

1308 Broad Street Durham, NC 27705 919.619.2258 www.brethorton.com

Written Description of Physical Changes Proposed

We propose to install cedar shingles on the locations of the house where new asphalt architectural shingles were previously approved and where they currently exist on the house. These locations include all the roof over the two-story portion of the house and the roof over the one-story, hipped-roof wings. Please see drawings for further information about location of proposed cedar shingles. The shingles are to be western red, pressure-treated cedar and are to have random widths but a consistent 5 ½" exposure. The ridges are to be cedar and the valleys (only two and, because of the pitch and height of the roof, difficult to see from the street) are to be a "classic bronze" finished metal to give the appearance of pantinated copper.

We propose to replace six existing columns on the front of the house with fiberglass/concrete composite columns made by HB&G. The columns we propose to replace include: (3) all-wood columns, likely original to a 1920's renovation; (2) replacement fiberglass/concrete composite columns; and (1) column with a wood shaft and wood capital, both of which may or may not be original to the 1920's renovation, and a furniture-grade structural foam base. The six new columns we propose are HB&G's round tapered "PermaCast" columns, made of fiberglass-reinforced concrete shafts and furniture grade- and structural foam bases and capitals. Their details, dimensions, and profiles are of the simplified doric order (referred to as "Tuscan" by the product literature), and the profiles and dimensions of their base and cap are very similar to those of the existing wood columns. The product cut sheets, provided as part of this application, demonstrate their similarity to the details of the existing all-wood columns. The proposed columns' base diameter (11.6") is less than an inch less than the average of the three existing all-wood columns (12.5"), and their upper diameter (9.4") is only slightly more than an inch less than the upper diameter of the existing all-wood columns (10.6").

capitals bases

Applicable Design Guidelines

Page / Standard #	Торіс	Brief description of the applicable aspect of your proposal
Page #79-82 / Standard #3.1	Roofs, Gutters, & Chimneys	This will be one of probably a number of roofing replacements over the history of the 180-year-old house. Old photographs show evidence of a wood roof over the two-story portion of the house. We believe the western-red cedar roof we propose will be similar to that roof.
Page # 64-66 Standard #2.1	Wood	The applicant believes there is an ongoing risk of water damage to the six columns which support the front porch. The replacement, which happened at an unknown date in the past, of two of the six columns with fiberglass/concrete replacement columns points to a history of damage. The water damage evident on the three existing all-wood (shaft, base, and capital) columns also points to a history of damage. A past replacement of the base of the sixth column also points to a history of damage. The shaft of this sixth column is wood, but it is 1" smaller in diameter than the three all-wood columns, which could be evidence of it also being a replacement column. The height of the porch, the relatively shallow eave, the details of the columns, which include horizontal surfaces on which water can sit, and the lack of significant pitch of the front porch floor have all likely led to water damage. Some form of replacement will have to happen, as all of the existing all-wood columns show damage, either in their shafts, bases, or capitals, and much of the damage is beyond the scope of repair. The owner of the house would like easier to maintain and more durable columns, which are historically accurate except for their material. The proposed columns would be painted to match the finish of the existing wood columns. The applicant hopes Standard 2.1.6 could allow for such a substitution.
Page # 96-99	Porches,	Please see description for "wood", above.
Standard #3.6	Entrances,	
	& Balconies	

Photographs



Photo, date unknown, showing circa 1876 Italianate-style renovation. Upper roof appears to be wood shingle while the roof the over one-story wings appears to be metal. Italianate, double columns can be seen on the porch.



West elevation today, during renovation. The house was renovated in the 1920's in the colonial revival style, and the Italianate double columns were replaced at that time with classical-order single columns. Columns, for the purpose of this application, are numbered from left (north) to right (south): N3, N2, N1, S1, S2, and S3.



Column N3. Non-original replacement column. Shaft is fiberglass/concrete composite and base and capital are furniture-grade structural foam.



Column N3 base. Furniture-grade structural foam base, lifted up to show how it slides onto shaft.



Column N2. Non-original replacement column. Shaft is fiberglass/concrete composite and base and capital are furniture-grade structural foam.



Column N2 capital. Furniture-grade structural foam capital and base do not show any indication of needing repair.



Column N1. Likely an original column from the 1920's renovation. All wood.



Column N1 capital. Holes in capital indicate where screw-driver probe test was performed and where significant rot was discovered.



Column N1 base. A screwdriver was able to be pushed well into the wood at the bottom left corner of the base.



Column S1. Likely an original column from the 1920's renovation. All wood.



Column S1 base. Shows significant water damage. Metal standoffs, at the four corners of the base, were employed at some point in the past in an attempt to allow air and water circulation under the base.



Column S2. Likely an original from the 1920's renovation. All wood. A large split in the finger-jointed wood of the shaft can be seen on the right edge of the column.



Column S2 capital showing water damage.



Column S3. Perhaps an original from the 1920's renovation, however wood shaft is narrower than other wood shafts, capital is wood; the base is a replacement furniture-grade structural foam base.

Round Tapered **PERMA**Cast[®] Columns

	_		_							_	_	_		_	
COL. SIZE	А	В	С	D	E	F	G	J	K	L	0	N	R	Т	LENGTHS AVAIL (ft.)
6"	5%"	4%"	9"	17/16"	1¼"	5/8"	3⁄4"	1¼"	1 3/8"	8"	1"	6¼"	35/16"	47/16"	4,6,8
8"	7%"	6¼"	10½"	1%"	1¾"	3/4"	¹³ /16"	1¼"	1½"	9 ¼"	1/2"	2¼"	4¾"	4½"	5,6,8,9.0
10"	9 ⁵ /8"	81/8"	131/8"	2 ³ /8"	21/8"	3/4"	¹³ / ₁₆ "	1¼"	1¾"	11¼"	⁵ /8"	2¼"	5¼"	5"	6, <mark>8,9,10,12</mark>
12"	115/8"	9 ³ ⁄8"	16½"	21/8"	2 ³ / ₈ "	7⁄8"	¹³ /16"	1¾"	2¼"	13¾"	³ /4"	2 ⁵ / ₈ "	61/8"	5¾"	6,8902 14.68
14"	13%"	11%"	19½"	3 ³ /8"	3 ³ /8"	1 ¹ / ₈ "	1"	2"	2%"	17"	7⁄8"	25/8"	7¾"	7"	8 9, 10 12 14 16, 18
16"	15¾"	13%"	22"	31/8"	3 ³ /8"	11/8"	13/16"	2¼"	2%"	19%"	1"	3"	8 ³ / ₈ "	8"	8.0 ,12,14,16 18, 20
18"	17½"	15%"	24%"	4"	4"	1%"	17/16"	2¾"	31/8"	22¾"	1½"	10¾"	9%"	81/8"	8,10,12,14,16, 18,20,22,24,26
20"	19½"	17¾6"	27"	4¾"	4½"	2"	17/16"	27/8"	3¾"	2415/16"	1½"	10¾"	11¼"	9"	10,12,14,16,18 20,22,24
22"	21 ⁵ / ₈ "	19¼"	30¼"	5"	5"	2"	1%"	3"	3¾"	27½"	1½"	10¾"	12"	10¼"	16,18,20,22, 24,26
24"	23%"	21¼"	33½"	6"	5¼"	2¼"	2"	3½"	4"	30%"	1½"	10¾"	13½"	115/16"	12,14,16,18,20, 22,24,26,28,30
28"	28"	241/8"	38"	6¾"	6½"	2¾"	2¼"	3¼"	47/8"	33%"	1½"	10¾"	15½"	11¾"	20,22,24,26,28
30"	29%"	26½"	41%"	6½"	5%"	2½"	3"	4"	4%"	38¼"	1½"	10¾"	14%"	14%"	20,22,24,26,28 30

*There may be a variance of up to 1/4" in all dimensions. Fluted columns available in all diameters. See page 16 for Parallel dimensions. See page 18 for Decorative Capital dimensions. Standard Fluted Column (Fluted in mold) • Split columns are not load bearing.

$\textbf{Column-Loc}^{\texttt{®}}$

Column-Loc[®] creates a continuous connection from floor to beam/ header without the expense of splitting and reattaching the column. This labor saving product is easy to install and delivers wind uplift resistance especially important in coastal and high wind

areas. Currently available for 8" and 10" round (tapered and no-taper) and square PermaCast[®] columns. Kits are available with and without threaded rod in lengths up to 12!.*



ROUND PERMACAST[®] INSIDE DIMENSIONS Inside dimension may persum to 1/8" Solitring

Diameter

vary up to 1/8". Splitting a column will decrease inside dimension 1/8".

COLUMN SIZE	TOP I.D.	BOT I.D.
6"	31/8"	41/8"
8"	5½"	6%"
10"	7%"	8%"
12"	8%"	10%"
14"	10%"	12%"
16"	12%"	15"
18"	14½"	16%"
20"	161/16"	18%"
22"	18%"	20 ¹³ /16"
24"	20"	22%"
28"	22%"	26¾"
30"	25¼"	28%"

*Plain columns only

Plumb-Fit®

To make installation even easier our 6"-12" round and square poly Tuscan Cap and Base Sets with flashing cap come with the Plumb-Fit[®] patented (Patent 9689674) installation system included.

Round PermaCast[®] Porch Installation Bracket

The HB&G Porch Installation Bracket includes the bracket and all required hardware. The bracket fits 20" - 30" Plain Round PermaCast[®] Columns and will secure a 2nd story porch to our PermaCast[®] Columns. Three brackets are required for each column.







Poly Tuscan Base Fluted Column

FRONT PORCH COLUMNS



HB&G's number one goal is finding ways that we can save you time and make your life easier.



PermaCast® PermaFlashing and Installation Kit

The PermaCast[®] flashing with Plumb-Fit[®] and installation kit is available in selected Tuscan cap and base sets.*

This innovation will not only save time but will keep the elements out of the column and secure the top and bottom of the column.

*Not available in Tuscan cap and base sets for Craftsman, No-taper, PermaLite[®], and Wood columns.

Split Column Assembly and Flange Kits

HB&G offers a split kit and a split kit with flange option with an improved

MMA adhesive. These kits can





Installation Kit for Beveled Cap and Base





PARALLEL DIMENSIONS* Column Parallel Column Parallel Dim. Size Dim. Size 0" 6x4 60" 18x18 8" 6x6 18x20 84" 32" 49" 6x8 18x22 8x5 12" 18x24 73" 24" 8x6 18x26 97" 8x8 32" 20x10 0" 8x9 28" 0" 20x12 40" 0" 8x10 20x14 8" 4" 10x6 20x16 10x8 32" 20x18 28" 10x9 28" 52" 20x20 40" 76" 10x10 20x22 10x12 48" 100" 20x24 8" 12x6 22x16 45" 69" 32" 12x8 22x18 12x9 20" 93" 22x20 12x10 32" 53" 22x22 12x12 **48**" 77" 22x24 59" 12x14 101" 22x26 12x16 40" 24x12 21" 12x18 73" 24x14 45"

14x8	32"	24x16	69"
14x9	12"	24x18	93"
14x10	24"	24x20	75"
14x12	48"	24x22	99"
14x14	27"	24x24	123"
14x16	51"	24x26	77"
14x18	75"	24x28	101"
16x8	16"	24x30	125"
16x10	40"	28x20	20"
16x12	29"	28x22	44"
16x14	53"	28x24	68"
16x16	36"	28x26	92"
16x18	60"	28x28	116"
16x20	84"	30x20	92"
18x8	0"	30x22	116"
18x10	16"	30x24	140"
18x12	40"	30x26	75"
18x14	48"	30x28	99"

ł	
Column Size	Bottom Diameter
6x4	5 ³ /8"
18x8	$17^{1}/4$ "
20x10	1811/16"
20x12	18 ⁵ /16"
20x14	19 ¹ /4"

36"

18x16

30x30

123"

*For Tapered Round Columns

FRONT PORCH COLUMNS



Cedar shingle sample



Cedar shingle example, similar to installation proposed



STRUCTURAL FOAM BASE & CAPITAL.



STRUCTURAL FOAM BASE & CAPITAL.

EXISTING WEST ELEVATION

1/4"=1'-0"

Bret Horton Architect

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Architect, PLLC is not permitted.

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ORIGINAL FROM THE 1920'S RENOVATION, HOWEVER WOOD SHAFT IS NARROWER THAN OTHER WOOD SHAFTS. CAPITAL IS WOOD, AND THE BASE IS A REPLACEMENT STRUCTURAL FOAM BASE.

Addition & **Renovations to** The Battle House

NC STUDY CENTER

203 Battle Lane Chapel Hill, NC 27514

HISTORIC DISTRICT **COMMISION REVIEW**

Not For Construction

ISSUED

REVISIONS		
NO.	DATE	

EXISTING WEST ELEVATION

DATE 9.10.21 SCALE AS NOTED DRAWN ΒH PROJECT NUMBER



SHEET







A2.2

Bret Horton Architect

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Addition & **Renovations to** The Battle House

NC STUDY CENTER

203 Battle Lane Chapel Hill, NC 27514

HISTORIC DISTRICT COMMISION REVIEW

Not For Construction

ISSUED

REVISIONS	
NO.	DATE

EXTERIOR ELEVATIONS

DATE 10.12.21 SCALE AS NOTED DRAWN ΒH PROJECT NUMBER



SHEET



Leading the industry in column innovation, HB&G PermaWrap® columns are made from cellular PVC which offers the advantages of being unaffected by moisture and insects but has the thickness, ease of use, and workability of wood.

PermaWrap[®] columns are available in all sizes and styles – square or Craftsman – plain, fluted, raised panel, and recessed panel. With all of these options, you are certain to find just the right amount of detail for your specific project.

Best of all, the PermaWrap[®] column comes with a 25-year HB&G warranty.

*See Warranty

cPVC Painting and Finishing

Caulk where required using Siroflex® brand Sealant and Adhesive provided by manufacturer. Putty any holes using acrylic putty or caulk. Lightly sand or scuff surface of column. Clean surface of column to remove any dirt or hand oil residue with light detergent and water, denatured alcohol, or window cleaner. Be sure to remove soap residue with clean water. Apply one coat of 100% acrylic exterior bonding primer and one or more finish coats of 100% acrylic exterior paint.

Do not paint columns using dark colors (dark colors are considered any color that falls within the L value of 56 to 0). L is a measure of lightness of an object and ranges from 0 (black) to 100 (white).

- 25 year limited warranty*
- Custom styles available
- Made from cellular PVC Ir
- Installation kit included
- Weather proofInsect proof
 - Low maintenance

- Interior and exterior use



*Made from polyurethane and may need to be split in the field for installation.



