



# County of Fairfax, Virginia

## MEMORANDUM

### STAFF MEMORANDUM TO THE LOCAL BOARD OF BUILDING AND FIRE CODE APPEALS

**HEARING DATE:** July 8, 2020

**APPELLANT:** Melissa Matthews, AIA, LEED AP  
11180 Sunrise Valley Dr., Suite 200  
Reston, VA 20191

**SUBJECT PROPERTY:** New Lake Anna House LP  
11444 North Shore Drive

**CODE:** 2015 Virginia Construction Code (VCC)

#### Staff Position

Staff respectfully recommends that the Fairfax County Board of Building and Fire Code Appeals uphold the denial by the building official and plan review staff of the use of Stone Strong wall blocks as a material for the retaining wall without the submission of an acceptable evaluation report from a nationally recognized testing laboratory.

The VCC has provisions for the approval of products and materials not specifically provided for in the code. Section 1703.4.2 permits us to require research reports in order to approve materials, which is our standard process and has been for nearly 20 years. We approve several dozen different products, materials and systems each year in this manner. Each one is treated equally. Subjecting the approval of one product one way and the approval of the next product a different way would be arbitrary and capricious.

#### **1703.4.2 Research reports.**

Supporting data, where necessary to assist in the approval of products, materials or assemblies not specifically provided for in this code, shall consist of valid research reports **from approved sources.**

Additionally, the applicant explicitly references the following standards in their drawings and appeal documents:

- **NCMA: DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS (3RD EDITION, 2010).**
- **ASTM C1776/C1776M-17: STANDARD SPECIFICATIONS FOR WET-CAST PRECAST MODULAR RETAINING WALL UNITS.**

Section 112.2, *Alternative methods or materials*, of the VCC applies to materials where standards of performance are not available:

#### **112.2 Alternative methods or materials.**

In accordance with Section 36-99 of the Code of Virginia, where practical, the provisions of this code are stated in terms of required level of performance so as to facilitate the prompt acceptance of new building materials and methods. **When generally recognized standards of performance are not available,** this section and other applicable requirements of this code provide for acceptance of materials and methods whose performance is substantially equal in safety to those specified on the basis of reliable test and evaluation data presented by the proponent. In addition, as a requirement of this code, the building official shall require that sufficient technical data be submitted to substantiate the proposed use of any material, *equipment*, device, assembly or method of construction.



In this case, standards are available, so the product can be evaluated. Therefore, review of this product without an evaluation report under the standards listed above is not appropriate.

Additional notes regarding supporting documentation submitted by Appellant are as follows:

- 1- The global stability analysis (GSA) prepared by ECS dated June 1<sup>st</sup>, 2020 and signed by Ms. Teresa E. Levisay, P.E., is not relevant to the material in question. It is for the support of excavation (piles) behind the wall and has nothing to do with the Stone Strong wall block.
- 2- The design computations prepared by AFS Geo Consultants, LLC signed and sealed by Mr. Aly F. Soliman dated January 2<sup>nd</sup>, 2020 is for segmented block type StoneStrong 6SF with geogrid SFSS (Synteen Geogrid SF55). It is not for the gravity wall system.
- 3- Letter from Maryland Department of Transportation State Highway Administration - The letter is only an approval to allow submittal of the product for review; it is not for actual approval of use of the product.

**Appellant Position**

The appellant's appeal application is attached.