Concrete Mixture Analysis Worksheet

Project Name: Miscellaneous Mix Designs
Client Name: Daytona Redi Mix
MDOT Project #: Various
Maximum Aggregate Size (inches): 1.5

Date: 9/3/2024
CT Project #: 230408
Mix ID #: 4500HP (Slag - Mid-Range)

MATERIALS				
Type	Source	Class	Spec. Grav.	F/T Dialation
Coarse	Manitoulin (MDOT 95-0005CA)	6AA	2.82	0.001
Intermediate	Port Inland (MDOT 74-0005CA)	26A	2.68	0.036
			1.00	
Fine	Krake-Measel (MDOT 44-0051SG)	2NS	2.68	
Cement	Ash Grove - Missisauga	Type IL	3.10	
GGBFS	Ash Grove - Detroit	100	2.91	

ADMIXTURES		
Type	Supplier	Dosage (oz/cwt)
SA-50	MAPEI	0.8
Dynamon SX	MAPEI	5

PROPORTIONS (SSD)				
Type	Wt, lbs.	Sp. Grav.	Vol. ft^3	% Vol.
Cement	423	3.1	2.19	
GGBFS	141	2.91	0.78	
Coarse	1870	2.82	10.63	57.20
Intermediate	110	2.68	0.66	3.54
		1.00	0.00	0.00
Fine	1220	2.68	7.30	39.26
Water	237	1	3.80	
Air, %	6.5		1.76	
			27.10	

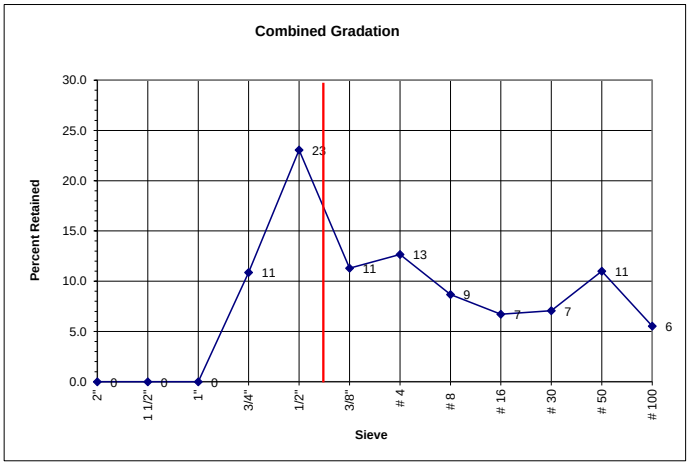
Total Cementitious:	564	lbs. or	6.0 bag
Water/Cement Ratio:	0.44		
Percent Cementitious Replacement:	25%		

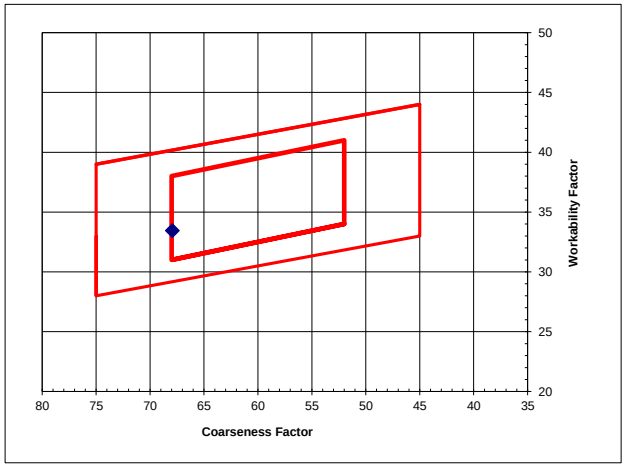
GRADATIONS												
	Coarse		Intermediate		0		Fine		Gradation Date: 9/3/2024			
SSD wt., lbs	1870		110		0		1220					
Abs. Volume	10.63		0.66		0.00		7.30					
Aggregate % Vol.	57.2		3.5		0.0		39.3					
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
2"	100	57.2	100	3.5		0.0	100	39.3	100.0	0.0	0.0	
1 1/2"	100	57.2	100	3.5		0.0	100	39.3	100.0	0.0	0.0	
1"	100	57.2	100	3.5		0.0	100	39.3	100.0	0.0	0.0	
3/4"	81	46.3	100	3.5		0.0	100	39.3	89.1	10.9	10.87	
1/2"	41	23.5	95	3.4		0.0	100	39.3	66.1	33.9	23.1	
3/8"	22	12.6	83	2.9		0.0	100	39.3	54.8	45.2	11.3	
# 4	5	2.9	22	0.8		0.0	98	38.5	42.1	57.9	12.7	
# 8	2	1.1	3	0.1		0.0	82	32.2	33.4	66.6	8.7	
# 16	2	1.1	2	0.1		0.0	65	25.5	26.7	73.3	6.7	
# 30	2	1.1	2	0.1		0.0	47	18.5	19.7	80.3	7.1	
# 50	2	1.1	2	0.1		0.0	19	7.5	8.7	91.3	11.0	
# 100	2	1.1	1	0.0		0.0	5	2.0	3.1	96.9	5.5	
# 200	2	0.9	1	0.0		0.0	2	0.8	1.7	98.3	1.5	

Fine Aggregate Fineness Modulus: 2.84 FM

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

Workability Factor (y-axis): 33
(Pass #8 + Adjustment Factor)





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