

### Concrete Mixture Analysis Worksheet

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

Date: 07/23/24 through 07/30/24  
 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 IL	3.10	
GGBFS	Ash Grove-Detroit	Grade 100	2.91	
ADMIXTURES				
Type	Supplier	Dosage (oz/cwt)		
Mapeair 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	1240	2.69	7.39	41.00
Intermediate 1	575	2.68	3.44	19.09
		1.00	0.00	0.00
Fine	1180	2.63	7.19	39.91
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%			

	GRADATIONS								Gradation Date: <u>7/23/2024</u>			
	Coarse		Intermediate 1		Fine		Fine		Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
SSD wt., lbs	1240		575		0		1180					
Abs. Volume	7.39		3.44		0.00		7.19					
Aggregate % Vol.	41.0		19.1		0.0		39.9					
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100.0	41.0	100.0	19.1	0.0	0.0	100.0	39.9	100.0	0.0	0.0	
1 1/2"	100.0	41.0	100.0	19.1	0.0	0.0	100.0	39.9	100.0	0.0	0.0	
1"	58.0	23.8	100.0	19.1	0.0	0.0	100.0	39.9	82.8	17.2	17.2	
3/4"	24.0	9.8	100.0	19.1	0.0	0.0	100.0	39.9	68.8	31.2	13.9	
1/2"	16.0	6.6	96.0	18.3	0.0	0.0	100.0	39.9	64.8	35.2	4.0	
3/8"	8.0	3.3	75.0	14.3	0.0	0.0	100.0	39.9	57.5	42.5	7.3	
# 4	2.0	0.8	17.0	3.2	0.0	0.0	100.0	39.9	44.0	56.0	13.5	
# 8	2.0	0.8	4.0	0.8	0.0	0.0	91.0	36.3	37.9	62.1	6.1	
# 16	2.0	0.8	3.0	0.6	0.0	0.0	68.0	27.1	28.5	71.5	9.4	
# 30	2.0	0.8	3.0	0.6	0.0	0.0	42.0	16.8	18.2	81.8	10.4	
# 50	2.0	0.8	3.0	0.6	0.0	0.0	16.0	6.4	7.8	92.2	10.4	
# 100	2.0	0.8	3.0	0.6	0.0	0.0	4.0	1.6	3.0	97.0	4.8	
# 200	1.7	0.7	2.6	0.5	0.0	0.0	2	0.7	1.9	98.1	1.1	

Fine Aggregate Fineness Modulus: 2.79 FM

Coarseness Factor (x-axis): 68  
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 38  
 (Pass #8 + Adjustment Factor)

