

### 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: 07/09/24 through 07/16/24  
 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 1L	3.10	
GGBFS	Ash Grove-Detroit	Grade 100	2.91	
ADMIXTURES				
Type	Supplier	Dosage (oz/cwt)		
Mapear SA	MAPEI	3.5		
DynamonSX	MAPEI	5		

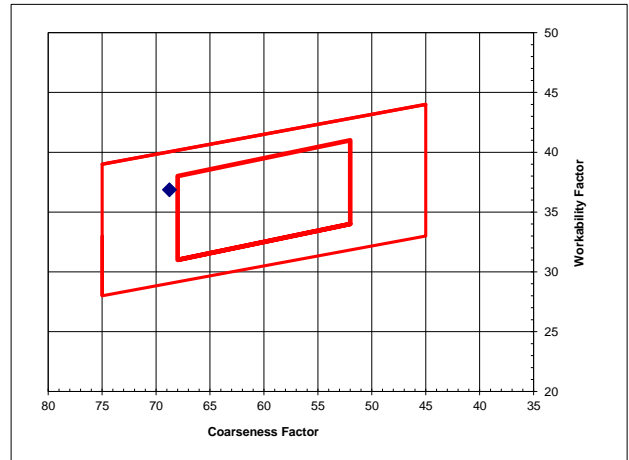
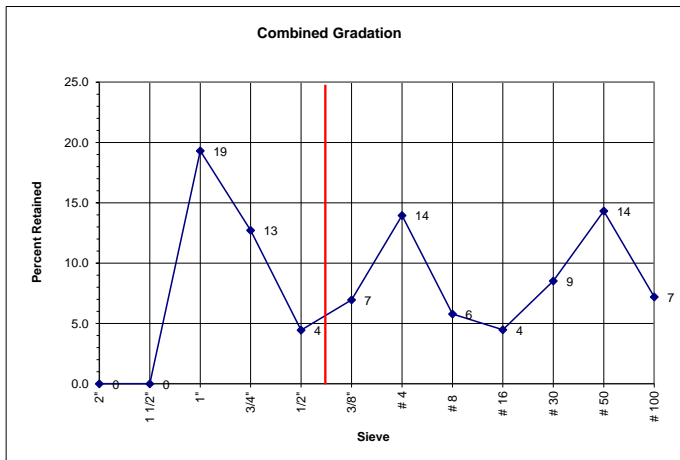
PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft <sup>3</sup>	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1320	2.69	7.86	43.88
Intermediate 1	490	2.68	2.93	16.35
Fine	1174	2.64	7.13	39.77
Water	257	1	4.12	
Air, %	6.5		1.76	
27.00				
Total Cementitious:		611	lbs. or	6.5 bag
Water/Cement Ratio:		0.42		
Percent Cementitious Replacement:		25%		

SSD wt., lbs	GRADATIONS								Gradation Date: <u>7/9/2024</u>			
	Coarse		Intermediate 1		Fine		Fine		Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
	Abs. Volume	Aggregate % Vol.	Abs. Volume	Aggregate % Vol.	Abs. Volume	Aggregate % Vol.	Abs. Volume	Aggregate % Vol.				
	1320	43.9	490	16.4	0	0.0	1174	39.8				
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100.0	43.9	100.0	16.4	0.0	0.0	100.0	39.8	100.0	0.0	0.0	
1 1/2"	100.0	43.9	100.0	16.4	0.0	0.0	100.0	39.8	100.0	0.0	0.0	
1"	56.0	24.6	100.0	16.4	0.0	0.0	100.0	39.8	80.7	19.3	19.3	
3/4"	27.0	11.8	100.0	16.4	0.0	0.0	100.0	39.8	68.0	32.0	12.7	
1/2"	18.0	7.9	97.0	15.9	0.0	0.0	100.0	39.8	63.5	36.5	4.4	
3/8"	10.0	4.4	76.0	12.4	0.0	0.0	100.0	39.8	56.6	43.4	6.9	
# 4	2.0	0.9	17.0	2.8	0.0	0.0	98.0	39.0	42.6	57.4	14.0	
# 8	2.0	0.9	6.0	1.0	0.0	0.0	88.0	35.0	36.9	63.1	5.8	
# 16	2.0	0.9	3.0	0.5	0.0	0.0	78.0	31.0	32.4	67.6	4.5	
# 30	2.0	0.9	2.0	0.3	0.0	0.0	57.0	22.7	23.9	76.1	8.5	
# 50	2.0	0.9	2.0	0.3	0.0	0.0	21.0	8.4	9.6	90.4	14.3	
# 100	1.0	0.4	2.0	0.3	0.0	0.0	4.0	1.6	2.4	97.6	7.2	
# 200	1.5	0.7	1.5	0.2	0.0	0.0	1	0.5	1.4	98.6	1.0	

Fine Aggregate Fineness Modulus: 2.54 FM

Coarseness Factor (x-axis): 69  
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

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



Approved By: James A. Plohq  
 Signature: James A. Plohq