PRECAST / READY-MIX CONCRETE

J. P. CARRARA & SONS, INC

CONCRETE CONTRACTORS

ARCHITECTURAL / STRUCTURAL PRECAST CONTRACTORS

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CONCRETE MIX DESIGN

DATE :	February 23, 2016					
PROJECT :	VAOT Annual Mix Qualification				VT	
ENGINEER :						
CONTRACTOR :						
CONCRETE SUPPLIER :	J.P. Carrara & Sons, Inc., Middlebury, VT					$G_{s,\ SSD}$
CEMENT SOURCE & TYPE :	Lafarge Type III					3.103
FLY ASH SOURCE & CLASS:	Headwaters Resources - Class F - Brayton Point					2.36
COARSE AGGREGATE(1):	J.P. Carrara & Sons, Inc., Middlebury, VT	P-stone (3/4")		ABS =	1.22%	2.586
FINE AGGREGATE :	J.P. Carrara & Sons, Inc., Middlebury, VT	JPC sand		ABS =	1.03%	2.607
AIR ENTRAINING AGENT :	Sika AEA-14					
RETARDING AGENT :	Sika Plastiment					
SELF-CONSOLIDATING ADMIX:	Sika Viscocrete 6100		HRWR + Superplasticizer			
VISCOSITY MODIFIER:	Sika Stabilizer 4R		Not Required; Dosed as needed			

QUANTITIES PER CUBIC YARD

Identification # : 425M-NoDCI

Mix Description : SCC Bridge - 4,000psi Release

								Yield
SPECIFICATIONS REQUIREMENT,	28	Day Strength (psi)	5,000	800 # Total Cementious (CM)				
Lafarge Type III		(lbs)	600					3.10
Fly Ash, Class F		(lbs)	200	25% by weight of CM				1.36
P-stone (3/4")		(lbs)(SSD)	1400	51% by weight of total agg.				8.68
JPC sand		(lbs)(SSD)	1320	49% by weight of total agg.				8.11
WATER (gallons) : (Maximum Water =	32.6	gal.+ CI)	31.0					4.14
W/C RATIO (lbs/lb) : (Max W/C =	0.34	)	0.32					
Sika AEA-14	(2-20 range)	(oz/yd^3)	5.5	7.0%	+ / --	2.0%		1.89
Sika Plastiment	(0-6 range)	(oz/cwt)	3.0					
Sika Viscocrete 6100	(7-11 range)	(oz/cwt)	7.6	24"	spread	+ / --	4"	
Sika Stabilizer 4R	(0-7 range)	(oz/cwt)	0.0	Not Required; Dosed as needed				
								27.3

Mix Properties: Unit Wt. (#/ft^3) 138.5

Prepared By: Benjamin L. Cota, Precast Production Engineer

Approved by [illegible], VAOT Structural Concrete Engineer 2/24/16