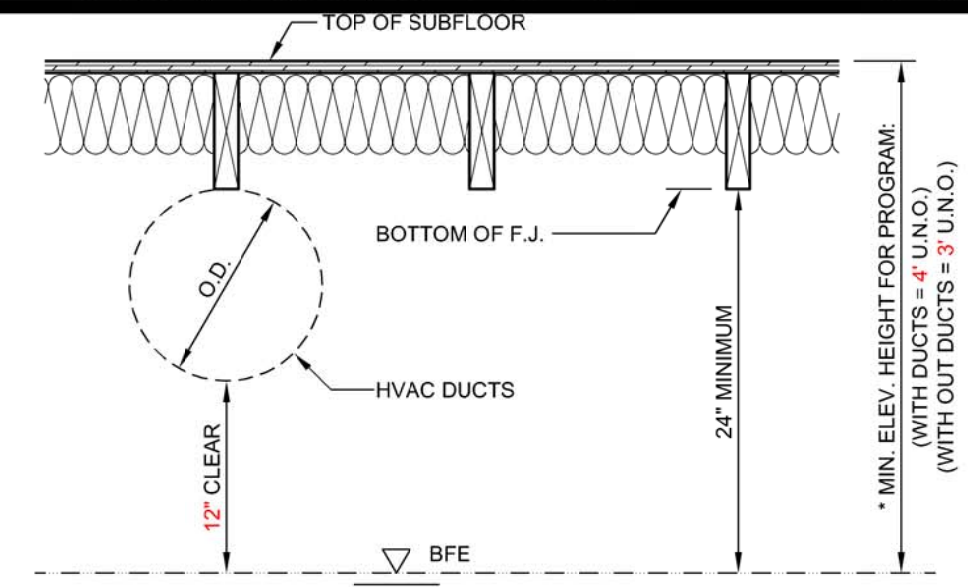


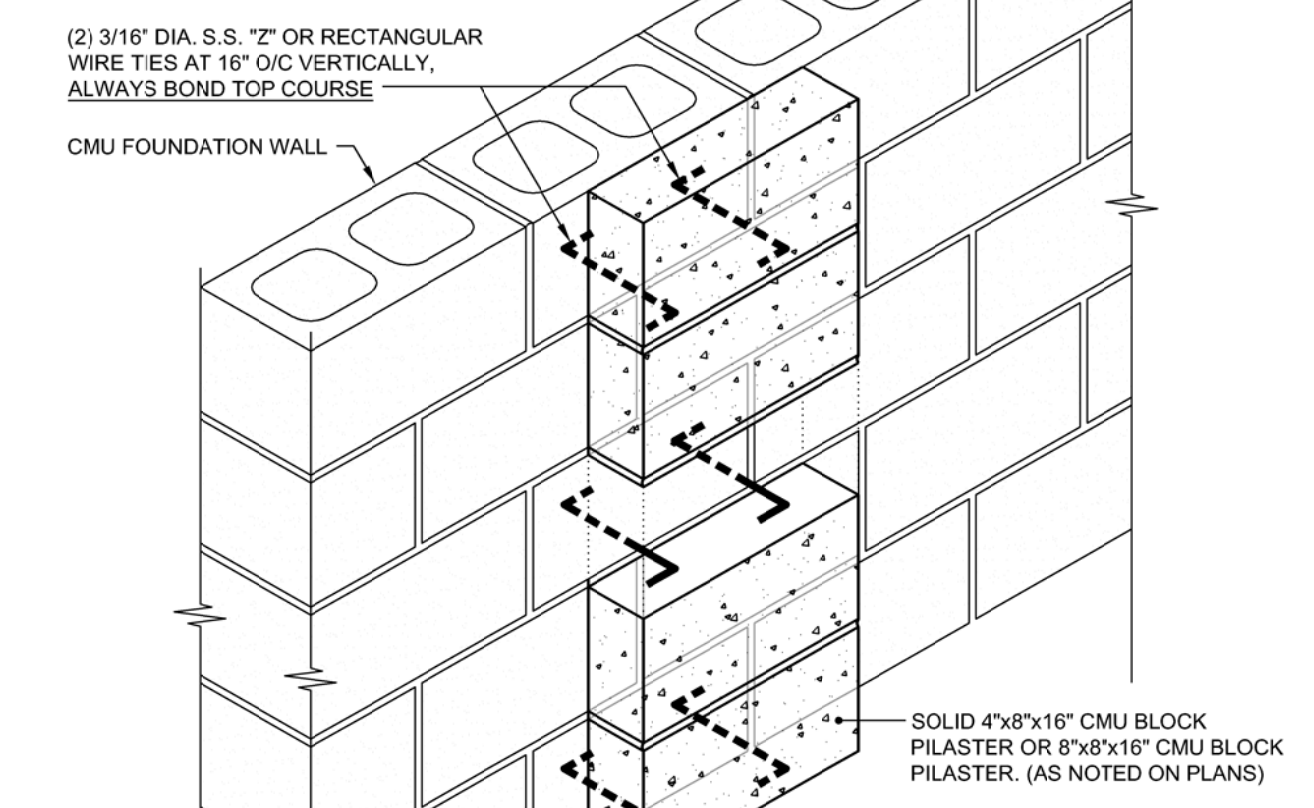
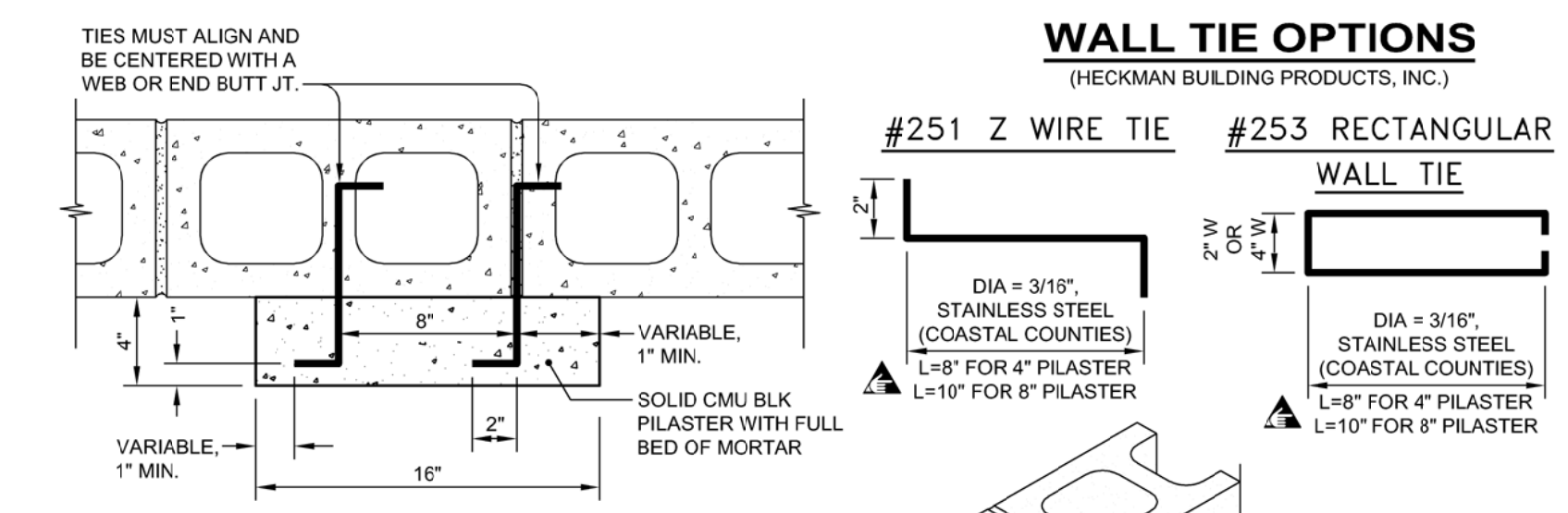
**S-10 WEEP HOLES AT BASE OF PERIMETER CMU FOUNDATION WALLS**  
 NOT TO SCALE DATE: 4-25-14  
 Details Developed By APPIAN Consulting Engineers



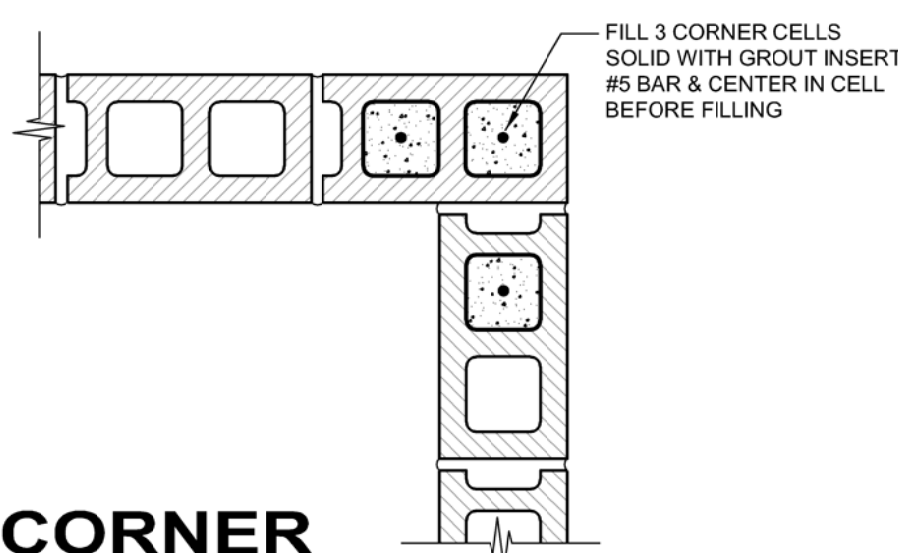
**THE FLOOR SHALL BE ELEVATED TO THE GREATER OF THE FOLLOWING AS APPLICABLE:**

- 1. Floor Elevation:**  
Hyde County requires that the bottom of the floor joists shall be elevated to the FIRM BFE + 3 feet. However, in mainland Hyde County in the AE zones, the RFPE is the base flood elevation as designated on the effective FIRM plus 3 feet of freeboard OR an elevation to above 7.5 feet NAVD 1988, whichever is greater. On the island of Ocracoke, the RFPE is 7.5 feet NAVD 1988 for all zones for residential buildings and the RFPE is 7.5 feet NAVD 1988 for all zones with non-residential buildings. This requirement exceeds the NC Residential Building Code (R322.2 [including A zones] [not subject to high velocity wave action]) which requires a minimum of the FIRM BFE + 1 foot (or 3 feet above highest adjacent grade if a depth number is not specified).
- 2. Mechanical Code:**  
FIRM BFE + 1 foot between the bottom of ducts or mechanical equipment and the FIRM BFE. The intent is to protect the ductwork from damage and water infiltration that could lead to mold and an unsafe condition for human occupants. (Reference: NC Residential Building Code R322.1.6 Protection of Mechanical and Electrical Systems [A & V Zones])

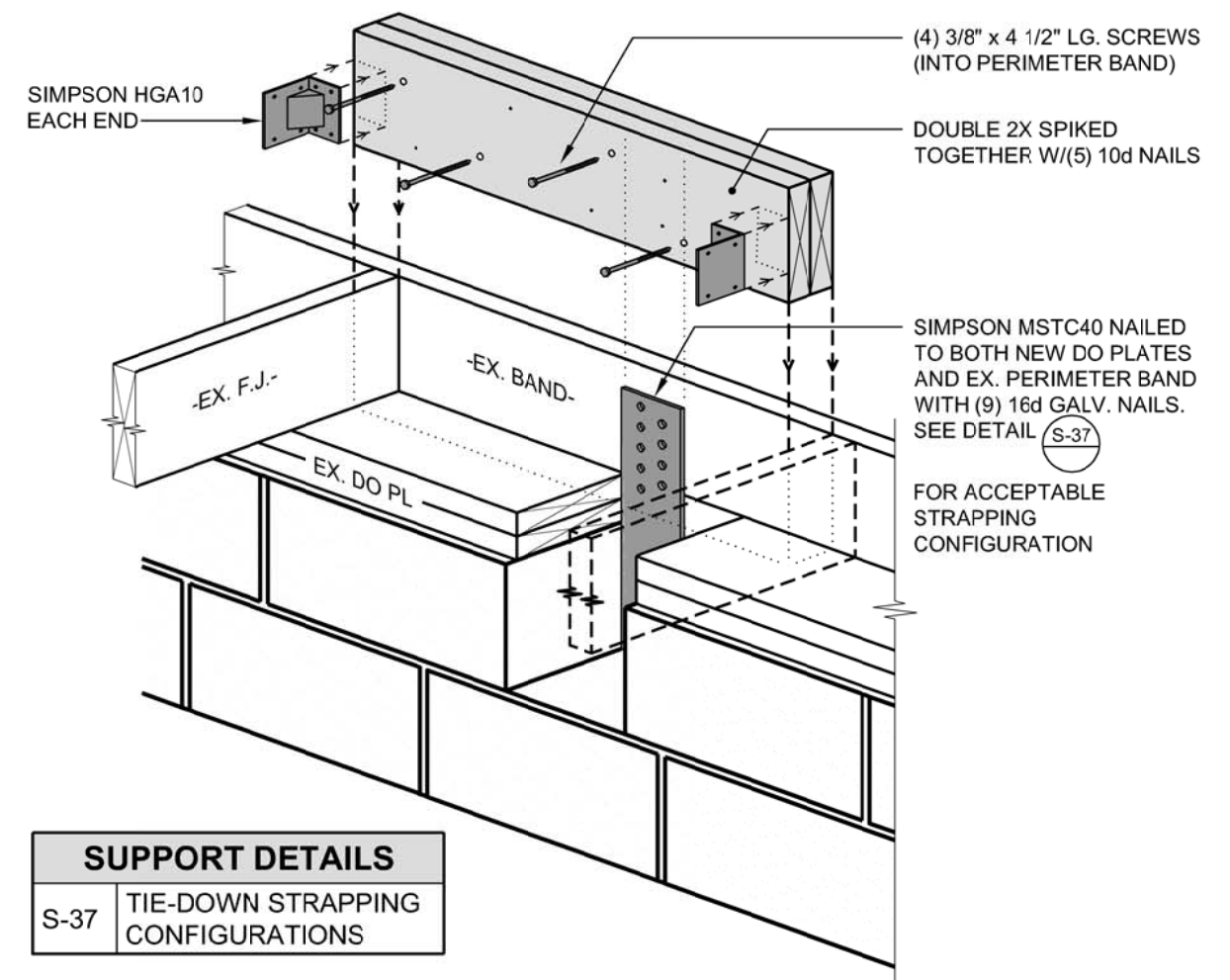
**S-12 ELEVATION DETAIL**  
 NOT TO SCALE DATE: 7-31-18  
 Details Developed By APPIAN Consulting Engineers  
 (REVISED FOR HYDE COUNTY)



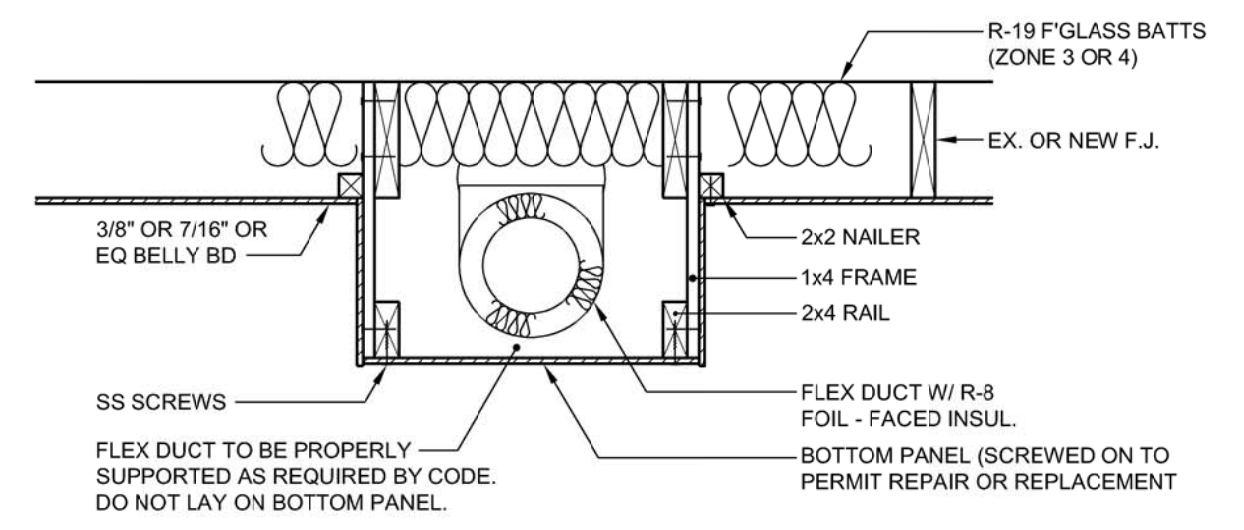
**S-20 BONDED PILASTER**  
 NOT TO SCALE DATE: 6-22-15  
 Details Developed By APPIAN Consulting Engineers



**S-11 CORNER REINFORCEMENT DETAIL**  
 NOT TO SCALE DATE: 7-31-18  
 Details Developed By APPIAN Consulting Engineers

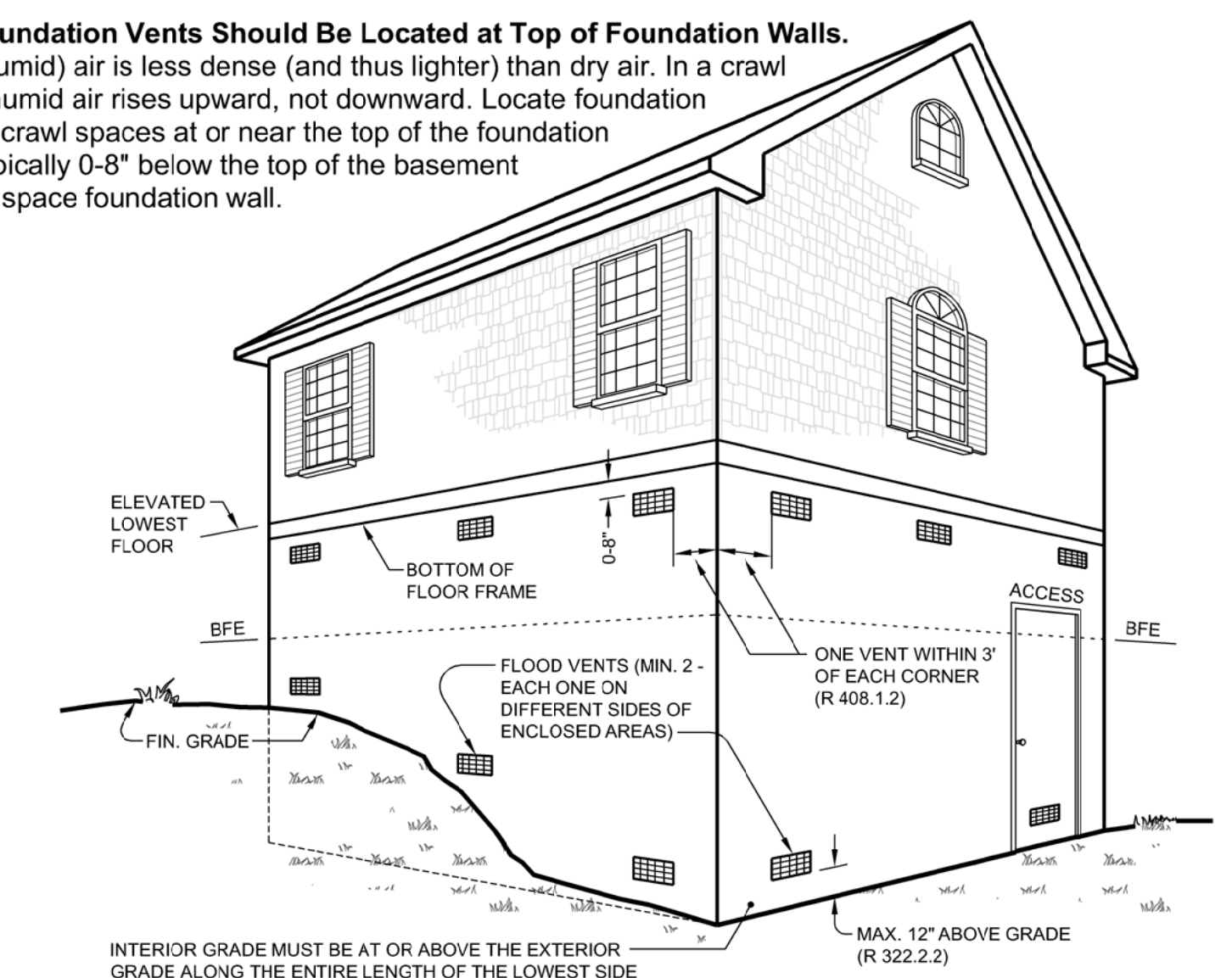


**S-17 SINGLE BAND ATTACHMENT TO CMU FOUNDATION**  
 NOT TO SCALE DATE: 7-31-18  
 (WHEN ORDERED BY ENGINEER)  
 Details Developed By APPIAN Consulting Engineers



**S-18 DETAIL SHOWING COWLING FOR EXPOSED FLEX-DUCT**  
 NOT TO SCALE DATE: 2-29-16  
 (WHEN ORDERED BY ENGINEER)  
 Details Developed By APPIAN Consulting Engineers

**Why Foundation Vents Should Be Located at Top of Foundation Walls.**  
 Moist (humid) air is less dense (and thus lighter) than dry air. In a crawl space, humid air rises upward, not downward. Locate foundation vents in crawl spaces at or near the top of the foundation wall - typically 0-8" below the top of the basement or crawl space foundation wall.



- FLOOD VENT NOTES:**
- Install flood vents (made by Crawl Space Door Systems, Inc.) sized to conform to 1 sq. inch of net opening per sq. foot of enclosed crawl space area.
  - The openings should be installed on at least two sides of each enclosed area to decrease the chances that all openings could be blocked with floating debris and to allow for more even filling by floodwater and draining of the enclosed area. Openings should be reasonably distributed around the perimeter of the enclosed area unless there is clear justification (approved by the project Engineer) for putting all openings on just one or two sides (such as in townhouses or buildings set into sloping sites). For spaces such as porches enclosed on 3 sides by a crawl space (because porch crawl spaces are not allowed to communicate with the crawl space below heated spaces), each of the two vents must be individually sized for the total enclosed area. [ref. Openings in Foundation Walls and Walls of Enclosures, FEMA Technical Bulletin 1 / 2008, or latest revision]
  - Vent area is computed per ASCE 24 based on a rate of rise and fall of 5 ft/hour. The number or size of the openings may be decreased if data can be supplied to the project Engineer for review and approval indicating the rate of rise and fall for the specific locale is less than 5 feet per hour.
  - Enclosure under buildings in V Zones are not required to have flood vents provided the walls are non-supporting breakaway walls, open lattice or insect screening. However coordinate with building inspector to ensure local jurisdiction is in concurrence with FEMA.
- CRAWL SPACE AIR VENTING NOTES:**
- The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square foot of crawl space ground area except that the total area of ventilation openings may be reduced to 1/1500 of under-floor areas where the ground surface is treated with an approved vapor retarder material in accordance with Section R408.2 and the required openings are placed in such way that the arrangement of openings provides cross-ventilation of the crawl space (Ref R408.1.1).
  - One vent shall be located within 3 feet of each corner of the building crawl space (Ref R408.1.2).

**S-21 FOUNDATION VENT LOCATION**  
 NOT TO SCALE DATE: 4-11-17  
 Details Developed By APPIAN Consulting Engineers

DESIGNER	BOBBY JOYNER
DATE	AUGUST, 2018
SCALE	AS NOTED
NO.	N/A
DATE	
BY	
DATE	
DESCRIPTION	

**Applan**  
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 www.applanengineers.com  
 admin@applanengineers.com

Final Drawings  
 Review Purposes ONLY  
  
 BOBBY L. JOYNER  
 ENGINEER  
 08/06/2023

**STANDARD DETAILS For Hyde County N.C. Flood Mitigation Assistance Grant 5161-004**

22-089  
 D-0000  
 D-2