farmington Hills, MI 4833		11 11113, IVII 40330	
3/4"		<u>00.0</u> 82.0			100.0	91.5	<u> </u>	0.0 8.5	-			
1/2"		37.4	100.0 98.9		100.0	70.1	21.3	29.9	-			
3/8"		17.2	79		100.0	57.9	12.2	42.1	*Maximum % Retained must be above the 3/8" sieve		above the 3/8" sieve.	
#4		3.9	6		98.8	41.2	16.7	58.8	*Any two adjacent sieves must equal 10% except ma			
#8		1.8	1.	5	84.9	34.2	7.0	65.8	nom. max., #100 and #200 sieves.			
#16		1.3	1.	2	67.5	27.1	7.1	72.9	*% Retained must be at least 4% for each sieve except			
#30		1.1	1.		48.2	19.5	7.6	80.5	nom. max., #10	00 and #200 sieves	S.	
#50		1.0	1.		16.5	7.1	12.4	92.9			6 for the 3/4" sieve whe	
#100 LBW		<u>1.0</u> 0.8	1.1		2.3 0.2	1.5 0.6	5.5 0.9	98.5	a 1.5" max. size (nom. Max. 1.0") aggregate is used.			
		-		-				99.4				
Production G		O Batch Plant Gra		regate Supplier Gra	1			on Sample (IPS	,			
Coarsene	ess Factor:	64	Work	ability Factor:	34	36.7		eness Factor:	61			
45						)	Work	ability Factor:	36		1	
1	45, 44				JMF Zone		Sieve	Cumulative	%	Cumulative		
-		52, 41			L		2"	% Passing 100.0	Retained	% Retained 0.0		
40		56	40	67_40	75, 39		 1.5"	100.0	0.0	0.0		
8				68, 38	75, 39		1.5	99.3	0.0	0.0		
5				Production Grad	dation		3/4"	89.2	10.1	10.8		
<b>ž</b> 35			<b>€</b> 9,136	i			1/2"	70.7	18.5	29.3		
iii I	$\rightarrow$	52, 34	·				3/8"	60.7	10.0	39.3		
	45, 33		L	i			#4	44.4	16.3	55.6		
ity	1	56.	52	<b>67, 32</b> , 31			#8	35.9	8.5	64.1		
<sup>30</sup>							#16	27.3	8.6	72.7		
rkability F	Operating Zone						#20	19.1	8.2			
Vorkability I	Operating Zone Boundary				75, 28		#30	-	-	80.9		
Worka	1 0	]			75, 28		#50	7.4	11.7	92.6		
Norkability F	1 0	50 55	5 60	65 Factor (%)		80		-	-			

Approved By:

PLANT #	-	P-103					Contractor:				
Sample Date	-	6/17/24			concrete Grade	: DM, 4500HP					
Dates Test R	epresents:	6/18/2024	through	6/24/2024			MDOT No.:				
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific	% Contribution					
6AA	58-003	Stoneco	1400	8.34	<b>Gravity</b> 2.69	Contribution 47.5					
26A	58-003	Stoneco	400	2.38	2.69	13.6					
20/1 2NS	63-114	Highland	1150	6.95	2.65	39.0					
	00	Total Wt				100.0	< Verify this nu	umber is 100%	SUPERIOR MATERIALS		
Sieve	6	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<u>Superior I</u> 30701 W. 1	Materials, LLC 10 Mile Rd.
2"	1(	00.0	100	0.0	100.0	100.0	0.0	0.0	Suite 500		
1.5"		00.0	100		100.0	100.0	0.0	0.0	Farmington Hills, MI 48336		n Hills, MI 48336
1"		00.0	100		100.0	100.0	0.0	0.0			
3/4"	-	32.0	100		100.0	91.5	8.5	8.5			
1/2"		37.4	98		100.0	70.1	21.3	29.9			
3/8"		7.2	79		100.0	57.9	12.2	42.1	*Maximum % Retained must be above the 3/8" sieve.		
#4		3.9	6.		98.8	41.2	16.7	58.8	*Any two adjacent sieves must equal 10% except max.		
#8 #16		1.8 1.3	1.		84.9 67.5	34.2 27.1	7.0 7.1	65.8 72.9	nom. max., #100 and #200 sieves.		
#16 #30		1.3	1.		48.2	19.5	7.1	80.5	*% Retained must be at least 4% for each sieve exception nom. max., #100 and #200 sieves.		•
#50		1.0	1.		16.5	7.1	12.4	92.9	,		o for the 3/4" sieve whe
#100		1.0	1.		2.3	1.5	5.5	98.5		e (nom. Max. 1.0") a	
LBW		0.8	0.		0.2	0.6	0.9	99.4			aggrogato to accar
Production G	radation	O Batch Plant Gra	dations 💿 Agg	regate Supplier Gra	dations	Adjusted WF	Intial Production	on Sample (IPS	3)		
	ess Factor:	64		ability Factor:	34	36.7		eness Factor:	61	l	
000130110	.33 1 40101.										
					0.				-		
45								ability Factor:	36	Cumulative	
	15, 44				JMF Zone			ability Factor: Cumulative	36 %	Cumulative % Retained	
-	15, 44	52, 41					Work: Sieve	ability Factor: Cumulative % Passing	36 % Retained	% Retained	
40	15, 44		40	67.40			Work	ability Factor: Cumulative	36 %		
40	15, 44		40	68, 38	JMF Zone		Works Sieve 2"	ability Factor: Cumulative % Passing 100.0	<b>36</b> % Retained 0.0	% Retained 0.0	
40	15, 44			68, 38	JMF Zone		Worka Sieve 2" 1.5" 1" 3/4"	ability Factor: Cumulative % Passing 100.0 100.0	<b>36</b> % Retained 0.0 0.0 0.7 10.1	% Retained 0.0 0.0 0.7 10.8	
40	15, 44			68, 38	JMF Zone		Works 2" 1.5" 1" 3/4" 1/2"	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5	% Retained 0.0 0.0 0.7 10.8 29.3	
40				68, 38	JMF Zone		Works 2" 1.5" 1" 3/4" 1/2" 3/8"	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7 60.7	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5 10.0	% Retained 0.0 0.0 0.7 10.8 29.3 39.3	
40	45, 33	52, 41 <b>56</b> , 52, 34		68, 38 Production Grac	JMF Zone		Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7 60.7 44.4	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5 10.0 16.3	% Retained 0.0 0.0 0.7 10.8 29.3 39.3 55.6	
40		52, 41 <b>56</b> ,		68, 38	JMF Zone		Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7 60.7 44.4 35.9	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5 10.0 16.3 8.5	% Retained           0.0           0.7           10.8           29.3           39.3           55.6           64.1	
40	45, 33 Operating Zone	52, 41 <b>56</b> , 52, 34 <b>56</b> ,		68, 38 Production Grac	JMF Zone 75, 39 dation		Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7 60.7 44.4 35.9 27.3	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5 10.0 16.3 8.5 8.6	% Retained           0.0           0.0           0.7           10.8           29.3           39.3           55.6           64.1           72.7	
40	45, 33	52, 41 <b>56</b> , 52, 34 <b>56</b> ,		68, 38 Production Grac	JMF Zone		Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16 #30	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7 60.7 44.4 35.9 27.3 19.1	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5 10.0 16.3 8.5 8.6 8.6 8.2	% Retained           0.0           0.0           0.7           10.8           29.3           39.3           55.6           64.1           72.7           80.9	
ability Factor (%)	45, 33 Operating Zone	52, 41 <b>56</b> , 52, 34 <b>56</b> ,		68, 38 Production Grac	JMF Zone 75, 39 dation		Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.2 70.7 60.7 44.4 35.9 27.3	<b>36</b> % <b>Retained</b> 0.0 0.0 0.7 10.1 18.5 10.0 16.3 8.5 8.6	% Retained           0.0           0.0           0.7           10.8           29.3           39.3           55.6           64.1           72.7	

Approved BY: May 1. Ball

	#:	12					Contractor:			-		
Sample Date	:	6/17/24	-	(	Concrete Grade	DM, 4500HP						
Dates Test R	epresents:	6/18/2024	through	6/24/2024			MDOT No.:			_		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution						
6AA	71-47	Presque Isle	1500	9.17	2.62	51.6						
26A	71-47	Presque Isle	255	1.56	2.62	8.8						
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6				SUP	ERIOR	
		Total Wt	2905	17.69		100.0	< Verify this n	umber is 100%	•		RIALS	
Sieve		6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	Superior Materials, LLC 30701 W. 10 Mile Rd.			
2"	1	00.0	100	).0	100.0	100.0	0.0	0.0	Suite 500			
1.5"		00.0	100		100.0	100.0	0.0	0.0	Farmington Hills, MI 48336			
1"		95.5	100	).0	100.0	97.7	2.3	2.3	1	5		
3/4"		73.2	100		100.0	86.2	11.5	13.8	]			
1/2"		31.4	93		100.0	64.0	22.2	36.0	]			
3/8"		17.0	81	.6	100.0	55.5	8.5	44.5	*Maximum % Retained must be above the 3/8" sieve.			
#4	4.0		16		95.6	41.4	14.2	58.6	*Any two adjacent sieves must equal 10% except max.,			
#8		2.5	4.		79.7	33.2	8.2	66.8	nom. max., #100 and #200 sieves.			
#16		2.2	2.4		64.1	26.7	6.5	73.3	*% Retained must be at least 4% for each sieve except n			
									nom. max., #100 and #200 sieves.			
#30		2.1	2.		48.6	20.5	6.2	79.5	· · ·	00 and #200 sieves		
#50		2.1	1.	8	25.8	11.5	9.0	88.5	*% Retained i	00 and #200 sieves must be at least 4%	6 for the 3/4" sieve when	
#50 #100		2.1 1.9	1. 1.	8 7	25.8 6.1	11.5 3.5	9.0 7.9	88.5 96.5	*% Retained i	00 and #200 sieves	6 for the 3/4" sieve when	
#50 #100 LBW		2.1 1.9 1.5	1. 1. 1.	8 7 4	25.8 6.1 1.0	11.5 3.5 1.3	9.0 7.9 2.3	88.5 96.5 98.7	*% Retained a 1.5" max. siz	00 and #200 sieves must be at least 4%	6 for the 3/4" sieve when	
#50 #100 LBW		2.1 1.9 1.5 Batch Plant Gra	1. 1. 1.	8 7	25.8 6.1 1.0 adations	11.5 3.5 1.3	9.0 7.9 2.3	88.5 96.5	*% Retained a 1.5" max. siz	00 and #200 sieves must be at least 4%	6 for the 3/4" sieve whe	
#50 #100 LBW Production G		2.1 1.9 1.5	1. 1. 1. dations () Aggi	8 7 4	25.8 6.1 1.0 adations	11.5 3.5 1.3	9.0 7.9 2.3 Intial Productio	88.5 96.5 98.7	*% Retained i a 1.5" max. siz 6) <b>63</b>	00 and #200 sieves must be at least 4%	6 for the 3/4" sieve when	
#50 #100 LBW Production G	iradation	2.1 1.9 1.5 Batch Plant Gra	1. 1. 1. dations () Aggi	8 7 4 regate Supplier Gra	25.8 6.1 1.0 adations	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars	88.5 96.5 98.7 on Sample (IPS	*% Retained i a 1.5" max. siz 5) <b>63</b>	00 and #200 sieves must be at least 4%	6 for the 3/4" sieve whe	
#50 #100 LBW Production G Coarsene	iradation	2.1 1.9 1.5 Batch Plant Gra	1. 1. 1. dations () Aggi	8 7 4 regate Supplier Gra	25.8 6.1 1.0 adations 33	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work	88.5 96.5 98.7 on Sample (IPS eness Factor:	*% Retained i a 1.5" max. siz 5) <b>63</b>	00 and #200 sieves must be at least 4%	6 for the 3/4" sieve whe	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 O Batch Plant Gra 67	1. 1. 1. dations () Aggi	8 7 4 regate Supplier Gra	25.8 6.1 1.0 adations	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor:	*% Retained i a 1.5" max. siz 63 63 36	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") ;	6 for the 3/4" sieve when	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 Batch Plant Gra	1. 1. 1. dations () Aggi	8 7 4 regate Supplier Gra	25.8 6.1 1.0 adations 33	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2"	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0	*% Retained I a 1.5" max. siz 63 63 36 % Retained 0.0	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0	6 for the 3/4" sieve when	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 O Batch Plant Gra 67	1. 1. 1. dations () Aggi	8 7 4 ability Factor:	25.8 6.1 1.0 adations 33	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5"	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0	*% Retained I a 1.5" max. siz 63 63 63 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0 0.0	6 for the 3/4" sieve whe	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 O Batch Plant Gra 67	1. 1. 1. dations () Aggi	8 7 4 ability Factor: 68, 40	25.8 6.1 1.0 adations 33	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1"	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3	*% Retained I a 1.5" max. siz 63 63 63 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0 0.0 0.7	6 for the 3/4" sieve when	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 O Batch Plant Gra 67	1. 1. 1. dations () Aggi	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4"	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0	*% Retained I a 1.5" max. siz 63 63 63 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0 0.0 0.7 11.0	6 for the 3/4" sieve whe	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 O Batch Plant Gra 67 52, 41	1. 1. 1. dations () Agg	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33 JMF Zone 75, 39	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2"	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3	*% Retained I a 1.5" max. siz 63 63 63 63 8 <b>63</b> 63 <b>63</b> <b>63</b> <b>63</b> <b>63</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b> <b>0</b>	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : <b>Cumulative</b> % Retained 0.0 0.0 0.7 11.0 29.7	6 for the 3/4" sieve whe	
#50 #100 LBW Production G Coarsene	eradation	2.1 1.9 1.5 O Batch Plant Gra 67	1. 1. 1. dations () Agg	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33 JMF Zone 75, 39	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8"	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3 59.9	*% Retained I a 1.5" max. siz 63 63 63 63 64 86 86 86 86 86 86 86 86 86 86 86 86 86	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : <b>Cumulative</b> % Retained 0.0 0.0 0.7 11.0 29.7 40.1	6 for the 3/4" sieve wher	
#50 #100 LBW Production G Coarsene	ess Factor:	2.1 1.9 1.5 O Batch Plant Gra 67 52, 41	1. 1. 1. dations () Agg	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33 JMF Zone 75, 39	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3 59.9 41.9	*% Retained I a 1.5" max. siz 63 63 63 63 63 76 76 76 76 76 76 76 76 76 76 76 76 76	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.7 11.0 29.7 40.1 58.1	6 for the 3/4" sieve wher	
#50 #100 LBW Production G Coarsene	ess Factor:	2.1 1.9 1.5 O Batch Plant Gra 67 52, 41	1. 1. 1. dations () Agg	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33 JMF Zone 75, 39	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3 59.9 41.9 35.9	*% Retained I a 1.5" max. siz 63 63 63 63 64 76 76 76 76 70 70 70 70 70 70 70 70 70 70 70 70 70	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.7 11.0 29.7 40.1 58.1 64.1	6 for the 3/4" sieve whe	
#50 #100 LBW Production G Coarsene	Ats, 44 (45, 33) Operating Zone	2.1 1.9 1.5 O Batch Plant Gra 67 52, 41 52, 34	1. 1. 1. dations () Agg	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations JMF Zone 75, 39 on Gradation	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3 59.9 41.9 35.9 27.8	*% Retained I a 1.5" max. siz 63 63 63 63 64 76 76 76 76 76 76 76 76 76 77 70 70 77 70 70 77 70 70 77 70 70 77 70 70	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.7 11.0 29.7 40.1 58.1 64.1 72.2	6 for the 3/4" sieve wher	
#50 #100 LBW Production G <b>Coarsene</b> 45 40 40 40 30 30	45, 44	2.1 1.9 1.5 O Batch Plant Gra 67 52, 41 52, 34	1. 1. 1. dations () Agg	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33 JMF Zone 75, 39	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16 #30	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3 59.9 41.9 35.9 27.8 18.9	*% Retained I a 1.5" max. siz 63 63 63 63 76 86 86 86 76 70 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.7 11.0 29.7 40.1 58.1 64.1 72.2 81.1	6 for the 3/4" sieve when	
#50 #100 LBW Production G Coarsene	Ats, 44 (45, 33) Operating Zone	2.1 1.9 1.5 O Batch Plant Gra 67 52, 41 52, 34	1. 1. 1. 1. 1. 1. dations ● Aggu Work 57, 40 60, €6 57, 22	8 7 4 ability Factor: 68, 40 68, 38	25.8 6.1 1.0 adations 33 JMF Zone 75, 39 on Gradation 75, 28	11.5 3.5 1.3 Adjusted WF	9.0 7.9 2.3 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	88.5 96.5 98.7 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.0 70.3 59.9 41.9 35.9 27.8	*% Retained I a 1.5" max. siz 63 63 63 63 64 76 76 76 76 76 76 76 76 76 77 70 70 77 70 70 77 70 70 77 70 70 77 70 70	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.7 11.0 29.7 40.1 58.1 64.1 72.2	6 for the 3/4" sieve when	

PREPARED BY: SM, LLC Technical Service

ActionLimits Boundary = - - - - -

Approved By:

Mary 1. Ball

Sample Date	<b>#:</b>	<b>p11</b> 6/17/24	-		Concrete Grade:	DM 4500HP	Contractor:			-		
Dates Test R		6/18/2024	through	6/19/2024		Din, 4000111	MDOT No.:					
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution						
6AA	71-47	Presque Isle	1405	8.59	2.62	48.4						
26A	71-47	Presque Isle	350	2.14	2.62	12.0						
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6				SUPERIOR		
		Total Wt	2905	17.69		100.0	< Verify this n	umber is 100%	•		RIALS	
Sieve		6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	Superior Materials, LLC 30701 W. 10 Mile Rd.			
2"		100.0	100	0.0	100.0	100.0	0.0	0.0	Suite 500			
1.5"		100.0	100		100.0	100.0	0.0	0.0	Farmington Hills, MI 48336		n Hills, MI 48336	
1"		96.2	100		100.0	98.2	1.8	1.8				
3/4"		72.4	100		100.0	86.7	11.5	13.3				
1/2"		33.4	93		100.0	67.0	19.6	33.0				
3/8"		18.3	81		100.0	58.3	8.7	41.7	*Maximum % Retained must be above the 3/8" sieve.			
#4		4.2	16.6		96.4	42.2	16.1	57.8	*Any two adjacent sieves must equal 10% except max.,			
#8		3.3	4.2		85.3	35.9	6.3	64.1	nom. max., #100 and #200 sieves. *% Retained must be at least 4% for each sieve except m			
#16		2.6	2.4		70.6	29.5	6.4	70.5				
					10.0			70.0			•	
#30		2.3	2.	0	49.6	21.0	8.5	79.0		00 and #200 sieves	Э.	
#30 #50		2.3 2.0	2. 1.	0 8	23.4	21.0 10.4	8.5 10.5	89.6	*% Retained i	00 and #200 sieves must be at least 4%	s. 6 for the 3/4" sieve when	
#30 #50 #100		2.3 2.0 1.8	2. 1. 1.	0 8 7	23.4 6.8	21.0 10.4 3.8	8.5 10.5 6.7	89.6 96.2	*% Retained i	00 and #200 sieves	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW	Gradation	2.3 2.0 1.8 1.4	2. 1. 1. 1.	0 8 7 4	23.4 6.8 1.3	21.0 10.4 3.8 1.4	8.5 10.5 6.7 2.4	89.6 96.2 98.6	*% Retained a 1.5" max. siz	00 and #200 sieves must be at least 4%	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G		2.3 2.0 1.8 1.4 O Batch Plant Gra	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra	23.4 6.8 1.3 dations	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio	89.6 96.2 98.6 on Sample (IPS	*% Retained i a 1.5" max. siz	00 and #200 sieves must be at least 4%	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	Bradation Bradation	2.3 2.0 1.8 1.4	2. 1. 1. 1. adations () Aggr	0 8 7 4	23.4 6.8 1.3 dations	21.0 10.4 3.8 1.4	8.5 10.5 6.7 2.4 Intial Production Coars	89.6 96.2 98.6 on Sample (IPS <b>eness Factor</b> :	*% Retained i a 1.5" max. siz 5) <b>62</b>	00 and #200 sieves must be at least 4%	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	ess Factor:	2.3 2.0 1.8 1.4 O Batch Plant Gra	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra	23.4 6.8 1.3 dations 36	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor:	*% Retained i a 1.5" max. siz 6) 62 36	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") ;	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene		2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra	23.4 6.8 1.3 dations	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Production	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative	*% Retained I a 1.5" max. siz 62 36 %	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") ; Cumulative	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene 45	ess Factor:	2.3 2.0 1.8 1.4 O Batch Plant Gra	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra	23.4 6.8 1.3 dations 36	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor:	*% Retained i a 1.5" max. siz 6) 62 36	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") ; Cumulative % Retained	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	ess Factor:	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra ability Factor:	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing	*% Retained I a 1.5" max. siz 62 62 36 % Retained	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") ; Cumulative	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	ess Factor:	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra ability Factor	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2"	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0	*% Retained I a 1.5" max. siz 62 62 36 % Retained 0.0	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	ess Factor:	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations () Aggr	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4"	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 95.0	*% Retained I a 1.5" max. siz 62 36 % Retained 0.0 0.0 0.0 0.0 5.0	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0 0.0 0.0 0.0 5.0	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	ess Factor:	2.3 2.0 1.8 1.4 () Batch Plant Gra 65	2. 1. 1. 1. adations (•) Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2"	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 95.0 72.3	*% Retained ( a 1.5" max. siz 6) 62 36 % Retained 0.0 0.0 0.0 0.0 5.0 22.8	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : Cumulative % Retained 0.0 0.0 0.0 0.0 5.0 27.7	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	45, 44	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations (•) Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8"	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 95.0 72.3 60.4	*% Retained ( a 1.5" max. siz 6) 62 36 % Retained 0.0 0.0 0.0 0.0 5.0 22.8 11.8	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : <b>Cumulative</b> % Retained 0.0 0.0 0.0 0.0 5.0 27.7 39.6	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	ess Factor:	2.3 2.0 1.8 1.4 () Batch Plant Gra 65	2. 1. 1. 1. adations (•) Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1.5" 1.5" 1.5" 3/4" 1/2" 3/8" #4	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 95.0 72.3 60.4 42.6	*% Retained ( a 1.5" max. siz 6) 62 36 % Retained 0.0 0.0 0.0 0.0 5.0 22.8 11.8 17.8	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.0 0.0 5.0 27.7 39.6 57.4	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	45, 44	2.3 2.0 1.8 1.4 () Batch Plant Gra 65	2. 1. 1. 1. adations (•) Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1.5" 1.5" 1.5" 3/4" 1/2" 3/8" #4 #8	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 95.0 72.3 60.4 42.6 36.0	*% Retained ( a 1.5" max. siz 6) 62 36 % Retained 0.0 0.0 0.0 0.0 5.0 22.8 11.8 17.8 6.6	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.0 0.0 5.0 27.7 39.6 57.4 64.0	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	45, 44 45, 44 45, 33 Operating Zone	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations (•) Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 dations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 100.0 95.0 72.3 60.4 42.6 36.0 29.5	*% Retained ( a 1.5" max. siz 36 % Retained 0.0 0.0 0.0 5.0 22.8 11.8 17.8 6.6 6.5	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.0 0.0 5.0 27.7 39.6 57.4 64.0 70.5	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G Coarsene	45, 44 45, 33	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations (•) Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 idations <b>36</b> JMF Zone	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16 #30	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 100.0 95.0 72.3 60.4 42.6 36.0 29.5 20.3	*% Retained ( a 1.5" max. siz 36 % Retained 0.0 0.0 0.0 5.0 22.8 11.8 17.8 6.6 6.5 9.2	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.0 0.0 5.0 27.7 39.6 57.4 64.0 70.5 79.7	s. 6 for the 3/4" sieve when	
#30 #50 #100 LBW Production G 45 40 40 40 40 40 40 40 40 40 40	45, 44 45, 44 45, 33 Operating Zone	2.3 2.0 1.8 1.4 O Batch Plant Gra 65	2. 1. 1. 1. adations • Aggr Work	0 8 7 4 regate Supplier Gra ability Factor: 67, 40	23.4 6.8 1.3 dations 36 JMF Zone Gradation 75, 39 75, 28	21.0 10.4 3.8 1.4 Adjusted WF	8.5 10.5 6.7 2.4 Intial Productio Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	89.6 96.2 98.6 on Sample (IPS eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 100.0 100.0 95.0 72.3 60.4 42.6 36.0 29.5	*% Retained ( a 1.5" max. siz 36 % Retained 0.0 0.0 0.0 5.0 22.8 11.8 17.8 6.6 6.5	00 and #200 sieves must be at least 4% e (nom. Max. 1.0") : % Retained 0.0 0.0 0.0 0.0 5.0 27.7 39.6 57.4 64.0 70.5	s. 6 for the 3/4" sieve when	

PREPARED BY: SM, LLC Technical Service

ActionLimits Boundary = - - - - -

Approved By:

Mart 1. Ball

PLANT :		P-35					Contractor:						
Sample Date		6/17/24			concrete Grade	DM, 4500HP							
Dates Test R	lepresents:	6/18/2024	through	6/24/2024	-		MDOT No.:						
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution							
6AA	58-003	Stoneco	1400	8.34	2.69	47.5							
26A	58-003	Stoneco	400	2.38	2.69	13.6							
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0				SUP	FRIOR		
		Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%		MATE	RIALS		
Sieve	(	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<u>Superior I</u> 30701 W. 1	<b>Materials, LLC</b> 10 Mile Rd.		
2"	1	00.0	100	0.0	100.0	100.0	0.0	0.0	Suite 500				
1.5"		00.0	100		100.0	100.0	0.0	0.0	Farmington Hills, MI 48336		n Hills, MI 48336		
1"		00.0	100		100.0	100.0	0.0	0.0	]				
3/4"		82.0	100		100.0	91.5	8.5	8.5					
1/2"		37.4	98	-	100.0	70.1	21.3	29.9					
3/8"		17.2	79.4		100.0	57.9	12.2	42.1	*Maximum % Retained must be above the 3/8" sieve.				
#4		3.9	6.0		98.4	41.0	16.9	59.0	*Any two adjacent sieves must equal 10% except max				
#8		1.8	1.5 1.2		85.2	34.3	6.8	65.7	nom. max., #100 and #200 sieves.				
#16 #30		1.3	1.2		64.4	25.9	8.4	74.1		*% Retained must be at least 4% for each sieve except			
#30 #50		1.1 1.0	1.		42.2 18.2	17.1 7.7	8.8 9.4	82.9 92.3	,	00 and #200 sieves			
#100		1.0	1.		2.6	1.6	6.1	98.4		e (nom. Max. 1.0")	for the 3/4" sieve when		
LBW		0.8	0.		0.6	0.7	0.9	99.3	a 1.5 111ax. Siz		aggregate is used.		
Production G	Gradation	Batch Plant Gra	dations 🔘 Aggr	egate Supplier Grad	dations			on Sample (IPS	6)				
Coarsene	ess Factor:	64	Work	ability Factor:	34	36.8	Coars	eness Factor:	61				
				<b>,</b>				ability Factor:	36				
<sup>45</sup> ]								Cumulative	%	Cumulative			
	45, 44				JMF Zone		Sieve	% Passing	Retained	% Retained			
		52, 41					2"	100.0	0.0	0.0			
-		56,			75, 39		1.5"	100.0	0.0	0.0			
<b>a</b> <sup>40</sup>				68, 38	Ĩ		1"	99.3	0.7	0.7			
م الالالالالالالالالالالالالالالالالالال					dation		3/4"	89.1	10.2	10.9			
40 (%) <b>JO</b>			ac 0a =	Production Grad	Jalion					<u> </u>			
actor (%)			■ <mark>🏟</mark> 1ª§	Production Grad	Jalion		1/2"	70.5	18.6	29.5			
Factor (%)		52, 34	■ 🏟,1ª§	Production Grad	Janon		3/8"	60.5	10.0	39.5			
ity Factor (%) 52 10 10 10 10	45, 33		● <b>₩</b> IPS				3/8" #4	60.5 44.1	10.0 16.4	39.5 55.9			
bility Factor (%)	45, 33	52, 34	ۇۋرىي 1960-1960-1960-1960-1960-1960-1960-1960-	Production Grad			3/8" #4 #8	60.5 44.1 35.6	10.0 16.4 8.5	39.5 55.9 64.4			
kability Factor (%) 00 01 02 02 02 03 04 04 04 04 04 04 04 04 04 04	45, 33 Operating Zone	56,	● 🍎 ျ∌§				3/8" #4 #8 #16	60.5 44.1 35.6 27.7	10.0 16.4 8.5 7.9	39.5 55.9 64.4 72.3			
(orkability Factor (%) 00 01 02 02 03 04 04 04 04 04 04 04 04 04 04		56,	■ 🖗 ျ∄§		75, 28		3/8" #4 #8 #16 #30	60.5 44.1 35.6 27.7 20.6	10.0 16.4 8.5 7.9 7.1	39.5 55.9 64.4 72.3 79.4			
Workability Factor (%)	Operating Zone	56,	■ 🖗 ျ∄§				3/8" #4 #8 #16 #30 #50	60.5 44.1 35.6 27.7 20.6 8.7	10.0 16.4 8.5 7.9 7.1 11.8	39.5 55.9 64.4 72.3 79.4 91.3			
Morkability Factor (%)	Operating Zone	56,				80	3/8" #4 #8 #16 #30	60.5 44.1 35.6 27.7 20.6	10.0 16.4 8.5 7.9 7.1	39.5 55.9 64.4 72.3 79.4			

Approved By: Mary 1. Ball

):			ſ	Concrete Grade	· DM. 4500HP						
		through			,,						
Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution						
58-003	Stoneco	1400	8.34	2.69	47.5						
58-003	Stoneco	400	2.38	2.69	13.6						
81-019	Pleasant Lake	1150	6.95	2.65	39.0			SUPERIOR			
	Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%			RIALS	
	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<u>Superior I</u> 30701 W. 1	<b>Materials, LLC</b> 10 Mile Rd.	
	100.0	100	0.0	100.0	100.0	0.0	0.0	Suite 500			
		-		100.0	100.0	0.0	0.0	Farmington Hills, MI 48336		n Hills, MI 48336	
100.0							0.0	]			
								*Maximum % Retained must be above the 3/8" sieve.			
								*Any two adjacent sieves must equal 10% except max.,			
										-	
								,			
	0.8			0.6	0.7	0.9	99.3		- (		
radation	O Batch Plant Gra	dations	regate Supplier Gra	adations	Adjusted W/F	Intial Production	on Sample (IPS	3)			
Gradation	Batch Plant Gra				,		on Sample (IPS	/	I		
Bradation Ess Factor:	Batch Plant Gra 64		regate Supplier Gra ability Factor:		Adjusted WF 36.8	Coars	eness Factor:	61			
					,	Coars	eness Factor: ability Factor:	61 36	Cumulativa		
					,	Coars	eness Factor: ability Factor: Cumulative	61 36 %	Cumulative		
ess Factor:				34	,	Coars Work Sieve	eness Factor: ability Factor: Cumulative % Passing	61 36 % Retained	% Retained		
ess Factor:	64		ability Factor:	34 JMF Zone	,	Coars Work Sieve 2"	eness Factor: ability Factor: Cumulative % Passing 100.0	61 36 % Retained 0.0	% Retained 0.0		
ess Factor:	64			34	,	Coars Work Sieve	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0	61 36 % Retained	% Retained		
ess Factor:	64		ability Factor:	34 JMF Zone 75, 39	,	Coars Work Sieve 2" 1.5"	eness Factor: ability Factor: Cumulative % Passing 100.0	61 36 % Retained 0.0 0.0	% Retained 0.0 0.0		
ess Factor:	64		ability Factor:	34 JMF Zone 75, 39	,	Coars Work Sieve 2" 1.5" 1"	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3	61 36 % Retained 0.0 0.0 0.7	% Retained 0.0 0.0 0.7		
ess Factor:	64		ability Factor:	34 JMF Zone 75, 39	,	Coars Work Sieve 2" 1.5" 1" 3/4" 1/2" 3/8"	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5	61 36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0	% Retained 0.0 0.0 0.7 10.9 29.5 39.5		
ess Factor:	<b>64</b>		ability Factor:	34 JMF Zone 75, 39	,	Coarse Work: Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1	61 36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4	% Retained           0.0           0.7           10.9           29.5           39.5           55.9		
45, 44	<b>64</b>	Work	ability Factor:	34 JMF Zone 75, 39	,	Coarse Work: Sieve 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6	61 36 % <u>Retained</u> 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5	% Retained           0.0           0.7           10.9           29.5           39.5           55.9           64.4		
45, 44	64 52, 41 52, 34 52, 34 56,	Work	Production Grad	34 JMF Zone 75, 39	,	Coarse Work: 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6 27.7	61 36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5 7.9	% Retained           0.0           0.0           0.7           10.9           29.5           39.5           55.9           64.4           72.3		
45, 44 45, 33	64 52, 41 52, 34 52, 34 56,	Work	Production Grad	34 JMF Zone 75, 39	,	Coarse Work: 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16 #30	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6 27.7 20.6	61 36 % <u>Retained</u> 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5 7.9 7.1	% Retained           0.0           0.0           0.7           10.9           29.5           39.5           55.9           64.4           72.3           79.4		
45, 44 45, 33 Operating Zone	64 52, 41 52, 34 52, 34 56,	Work	Production Grad	34 JMF Zone 75, 39 dation	,	Coarse Work: 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	eness Factor: ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6 27.7	61 36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5 7.9	% Retained           0.0           0.0           0.7           10.9           29.5           39.5           55.9           64.4           72.3		
;	epresents: Pit # 58-003 58-003 81-019	6/17/24           epresents:         6/17/24           epresents:         6/18/2024           Pit #         Source           58-003         Stoneco           58-003         Stoneco           81-019         Pleasant Lake           Total Wt           6AA           100.0           10.0	$\begin{tabular}{ c c c c c c c } \hline \hline & $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	6/17/24         Concrete Grade           epresents: $6/18/2024$ through $6/24/2024$ Pit #         Source         Weight (ssp)         ft <sup>3</sup> Specific Gravity           58-003         Stoneco         1400 $8.34$ 2.69           58-003         Stoneco         400         2.38         2.69           81-019         Pleasant Lake         1150 $6.95$ 2.65           Total Wt         2950         17.68         2NS           6AA         26A         2NS           100.0         100.0         100.0         100.0           100.0         100.0         100.0         100.0           100.0         100.0         100.0         100.0           100.0         100.0         100.0         100.0           100.0         100.0         100.0         100.0           37.4         98.9         100.0         384           1.8         1.5         85.2           1.3         1.2         64.4           1.1         1.1         42.2           1.0         1.1         18.2	$6/17/24$ Concrete Grade:         DM, 4500HP           epresents: $6/18/2024$ through $6/24/2024$ Pit #         Source         Weight (ssp) $ft^3$ Specific Gravity $0/17/24$ Pit #         Source         Weight (ssp) $ft^3$ Specific Gravity $0/17/24$ S8-003         Stoneco         1400 $8.34$ $2.69$ $47.5$ 58-003         Stoneco         400 $2.38$ $2.69$ $13.6$ 81-019         Pleasant Lake         1150 $6.95$ $2.65$ $39.0$ Total Wt         2950         17.68         100.0         100.0 $6AA$ 26A         2NS         Cumulative $%$ Passing $100.0$ 100.0         100.0         100.0         100.0 $100.0$ 100.0         100.0         100.0         100.0 $100.0$ 100.0         100.0         70.1 $17.2$ 79.4         100.0         57.9 $3.9$ $6.0$ 98.4         41.0 $1.8$ $1.5$ 85.2         3	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	6/17/24         Concrete Grade:         DM, 4500HP           epresents:         6/18/2024         through         6/24/2024         MDOT No.:           Pit #         Source         Weight (ssp)         ft <sup>3</sup> Specific         %           Gravity         Contribution         %         Contribution         %           58-003         Stoneco         1400         8.34         2.69         47.5           58-003         Stoneco         400         2.38         2.69         13.6           81-019         Pleasant Lake         1150         6.95         2.65         39.0           Total Wt         2950         17.68         100.0         c Verify this number is 100%           6AA         26A         2NS         Cumulative % Passing         % Retained           100.0         100.0         100.0         0.0         0.0           100.0         100.0         100.0         100.0         0.0         0.0           100.0         100.0         100.0         100.0         0.0         0.0           100.0         100.0         100.0         100.0         0.0         0.0           100.0         100.0         77.9         12.2	i         6/17/24         Concrete Grade:         DM, 4500HP           epresents:         6/18/2024         through         6/24/2024         MDOT No.:           Pit #         Source         Weight (ssp)         ft <sup>3</sup> Specific Gravity         % Contribution           58-003         Stoneco         1400         8.34         2.69         13.6         100.0         100.0           58-003         Stoneco         400         2.38         2.69         13.6         100.0         100.0         Stoneco         400         2.38         2.69         13.6         100.0         Stoneco         400         2.38         2.69         13.6         Stoneco         400         2.38         2.69         13.6         Stoneco         Superior I         30.0         Stoneco         400         2.38         2.69         13.6         Stoneco         Superior I         30.0         Superior I         30.	

Approved By: Mary P. Ball

PLANT #		P-02					Contractor:				
Sample Date	):	6/17/24		C	Concrete Grade	DM, 4500HP					
Dates Test R	Represents:	6/18/2024	through	6/24/2024			MDOT No.:				
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution					
6AA	71-47	Presque Isle	1500	9.17	2.62	51.6					
26A	71-47	Presque Isle	255	1.56	2.62	8.8					
2NS	63-115	Ray Rd	1150		2.65	39.6				SUP	ERIOR
		Total Wt	2905	17.69		100.0	< Verify this n	umber is 100%		MATE	RIALS
Sieve	(	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<b>Superior</b> 30701 W. 1	<u>Materials, LLC</u> 10 Mile Rd.
2"	1	00.0	100	0.0	100.0	100.0	0.0	0.0	Suite 500		
1.5"		00.0	100	0.0	100.0	100.0	0.0	0.0	Farmington Hills, MI 48336		n Hills, MI 48336
1"	ļ	98.1	100	0.0	100.0	99.0	1.0	1.0	1		
3/4"		74.2	100		100.0	86.7	12.3	13.3			
1/2"		33.6	93		100.0	65.1	21.5	34.9			
3/8"		18.0	81.6		100.0	56.0	9.1	44.0	*Maximum % Retained must be above the 3/8" sieve.		
#4		3.0	16		95.6 79.7	40.9	15.2	59.1	*Any two adjacent sieves must equal 10% except max.,		
#8		2.4		4.2		33.2	7.7	66.8	nom. max., #100 and #200 sieves.		
#16		2.1			64.1	26.7	6.5	73.3	*% Retained must be at least 4% for each sieve excep		
#30 #50		2.1 2.0	2.		48.6 25.8	20.5 11.4	6.2 9.1	79.5 88.6		00 and #200 sieves	
#50 #100		2.0	1.	-	25.8 6.1	3.6	9.1 7.8	96.4			5 for the 3/4" sieve wher
LBW		<u>2.0</u> 1.7	1.		1.0	1.4	2.2	98.6	a 1.5 max. siz	e (nom. Max. 1.0")	aggregate is used.
Production G		Batch Plant Gra		regate SupplierGrac	-	Adjusted WF		on Sample (IPS	<b>S</b> )		
	ess Factor:	66	Work	ability Factor:	33	35.7		eness Factor:	63		
								ability Factor:	35		
<sup>45</sup>	•						WORK	Cumulative	%	Cumulative	
	45, 44				JMF Zone		Sieve	% Passing	Retained	% Retained	
1		52, 41					2"	100.0	0.0	0.0	
<del>~</del> <sup>40</sup>			58, 39	<b>68, 39</b> 68, 38	75, 39		1.5"	100.0	0.0	0.0	
(%)				68, 38			1"	100.0	0.0	0.0	
P							3/4"	95.1	4.9	4.9	
<b>5</b> 35			■ 60, <u>3</u> 6	IPS Production	Gradation		1/2"	74.6	20.5	25.4	
Ë j	$\rightarrow$	52, 34		i			3/8"	59.3	15.3	40.7	
ity	45, 33		!				#4	42.1	17.2	57.9	
<b>iiq</b> 30			58, 31	688,331			#8	35.1	7.1	64.9	
<u>→</u> 30 -	· Operating Zone						#16	29.2	5.9	70.8	
	Boundary				75, 28		#30	21.9	7.3	78.1	
	Boundary						#50	9.6	12.4	90.4	
Worka	Boulluary										
Aorkat 25 40	45	50 55	60	65 Factor (%)	75	80	#100 LBW	2.4 0.9	7.2 1.5	97.6 99.1	

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