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TO: SCHOOL SUPERINTENDENTS, ARCHITECTS AND ENGINEERS

FROM: KATHERINE LYNN, ASST FINANCE DIRECTOR, REAL PROPERTY  
MANAGEMENT  
FRANK BARNES, DIRECTOR, DIVISION OF CONSTRUCTION  
MANAGEMENT

SUBJECT: ADDITIONAL GUIDANCE ON STORM SHELTERS REQUIRED BY 2015  
*INTERNATIONAL BUILDING CODE*

This memorandum is being issued to provide school architects, engineers, and superintendents, additional guidance on the requirements and interpretation of the 2015 International Building Code, Section 423 Storm Shelters.

The Division of Construction Management views the adoption of the 2015 International Building Code as being applicable to building construction that occurs subsequent to its adoption and not intended to address or correct pre-existing building conditions.

The 2015 International Building Code, Section 423.4 requires a storm shelter complying with ICC 500 for all Group E occupancies located in an area with a design wind speed for tornados of 250 MPH and when the Group E occupancy has an occupant load of 50 or more. For storm shelters required by the 2015 International Building Code, Section 423.4 where the Group E occupancy consists of an addition to an existing building, the new addition shall be required to accommodate the occupant load of any space added to the existing building but shall not be required to accommodate the total occupant load of the entire building (existing building and addition). The requirement for storm shelters would not apply to the renovation of a Group E occupancy as long as the existing structural systems including foundations, load bearing walls, building frame, etc. are not substantially modified or removed and replaced. The requirement for storm shelters would apply when an existing space is renovated and there is a change of occupancy to a Group E with an added occupancy of 50 or more. In cases where a storm shelter cannot be incorporated into the existing renovated structure, a stand-alone storm shelter shall be provided.

A portable building that is a single, pre-fabricated, stand-alone structure is considered a

temporary building structure. Projects that consist of multiple portable buildings that are Group E occupancy of 50 or more are encouraged, but not required to include storm shelters. A modular building is a building that consists of two or more pre-fabricated, modular components joined together at the site to form a building structure. Modular buildings are considered permanent structures and must meet the requirements of the State Building Code including the requirement for storm shelters for Group E occupancies of 50 or more.

For a new Group E occupancy, the minimum occupant load shall be based on the classroom area included in the new addition. The minimum occupant load shall be calculated as previously stated in the memo issued by the Building Commission on July 10, 2010 which states the following (emphasis added):

and private *WZB*

1. **Occupant Load (Para. 501.1.1).** Each new public school shall include a safe space or safe spaces of sufficient size to accommodate the student occupant load plus an additional 10% increase for faculty and administration. The student occupant load shall be calculated at 1 student per 30 SF of gross classroom area. Fractions or portions shall be rounded up to whole numbers. *Classroom area must include all rooms designated for general classroom instruction (for example: special education, art, computer lab, science lab, etc.). Auxiliary support areas such as cafeterias, band practice rooms, gymnasiums, etc. do not have to be included as general classroom instruction area.*

The design professional shall be responsible for the final determination of whether or not the proposed Group E structure is located in an area where the shelter design wind speed is 250 MPH as stated in the memo issued by the Building Commission on July 10, 2010. The memo stated the following (emphasis added):

2. **Tornado Wind Speed Determination (Para. 304.2).** A state map with counties is attached that approximates the shelter design wind speeds as illustrated in Figure 304.2 (1). *The map is provided as a guide and the design professional must use their professional judgment when determining the appropriate design criteria.* The design wind speed must be indicated on the Safe Space Plan and on the required safe space signage.

The Division of Construction Management and the State Department of Education recognize that the safety of all occupants of both new and existing buildings is highly important. School administrators are strongly encouraged to develop plans that provide for the best possible refuge in the event of a tornado or high wind event, including the incorporation of new storm shelters where feasible.

If there are additional questions regarding the ICC 500, please contact the Division of Construction Management at 334-242-4082.

Cc: Perry Taylor, State School Architect