

### 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: 06/04/24 through 06/11/24  
 CT Project #: 230408  
 Mix ID #: BW-008 (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	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)		
Mapear SA	MAPEI	3.5		
DynamonSX	MAPEI	5		

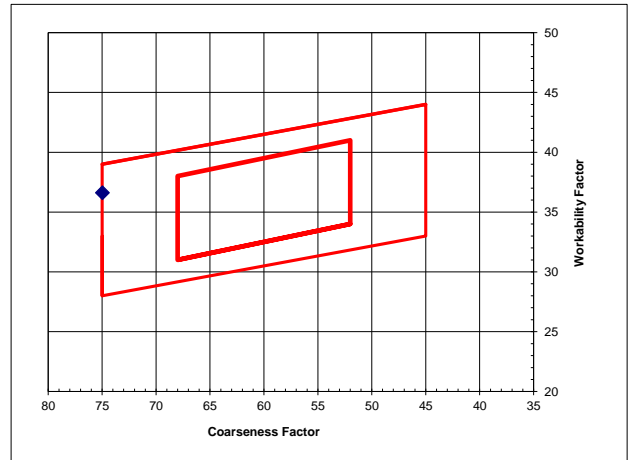
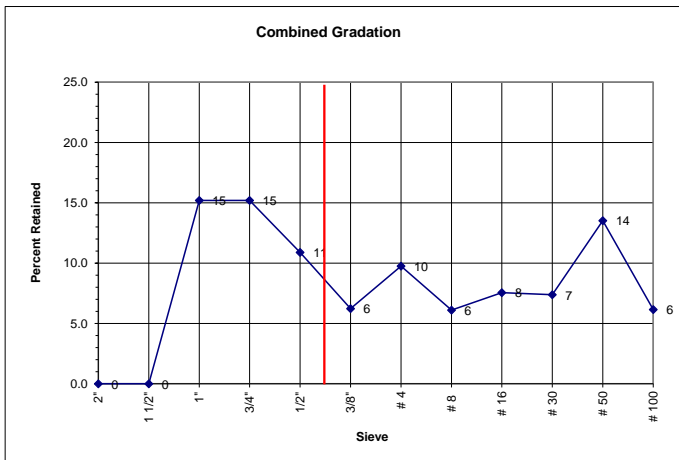
PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft <sup>3</sup>	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1475	2.69	8.79	49.02
Intermediate 1	300	2.68	1.79	10.01
Fine	1210	2.64	7.35	40.97
Water	257	1	4.12	
Air, %	6.5		1.76	
				27.01
Total Cementitious:		611	lbs. or	6.5 bag
Water/Cement Ratio:		0.42		
Percent Cementitious Replacement:		25%		

GRADATIONS												
SSD wt., lbs	Coarse		Intermediate 1		Fine		Gradation Date: <u>6/4/2024</u>					
	1475	300	0	1210			Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %		
Abs. Volume	8.79	1.79	0.00	7.35								
Aggregate % Vol.	49.0	10.0	0.0	41.0								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
2"	100.0	49.0	100.0	10.0	0.0	0.0	100.0	41.0	100.0	0.0	0.0	
1 1/2"	100.0	49.0	100.0	10.0	0.0	0.0	100.0	41.0	100.0	0.0	0.0	
1"	69.0	33.8	100.0	10.0	0.0	0.0	100.0	41.0	84.8	15.2	15.2	
3/4"	38.0	18.6	100.0	10.0	0.0	0.0	100.0	41.0	69.6	30.4	15.2	
1/2"	17.0	8.3	94.0	9.4	0.0	0.0	100.0	41.0	58.7	41.3	10.9	
3/8"	10.0	4.9	66.0	6.6	0.0	0.0	100.0	41.0	52.5	47.5	6.2	
# 4	3.0	1.5	11.0	1.1	0.0	0.0	98.0	40.2	42.7	57.3	9.8	
# 8	2.0	1.0	4.0	0.4	0.0	0.0	86.0	35.2	36.6	63.4	6.1	
# 16	1.0	0.5	3.0	0.3	0.0	0.0	69.0	28.3	29.1	70.9	7.6	
# 30	1.0	0.5	3.0	0.3	0.0	0.0	51.0	20.9	21.7	78.3	7.4	
# 50	1.0	0.5	3.0	0.3	0.0	0.0	18.0	7.4	8.2	91.8	13.5	
# 100	1.0	0.5	3.0	0.3	0.0	0.0	3.0	1.2	2.0	98.0	6.1	
# 200	1.3	0.6	2.6	0.3	0.0	0.0	1	0.4	1.3	98.7	0.8	

Fine Aggregate Fineness Modulus: 2.75 FM

Coarseness Factor (x-axis): 75  
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 37  
 (Pass #8 + Adjustment Factor)



James Plohq

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