Wise Engineering
3915 Old Fairground Rd.
Angier, NC 27501
(919)894-2203

November 24, 2019

Ralphael Locklear
Southeastern General Contractors

Subject: 12 Broadlake Ln., Spring Lake, NC 28390

Mr. Locklear,

I have reviewed the home being constructed at the subject address. Specifically, I reviewed the brick lintels to be used to support the brick veneer.

Based on my observations and analysis, the lintels used are adequate to support the brick as installed. The lintels specified for the home are as follows:

1. For spans 4'-0" and less – use L3.5"x3.5:x1/4" (steel angle)
2. For spans 4'-0" to 8'-0" – use L5"x3.5"x5/16" (steel angle)

The above specified steel lintels are adequate to support the brick as constructed without bolting to the headers. If you need additional information or have other questions, please let us know.

Sincerely,

Randy K. Wise, PE

NORTH CAROLINA PROFESSIONAL SEAL 19860 ENGINEER RANDY K. WISE 11/24/2019

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

FIELD REPORT

Project No.	33:4909
Report No.	2
Day & Date	Wednesday 10/23/2019
Weather	70°/ Sunny
On-Site Time	0.75
Lab Time	0.00
Travel Time*	0.00
Total	0.75
Re Obs.Time	0.00

Project **Broadlake Lot**

Location **Spring Lake, NC**

Client **South Eastern General Contractors - Austin Perkins**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival Departure
01:30P 02:15P

Chargeable Items **1 - Nuclear Gauge Rental**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on site, as requested, to observe and evaluate the bearing capacity of soils via hand auger/dcp method for testing ground compaction by a leaning pier in the crawl space of an existing home.

A hand auger was used to advance the boreholes to different depths noted on the boring logs. Dynamic Cone Penetrometer (DCP) test were performed in the hand auger boreholes by a 1.5 inch diameter cone driven into the soil by a 15 pound ring weight with a free fall of 20 inches. The number of blows required to drive the cone into the soil a distance of 1.75 inches is termed the DCP Value and is indicated for each test on the hand auger. Please see the attached sketch and data sheet for details.

A total of 1 hand auger/DCP evaluation(s) were performed to a depth of approximately 3 feet below the current sub grade elevation. Soil encountered was Black top soil, Black clay sand, Brown clay Sand. DCP blow counts ranged from 7 to 25+ blows per increment. It is to the opinion of ECS that the materials in place at test locations in the foundation did appear to be suitable to support a design bearing capacity 2000 psf.

Please see sketch for DCP evaluation locations.

ECS will return, as requested, to perform additional services.

By **Thomas Allen Wilmot, — Field Technician** 1800

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

LETTER OF TRANSMITTAL

October 24, 2019

South Eastern General Contractors
3059 N. Main Street
Suite 16
Hope Mills, NC 28348

ATTN: Austin Perkins

RE: **Broadlake Lot**

ECS Job # **33:4909**

Permits:

Location: **12 Broadlake Ln**
Spring Lake, NC

We are enclosing: X Field Reports X For your use X As requested

ENCL:

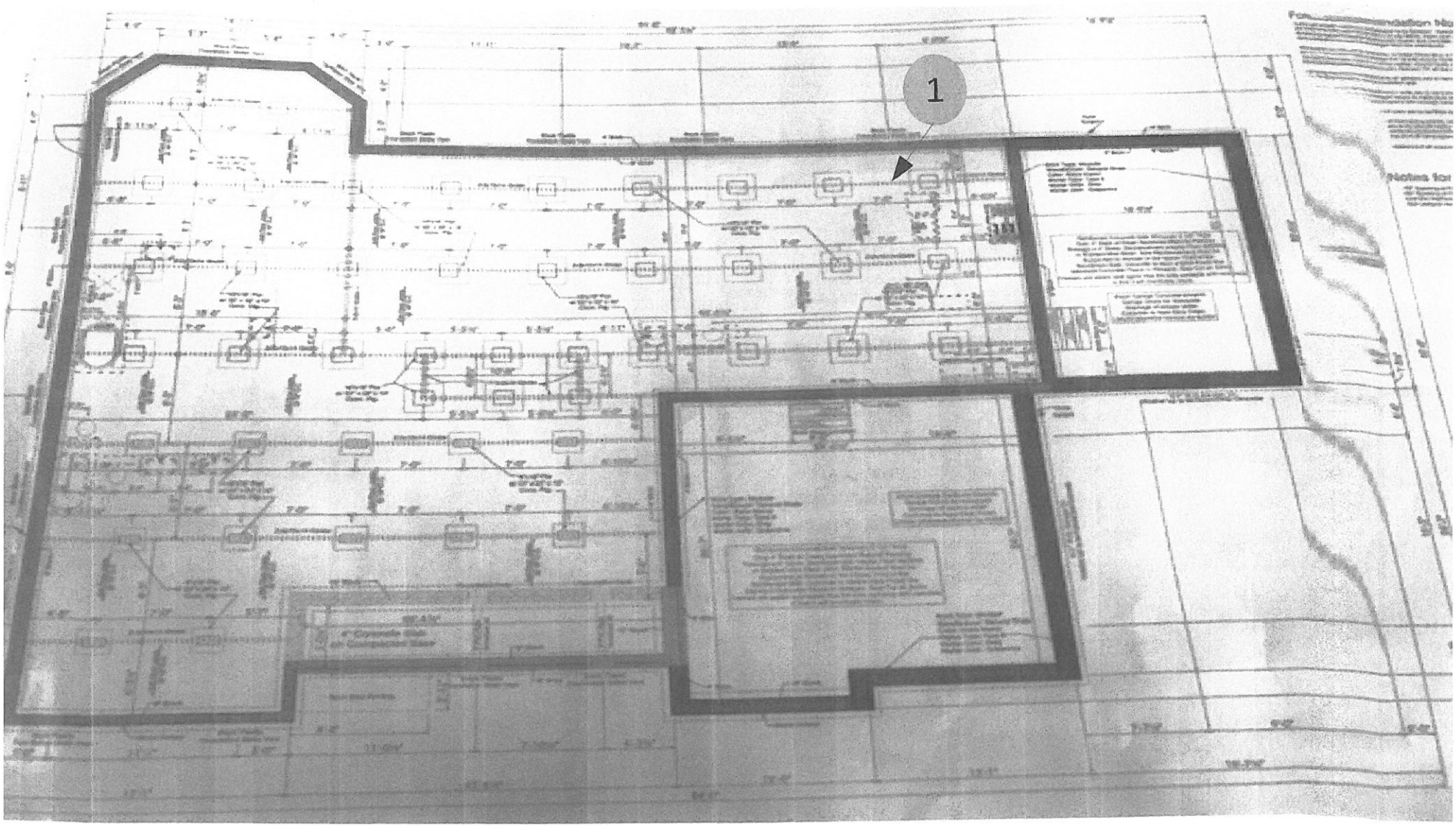
Field Report # 2 10/23/2019

Dennis D. Lowery, P.E.
Project Engineer

Donny Johnson
Field Services Manager

Disclaimer

1. This report (and any attachments) shall not be reproduced except in full without prior written approval of ECS.
2. The information in this report relates only to the activities performed on the report date.
3. Where appropriate, this report includes statements as to compliance with applicable project drawings and specifications for the activities performed on this report date.
4. Incomplete or non-conforming work will be recorded for future resolution.
5. The results of samples and/or specimens obtained or prepared for subsequent laboratory testing will be presented in separate reports/documents.



'homas Wilmot)ct 23th, 2019 2 Broadlake Ln roj: 4909 VO#: 53905	**Key (NTS)** DCPs test location #	ECS	NORTH

Report of Spread Footing - Foundation Observations

Project: Broadlake Lot

Location: 12 Broadlake Ln
Spring Lake - Cumberland - NC - 28390

Contractor: None Listed

Project No. 4909

Day/Date: 10/23/2019

Footing Number	Location	Size (W x H x L)		Footing Bottom Elevation			Description of Subgrade Material	Required Blow Counts	Design Bearing Pressure
		Design	Actual	Design	Depth of Undercut (in)			# of Blows / increment	
1	North east of building	x x	x x	N/A	-1 .		Black Top Soil	6 6,8,7	2000
1	North east of building	x x	x x	N/A	-2 .		Black Clay Sand	6 5,5,5	2000
1	North east of building	x x	x x	N/A	-3 .		Brown Clay Sand	6 5,5,8	2000

By: Thomas Allen Wilmot

ECS Southeast, LLP

WO:53905

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

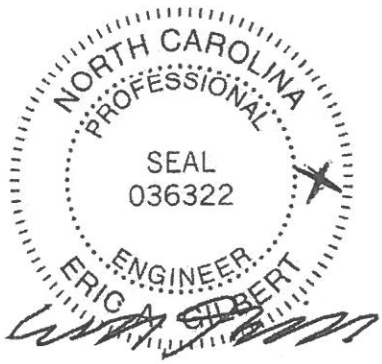
Re: J0419-1746
CORPUZ RESIDENCE

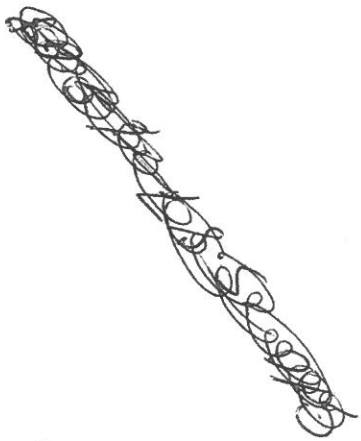
The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: E13616790 thru E13616885

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844





October 9,2019

Gilbert, Eric

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

lvl over header.JPG
Scott Guy
9/30/2019

notched girder.JPG
Scott Guy
9/30/2019

shimmed girders at piers.J...
Scott Guy
9/30/2019

SGC-12 Broadlake Lane.pdf
Donna Johnson
8/19/2019

meter receipt
Kimberly Gibbons
8/14/2019

engine letter footing.JPG

8/1/2019

Permit Form
Jennifer Brock
7/16/2019

lien agent
Kimberly Gibbons
7/12/2019

Corpuz_Plan_for_Permits_...
Donna Johnson
6/7/2019

bldg app
Kimberly Gibbons
6/7/2019

land use site plan
Kimberly Gibbons
6/5/2019

Inspection Results Letter
Donna Johnson
11/13/2019

WISE ENGINEERING
3915 Old Fairground Rd.
Angier, NC 27501
(919)894-2203

July 31, 2019

Ralphael Locklear
Southeastern General Contractors

Subject: 12 Broadlake Ln., Spring Lake, NC 28390

Mr. Locklear,

I have reviewed the foundation preparation for the home being constructed at the subject address. Specifically, I reviewed the excavation depth based on the highly organic soils encountered within the top 12 inches of the surface.

Based on my observations and analysis, the foundation footings as well as the footings for the interior piers should be over-excavated down to firm soil. On the higher areas of the lot, this equates to approximately 2 feet deep. Within the middle section and lower portions of the lot, the footing areas should be excavated down to approximately 3 feet deep. Once excavated, I recommend filling the excavations with approximately 12 inches of stone (#57 or #78M). The footings may be poured directly on the added stone.

If you need additional information or have other questions, please let us know.

Sincerely,

Randy K. Wise, PE

NORTH CAROLINA PROFESSIONAL SEAL 19860 ENGINEER RANDY K. WISE
7/31/2019

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

LETTER OF TRANSMITTAL

August 1, 2019

South Eastern General Contractors
3059 N. Main Street
Suite 16
Hope Mills, NC 28348

ATTN: Austin Perkins

RE: **Broadlake Lot**
ECS Job # **33:4909**

Permits:
Location: **12 Broadlake Ln**
Spring Lake, NC

We are enclosing: **X** Field Reports **X** For your use **X** As requested

ENCL:

Field Report # 1 07/31/2019

Dennis D Lowery, P.E.
Project Engineer

Dave Vosler
Construction Materials Project Manager

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

FIELD REPORT

Project No.	**33:4909**
Report No.	**1**
Day & Date	**Wednesday 07/31/2019**
Weather	**90°/ Sunny**
On-Site Time	**0.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**0.50**
Re Obs.Time	**0.00**

Project **Broadlake Lot**

Location **Spring Lake, NC**

Client **South Eastern General Contractors - Austin Perkins**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival **02:45P** Departure **03:15P**

Chargeable Items

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on site, as requested, to observe and evaluate the bearing capacity of soils via hand auger/dcp method for foundations. Footings were not dug prior to time to conduct DCP's. Contractor was informed to call office and reschedule.

ECS will return, as requested, to perform additional services.

By **Thomas Allen Wilmot, — Field Technician** 1800

1085459

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

LETTER OF TRANSMITTAL

October 24, 2019

South Eastern General Contractors
3059 N. Main Street
Suite 16
Hope Mills, NC 28348

ATTN: Austin Perkins

RE: **Broadlake Lot**

ECS Job # **33:4909**

Permits:

Location: **12 Broadlake Ln**
Spring Lake, NC

We are enclosing: **X** Field Reports **X** For your use **X** As requested

ENCL:

Field Report # 2 10/23/2019

Dennis D. Lowery, P.E.
Project Engineer

Donny Johnson
Field Services Manager

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

FIELD REPORT

Project No.	**33:4909**
Report No.	**2**
Day & Date	**Wednesday 10/23/2019**
Weather	**70°/ Sunny**
On-Site Time	**0.75**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**0.75**
Re Obs.Time	**0.00**

Project **Broadlake Lot**

Location **Spring Lake, NC**

Client **South Eastern General Contractors - Austin Perkins**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival **01:30P** Departure **02:15P**

Chargeable Items **1 - Nuclear Gauge Rental**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on site, as requested, to observe and evaluate the bearing capacity of soils via hand auger/dcp method for testing ground compaction by a leaning pier in the crawl space of an existing home.

A hand auger was used to advance the boreholes to different depths noted on the boring logs. Dynamic Cone Penetrometer (DCP) test were performed in the hand auger boreholes by a 1.5 inch diameter cone driven into the soil by a 15 pound ring weight with a free fall of 20 inches. The number of blows required to drive the cone into the soil a distance of 1.75 inches is termed the DCP Value and is indicated for each test on the hand auger. Please see the attached sketch and data sheet for details.

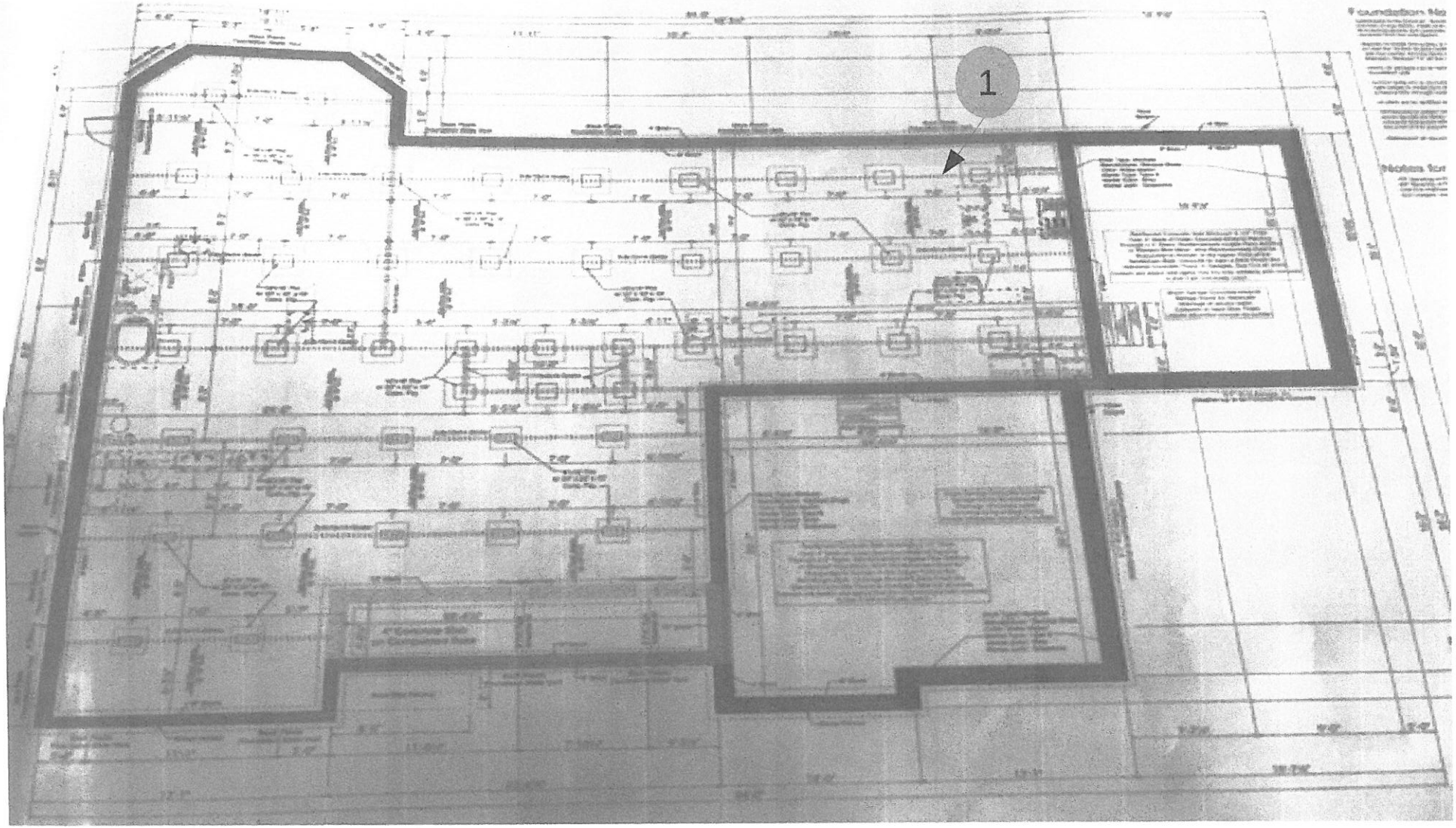
A total of 1 hand auger/DCP evaluation(s) were performed to a depth of approximately 3 feet below the current sub grade elevation. Soil encountered was Black top soil, Black clay sand, Brown clay Sand. DCP blow counts ranged from 7 to 25+ blows per increment. It is to the opinion of ECS that the materials in place at test locations in the foundation did appear to be suitable to support a design bearing capacity 2000 psf.

Please see sketch for DCP evaluation locations.

ECS will return, as requested, to perform additional services.

By **Thomas Allen Wilmot, — Field Technician** 1800

1086715



Thomas Wilmot Oct 23th, 2019 12 Broadlake Ln Proj: 4909 WO#: 53905	**Key (NTS)** DCPs test location (#)	ECS	NORTH ↑

Report of Spread Footing - Foundation Observations

Project: Broadlake Lot

Project No. 4909

Location: 12 Broadlake Ln
Spring Lake - Cumberland - NC - 28390

Day/Date: 10/23/2019

Contractor: None Listed

Footing Number	Location	Size (W x H x L)		Footing Bottom Elevation			Description of Subgrade Material	Required Blow Counts	Design Bearing Pressure
		Design	Actual	Design	Depth of Undercut (in)			# of Blows / increment	
1	North east of building	x x	x x	N/A	-1 .		Black Top Soil	6 6,8,7	2000
1	North east of building	x x	x x	N/A	-2 .		Black Clay Sand	6 5,5,5	2000
1	North east of building	x x	x x	N/A	-3 .		Brown Clay Sand	6 5,5,8	2000

By: Thomas Allen Wilmot

ECS Southeast, LLP

WO:53905

ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

LETTER OF TRANSMITTAL

December 2, 2019

South Eastern General Contractors
3059 N. Main Street
Suite 16
Hope Mills, NC 28348

ATTN: Austin Perkins

RE: **Broadlake Lot**
ECS Job # **33:4909**

Permits:
Location: **12 Broadlake Ln**
Spring Lake, NC

We are enclosing: X Field Reports X For your use X As requested

ENCL:

Field Report # 3 11/27/2019

NORTH CAROLINA PROFESSIONAL 043840 ENGINEER DENNIS D. LOWERY

Dennis D. Lowery, P.E.
Project Engineer

DEC 2 2019

Donny Johnson
Field Services Manager

Disclaimer

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4. *Incomplete or non-conforming work will be recorded for future resolution.*
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ECS Southeast, LLP
6151 Raeford Road
Suite A
Fayetteville, NC 28304
(910) 401-3288 [Phone]
(910) 323-0539 [Fax]

FIELD REPORT

Project No.	**33:4909**
Report No.	**3**
Day & Date	**Wednesday 11/27/2019**
Weather	**55°/ Cloudy**
On-Site Time	**1.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**1.00**
Re Obs.Time	**0.00**

Project **Broadlake Lot**

Location **Spring Lake, NC**

Client **South Eastern General Contractors - Austin Perkins**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival **12:45P** Departure **01:45P**

Chargeable Items **1 - Nuclear Gauge Rental**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on site, as requested, to observe:

1: The compaction of soils for Porch. Please see the attachment for test results.

Utilizing the unspecified test method to check the compaction of soils; test results indicated that the compacted material, at the areas and elevations tested, met or exceeded 95% of the maximum dry density as obtained in our laboratory using the standard proctor method.

By **Gerald John Bowling, — Field Technician** 1800

1087021

ECS SOUTHEAST, LLP

Field Compaction Summary, ASTM Nuclear

Project No: 4909 Project Name: Broadlake Lot

Date: 11/27/2019

Client: South Eastern General Contractors

Contractor: None Listed

Technician: Gerald John Bowling

Test Method ASTM Nuclear			
Nuclear Gauge No. 1029			
Make		Density Std	2578
Model		Moisture Std	760
Ser. No.			

Sample No.	Description	Proctor Method	Uncorrected Max. Density	Uncorrected Opt. MC
New	orange clayey sand	New	119.70	11.50

Test No.	Lot No.	Test Mode	Probe Depth (in.)	Station / Location	Lift / Elev	Sample No.	% Oversize	Corrected Maximum Dry Density (pcf)	Corrected Optimum Moisture Content (%)	Wet Density (pcf)	Dry Density (pcf)	Moisture Content (%)	Percent Comp. (%)	P / F	Comments
1		DT	6	LOC-1 Porch	s-grade	New	0.00	119.70	11.50	129.0	114.3	12.9	95.5	F	
2		DT	6	LOC-2 Porch	s-grade	New	0.00	119.70	11.50	128.5	113.9	12.8	95.2	F	

Test Mode: DT = Direct Transmission BS = Back Scatter

WO:54141