

Concrete Mixture Analysis Worksheet

Project Name: I-696 (I-275 to Lahser)
 Contractor Name: Daytona Redi Mix
 MDOT Project #: 63101-131589
 Maximum Aggregate Size (inches): 1.5

Representative Date: 06/19/24 through 06/25/24
 CT Project #: 230408
 Mix ID #: BW-007 (Slipform)

MATERIALS				
Type	Source	Class	Spec. Grav.	F/T Dialation
Coarse	Stoneco-Ottawa Lake (58-0003CA)	CA	2.69	0.010
Intermediate 1	Stoneco-Ottawa Lake (58-0003CA)	IA	2.68	0.010
			1.00	
Fine	Mid Michigan-Vella (81-0101SG)	Fine	2.64	
Cement	Ash Grove-Missisauga	Type IL	3.10	
GGBFS	Ash Grove-Detroit	Grade 100	2.91	

ADMIXTURES		
Type	Supplier	Dosage (oz/cwt)
Mapair SA	MAPEI	3.5
Mapetard R	MAPEI	3

PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft ³	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1450	2.69	8.64	47.41
Intermediate 1	375	2.68	2.24	12.31
		1.00	0.00	0.00
Fine	1209	2.64	7.34	40.28
27.00				
Water	238	1	3.81	
Air, %	6.5		1.76	

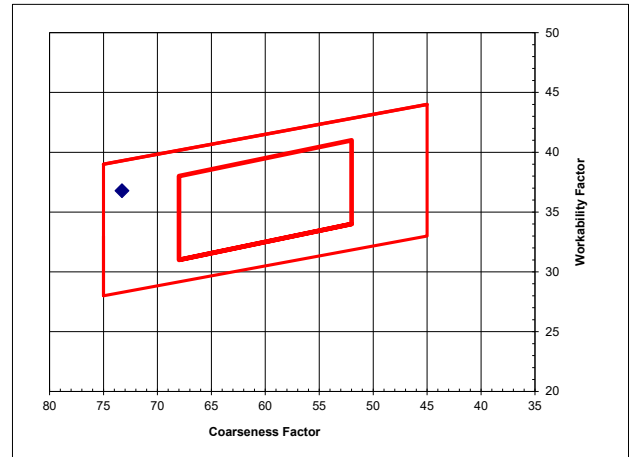
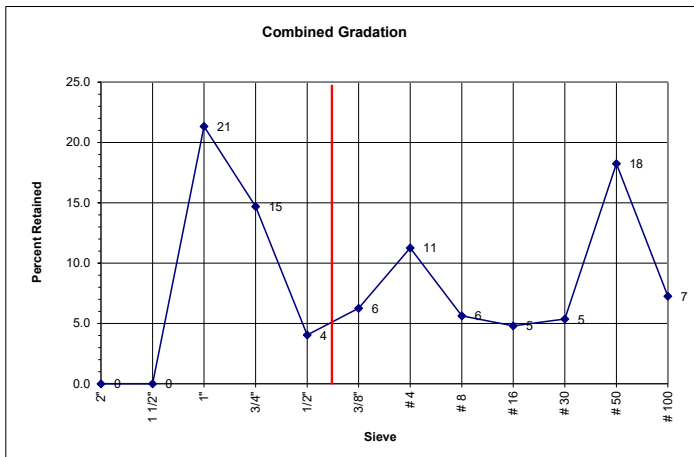
Total Cementitious:	611 lbs. or 6.5 bag
Water/Cement Ratio:	0.39
Percent Cementitious Replacement:	25%

	GRADATIONS								Gradation Date: <u>6/18/2024</u>			
	Coarse		Intermediate 1		Fine		Fine					
SSD wt., lbs	1450		375		0		1209					
Abs. Volume	8.64		2.24		0.00		7.34					
Aggregate % Vol.	47.4		12.3		0.0		40.3					
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
2"	100.0	47.4	100.0	12.3	0.0	100.0	40.3	100.0	0.0	0.0		
1 1/2"	100.0	47.4	100.0	12.3	0.0	100.0	40.3	100.0	0.0	0.0		
1"	55.0	26.1	100.0	12.3	0.0	100.0	40.3	78.7	21.3	21.3		
3/4"	24.0	11.4	100.0	12.3	0.0	100.0	40.3	64.0	36.0	14.7		
1/2"	16.0	7.6	98.0	12.1	0.0	100.0	40.3	59.9	40.1	4.0		
3/8"	8.0	3.8	78.0	9.6	0.0	100.0	40.3	53.7	46.3	6.3		
# 4	1.0	0.5	20.0	2.5	0.0	98.0	39.5	42.4	57.6	11.3		
# 8	1.0	0.5	7.0	0.9	0.0	88.0	35.4	36.8	63.2	5.6		
# 16	1.0	0.5	4.0	0.5	0.0	77.0	31.0	32.0	68.0	4.8		
# 30	1.0	0.5	3.0	0.4	0.0	64.0	25.8	26.6	73.4	5.4		
# 50	1.0	0.5	2.0	0.2	0.0	19.0	7.7	8.4	91.6	18.2		
# 100	1.0	0.5	2.0	0.2	0.0	1.0	0.4	1.1	98.9	7.3		
# 200	1.0	0.5	2.0	0.2	0.0	1	0.4	1.2	98.8	0.0		

Fine Aggregate Fineness Modulus: 2.53 FM

Coarseness Factor (x-axis): 73.3
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 36.8
(Pass #8 + Adjustment Factor)



James A. Plohg

Approved By: _____
 Signature: James A. Plohg