Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

Project No.: **WECB-1401**

Report Date: **February 3, 2020**

Client: **Mr. John P. Orsina**
Address: **Westbrook Concrete Block Co., Inc.**
PO Box 700
Westbrook CT 06498

Project Name: **Westbrook Concrete Block Co., Inc.**

Date Received: **January 17, 2020**

Date of Compression Testing: **February 3, 2020**

Unit Specification: **ASTM C90**

Date of Absorption Testing: **January 30, 2020**

Unit Designation and Description: **Concrete Masonry Unit**
Light Weight Spectra Glaze I

Testing Technician: **TRex**

Laboratory Number:**10- 178998**

Summary of Test Results

Physical Property	Specification Values	Average Test Results		Physical Property	Specification Values	Average Test Results	
Net Compressive Strength (min.)	2000	**3180**	*psi*	Min. Faceshell Thickness (FST)	1.25	**1.36**	*in.*
Gross Compressive Strength		**1670**	*psi*	Min. Web Thickness (WT)	0.750	**1.15**	*in.*
Density		**102.7**	*pcf*	Equivalent Web Thickness		**2.65**	*in.*
Absorption (max.)	18	**12.9**	*pcf*	Equivalent Thickness		**4.02**	*in.*
Percent Solid		**52.6**	*%*	Normalized Web Area	6.5	**31.8**	$in.^2/ft.^2$
Net Cross-Sectional Area		**62.98**	$in.^2$	Max. Var. From Spec. Dimensions			*in.*
Gross Cross-Sectional Area		**119.66**	$in.^2$	Moisture Content			*%*

Individual Unit Test Results

Compression Units

Specimen No.	Received Wt, W_R	Cross-Sectional Area		Max. Load	Compressive Strength	
		Gross	Net*		Gross	Net
	lb.	$in.^2$	$in.^2$	*lb*	*psi*	*psi*
4	29.96	119.60	63.13	188960	1570	2990
5	30.11	119.84	62.84	209820	1750	3330
6	30.56	119.53	62.55	202170	1690	3230
Average	**30.21**	**119.66**	**62.84**	**200320**	**1670**	**3180**

* Net area determined from absorption specimens unless solid units are used.

Absorption Units

Specimen No.	Average Width	Average Height	Average Length	Average Min. FST	Average Min. WT	Normalized Web Area
	in.	*in.*	*in.*	*in.*	*in.*	$In.^2/ft^2$
1	7.64	7.60	15.65	1.36	1.15	31.7
2	7.64	7.60	15.66	1.35	1.15	31.8
3	7.64	7.63	15.65	1.36	1.15	31.8
Average	**7.64**	**7.61**	**15.65**	**1.36**	**1.15**	**31.8**

Specimen No.	Received Wt, W_R**	Immersed Wt, W_I	Saturated Wt, W_S	Oven-Dry Wt, W_D	Absorption		Density	Net Volume	Net Area	Percent Solid	Moisture Content** % of total absorption
	lb	*lb*	*lb*	*lb*	*pcf*	*%*	*pcf*	ft^3	in^2	*%*	
1	30.21	14.71	32.05	28.49	12.8	12.5	102.5	0.2778	63.01	52.8	
2	29.55	14.43	31.62	27.96	13.3	13.1	101.5	0.2754	63.05	52.4	
3	30.57	15.09	32.44	28.95	12.6	12.1	104.1	0.2779	62.80	52.7	
Average	**30.11**	**14.74**	**32.04**	**28.47**	**12.9**	**12.5**	**102.7**	**0.2770**	**62.95**	**52.6**	

**Received weight determined at the time of unit delivery to the job site or from units sampled at that time and delivered to the laboratory in sealed containers for moisture content determination.

Remarks: The units were tested according to ASTM C140. This set meets the absorption and compressive strength requirements of ASTM C90
NCMA Tek 7-1C Fire Resistance Rating = 2.5 hours based on the client supplied mix design.

Samples were obtained and delivered to the lab by the client. The above units were tested at 28 days after casting.

Chas M. Snyder, PE
Laboratory Manager