

ADDRESS : 25 ABACO CT SUBDIV: ATKINS VILLAGE PH 3  
 CONTRACTOR : ROYAL OAKS BUILDING GROUP LLC PHONE : (919) 233-3886  
 OWNER : ROYAL OAKS BUILDING GROUP PHONE :  
 PARCEL : 04-0664- - -0020- -43-  
 APPL NUMBER: 17-50040980 CP NEW RESIDENTIAL (SFD)  
 DIRECTIONS : T/S: 03/21/2017 08:39 AM JBROCK ----  
 ATKINS VILLAGE #41  
 premise #76040985

STRUCTURE: 000 000 45X67 3BDR CRAWL W/ GARAGE & DECK  
 FLOOD ZONE : FLOOD ZONE X  
 # BEDROOMS : 3000000.00 PROPOSED USE : SFD  
 SEPTIC - EXISTING? : NEW TANK WATER SUPPLY : COUNTY

PERMIT: CPSF 00 CP \* SFD

TYP/SQ	REQUESTED COMPLETED	INSP RESULT	DESCRIPTION RESULTS/COMMENTS
A814 01	5/02/17 5/02/17	SB AP	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 002966356 25 ABACO CT FUQUAY VARINA 28326 T/S: 05/02/2017 09:22 AM SBENNETT -----
E207 01	5/02/17 5/02/17	BS AP	R*ELEC TEMP SERVICE POLE TIME: 17:00 VRU #: 002966364 T/S: 05/01/2017 10:52 AM JBROCK ----- t-pole only T/S: May 02, 2017 10:49 AM BSUTTON -----
B101 01	5/19/17 <i>5-19-17</i>	TI <i>APPS</i>	R*BLDG FOOTING / TEMP SVC POLE TIME: 17:00 VRU #: 002974475 T/S: 05/18/2017 08:39 AM DJOHNSON ----- ENGINEER LETTER SHOULD BE ONSITE.
B103 01	5/19/17	TI	R*BLDG FOUND & TEMP SVC POLE TIME: 17:00 VRU #: 002974483 T/S: 05/18/2017 08:39 AM DJOHNSON -----
B113 01	5/19/17	TI	R*BLDG WATER/DAMP PROOFING TIME: 17:00 VRU #: 002974491 T/S: 05/18/2017 08:40 AM DJOHNSON -----

COMMENTS AND NOTES

May 18, 2017

Mr. Rich Sherman  
Royal Oaks Homes  
[rsherman@royaloakshomes.com](mailto:rsherman@royaloakshomes.com)**Report of Observations  
Atkins Village North, Lot 41  
Fuquay Varina, North Carolina  
Our Project Number 121-15-78801**

Gentlemen:

As requested, a representative of TerraTech Engineers, Inc. was present at the above referenced site on May 10, 2017 to perform testing on the crawl space footing excavations for the proposed residential home located in the area of Lot #41. The purpose of our testing was to verify that the design soil bearing pressure is available for the concrete foundations. We understand that an allowable soil bearing pressure of 2,000 pounds per square foot (psf) is required. Our services did not include surveying. Locations are based on the excavations performed by others.

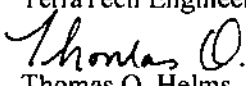
Our field examinations consisted of visual observations, dynamic cone penetrometer testing in accordance with ASTM STP-399, and hand rod probing at selected locations. Dynamic cone penetrometer testing was performed at select locations and to a maximum depth of 3 feet below the over-excavated foundation bearing elevation. Our scope did not include mechanically drilled soil test borings to evaluate deeper subsurface soil conditions that could affect foundation support. Such services can be provided, if desired.

During our recent site visit, the footings had been over-excavated approximately 2 to 3 feet below the foundation bearing elevation and standing water was present in the footing excavations. In order to lower the elevation of the groundwater, we recommended that a temporary well point with a sump that discharges the water down gradient be installed just outside the rear portion of the footing excavation. The elevation of the sump should be at least 2 feet below the bottom elevation of the over-excavated footing depth. After the groundwater elevation was lowered and the footing excavations were mucked out, we recommended that the footing excavations be backfilled with consolidated #57 washed stone wrapped in geotextile fabric to re-establish the foundation bearing elevation.

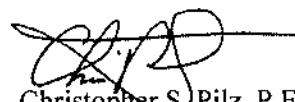
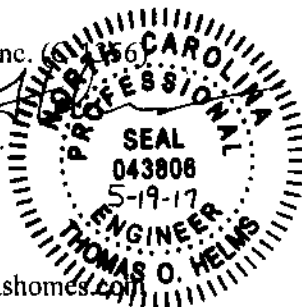
After the recommended remedial measures were performed and prior to placement of geotextile fabric and #57 washed stone, the results of the footing examinations indicated that an allowable bearing capacity of 2,000 pounds per square foot (psf) was available at the locations and depths tested at the time of our investigation. Additionally, the foundation dimension met the plan minimum requirements.

Exposure to the environment, especially rainfall, may weaken the soils beneath the foundation bearing surface, if they are exposed for extended periods of time prior to concrete placement. If the over-excavated soils beneath the foundation bearing surface become softened due to exposure, the soft soils should be compacted or removed and replaced prior to placement of geotextile fabric, washed stone, and concrete.

If you have any questions concerning this information, please do not hesitate to call.

Sincerely,  
TerraTech Engineers, Inc.  
Thomas O. Helms, P.E.  
Project Engineer

TOH/sk

cc: [rsargent@royaloakshomes.com](mailto:rsargent@royaloakshomes.com)Christopher S. Pilz, P.E.  
Principal Geotechnical Engineer

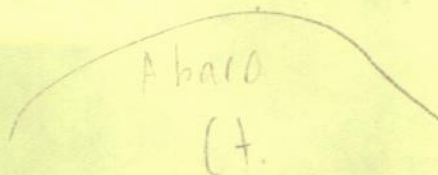
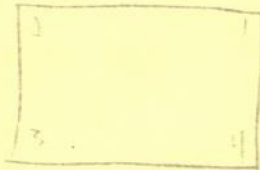
## FOOTING EVALUATION SUMMARY

Project: Atkins Village Project Number: 78801  
Builder: Royal Oaks Date: 5-10-17  
Technician: Will Oakes Project Manager: Chris - P. 12  
Physical Address: 25 Abaco Ct. Lot #: 41  
Foundation: Slab on grade / Crawl Space Bearing Capacity: 2,000 PSF

Observation Notes: Initial probing revealed muddy material which 8 and 11  
cleaned out footings were dug 4-5 feet and filled with  
washed stone to two feet below subgrade with fabric  
below wrapped around stone, per project manager's request.  
All density tests met project specifications. All footing  
dimensions matched plans. Footings were approximately 16 inches  
wide and 2 feet deep. All piers were 30" x 30."

- Does NOT meet requirement, please call TerraTech office for re-inspection.  
 Meets bearing capacity requirement at locations and elevations tested.

Drawn Diagram:



\*We note that exposure to the environment, especially rainfall, may weaken the soils at the foundation bearing elevation. Any soft soils should be removed prior to concrete placement. All evaluations are subject to review by a TerraTech project engineer.