

### Concrete Mixture Analysis Worksheet

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

Date: 08/20/24 through 08/27/24  
 CT Project #: 230408  
 Mix ID #: BW-010 (Handwork)

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-Missisauga	Type II	3.10	
GGBFS	Ash Grove-Detroit	Grade 100	2.91	
ADMIXTURES				
Type	Supplier	Dosage (oz/cwt)		
Mapair SA	MAPEI	3.5		
DynamonSX	MAPEI	5		

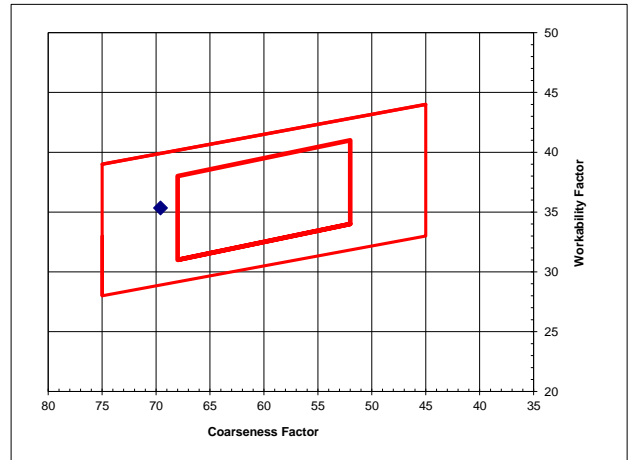
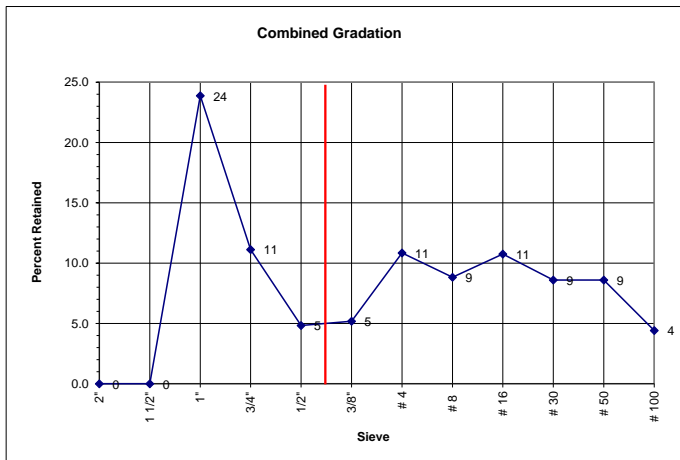
PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft <sup>3</sup>	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1245	2.69	7.42	41.17
Intermediate 1	565	2.68	3.38	18.75
		1.00	0.00	0.00
Fine	1185	2.63	7.22	40.08
Water	257	1	4.12	
Air, %	6.5		1.76	
				27.10
Total Cementitious:		611	lbs. or	6.5 bag
Water/Cement Ratio:		0.42		
Percent Cementitious Replacement:		25%		

SSD wt., lbs	GRADATIONS								Gradation Date: <u>8/20/2024</u>			
	Coarse		Intermediate 1		Fine		Fine		Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
	1245	565	0	1185	7.42	7.22						
Abs. Volume	7.42	3.38	0.00	7.22								
Aggregate % Vol.	41.2	18.8	0.0	40.1								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100.0	41.2	100.0	18.8	0.0	100.0	40.1	100.0	0.0	0.0		
1 1/2"	100.0	41.2	100.0	18.8	0.0	100.0	40.1	100.0	0.0	0.0		
1"	42.0	17.3	100.0	18.8	0.0	100.0	40.1	76.1	23.9	23.9		
3/4"	15.0	6.2	100.0	18.8	0.0	100.0	40.1	65.0	35.0	11.1		
1/2"	6.0	2.5	94.0	17.6	0.0	100.0	40.1	60.2	39.8	4.8		
3/8"	3.0	1.2	73.0	13.7	0.0	100.0	40.1	55.0	45.0	5.2		
# 4	1.0	0.4	26.0	4.9	0.0	97.0	38.9	44.2	55.8	10.8		
# 8	1.0	0.4	11.0	2.1	0.0	82.0	32.9	35.3	64.7	8.8		
# 16	1.0	0.4	5.0	0.9	0.0	58.0	23.2	24.6	75.4	10.7		
# 30	1.0	0.4	4.0	0.8	0.0	37.0	14.8	16.0	84.0	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	0.5	0.0	2	1.0	1.8	98.2	1.1		

Fine Aggregate Fineness Modulus: 3.05 FM

Coarseness Factor (x-axis): 70  
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 35  
 (Pass #8 + Adjustment Factor)



*James A. Plohq*