

STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIAL AND RESEARCH SECTION - STRUCTURAL CONCRETE UNIT

Revision: 08/31/15

Concrete class: Precast Prestressed
 Additional Description _____
 Ready Mix Supplier: CARROLL CONCRETE - CHARLESTOWN, NH
 Designed By: Scott Jordan
 Design strength: 5000 PSI
 Mix Design Style: Conventional
 Agg weight - SSD or Dry: SSD

Agency Use Only	
Mix ID	PP17-061
Mix Design #	061
Approved by	jwild
Approved Date	1/9/2017
Spec Book Year	2011

Mix designs are valid for a 12 month period from date of approval or unless there is a change in material, material property or design parameter.

Cement:	701.02	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Cement Type III:	701.04	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Blended Cement:	701.06	Source:	<u>LAFARGE - TERCEM - MONTREAL, EAST PLANT</u>	Specific Gravity	<u>2.980</u>	lb/cy	<u>680</u>	<u>3.55</u> cf
		Brand Name:						
Cement with Slag:	701.07	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Pozzolan:	725.03(a)	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Fly Ash:	725.03(a)	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Silica Fume:	725.03(b)	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Slag:	725.03(c)	Source:		Specific Gravity		lb/cy	0.00	cf
		Brand Name:						
Water				32 gals	267	lb/cy	4.28	cf
Air Content Target				7.0 %			1.89	cf
Coarse Aggregate 3/8"	704.02A	Source:		Absorption		lb/cy	0.00	cf
		Brand Name:						
Coarse Aggregate 3/4"	704.02B	Source:	<u>NORLITE - COHOES, NY</u>	Absorption	<u>20.00</u>	Specific Gravity	<u>1.250</u>	<u>635</u> lb/cy <u>8.14</u> cf
		Brand Name:						
Coarse Aggregate 1 1/2"	704.02C	Source:		Absorption		Specific Gravity		lb/cy 0.00 cf
		Brand Name:						
Fine Aggregate:	704.01	Source:	<u>NEWPORT SAND & GRAVEL - NEWPORT, NH</u>	Absorption	<u>1.00</u>	Specific Gravity	<u>2.670</u>	<u>1523</u> lb/cy <u>9.14</u> cf
		Brand Name:		Fineness Modulus	<u>2.75</u>			
Air Entrainment Admixture	725.02(b)	Source:	<u>MASTER BUILDERS INC - MESQUITE, TX</u>			Specific Gravity		<u>0.5</u> oz/cy
		Brand Name:	<u>MasterAir AE200</u>					
Retarder Admixture:	725.02(c)	Source:	<u>MASTER BUILDERS INC - MESQUITE, TX</u>			Specific Gravity		<u>1</u> oz/cwt
		Brand Name:	<u>MasterSet R100</u>					
High Range Water Reducer Admixture:	725.02(h)	Source:	<u>MASTER BUILDERS INC - MESQUITE, TX</u>			Specific Gravity		<u>5</u> oz/cwt
		Brand Name:	<u>MasterGlenium 7500</u>					
Other Admixtures:		Source:				Specific Gravity		<u>0.00</u> cf
		Brand Name:						
Specific performance admixture	725.02(i)	Source:	<u>MASTER BUILDERS INC - MESQUITE, TX</u>			Specific Gravity		<u>1</u> oz/cwt <u>0.00</u> cf
		Brand Name:	<u>MasterSure Z60</u>					
		Source:				Specific Gravity		<u>0.00</u> cf
		Brand Name:						
TOTAL					<u>45.900</u>		<u>3085</u> lb	<u>27.00</u> cf

Approved by James Wild, VACT
 Structural Concrete Engineer 1/9/17 for
 Ludlow BRFO25-1(42) self perform precast

Maximum Water/Cementitious Ratio 0.44
 Maximum Water (gal/cy) 34.8
 Slump Min/Max (inch) 4.0 min 8.0 max
 Air Content Min/Max (%) 5.5 min 8.5 max
 Design Unit Wt. (lb/cf) 114.26

Notes:
 2016 construction season, 11-17-16. Unit weight to be +/- 3 lbs of design, tested in compliance with ASTM C567, gradation of light weight 3/4" 90-100% passing, 3/8" 10-50% passing, #4 0-15% passing, Norlite batch weight to be adjusted prior to batching based on unit weight and moisture content

Vermont Agency of Transportation
RECEIVED
 CK'D BY VHB OK'D BY TAS
 March 7, 2017
 RESUBMIT NO APPROVED AS NOTED
 BY T Sumner DATE 3/9/17

SHOP DRAWING REVIEW	
<input type="checkbox"/> REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.	
<input type="checkbox"/> REJECTED	<input type="checkbox"/> REVISE AND RESUBMIT <input checked="" type="checkbox"/> FURNISH AS CORRECTED
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.	
 40 IDX Drive Building 100, Suite 200 South Burlington, VT 05403 802.497.6100	Job Number: <u>BRF 025-1(42)</u> Reviewed By: <u>E.F. LAWES</u> Date: <u>MARCH 9, 2017</u>

COLD RIVER BRIDGES, LLC
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 LUDLOW BRF 0251(42)
 CONCRETE MIX DESIGN SHEET NUMBER
 DATE: 11/18/16 14