

Concrete Mixture Analysis Worksheet

Project Names: I-96 (Kent Lake to I-275) /// I-696 (I-275 to Lahser)
 Contractor Name: Daytona Redi Mix
 MDOT Project #: 63022-124103 /// 63101-131589
 Maximum Aggregate Size (inches): 2

Representative Date: 08/20/24 through 08/27/24
 CT Project #: 230408
 Mix ID #: BW-009 (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	Stoneco-Moscow (30-0071SG)	Fine	2.63	
Cement	Ash Grove-Missauga	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	1250	2.69	7.45	40.64
Intermediate 1	585	2.68	3.50	19.09
		1.00	0.00	0.00
Fine	1211	2.63	7.38	40.27
Water	238	1	3.81	
Air, %	6.5		1.76	
				27.10

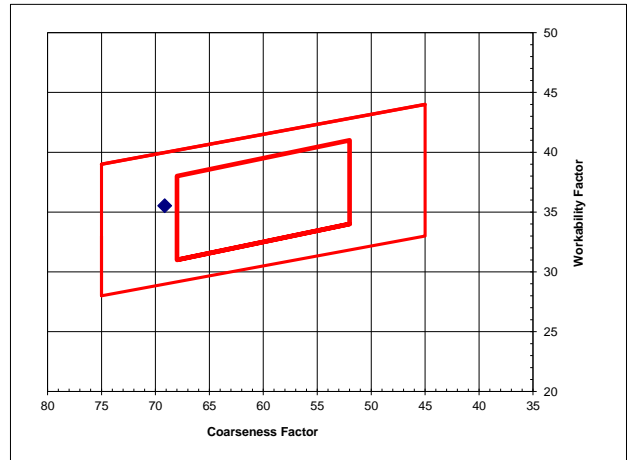
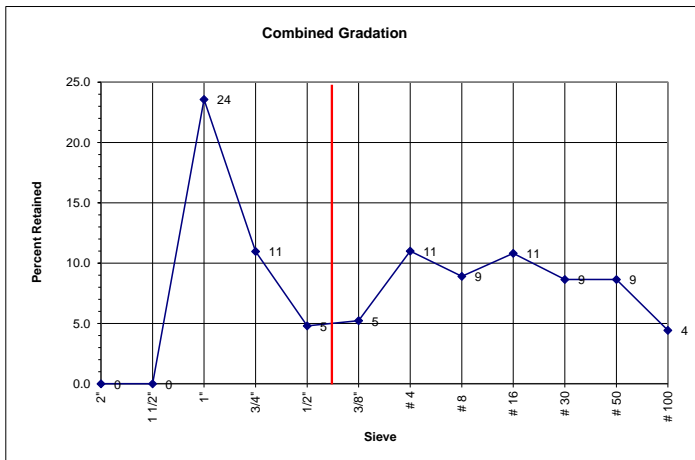
Total Cementitious:	611 lbs. or 6.5 bag
Water/Cement Ratio:	0.39
Percent Cementitious Replacement:	25%

	GRADATIONS								Gradation Date: <u>8/20/2024</u>			
	Coarse		Intermediate 1		Fine		Fine					
	SSD wt., lbs	1250	585	0	1211					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	7.45	3.50	0.00	7.38								
Aggregate % Vol.	40.6	19.1	0.0	40.3								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100.0	40.6	100.0	19.1	0.0	100.0	40.3	100.0	0.0	0.0		
1 1/2"	100.0	40.6	100.0	19.1	0.0	100.0	40.3	100.0	0.0	0.0		
1"	42.0	17.1	100.0	19.1	0.0	100.0	40.3	76.4	23.6	23.6		
3/4"	15.0	6.1	100.0	19.1	0.0	100.0	40.3	65.5	34.5	11.0		
1/2"	6.0	2.4	94.0	17.9	0.0	100.0	40.3	60.7	39.3	4.8		
3/8"	3.0	1.2	73.0	13.9	0.0	100.0	40.3	55.4	44.6	5.2		
# 4	1.0	0.4	26.0	5.0	0.0	97.0	39.1	44.4	55.6	11.0		
# 8	1.0	0.4	11.0	2.1	0.0	82.0	33.0	35.5	64.5	8.9		
# 16	1.0	0.4	5.0	1.0	0.0	58.0	23.4	24.7	75.3	10.8		
# 30	1.0	0.4	4.0	0.8	0.0	37.0	14.9	16.1	83.9	8.6		
# 50	1.0	0.4	3.0	0.6	0.0	16.0	6.4	7.4	92.6	8.6		
# 100	1.0	0.4	3.0	0.6	0.0	5.0	2.0	3.0	97.0	4.4		
# 200	0.8	0.3	2.9	0.6	0.0	2.4	1.0	1.8	98.2	1.1		

Fine Aggregate Fineness Modulus: 3.05 FM

Coarseness Factor (x-axis): 69.1
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 35.5
(Pass #8 + Adjustment Factor)



Approved By: James A. Plohg
 Signature: *James A. Plohg*