Docket Item # 11
BAR CASE# 2009-0035

BAR Meeting
April 1, 2009

ISSUE: Alterations

APPLICANT: Kenneth Carpi

LOCATION: 202 Duke Street

ZONE: RM/Residential

STAFF RECOMMENDATION: Staff recommends deferral for restudy.

**EXPIRATION OF APPROVALS NOTE: In accordance with Sections 10-106(B) and 10-206(B) of the Zoning Ordinance, any official Board of Architectural Review approval will expire 12 months from the date of issuance if the work is not commenced and diligently and substantially pursued by the end of that 12-month period.

**BUILDING PERMIT NOTE: Most projects approved by the Board of Architectural Review require the issuance of one or more construction permits by Building and Fire Code Administration (including signs). The applicant is responsible for obtaining all necessary construction permits after receiving Board of Architectural Review approval. Contact Code Administration, Room 4200, City Hall, 703-838-4360 for further information.

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I. ISSUE:
The Applicant is requesting approval of a Certificate of Appropriateness for the installation of two, HVAC condensers on the rooftop of the rear portion of the house at 202 Duke Street.

II. HISTORY:
According to Ethelyn Cox in Historic Alexandria Street by Street, 202 Duke Street was built by William Mitchell between 1795 and 1805. This Alexandria flounder house never acquired an addition fronting the street, hence the large front yard and lack of rear yard.

Prior Approvals:

In 1996, the Board approved demolition/capsulation, a rear addition and alterations to this property (BAR Case #95-0012 & 0013, 1/17/1996). Later, the Board subsequently approved alterations to the previously approved plans (BAR Case #96-0197, 9/18/1996).

In September 2007, the BAR approved a 5 foot 6 inch by 7 foot shed for the subject property. The shed was approved with a sloped roof with the high side to be constructed against the dwelling's west brick wall and the low side facing east into the yard. The approved materials included a standing seam copper roof and "Antique" brick veneer walls.

III. ANALYSIS:
The rooftop A/C units comply with zoning.

The installation of condensers on rooftops of any historic building is a challenging issue within the historic district. The Board must evaluate its impact to the structural integrity of the individual historic resource upon which it is being mounted, ensure that the installation of the equipment does not damage or alter the character-defining roof shape or compromise the architectural integrity of the historic district's streetscape.

The current application has not provided the Board with documentation of the current structural analysis of the historic roof upon which the condensers are proposed to be mounted. Condensers of this size individually weigh approximately 225 pounds or more. An increase of 450 pounds of weight on top of this historic roof structure may compromise the " flounder's" structural integrity especially if snow loads are added into the formulary. As such, this roof's structural system needs to be analyzed to determine if it can support the additional weight of these units, without requiring an alteration to its structural system.

From a compatibility standpoint, the proposed location of the condensers is problematic for two main reasons. The current location visually obstructs the pure form of the "flounder", which is a very unique roof form identified as a character-defining feature within the Old and Historic District. Secondly, the installation of the condensers will require penetration into the roof's sheathing. It is standard preservation practice not to support the installation of modern

mechanical equipment on historic structures which will damage character-defining features or is conspicuous from the public right-of-way.

The *Design Guidelines* describe HVAC equipment as an "important contemporary functional element of a structure" and "such equipment can have an important effect on the overall visual composition of a historic building and, if not appropriately located, may be a visual disruption of the skyline and a unified building design." It is recommended that "to the extent possible HVAC equipment should be hidden from view." The *Guidelines* further explain that "HVAC equipment can sometimes be located on the roof of a historic structure. However….roof rafters in a historic structure may not be able to carry the additional weight of an HVAC compressor." (*Design Guidelines,* Doors - Page 1 & 2).

It is recommended that the Board defer this proposal for re-study. The study should include an evaluation of the property for alternative sites for proposed condenser units. Some possible locations to consider include on the existing second floor roof deck, behind the approved 2007 shed with landscape screening, or altering the existing roof slope of the approved 2007 shed to enable the condenser units to be mounted upon it. This would also require designing a architecturally compatible screen to surround the units, as they would be housed in view of the front of this resource.

If the Applicants are unable to find alternative solutions, the Board should be provided with a detailed written justification as to why the units cannot be installed in the existing yard or mounted on another non-historic massing, and an analysis of the existing flounder's roof structural system with proposed condenser installation. This analysis should include potential snow loads.

IV. <u>STAFF RECOMMENDATION</u>:
Staff recommends deferral for restudy.

V. CITY DEPARTMENT COMMENTS:

Legend: C - code requirement R - recommendation S - suggestion F- finding

Code Administration:

C-1 Alterations to the existing structure must comply with the 2006 edition of the Uniform Statewide Building Code (USBC).

C-2 A Building / Mechanical / Electrical permit is required for the proposed project.

Historic Alexandria:

R Approve.

Alexandria Archaeology:

Transportation and Environmental Services:

No Comments.

VI. IMAGES:

Figure 1: View of Property from Public ROW

Figure 2: View of Property from Public ROW

Location of Condenser Units (Toward Rear of Roof Structure)

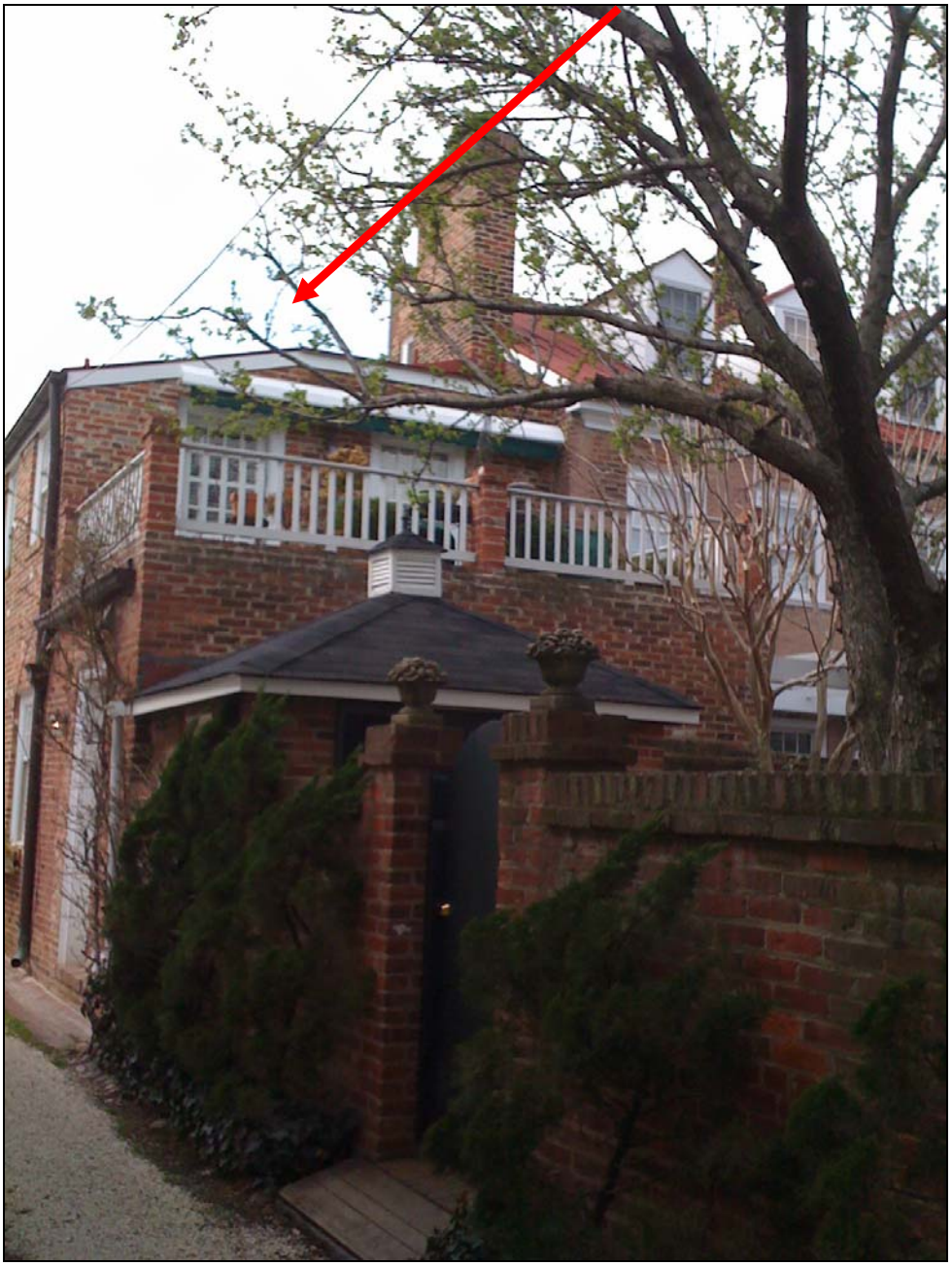


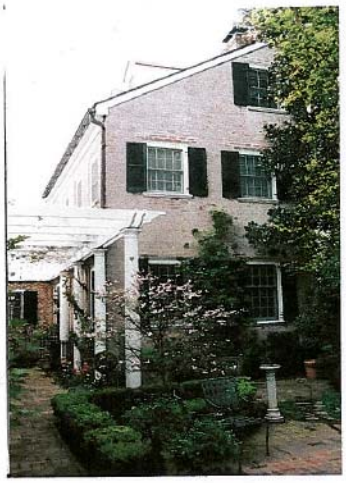
Figure 3: View of Property from Public Alley

Figure 4: View of Rear Flounder Addition

Figure 5: Ariel Views of Subject Property

Figure 6: Aerial View of Subject Property

202 Duke Street from the street
South Elevation



202 Duke Street from inside the gate
South Elevation

View from Lee Street approaching the alley behind
202 Duke Street (Red Roof)

Lee Street West Elevation of 202 Duke Street
(Red Roof)

From the Alley North Elevation

Figure 7: Applicant's Submitted Photos

202 Duke Street

Dimensions of HVAC Condensers to be relocated:

Unit #1 – 23"W x 28"D x 22"H

Unit #2 – 29"W x 34"D x 27"H

Figure 8: Dimensions of Proposed Condenser Units

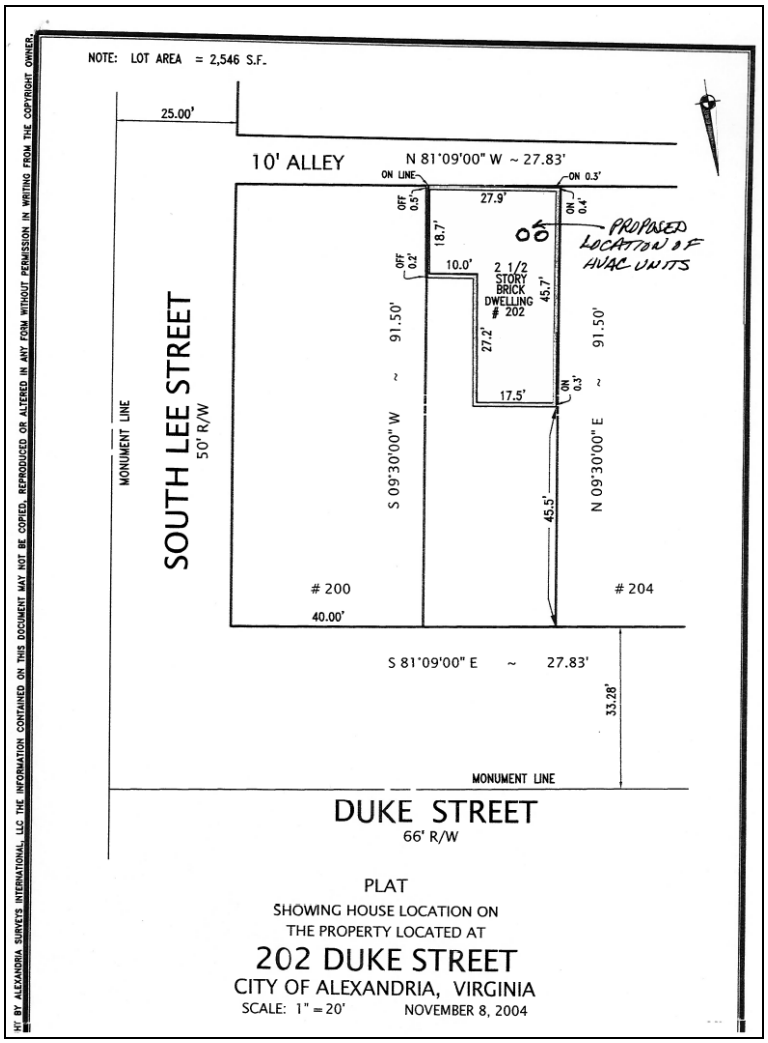


Figure 9: Location of Condenser Units