



07/13/2026

Harnett County Building Inspections
420 McKinney Parkway
Lillington, NC 27546

Re: Achievement Charter Academy – Modular Classroom Relocation

25 Buttonwood Court
Fuquay-Varina, NC 27526

To Whom It May Concern:

At the request of Achievement Charter Academy, Bowman Consulting has reviewed the original sealed structural foundation drawings and supporting project documentation for the modular classroom buildings proposed to be relocated from Wayne STEM Academy in Goldsboro, North Carolina, to the proposed site located at 25 Buttonwood Court, Fuquay-Varina, North Carolina. The documents reviewed as part of this evaluation are identified in Exhibit B – Documents Reviewed.

The purpose of this review is to evaluate the compatibility of the governing structural site design criteria for the proposed relocation site with the design criteria identified on the original sealed foundation drawings. This evaluation was performed in accordance with the applicable North Carolina Building Code requirements and applicable provisions of the International Building Code (IBC). A summary of the governing structural design criteria comparison is provided in Exhibit A – Structural Design Criteria Comparison.

Our review was limited to a comparison of the applicable building code requirements, Risk Category, design wind criteria, seismic design criteria, and assumed allowable soil bearing pressure. The evaluation was based on the assumption that the modular buildings, foundation configuration, structural framing, loading conditions, occupancy classification, and intended use remain consistent with those shown on the original sealed structural drawings.

Based on the information available, the governing structural design criteria for the proposed relocation site do not exceed those used for the original foundation design.

Specifically, the proposed site has an ultimate design wind speed of 130 mph in accordance with ASCE/SEI 7-16 for Risk Category IV structures, consistent with the original foundation design criteria. The proposed site is classified as Exposure Category C, consistent with the original foundation design. Accordingly, the applicable wind design parameters do not exceed those used for the original design.

The applicable seismic design criteria for the proposed relocation site were also reviewed. Based on the structural characteristics of the modular buildings and the applicable governing load combinations, wind loading remains the controlling lateral design case. Accordingly, seismic loading does not result in more stringent structural foundation design requirements than those considered in the original design.

In the absence of a project-specific geotechnical investigation, this evaluation assumes an allowable soil bearing pressure of 1,500 psf in accordance with the presumptive soil bearing values permitted by IBC Section

1806.2 and Table 1806.2 for suitable supporting soils. This assumed bearing pressure is consistent with the value utilized for the original foundation design.

The proposed relocation site is within the same general climatic region as the original installation site, and the foundation configuration and support conditions are assumed to remain consistent with the original sealed foundation drawings. The foundation system consists of ABS foundation pads installed at grade in accordance with the original sealed foundation drawings and the manufacturer's installation requirements. Any site-specific requirements related to grading, drainage, flood hazard areas, accessibility, utilities, or other nonstructural site development items shall be addressed separately by others as required by the Authority Having Jurisdiction.

As summarized in Exhibit A, the governing structural design criteria applicable to the proposed relocation site are equivalent to those used for the original sealed foundation design. Accordingly, the original sealed foundation design remains applicable for the proposed relocation site. The proposed site does not impose structural design requirements that exceed those considered in the original foundation design.

This evaluation relies upon the original sealed foundation design as the basis for comparison. Bowman Consulting's services were limited to evaluating the applicability of that design to the proposed relocation site and did not include a redesign or independent structural analysis of the original foundation system.

This opinion is based on the following assumptions:

- The modular buildings remain unchanged from their original installation, including configuration, structural framing, dead loads, live loads, equipment loads, and occupancy.
- No modifications, additions, or alterations have been made that would increase structural loading.
- The original foundation configuration and anchorage details remain consistent with the original sealed drawings.
- The ABS foundation pads will be installed on properly prepared, level, undisturbed native soil or approved engineered fill capable of providing the assumed allowable soil bearing pressure of 1,500 psf.
- Existing field conditions and subsurface conditions at the proposed relocation site have not been independently verified by Bowman Consulting.

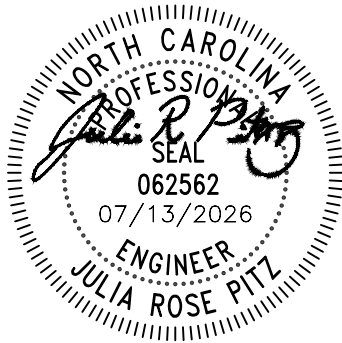
Because the foundation system utilizes surface-installed ABS foundation pads, no foundation excavations are anticipated as part of this installation. If unsuitable soils, undocumented fill, excessive settlement, or other conditions inconsistent with the assumptions of this evaluation are encountered during site preparation or installation, such conditions should be corrected prior to installation and, if necessary, brought to the attention of the Engineer of Record.

The conclusions presented herein are based solely on the documents identified in Exhibit B and the assumptions stated in this letter. No destructive testing, subsurface investigation, or independent structural analysis of the original foundation design was performed as part of this evaluation.

This evaluation is intended solely to demonstrate that the governing structural design criteria at the proposed relocation site are equivalent to those used in the original sealed foundation design and should not be construed as a redesign of the modular foundation system.

Should you have any questions, please do not hesitate to contact me.

Respectfully,



Julia Pitz, PE
Senior Structural Engineer
Bowman Consulting Group

Attachments:

Exhibit A – Structural Design Criteria Comparison
Exhibit B – Documents Reviewed

Exhibit A – Structural Design Criteria Comparison

Achievement Charter Academy – Modular Classroom Relocation
25 Buttonwood Court, Fuquay-Varina, NC

Design Parameter	Original Installation (3006 Summit Rd Goldsboro, NC)	Proposed Installation (25 Buttonwood Court Fuquay-Varina, NC)	Evaluation
Applicable Building Code	NC Building Code (IBC/ASCE 7-16)	NC Building Code (IBC/ASCE 7-16)	Equivalent
Occupancy	Educational	Educational	Same
Risk Category	IV	IV	Same
Ultimate Design Wind Speed (Vult)	130 mph	130 mph	Same
Wind Exposure Category	C	C	Same
Wind Governing Design	Yes	Yes	Same
Seismic Design Criteria	Reviewed	Reviewed	Wind remains the governing lateral design case. No increase in foundation design requirements.
Allowable Soil Bearing Pressure	1,500 psf	1,500 psf (assumed per IBC Section 1806.2, Table 1806.2)	Equivalent
Foundation System	ABS Foundation Pads	ABS Foundation Pads	Same
Foundation Configuration	Original Sealed Design	No Change	Same
Structural Framing	Original Modular Building	No Change	Same
Structural Loads	Original Design Loads	No Change Assumed	Same
Building Use	Classroom	Classroom	Same

Engineering Conclusion

Based on the comparison above, the governing structural design criteria applicable to the proposed relocation site are equivalent to those used for the original sealed foundation design. The proposed relocation site does not impose structural design requirements that exceed those considered in the original foundation design. Accordingly, the original sealed foundation design remains applicable for the proposed relocation site, subject to the assumptions and limitations described in the accompanying engineering letter.

Exhibit B – Documents Reviewed

The following documents were reviewed as part of this structural evaluation:

1. Original sealed structural foundation drawings for the modular classroom buildings (Wayne STEM Academy, Goldsboro, North Carolina). (DWG No. DBI-10735 A/K Sealed: 06/07/2023)
2. Original modular building approval documents and foundation details.
3. Proposed site plan for Achievement Charter Academy, 25 Buttonwood Court, Fuquay-Varina, North Carolina.
4. Site-specific hazard/design criteria report utilized to establish applicable wind and seismic design parameters.
5. Applicable North Carolina Building Code and referenced standards, including:
 - North Carolina Building Code
 - International Building Code (IBC)
 - ASCE/SEI 7-16, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*