Richard T. Hughes, P.E.

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Clearfield, PA 16830

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June 1, 2011

Parker Block Company 30243 Millsboro Highway Millsboro, DE 19966

Gentlemen:

This letter is to certify that the Bond Beam Lintels as shown in 8 x 8 load tables manufactured by Parker Block comply with the latest steel standards as specified by ASTM 615 for 60,000 psi reinforcement. The masonry mix has been tested in accordance with ASTM C109 and has a compressive strength in excess of 3,500 psi.

Furthermore, the methods of design and the calculated capacities of the lintels as shown in the load tables used the ACI 318-05 section 9.1 Ultimate Design method, the building code requirements for masonry ACI 530/ASCE 5-88 and conform to the latest NCMA TEK-17.2-2002 specifications. The loads developed for use in the design of the lintel is also in compliance with the UBC Code. In all lengths of lintels, bond, flexure and shear values were calculated and studied to ensure the proper governing load values are shown in the tables. In all instances of lintels (up to 12 ft. in length) as a minimum the members carry the apex area of hollow masonry block above the span unless otherwise noted. A 1.4 dead load factor was used in the design of the members for both self-weight and allowable loads as expressed in the tables.

Parker Block Company lintels also carry a 1 ½ hour UL fire rating when the lintels are restrained, such as for seismic requirements. I would like to certify the structural integrity of this produce as long as it is used within the standard industry application.

Please do not hesitate to call if you have any questions or require additional information.

Sincerely.

Richard T. Hughes,

No. 12693 F. No. 12693 F. No. 12693

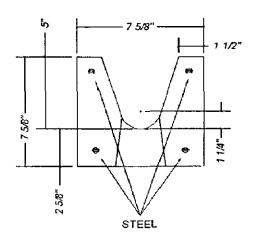


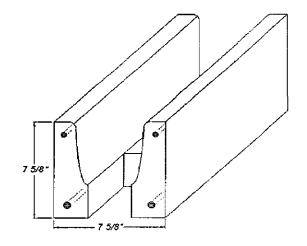
8" PRECAST HERC-U-LINTELS

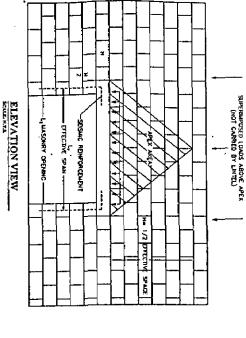
STANDARD LENGTHS

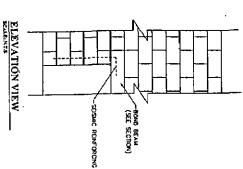
OVERALL	ТОР	воттом	
LENGTH	\$TEEL	STEEL	
48"	2-#3 rebar	2-#3 rebar	
56"	2-#3 rebar	2-#3 rebar	
64"	2-#3 rebar	2-#3 rebar	
72"	2-#3 rebar	2-#4 rebar	
80"	2-#3 rebar	2-#4 rebar	
88"	2-#3 rebar	2-#4 rebar	
96"	2-#3 rebar	2-#4 rebar	
104"	2-#3 rebar	2-#4 rebar	
112"	2-#3 rebar	2-#4 rebar	
120"	2-#3 rebar	2-#4 rebar	
128"	2-#3 rebar	2-#5 rebar	
136"	2-#3 rebar	2-#5 rebar	
144"	2-#3 rebar	2-#5 rebar	

Rebar: ASTM A615 Grade 60 Concrete Strenght: 3500 psi Average Weight: 28lbs If Finish: CMU Textrue











30234 Millsboro Highway Phone: 302-934-9237 Millsboro, DE 19966

6. Hazimum bending moment capacity II.	Lima Load	Deod Load	5. Maximum ollowable load Balanced condition	4. Effective apon Le(inches)	3. Magenry opening L (inches)	2. Nominal linter length (inches)	roφs (A.)	1. Reintgreement	8X8 LINTELS 3,500 psi PRECAST BOND BEAM LINTELS
(Ihr. + P.) 5796	(Ast - It.)	(ms = n;)	(18t=fL)	<u>.</u>	(inches)		Boltom	Top	ELS
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5798	5024	6102	8542	ಜ್ಞ	8	36			0 psi
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5796	145	1766	2476	22	:	8			Z
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9800	360	ŝ	93	36	126	Ē			

0.9 (A₂) (£) (d-a/2)

n.= nonest governed by ultimate strength = 0.9 (A_c) (V.= Shear governed by ultimate strength M_a= 18 W_c (L_c)²
V.= 12 W.L_c
nax = Maximum allowable deflection = L_c/36010.3*
Ul. Für Ratings 1-1/2 hour

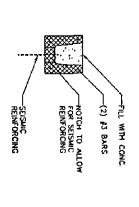
<u>Typical Section:</u>
Width (W) = 7-5/8"
Height (H) = 7.625"

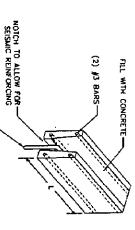
As a minimum, the lintels carry the spex area above the span. An example of the uniform equivelent apex load calculation follows.

Hollow masonry block weights for determining uniform equivalent apex load on liniel: 8° block weight = 35 psf (Hollow) 12" block weight = 50 psf (Hollow)

Equivalent load of apex area = .33 WL
Effective span "L" of lines (centerline of bearing).
Weight of masonry block "W" PSF
EXAMPLE

Equivalent apex load for 4"X8" Lintel with effective span of 48"
Apex Load = (.33) (w) (£) = .33 (35 ps02) (48"12) = 23#Ff
Apex Load = (.33) (w) (£) = .33 (35 ps02) (48"12) = 23#Ff
(from load table for live loads) = 852 #Ff
Therefore, the lintel has significant excess capacity, if





SEISMIC REINFORCING-



Sustainable Concrete Products for Structures and Hardscapes

13750 Sunrise Valley Drive Herndon, VA 20171-4662 703.713.1900 Fax: 703.713.1910

www.ncma.org

Job No.: Report Date:

11-386 5/20/2011

Client:

Parker Block Co, Inc.

Testing Agency:

National Concrete Masonry Association

Address: PO Box 780

ASTM C140-10 Test Report

Millsbora, DE 19966-0780

Address:

Research and Development Laboratory

13750 Sunrise Valley Drive

Herndon, VA 20171-4662

Sampling Party:

Parker Block Co, Inc.

Unit Designation/Description:
U-Shaped Concrete Masonry Lintel

Absorption

Sampling and Testing Concrete Masonry Units and Related Units

Date Samples Received:

5/10/2011

Summary of Test Results:

Physical Property
Net Compressive Strength

Tested

<u>Values</u>

Density Absorption

4080 îpsi 135.9 lb/ft³ 11.3 lb/ft³ 8.3 %

The client delivered three full-size U-shaped concrete masonry lintels to the laboratory. From each lintel, a 2 x 4 x 8 in, coupon was saw-cut from the unit for compression testing. Also, an additional segment was taken from the unit for absorption testing. The results of these tests are summarized above, with individual results listed below

Measurements of Full-Size Units *

	Avg Width **	Avg Height	Length Front	Length Rear
	in.	in.	in.	in.
Linit #1	7.64	7 38	30.50	30.40

Date Tested 5/17/2011

Compression Specimens

		Width in.	Height in.	Length in.	Coupon Weight Ib	Compression Load lb	Compressive Strength psi
	Unit #1a	2.11	4.05	⁷ 8.12	5.36	65410	3820
	Unit #2a	2.00	4.02	8.01	5.14	60030	3750
Date Tested	Unit #3a	2.08	4.04	8.25	5.66	80010	4660
5/20/2011	Average	2.06	4.04	8.13	5.39	68480	4080

Absorption Specimens

Approxmiate Absorption Specimen Size 2 x 7.5 x 8 inch

-		Received Weight	Immersed Weight	Saturated Weight	Oven-Dry Weight - Ib	Absorption	Absorption	Density
Date Tested	Unit #1b	8.90	5.17	8.96	8.28	11.2	8,2	136.2
5/18/2011	Unit #2b	9.08	5.27	9.18	8.46	11.5	8.5	135.1
to	Unit #3b	9.14	5.32	9.22	8.52	11.2	8.2	136.3
5/20/2011	Average	0.04	5.25	0.12	9.42	11.2	0.2	12E D

Nicholas R. Lang

Manager, Research & Development Laboratory