REQUEST FOR BOARD ACTION

ITEM NO. _14_

DATE OF MEETING: January 4, 2016

REQUESTED BY: Kyle M. Breuer, Director, Planning and Community Development

SHORT TITLE: Approval of Professional Service Contracts for FY 14 FMA Grant Project

BACKGROUND: As part of the FY 14 Flood Mitigation Assistance (FMA) grant project, it is necessary to hire various professional service providers to execute elements of the project including engineering, surveying, asbestos inspection, legal, and appraisal services. As part of Holland Consulting Planners, Inc. management contract, they have solicited proposals from qualified firms, attempting to keep as much work local as possible and have provided recommendations based on responses received. Staff has reviewed the proposals submitted and is in agreement with their recommendations as follows:

Surveying:	Progressive Land Development Consultants
Engineering:	Appian Engineers
Asbestos Inspections:	Atlantic Shores Environmental Services
Legal:	Sherman & Rogers
Appraisal:	C. Nathan King & Associates

A copy of the Request for Proposals as well as all proposals submitted is attached to this item for the Board's review.

SPECIFIC ACTION REQUESTED: To consider approval of the selection of the service contracts with the identified providers as outlined above.

HOLLAND CONSULTING PLANNERS

Memorandum

To: Kyle Breuer, Designated Agent
Pender County FY14 Flood Mitigation Assistance Program

From: Reed Whitesell, AICP
Holland Consulting Planners, Inc.

Re: Recommendations for FMA Professional Services Contracts

Date: December 18, 2015

Background

Pender County has received Flood Mitigation Assistance (FMA) funds to elevate six residential structures and acquire five additional residential structures in Pender County. HCP, Inc., is currently under contract to provide management services for the project. In November, 2015, we solicited proposals from a number of firms located in Wilmington and Pender County to provide the required engineering, surveying, asbestos inspection, legal, and appraisal services required to implement the program. I have personally reviewed all proposals received and am providing you with the following recommendations for contract awards by the Board of Commissioners on January 4, 2016.

Recommendations

Surveying Services (required for elevation certificates and boundary surveys)

Proposals were received from:

Progressive Land Development Consultants – Wilmington
Cape Fear Surveying – Wilmington
Robert H. Goslee & Associates – Wilmington

All three firms are well-qualified, and all three firms have extensive recent experience in Pender County. I recommend **Progressive Land Development Consultants** on the basis of combined cost, background, and responsiveness. Their hourly rate for a 3-man survey crew is only $95.00. This firm also provided a very specific response concerning estimated cost of elevation certificates and boundary surveys, and indicated a very efficient response time.

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Wilmington, North Carolina 28403
Phone 910.392.0060 • Fax 910.392.2839

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Washington, North Carolina 27889
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Engineering Services (required for structural evaluation and foundation design for elevations)

Proposals were received from:

Appian Consulting Engineers – Rocky Mount
Weston Lyall – Holly Ridge

I reviewed both proposals and recommend that the Board award the contract for FY14 FMA structural engineering services to **Appian Consulting Engineers, P.A.**, for the following reasons:

1. Both firms are well-qualified and have specific recent experience in the evaluation of residential structures and elevation/retrofitting design on FEMA-funded elevation projects. Both firms have worked previously for our other clients and have provided satisfactory and cost-effective service. Appian has much more recent experience in elevation feasibility and design, and has also worked closely with our firm on the recently completed Beaufort County and Hyde County HMGP Irene elevation projects. HCP is also working as a subcontractor for Appian on the recently-funded Pamlico County HMGP Irene elevation project. As your FMA management consultant, I feel more confident in Appian's ability to respond to concerns of the county and HCP on an immediate basis, to provide plans and specifications with a minimum of construction change orders, and to interpret both local and state building code requirements.

2. The hourly rates of Weston Lyall's principal are lower than Appian's principal; however, the rates for both firms' support personnel are consistent and very reasonable. Also, Appian's involvement in the nearby Carolina Beach FY13-14 Project will allow them to provide very efficient and cost-effective service.

Asbestos Inspection Services (required due to demolition activity)

Proposals were received from:

Keenan Construction & Consulting – Wilmington
ECS Carolinas, LLP -- Wilmington
Atlantic Shores Environmental Services -- Wilmington

All three firms are local, responsive, and well-qualified. I recommend **Atlantic Shores Environmental Services** on the basis of combined cost, background, and responsiveness. The firm is also a women's owned business (WBE), and awards to WBE's or MBE's are encouraged in federally-funded programs. Their per house fee is significantly lower than the fee proposed by ECS Carolinas and commensurate with the fee submitted by Keenan.

Legal Services (required for title opinions and closings for acquisition activity)

Proposals were received from:

Moore & Kenan -- Burgaw
Sherman & Rogers -- Burgaw

Both firms are local, responsive, and well-qualified. I recommend **Sherman & Rogers** due to the fact that their estimated cost per title opinion is $250.00, and Moore & Keenan indicated an estimate of $350.00 per unit for that task. The hourly rate of both firms for general legal advice is $250.00.

Appraisal Services (required to establish just compensation for acquisition activity)

Only one proposal was received, from **C. Nathan King & Associates.** The procurement standards outlined in the FMA regulations (44CFR13.36) allow the county to award contracts on an non-competitive basis if a formal competitive procurement process is followed and only one proposal is received, assuming that costs are reasonable and the selected firm is well-qualified. C. Nathan King & Associates is located in Surf City, where four of the five proposed acquisition units are also located, and they indicated a fee of $425.00 per appraisal report, which is cost-effective based on my experience in managing these programs since 1997.

Required Action

Approve execution of standard FMA professional services contracts with the recommended firms by the FMA Designated Agent.

HOLLAND CONSULTING PLANNERS

25 Years of Service
1987 - 2012

November 16, 2015

Pender County FY2014 Flood Mitigation Assistance Program
Request for Real Estate Appraisal Services

Pender County is currently involved in the administration of a FY2014 Flood Mitigation Assistance Program funded by the North Carolina Division of Emergency Management (NCDEM). During the course of the project, the county will require appraisal services from an NC Certified Real Estate Appraiser. Required services will include preparation of Uniform Residential Appraisal Reports and/or review appraisals as required by 49CFR24 for the acquisition of real property with federal funds. Five (5) parcels will require appraisal reports. Four units are located on Topsail Island and one is located in Maple Hill.

If your firm is interested in providing services to the Pender County for this program, please respond by **5:00pm, December 2, 2015**. The county requires a letter of interest, a brief description of experience in the Pender County area, a listing of general experience in the area of community development, and a cost per parcel for 1) Appraisal Reports and 2) Review Appraisal Reports. Since the county will require a quick turnaround for appraisals, please also indicate your firm's average response time for preparation of individual appraisal reports. The county will consider efficiency and experience as well as cost in the selection process.

Please submit your response in writing to **Mr. Reed Whitesell, Community Development Manager, Holland Consulting Planners, Inc., 3329 Wrightsville Avenue, Suite F, Wilmington, NC 28403**. Please also indicate on the envelope "**Appraisal Services Proposal Enclosed**." If you have any questions concerning the scope of work, do not hesitate to contact me at (910)392-0060.

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HOLLAND CONSULTING PLANNERS

25 Years of Service
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November 16, 2015

Pender County FY2014 Flood Mitigation Assistance (FMA) Elevation Program
Request for Asbestos Inspection Services

Pender County is currently involved in the administration of a Flood Mitigation Assistance (FMA) Elevation Program, funded by the North Carolina Division of Emergency Management (NCDEM). During the course of the project, the County will require services from a North Carolina Licensed Asbestos Inspector. The submitting firm shall provide the local government with an asbestos inspection for approximately eleven (11) residential structures proposed for elevation in various locations in Pender County, North Carolina. The County anticipates that the asbestos inspection work will be completed over three (3) months beginning in January, 2016.

The approved inspector shall perform a site inspection for asbestos in accordance with all rules, policies, and procedures of the North Carolina Department of Health and Human Services (NCDHHS), produce an asbestos inspection report in conformance with 15A NCAC 19C.0601-0607, and provide it to the designated Program Administrator for the County. Inspection for the six (6) units to be elevated will be limited to area under existing floor space only (crawlspace). A full structure inspection will be required for the five (5) units to be acquired.

If your firm is interested in providing asbestos inspection services to Pender County for this program, please respond by **5:00 PM, December 2, 2015.** The County requires a letter of interest including a lump-sum inspection fee for the unit(s) to be inspected and a fixed price per processed sample. Since the County will require a quick turnaround for the inspections, please also indicate your firm's average response time for submission of each completed inspection following a notice to proceed.

Please submit your response in writing to **Mr. Reed Whitesell, FMA Administrator, Holland Consulting Planners, Inc., 3329 Wrightsville Avenue, Suite F, Wilmington, NC 28403.** Please also indicate on the envelope **"Asbestos Inspection Services Proposal."** If you have any questions concerning the scope of work, do not hesitate to contact me at (910) 392-0060.

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PENDER COUNTY

FY2014 FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM

INSTRUCTIONS TO PROPOSERS

CONSULTING ENGINEERING SERVICES

STRUCTURAL ENGINEERING ACTIVITIES

Activity consists of: Elevation and Retrofitting of Approximately Six (6) Residential Structures Located in Pender County, North Carolina.

PROPOSAL INSTRUCTIONS

Proposals must be submitted by 5:00 PM, December 2, 2015.

Submit two (2) copies of proposal to:

Mr. J. Reed Whitesell, FMA Administrator
Holland Consulting Planners, Inc.
3329 Wrightsville Avenue, Suite F
Wilmington, North Carolina 28403

with "Pender County FY2014 FMA Engineering Services Proposal" clearly marked in the lower left corner of the envelope.

SELECTION PROCEDURE FOR CONSULTING ENGINEER

Based upon competitive negotiations, Pender County will select one consulting engineering firm. Proposals will be solicited from all firms who wish to be considered for this project. Proposals submitted by the deadline established in the Instructions to Proposers will be reviewed and evaluated by the County in accordance with the following selection criteria:

1. Firm's experience in coastal residential structural engineering, and specifically in Hazard Mitigation Assistance Elevation and Retrofitting projects;

2. Coastal residential structural engineering and HMGP/FMA project engineering qualifications and competence of key personnel assigned to the project;

3. Capability of the firm to perform the desired services within an acceptable time frame and within financial constraints;

4. Availability of a qualified resident inspector;

5. Evaluation of existing and anticipated additional workload of the firm during project development;

6. Hourly rates of personnel assigned to the project.

Pender County will select the firm (ranked in order of qualifications) best qualified to perform the engineering services detailed in these instructions.

The County will attempt to negotiate a fee with the number one ranked firm. If a mutually satisfactory fee is negotiated by the parties, it will be approved. If efforts to negotiate a fair and reasonable fee are unsuccessful with the number one ranked firm, negotiations will cease with that firm and begin with the second ranked firm. If the County is unable to negotiate a satisfactory agreement with either of the firms, the County will select additional firms in order of their competence and qualifications and continue negotiations until a satisfactory agreement has been reached and approved by Pender County.

CONTENTS OF PROPOSALS

Please provide the following information in the proposal for engineering services:

1. Name of firm

2. Location of offices

3. List of references

4. Coastal residential structural engineering experience of firm, including HMGP/FMA engineering services for Hurricane Fran, Hurricane Isabel, Hurricane Irene, or other storm events/mitigation initiatives.

5. Names and qualifications, including residential structural and HMGP/FMA engineering experience, of all personnel who will work on the project, including resident inspector.

6. Projected availability of design/inspection personnel assigned to the project over the next twelve-month period (from February, 2016 through January, 2017).

7. Hourly rates for personnel to be utilized on the project. **Include a table outlining the percentage of total work to be assigned to each pay classification of project team members**.

SCOPE OF ENGINEER'S SERVICES

The Professional Engineer(s) shall work with the Grant Administrator and the Pender County Building Inspections Department to assist in the implementation and completion of the project. The needed engineering services require that the selected firm provide the following:

- Pre-elevation inspection of the six (6) structures proposed for elevation and preparation of a written statement for the FMA elevation feasibility checklist and Scope of Work indicating any concerns with structural feasibility and briefly outlining any proposed unit-specific design modifications. All six (6) structures are located on Ocean Boulevard in Topsail Beach, NC.

- Development of specific foundation specifications and drawings for each structure in the project based upon the North Carolina Residential Building Code requirements and generally accepted coastal structural design standards.

- Limited on-site inspection and review of contractors' work at the request of the County, including provision of written documentation to the Building Inspector certifying that completed unit-specific foundation and accesses were properly constructed.

HOLLAND CONSULTING PLANNERS

25 Years of Service
1987 - 2012

November 16, 2015

Pender County FY2014 Flood Mitigation Assistance Program
Request for Legal Services

Pender County is currently involved in the administration of an FY2014 Flood Mitigation Assistance (FMA) Program funded by the North Carolina Division of Emergency Management. During the course of the project, the county will require legal services from a private firm. Required services will consist of preparation of preliminary title opinions for units to be acquired by Pender County (five parcels), property closings, recording deeds of trust, and minimal general legal advice.

If your firm is interested in providing services to Pender County for this program, please respond by **5:00PM, December 2, 2015**. The county requires a letter of interest with attached hourly rates for general legal advice and for preliminary title opinions and closings, if different from the general rate, and a brief description of experience in the Pender County area. Since the county will require a quick turnaround for preliminary title opinions, please also indicate your firm's average response time for preliminary title opinion preparation. The county will consider efficiency and experience as well as hourly rates in the selection process.

Please submit your response in writing to **Mr. Reed Whitesell, FMA Administrator, Holland Consulting Planners, Inc., 3329 Wrightsville Avenue, Suite F, Wilmington, NC 28403**. Please also indicate on the envelope "**Legal Services Proposal Enclosed.**" If you have any questions concerning the scope of work, do not hesitate to contact me at (910)392-0060.

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HOLLAND CONSULTING PLANNERS

25 Years of Service
1987 - 2012

November 16, 2015

Pender County FY2014 Flood Mitigation Assistance (FMA) Elevation Program
Request for Professional Surveying Services

Pender County is currently involved in the administration of a Flood Mitigation Assistance (FMA) Elevation Program, funded by the North Carolina Division of Emergency Management (NCDEM). During the course of the project, the County will require professional surveying services from a North Carolina Registered Land Surveyor. The submitting firm shall provide the local government with legal boundary surveys and elevation certificates for approximately eleven (11) parcels proposed for elevation or acquisition in various locations in Pender County, North Carolina. The County anticipates that the surveying work outlined in this Request for Proposals will be completed over three (3) months beginning in January, 2016. The project requires a good working knowledge of boundary surveying in the Pender County area and specific experience with residential elevation and acquisition projects.

Prior to elevation or acquisition, the surveyor shall perform a field survey necessary to provide the Program Administrator with a survey map of the structure included in the project, which will include a site survey map showing the parcel boundary and location of main and accessory structures. A pre-elevation elevation certificate will also be required for the six (6) structures to be elevated. If your firm is interested in providing service to Pender County for this program, **please respond by 5:00 PM, December 2, 2015**. The County requires a letter of interest including your hourly rates and a brief description of experience in the local area. Since the County will require a quick turnaround for the surveys, please also indicate your firm's average response time for submission of each completed survey following notice to proceed.

Please submit your response in writing to **Mr. Reed Whitesell, FMA Administrator, Holland Consulting Planners, Inc., 3329 Wrightsville Avenue, Suite F, Wilmington, NC 28403**. Please also indicate on the envelope **"Surveying Services Proposal."** If you have any questions concerning the scope of work, do not hesitate to contact me at (910) 392-0060.

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C. Nathan King & Associates Appraisals

202 South Shore Drive • Surf City, NC 28445

910.328.3588 fax
910.328.0239 office
1.800.513.8957 toll free
reappraisals@embarqmail.com

November 25, 2015

RECEIVED
NOV 30 2015

Mr. Reed Whitesell
Community Development Manager
Holland Consulting Planners, Inc.
3329 Wrightsville Avenue
Suite F
Wilmington, NC 28403

Re: Pender County FY2014 Flood Mitigation Assistance Program
Request for Real Estate Appraisal Services

Dear Mr. Whitesell:

I am interested in completing appraisals in Pender County as specified in your recent letter regarding five parcels on Topsail Island and one in Maple Hill. I am a NC State Certified Residential Real Estate Appraiser. I have been an appraiser for more than twenty years appraising properties primarily in Pender and Onslow Counties. My fee for URAR reports and review appraisals is $425.00 per report. The average turnaround time is 7-10 days from the date of inspection.

Your consideration of my services will be sincerely appreciated. If additional information is required, please do not hesitate to contact me at the office at 910-328-0239 or on my cell 910-376-4075.

Respectfully,

C. Nathan King
Owner, C. Nathan King & Associates Appraisals

KEENAN CONSTRUCTION & CONSULTING, CO.
542 Long Leaf Acres Drive
Wilmington, NC 28405
(910) 395-4970 FAX (910) 395-1632

November 25, 2015

Holland Consulting Planners, Inc.
Attn: Mr. Reed Whitesell
3329 Wrightsville Ave.
Suite F
Wilmington, NC 28403

Ref: Pender County FY2014 Flood Mitigation Assistance Elevation Program- Asbestos Inspection Services

Dear: Mr. Whitesell:

Keenan Construction and Consulting Co. has been doing asbestos inspection since 1995. Most of the work has been done for CDBG block grant and FMA elevation programs municipalities and NC counties. I have done inspections as far north as Red Springs west to Fairbluff and east to New Bern and several in Pender county over the past few years.

Once given notice to begin, I usually have a finished asbestos report emailed to you within a week (about a five to seven business days turn around time.) My reports include a picture of the house, a drawing of the floor plan of the house, the sampling report and lab report plus a summary letter as to where and how much asbestos was found. These reports are very helpful to the abatement contractors in making their bids.

My fee for crawlspace (elevation) inspection only is $125 per house for labor plus $8.00 per sample. I estimate about 5 samples per house. A estimated total of $165.00 per house. These cost could increased if more samples are required by NCHHS standards in conformance with 15A NCAC 19C.0060. *You are only charged for samples taken*.]. No charge for samples not taken.

Full house inspection fee is $250.00 per house for labor plus $8.00 per sample. I estimate abour10 samples per house. These cost could increased if more samples are required by NCHHS standards in conformance with 15A NCAC 19C.0060. *You are only charged for samples taken*.]. No charge for samples not taken.

Sincerely,

George F. Keenan

George F. Keenan
NC Asbestos Inspector 10960

ECS Carolinas, LLP

Proposal for Asbestos Inspection Services

Pender County FY2014 Flood Mitigation Assistance
(FMA) Elevation Program Request for Asbestos Inspection Services
Pender County, North Carolina
ECS Proposal Number 22-20314-P

December 1, 2015

December 1, 2015

Mr. J. Reed Whitesell
Holland Consulting Planners
3329 Wrightsville Avenue Suite F
Wilmington, NC 28403

Reference: Proposal for Asbestos Inspection Services
Pender County FY2014 Flood Mitigation Assistance
11 Residences
Pender County, NC
ECS Proposal Number: 22-20314P

Dear Mr. Whitesell:

ECS Carolinas, LLP (ECS) is pleased and would like to thank you for the opportunity to submit this proposal to provide asbestos services for the above referenced project. This proposal contains our project understanding, proposed scope of services, estimated fee, schedule of work, and authorization requirements.

PROJECT UNDERSTANDING

ECS was requested to provide a proposal to perform an asbestos survey of the crawlspaces of approximately six (6) residential structures to be elevated in Pender County, North Carolina. In addition, five (5) residences will need a complete asbestos inspection. Project information is based on a Request for Proposal provided from Holland Consulting Planners to ECS. Based on your request, ECS recommends the following scope of services.

SCOPE OF SERVICES

The purpose of this work is to survey the property to identify ACM prior to demolition activities. ECS proposes to complete the asbestos survey as described below:

1. ECS will perform the testing to identify ACM in general accordance with the U.S. Environmental Protection Agency (EPA) and NESHAPS requirements. Personnel performing the asbestos survey will be registered as Accredited Asbestos Inspectors within North Carolina.

2. ECS will begin by interviewing the site contact to learn available information regarding the past history of the building, including ages of materials, past renovations, maintenance, etc.

3. ECS will observe each property. Homogeneous areas are defined as sections of building materials which appear to have been installed in the same general time period, and are of uniform color and texture. Once homogeneous areas are identified, samples will be collected of materials suspected to contain asbestos in general accordance with NESHAP regulations. Specifically, samples will be collected from random locations of each homogeneous area. The number of samples collected from each homogeneous area will vary, based upon the following criteria:

- Thermal Insulation Materials (piping, breeching, boiler insulation, etc.) - A minimum of three samples are required. Only patch areas (less than six square or linear feet) may have one sample collected.

- Surfacing Materials (plaster, fireproofing, etc.) – A minimum of seven samples are to be taken for areas greater than 5,000 square feet; five samples for areas greater than 1,000 square feet, but less than 5,000 square feet; three samples for areas less than 1,000 square feet; one sample for patching material.

- Miscellaneous Materials (flooring, adhesives, roofing, wallboard, etc.) – A minimum of two samples are required.

4. Samples collected from the property will be delivered to laboratories accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for testing. A chain of custody will be maintained with the samples.

5. If one sample of a material from a homogeneous area is reported to contain greater than 1% asbestos, then by EPA definition, it is characterized as ACM.

6. This assessment will be limited to the crawlspace in the six units, as specified by Holland Consulting Planners, and will not include destructive sampling. Due to the limited nature of our sampling, inaccessible materials may exist in chases, above fixed ceilings, behind permanent or attached fixtures, behind walls, etc. Suspect materials observed in inaccessible or unsafe to access areas will have to be assumed positive or be evaluated at the time of discovery.

7. The five units requiring a complete-structure asbestos inspection will include limited destructive sampling unless otherwise specified by the client. These structures are slated for demolition. Due to the limited nature of our sampling, inaccessible materials may exist in chases, above fixed ceilings, behind permanent or attached fixtures, behind walls, etc. Suspect materials observed in inaccessible or unsafe to access areas will have to be assumed positive or be evaluated at the time of discovery.

8. An electronic report will be provided, which will detail the approximate quantity and location of the ACM, which often requires removal with documentation by a licensed asbestos abatement contractor prior to renovation or demolition..

PROPOSAL ASSUMPTIONS

ECS has made the following assumptions in developing this proposal:

- Prices presented herein are valid for 60 days from the date of this proposal.

- ECS will be granted safe, unrestricted access to the property. Materials that are not accessible or observable shall be assumed to contain asbestos.

FEES/COST OF SERVICES

Crawl Space Inspections

Limited Asbestos Survey and Report ($300.00 per residence@ 6 residences) $1,800.00
* Sample Analysis (Approximately 10-15 samples per residence@ $15/each)$900.00-$1,350.00
TOTAL ESTIMATED COSTS FOR SCOPE OF SERVICES $2,700.00-3,150.00

Complete Asbestos Inspections

Full Asbestos Survey and Report ($500.00 per residence@ 5 residences)..... $2,500.00
* Sample Analysis (Approximately 35-40 samples per residence@ $15/each)$2,625.00-4,500.00
TOTAL ESTIMATED COSTS FOR SCOPE OF SERVICES $5,125.00-7,000.00

* The total sample cost will vary as charges for analysis will not be known until field and laboratory services are complete. ECS will invoice only for the actual number of bulk samples analyzed. Pricing is also based on 24-hour laboratory analysis. If it is requested that analysis is expedited, there will be additional fees.

SCHEDULE OF WORK

The asbestos survey field work can be initiated within one week of authorization to proceed. The analytical results will be available approximately one business days after receipt by the laboratory. The asbestos survey report will be issued within five business days after results are received. Therefore, ECS anticipates the asbestos surveys to be completed within three to four weeks after authorization to proceed. ECS will provide preliminary verbal results as they are available.

AUTHORIZATION

If the above scope of work is acceptable to you, please sign the Proposal Acceptance Form and return one copy of the proposal acceptance form to us. Please note that the attached General Conditions of Service are incorporated herein by reference and are an integral part of this agreement between us. By signing the Proposal Acceptance Form or referencing this proposal, you are also accepting the General Conditions of Service and this proposal in its entirety. Alternatively, you could issue a letter of acceptance or purchase order; but we would ask that you reference and include our proposal by reference showing proposal number and date. This proposal is valid for a period of sixty days beyond that date it may be necessary to revise our schedule or fee.

Thank you for the opportunity to submit this proposal to provide services and serve as your consultant. We look forward to the opportunity to work with you on this project and to hopefully serve as your consultant in the future. If you have any questions, or if we can be of any additional service, please contact us at 910-686-9114.

Respectfully submitted,
ECS CAROLINAS, LLP

Denise A. Popeo
Senior Environmental Project Manager

Amy C. Conchas, REM
Environmental Principal

PROPOSAL ACCEPTANCE FORM

ECS CAROLINAS, LLP
(Please Print or Type)

Project Name: Pender County FY2015 FMA Elevation Program Asbestos Inspection Services
Location: Pender County, NC

Please complete and return this Proposal Acceptance Form to ECS as shown at the bottom of this form. By signing and returning this form, you are providing us with authorization to proceed, providing us permission to enter the site, and making this proposal the agreement between us. Your signature also indicates that you have read this document and the terms and conditions of service in its entirety and agree to pay for these services.

CLIENT AND BILLING INFORMATION

Name of Client: _____

Contact Person: _____

Telephone No. _____

E-mail: _____

	Responsible for Payment	Approval of Invoice (if different)
Contact Name:		
Company Name:		
Address		
Address		
City, State, Zip		
Telephone No.:		
Fax No:		
E-mail Address:		

The reports are normally e-mailed directly to client. If you require copies to others, please provide their names, e-mail addresses and fax numbers below.

Name	e-mail Address	Phone Number	Fax Number

Special Instructions: _____

Client Signature: × _____ Date: _____

Please contact Amy Conchas at aconchas@ecslimited.com or fax to (910) 686- 9666

Client: Holland Consulting Planners (hereinafter the "Proposal")

ECS CAROLINAS, LLP
TERMS AND CONDITIONS OF SERVICE

The professional services (the "Services") to be provided by ECS CAROLINAS, LLP ["ECS"] pursuant to the Proposal shall be provided in accordance with these Terms and Conditions of Service ("Terms"), including any addenda as may be incorporated or referenced in writing shall form the Agreement between ECS and Client.

1.0 INDEPENDENT CONSULTANT STATUS - ECS shall serve as an independent professional consultant to CLIENT for Service on the Project, identified above, and shall have control over, and responsibility for, the means and methods for providing the Services identified in the Proposal, including the retention of Subcontractors and Subconsultants

2.0 SCOPE OF SERVICES - It is understood that the fees, reimbursable expenses and time schedule defined in the Proposal are based on information provided by CLIENT and/or CLIENT'S contractors and consultants. CLIENT acknowledges that if this information is not current, is incomplete or inaccurate, if conditions are discovered that could not be reasonably foreseen, or if CLIENT orders additional services, the scope of services will change, even while the Services are in progress.

3.0 STANDARD OF CARE

3.1 In fulfilling its obligations and responsibilities enumerated in the Proposal, ECS shall be expected to comply with and its performance evaluated in light of the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at that time in the region (the "Standard of Care"). Nothing contained in the Proposal, the agreed-upon scope of Services, these Terms and Conditions of Service or any ECS report, opinion, plan or other document prepared by ECS shall constitute a warranty or guaranty of any nature whatsoever.

3.2 CLIENT understands and agrees that ECS will rely on the facts learned from data gathered during performance of Services as well as those facts provided by the CLIENT. CLIENT acknowledges that such data collection is limited to specific areas that are sampled, bored, tested, observed and/or evaluated. Consequently, CLIENT waives any and all claims based upon erroneous facts provided by the CLIENT, facts subsequently learned or regarding conditions in areas not specifically sampled, bored, tested, observed or evaluated by ECS.

3.3 If a situation arises that causes ECS to believe compliance with CLIENT'S directives would be contrary to sound engineering practices, would violate applicable laws, regulations or codes, or will expose ECS to legal claims or charges, ECS shall so advise CLIENT. If ECS' professional judgment is rejected, ECS shall have the right to terminate its Services in accordance with the provisions of Section 25.0, below.

3.4 If CLIENT decides to disregard ECS' recommendations with respect to complying with applicable Laws or Regulations, ECS shall determine if applicable law requires ECS to notify the appropriate public officials. CLIENT agrees that such determinations are ECS' sole right to make.

4.0 CLIENT DISCLOSURES

4.1 Where the Scope of Services requires ECS to penetrate a Site surface, CLIENT shall furnish and/or shall direct CLIENT'S consultant(s) or agent(s) to furnish ECS information identifying the type and location of utility lines and other man-made objects known, suspected, or assumed to be located beneath or behind the Site's surface. ECS shall be entitled to rely on such information for completeness and accuracy without further investigation, analysis, or evaluation.

4.2 "Hazardous Materials" shall include but not be limited to any substance that poses or may pose a present or potential hazard to human health or the environment whether contained in a product, material, by-product, waste, or sample, and whether it exists in a solid, liquid, semi-solid or gaseous form. CLIENT shall notify ECS of any known, assumed, or suspected regulated, contaminated, or other similar Hazardous Materials that may exist at the Site prior to ECS mobilizing to the Site.

4.3 If any Hazardous Materials are discovered, or are reasonably suspected by ECS after its Services begin, ECS shall be entitled to amend the scope of Services and adjust its fees to reflect the additional work or personal protective equipment and/or safety precautions required by the existence of such Hazardous Materials.

5.0 INFORMATION PROVIDED BY OTHERS - CLIENT waives, releases and discharges ECS from and against any claim for damage, injury or loss allegedly arising out of or in connection with errors, omissions, or inaccuracies in documents and other information in any form provided to ECS by CLIENT or CLIENT's agents, contractors, or consultants, including such information that becomes incorporated into ECS documents.

6.0 CONCEALED RISKS - CLIENT acknowledges that special risks are inherent in sampling, testing and/or evaluating concealed conditions that are hidden from view and/or neither readably apparent nor easily accessible, *e.g.*, subsurface conditions, conditions behind a wall, beneath a floor, or above a ceiling. Such circumstances require that certain assumptions be made regarding existing conditions, which may not be verifiable without expending additional sums of money or destroying otherwise adequate or serviceable portions of a building or component thereof. Accordingly, ECS shall not be responsible for the verification of such conditions unless verification can be made by simple visual observation. Client agrees to bear any and all costs, losses, damages and expenses (including, but not limited to, the cost of ECS' Additional Services) in any way arising from or in connection with the existence or discovery of such concealed or unknown conditions.

7.0 RIGHT OF ENTRY/DAMAGE RESULTING FROM SERVICES

7.1 CLIENT warrants that it possesses the authority to grant ECS right of entry to the Site for the performance of Services. CLIENT hereby grants ECS and its subcontractors and/or agents, the right to enter from time to time onto the property in order for ECS to perform its Services. CLIENT agrees to indemnify and hold ECS harmless from any claims arising from allegations that ECS trespassed or lacked authority to access the Site.

7.2 CLIENT warrants that it possesses all necessary permits, licenses and/or utility clearances for the Services to be provided by ECS except where ECS' Proposal explicitly states that ECS will obtain such permits, licenses, and/or utility clearances.

7.3 ECS will take reasonable precautions to limit damage to the Site and its improvements during the performance of its Services. CLIENT understands that the use of exploration, boring, sampling, or testing equipment may cause minor, but common, damage to the Site. The correction and restoration of such common damage is CLIENT'S responsibility unless specifically included in ECS' Proposal.

7.4 CLIENT agrees that it will not bring any claims for liability or for injury or loss against ECS arising from (i) procedures associated with the exploration, sampling or testing activities at the Site, (ii) discovery of Hazardous Materials or suspected Hazardous Materials, or (iii) ECS' findings, conclusions, opinions, recommendations, plans, and/or specifications related to discovery of contamination.

8.0 UNDERGROUND UTILITIES

8.1 ECS shall exercise the Standard of Care in evaluating client-furnished information as well as information readily and customarily available from public utility locating services (the "Underground Utility Information") in its effort to identify underground utilities. The extent of such evaluations shall be at ECS' sole discretion.

8.2 CLIENT recognizes that the Underground Utility Information provided to or obtained by ECS may contain errors or be incomplete. CLIENT understands that ECS may be unable to identify the locations of all subsurface utility lines and man-made features.

8.3 CLIENT waives, releases, and discharges ECS from and against any claim for damage, injury or loss allegedly arising from or related to subterranean structures (pipes, tanks, cables, or other utilities, etc.) which are not called to ECS' attention in writing by CLIENT, not correctly shown on the Underground Utility Information and/or not properly marked or located by the utility owners, governmental or quasi-governmental locators, or private utility locating services as a result of ECS' or ECS' subcontractor's request for utility marking services made in accordance with local industry standards.

9.0 SAMPLES

9.1 Soil, rock, water, building materials and/or other samples and sampling by-products obtained from the Site are and remain the property of CLIENT. Unless other arrangements are requested by CLIENT and mutually agreed upon by ECS in writing, ECS will retain samples not consumed in laboratory testing for up to sixty (60) calendar days after the issuance of any document containing data obtained from such samples. Samples consumed by laboratory testing procedures will not be stored.

9.2 Unless CLIENT directs otherwise, and excluding those issues covered in Section 10.0, CLIENT authorizes ECS to dispose of CLIENT'S non-hazardous samples and sampling or testing process by-products in accordance with applicable laws and regulations.

10.0 ENVIRONMENTAL RISKS

10.1 When Hazardous Materials are known, assumed, suspected to exist, or discovered at the Site, ECS will endeavor to protect its employees and address public health, safety, and environmental issues in accordance with the Standard of Care. CLIENT agrees to compensate ECS for such efforts.

10.2 When Hazardous Materials are known, assumed, or suspected to exist, or discovered at the Site, ECS and/or ECS' subcontractors will exercise the Standard of Care in containerizing and labeling such Hazardous Materials in accordance with applicable laws and regulations, and will leave the containers on Site. CLIENT is responsible for the retrieval, removal, transport and disposal of such contaminated samples, and sampling process byproducts in accordance with applicable law and regulation.

10.3 Unless explicitly stated in the Scope of Services, ECS will neither subcontract for nor arrange for the transport, disposal, or treatment of Hazardous Materials. At CLIENT'S written request, ECS may assist CLIENT in identifying appropriate alternatives for transport, off-site treatment, storage, or disposal of such substances, but CLIENT shall be solely responsible for the final selection of methods and firms to provide such services. CLIENT shall sign all manifests for the disposal of substances affected by contaminants and shall otherwise exercise prudence in arranging for lawful disposal.

10.4 In those instances where ECS is expressly retained by CLIENT to assist CLIENT in the disposal of Hazardous Materials, samples, or wastes as part of the Proposal, ECS shall do so only as CLIENT'S agent (notwithstanding any other provision of this AGREEMENT to the contrary). ECS will not assume the role of, nor be considered a generator, storer, transporter, or disposer of Hazardous Materials.

10.5 Subsurface sampling may result in unavoidable cross-contamination of certain subsurface areas, as when a probe or excavation/boring device moves through a contaminated zone and links it to an aquifer, underground stream, pervious soil stratum, or other hydrous body not previously contaminated, or connects an uncontaminated zone with a contaminated zone. Because sampling is an essential element of the Services indicated herein, CLIENT agrees this risk cannot be eliminated. Provided such services were performed in accordance with the Standard of Care, CLIENT waives, releases and discharges ECS from and against any claim for damage, injury, or loss allegedly arising from or related to such cross-contamination.

10.6 CLIENT understands that a Phase I Environmental Site Assessment (ESA) is conducted solely to permit ECS to render a professional opinion about the likelihood of the site having a Recognized Environmental Condition on, in, beneath, or near the Site at the time the Services are conducted. No matter how thorough a Phase I ESA study may be, findings derived from its conduct are highly limited and ECS cannot know or state for an absolute fact that the Site is unaffected or adversely affected by one or more Recognized Environmental Conditions. CLIENT represents and warrants that it understands the limitations associated with Phase I ESAs.

11.0 OWNERSHIP OF DOCUMENTS

11.1 ECS shall be deemed the author and owner (or licensee) of all documents, technical reports, letters, photos, boring logs, field data, field notes, laboratory test data, calculations, designs, plans, specifications, reports, or similar documents and estimates of any kind furnished by it [the "Documents of Service"] and shall retain all common law, statutory and other reserved rights, including copyrights. CLIENT shall have a limited, non-exclusive license to use copies of the Documents of Service provided to it in connection with the Project for which the Documents of Service are provided until the completion of the Project.

11.2 ECS' Services are performed and Documents of Service are provided for the CLIENT'S sole use. CLIENT understands and agrees that any use of the Documents of Service by anyone other than the CLIENT, it's licensed consultants and its contractors is not permitted. CLIENT further agrees to indemnify and hold ECS harmless for any errors, omissions or damage resulting from its contractors' use of ECS' Documents of Service.

11.3 CLIENT agrees to not use ECS' Documents of Service for the Project if the Project is subsequently modified in scope, structure or purpose without ECS' prior written consent. Any reuse without ECS' written consent shall be at CLIENT'S sole risk and without liability to ECS or to ECS' subcontractor(s). CLIENT agrees to indemnify and hold ECS harmless for any errors, omissions or damage resulting from its use of ECS' Documents of Service after any modification in scope, structure or purpose.

11.4 CLIENT agrees to not make any modification to the Documents of Service without the prior written authorization of ECS. To the fullest extent permitted by law, CLIENT agrees to indemnify, defend, and hold ECS harmless from any damage, loss, claim, liability or cost (including reasonable attorneys' fees and defense costs) arising out of or in connection with any unauthorized modification of the Documents of Service by CLIENT or any person or entity that acquires or obtains the Documents of Service from or through CLIENT. CLIENT represents and warrants that the Documents of Service shall be used only as submitted by ECS.

12.0 SAFETY

12.1 Unless expressly agreed to in writing in its Proposal, CLIENT agrees that ECS shall have no responsibility whatsoever for any aspect of site safety other than for its own employees. Nothing herein shall be construed to relieve CLIENT and/or its contractors, consultants or other parties from their responsibility for site safety. CLIENT also represents and warrants that the General Contractor is solely responsible for Project site safety and that ECS personnel may rely on the safety measures provided by the General Contractor.

12.2 In the event ECS assumes in writing limited responsibility for specified safety issues, the acceptance of such responsibilities does not and shall not be deemed an acceptance of responsibility for any other non-specified safety issues, including, but not limited to those relating to excavating, trenching, shoring, drilling, backfilling, blasting, or other construction activities.

13.0 CONSTRUCTION TESTING AND REMEDIATION SERVICES

13.1 CLIENT understands that construction testing and observation services are provided in an effort to reduce, but cannot eliminate, the risk of problems arising during or after construction or remediation. CLIENT agrees that the provision of such Services does not create a warranty or guarantee of any type.

13.2 Monitoring and/or testing services provided by ECS shall not in any way relieve the CLIENT'S contractor(s) from their responsibilities and obligations for the quality or completeness of construction as well as their obligation to comply with applicable laws, codes, and regulations.

13.3 ECS has no responsibility whatsoever for the means, methods, techniques, sequencing or procedures of construction selected, for safety precautions and programs incidental to work or services provided by any contractor or other consultant. ECS does not and shall not have or accept authority to supervise, direct, control, or stop the work of any contractor or consultant or any of their subcontractors or subconsultants.

13.4 ECS strongly recommends that CLIENT retain ECS to provide construction monitoring and testing services on a full time basis to lower the risk of defective or incomplete Work being installed by CLIENT'S contractor(s). If CLIENT elects to retain ECS on a part time basis for any aspect of construction monitoring and/or testing, CLIENT accepts the risks that a lower level of construction quality may occur and that defective or incomplete work may result and not be detected by ECS' part time monitoring and testing. Unless the CLIENT can show that the error or omission is contained in ECS' reports, CLIENT waives, releases and discharges ECS from and against any other claims for errors, omissions, damages, injuries, or loss alleged to arise from defective or incomplete work that was monitored or tested by ECS on a part time basis. Except as set forth in the preceding sentence, CLIENT agrees to indemnify and hold ECS harmless from all damages, costs, and attorneys' fees, for any claims alleging errors, omissions, damage, injury or loss allegedly resulting from Work that was monitored or tested by ECS on a part time basis.

14.0 CERTIFICATIONS - CLIENT may request, or governing jurisdictions may require, ECS to provide a "certification" regarding the Services provided by ECS. Any "certification" required of ECS by the CLIENT or jurisdiction(s) having authority over some or all aspects of the Project shall consist of ECS' inferences and professional opinions based on the limited sampling, observations, tests, and/or analyses performed by ECS at discrete locations and times. Such "certifications" shall constitute ECS' professional opinion of a condition's existence, but ECS does not guarantee that such condition exists, nor does it relieve other parties of the responsibilities or obligations such parties have with respect to the possible existence of such a condition. CLIENT agrees it cannot make the resolution of any dispute with ECS or payment of any amount due to ECS contingent upon ECS signing any such "certification."

15.0 BILLINGS AND PAYMENTS

15.1 Billings will be based on the unit rates, plus travel costs, and other reimbursable expenses as stated in the Professional Fees section of the Proposal. Any Estimate of Professional Fees stated in these Terms shall not be considered as a not-to-exceed or lump sum amount unless otherwise explicitly stated. CLIENT understands and agrees that even if ECS agrees to a lump sum or not-to-exceed amount, that amount shall be limited to number of hours, visits, trips, tests, borings, or samples stated in the Proposal.

15.2 CLIENT agrees that all Professional Fees and other unit rates shall be adjusted annually to account for inflation based on the most recent 12-month average of the Consumer Price Index (CPI-U) for all items as established by www.bls.gov when the CPI-U exceeds an annual rate of 2.0%.

15.3 Should ECS identify a Changed Condition(s), ECS shall notify the CLIENT of the Changed Condition(s). ECS and CLIENT shall promptly and in good faith negotiate an amendment to the Scope of Services, Professional Fees, and time schedule.

15.4 CLIENT recognizes that time is of the essence with respect to payment of ECS' invoices, and that timely payment is a material consideration for this agreement. All payment shall be in U.S. funds drawn upon U.S. banks and in accordance with the rates and charges set forth in the Professional Fees. Invoices are due and payable upon receipt.

15.5 If CLIENT disputes all or part of an invoice, CLIENT shall provide ECS with written notice stating in detail the facts of the dispute within fifteen (15) calendar days of the invoice. CLIENT agrees to pay the undisputed amount of such invoice promptly.

15.6 ECS reserves the right to charge CLIENT an additional charge of one-and-one-half (1.5) percent (or the maximum percentage allowed by Law, whichever is lower) of the invoiced amount per month for any payment received by ECS more than thirty (30) calendar days from the date of the invoice, excepting any portion of the invoiced amount in dispute. All payments will be applied to accrued interest first and then to the unpaid principal amount. Payment of invoices shall not be subject to unilateral discounting or set-offs by CLIENT.

15.7 CLIENT agrees that its obligation to pay for the Services is not contingent upon CLIENT'S ability to obtain financing, zoning, approval of governmental or regulatory agencies, permits, final adjudication of a lawsuit, CLIENT'S successful completion of the Project, settlement of a real estate transaction, receipt of payment from CLIENT'S client, or any other event unrelated to ECS provision of Services. Retainage shall not be withheld from any payment, nor shall any deduction be made from any invoice on account of penalty, liquidated damages, or other sums incurred by CLIENT. It is agreed that all costs and legal fees including actual attorney's fees, and expenses incurred by ECS in obtaining payment under this Agreement, in perfecting or obtaining a lien, recovery under a bond, collecting any delinquent amounts due, or executing judgments, shall be reimbursed by CLIENT.

15.8 Unless CLIENT has provided notice to ECS in accordance with Section 16.0 of these Terms, payment of any invoice by the CLIENT shall mean that the CLIENT is satisfied with ECS' Services and is not aware of any defects in those Services.

16.0 DEFECTS IN SERVICE

16.1 CLIENT, its personnel, its consultants, and its contractors shall promptly inform ECS during active work on any project of any actual or suspected defects in the Services so to permit ECS to take such prompt, effective remedial measures that in ECS' opinion will reduce or eliminate the consequences of any such defective Services. The correction of defects attributable to ECS' failure to perform in accordance with the Standard of Care shall be provided at no cost to CLIENT. However, ECS shall not be responsible for the correction of any deficiency attributable to CLIENT-furnished information, the errors, omissions, defective materials, or improper installation of materials by CLIENT's personnel, consultants or contractors, or work not observed by ECS. CLIENT shall compensate ECS for the costs of correcting such defects.

16.2 Modifications to reports, documents and plans required as a result of jurisdictional reviews or CLIENT requests shall not be considered to be defects. CLIENT shall compensate ECS for the provision of such Services.

17.0 INSURANCE - ECS represents that it and its subcontractors and subconsultants maintain Workers Compensation insurance, and that ECS is covered by general liability, automobile and professional liability insurance policies in coverage amounts it deems reasonable and adequate. ECS shall furnish certificates of insurance upon request. The CLIENT is responsible for requesting specific inclusions or limits of coverage that are not present in ECS insurance package. The cost of such inclusions or coverage increases, if available, will be at the expense of the CLIENT.

18.0 LIMITATION OF LIABILITY

18.1 CLIENT AGREES TO ALLOCATE CERTAIN RISKS ASSOCIATED WITH THE PROJECT BY LIMITING ECS' TOTAL LIABILITY TO CLIENT ARISING FROM ECS' PROFESSIONAL LIABILITY, I.E. PROFESSIONAL ACTS, ERRORS, OR OMISSIONS AND FOR ANY AND ALL CAUSES INCLUDING NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT, OR BREACH OF WARRANTY, INJURIES, DAMAGES, CLAIMS, LOSSES, EXPENSES, OR CLAIM EXPENSES (INCLUDING REASONABLE ATTORNEY'S FEES) RELATING TO PROFESSIONAL SERVICES PROVIDED UNDER THIS AGREEMENT TO THE FULLEST EXTENT PERMITTED BY LAW. THE ALLOCATION IS AS FOLLOWS.

18.1.1 If the proposed fees are $10,000 or less, ECS' total aggregate liability to CLIENT shall not exceed $20,000, or the total fee received for the services rendered, whichever is greater.

18.1.2 If the proposed fees are in excess of $10,000, ECS' total aggregate liability to CLIENT shall not exceed $40,000, or the total fee for the services rendered, whichever is greater.

18.2 CLIENT agrees that ECS shall not be responsible for any injury, loss or damage of any nature, including bodily injury and property damage, arising directly or indirectly, in whole or in part, from acts or omissions by the CLIENT, its employees, agents, staff, consultants, contractors, or subcontractors to the extent such injury, damage, or loss is caused by acts or omissions of CLIENT, its employees, agents, staff, consultants, contractors, subcontractors or person/entities for whom CLIENT is legally liable.

18.3 CLIENT agrees that ECS' liability for all non-professional liability arising out of this agreement or the services provided as a result of the Proposal be limited to $500,000.

19.0 INDEMNIFICATION

19.1 Subject Section 18.0, ECS agrees to hold harmless and indemnify CLIENT from and against damages arising from ECS' negligent performance of its Services, but only to the extent that such damages are found to be caused by ECS' negligent acts, errors or omissions, (specifically excluding any damages caused by any third party or by the CLIENT.)

19.2 To the fullest extent permitted by Law, CLIENT agrees to indemnify, and hold ECS harmless from and against any and all liability, claims, damages, demands, fines, penalties, costs and expenditures (including reasonable attorneys' fees and costs of litigation defense and/or settlement) ["Damages"] caused in whole or in part by the negligent acts, errors, or omissions of the CLIENT or CLIENT'S employees, agents, staff, contractors, subcontractors, consultants, and clients, provided such Damages are attributable to: (a) the bodily injury, personal injury, sickness, disease and/or death of any person; (b) the injury to or loss of value to tangible personal property; or (c) a breach of these Terms. The foregoing indemnification shall not apply to the extent such Damage is found to be caused by the sole negligence, errors, omissions or willful misconduct of ECS.

19.3 It is specifically understood and agreed that in no case shall ECS be required to pay an amount of Damages disproportional to ECS' culpability. IF CLIENT IS A HOMEOWNER, HOMEOWNERS' ASSOCIATION, CONDOMINIUM OWNER, CONDOMINIUM OWNER'S ASSOCIATION, OR SIMILAR RESIDENTIAL OWNER, ECS RECOMMENDS THAT CLIENT RETAIN LEGAL COUNSEL BEFORE ENTERING INTO THIS AGREEMENT TO EXPLAIN CLIENT'S RIGHTS AND OBLIGATIONS HEREUNDER, AND THE LIMITATIONS, AND RESTRICTIONS IMPOSED BY THIS AGREEMENT. CLIENT AGREES THAT FAILURE OF CLIENT TO RETAIN SUCH COUNSEL SHALL BE A KNOWING WAIVER OF LEGAL COUNSEL AND SHALL NOT BE ALLOWED ON GROUNDS OF AVOIDING ANY PROVISION OF THIS AGREEMENT.

19.4 IF CLIENT IS A RESIDENTIAL BUILDER OR RESIDENTIAL DEVELOPER, CLIENT SHALL INDEMNIFY AND HOLD HARMLESS ECS AGAINST ANY AND ALL CLAIMS OR DEMANDS DUE TO INJURY OR LOSS INITIATED BY ONE OR MORE HOMEOWNERS, UNIT-OWNERS, OR THEIR HOMEOWNER'S ASSOCIATION, COOPERATIVE BOARD, OR SIMILAR GOVERNING ENTITY AGAINST CLIENT WHICH RESULTS IN ECS BEING BROUGHT INTO THE DISPUTE.

19.5 IN NO EVENT SHALL THE DUTY TO INDEMNIFY AND HOLD ANOTHER PARTY HARMLESS UNDER THIS SECTION 19.0 INCLUDE THE DUTY TO DEFEND.

20.0 CONSEQUENTIAL DAMAGES

20.1 CLIENT shall not be liable to ECS and ECS shall not be liable to CLIENT for any consequential damages incurred by either due to the fault of the other or their employees, consultants, agents, contractors or subcontractors, regardless of the nature of the fault or whether such liability arises in breach of contract or warranty, tort, statute, or any other cause of action. Consequential damages include, but are not limited to, loss of use and loss of profit.

20.2 ECS shall not be liable to CLIENT, or any entity engaged directly or indirectly by CLIENT, for any liquidated damages due to any fault, or failure to act, in part or in total by ECS, its employees, agents, or subcontractors.

21.0 SOURCES OF RECOVERY

21.1 All claims for damages related to the Services provided under this agreement shall be made against the ECS entity contracting with the CLIENT for the Services, and no other person or entity. CLIENT agrees that it shall not name any affiliated entity including parent, peer, or subsidiary entity or any individual officer, director, or employee of ECS, specifically including its professional engineers and geologists.

21.2 In the event of any dispute or claim between CLIENT and ECS arising out of in connection with the Project and/or the Services, CLIENT and ECS agree that they will look solely to each other for the satisfaction of any such dispute or claim. Moreover, notwithstanding anything to the contrary contained in any other provision herein, CLIENT and ECS' agree that their respective shareholders, principals, partners, members, agents, directors, officers, employees, and/or owners shall have no liability whatsoever arising out of or in connection with the Project and/or Services provided hereunder. In the event CLIENT brings a claim against an affiliated entity, parent entity, subsidiary entity, or individual officer, director or employee in contravention of this Section 21, CLIENT agrees to hold ECS harmless from and against all damages, costs, awards, or fees (including attorneys' fees) attributable to such act.

22.0 THIRD PARTY CLAIMS EXCLUSION - CLIENT and ECS agree that the Services are performed solely for the benefit of the CLIENT and are not intended by either CLIENT or ECS to benefit any other person or entity. To the extent that any other person or entity is benefited by the Services, such benefit is purely incidental and such other person or entity shall not be deemed a third party beneficiary to the AGREEMENT. No third-party shall have the right to rely on ECS' opinions rendered in connection with ECS' Services without written consent from both CLIENT and ECS, which shall include, at a minimum, the third-party's agreement to be bound to the same Terms and Conditions contained herein and third-party's agreement that ECS' Scope of Services performed is adequate.

23.0 DISPUTE RESOLUTION

23.1 In the event any claims, disputes, and other matters in question arising out of or relating to these Terms or breach thereof (collectively referred to as "Disputes"), the parties shall promptly attempt to resolve all such Disputes through executive negotiation between senior representatives of both parties familiar with the Project. The parties shall arrange a mutually convenient time for the senior representative of each party to meet. Such meeting shall occur within fifteen (15) days of either party's written request for executive negotiation or as otherwise mutually agreed. Should this meeting fail to result in a mutually agreeable plan for resolution of the Dispute, CLIENT and ECS agree that either party may bring litigation.

23.2 CLIENT shall make no claim (whether directly or in the form of a third-party claim) against ECS unless CLIENT shall have first provided ECS with a written certification executed by an independent engineer licensed in the jurisdiction in which the Project is located, reasonably specifying each and every act or omission which the certifier contends constitutes a violation of the Standard of Care. Such certificate shall be a precondition to the institution of any judicial proceeding and shall be provided to ECS thirty (30) days prior to the institution of such judicial proceedings.

23.3 Litigation shall be instituted in a court of competent jurisdiction in the county or district in which ECS' office contracting with the CLIENT is located. The parties agree that the law applicable to these Terms and the Services provided pursuant to the Proposal shall be the laws of the Commonwealth of Virginia, but excluding its choice of law rules. Unless otherwise mutually agreed to in writing by both parties, CLIENT waives the right to remove any litigation action to any other jurisdiction. Both parties agree to waive any demand for a trial by jury.

24.0 CURING A BREACH

24.1 A party that believes the other has materially breached these Terms shall issue a written cure notice identifying its alleged grounds for termination. Both parties shall promptly and in good faith attempt to identify a cure for the alleged breach or present facts showing the absence of such breach. If a cure can be agreed to or the matter otherwise resolved within thirty (30) calendar days from the date of the termination notice, the parties shall commit their understandings to writing and termination shall not occur.

24.2 Either party may waive any right provided by these Terms in curing an actual or alleged breach; however, such waiver shall not affect future application of such provision or any other provision.

25.0 TERMINATION

25.1 CLIENT or ECS may terminate this agreement for breach or these terms, non-payment, or a failure to cooperate. In the event of termination, the effecting party shall so notify the other party in writing and termination shall become effective fourteen (14) calendar days after receipt of the termination notice.

25.2 Irrespective of which party shall effect termination, or the cause therefore, ECS shall promptly render to CLIENT a final invoice and CLIENT shall immediately compensate ECS for Services rendered and costs incurred including those Services associated with termination itself, including without limitation, demobilizing, modifying schedules, and reassigning personnel.

26.0 TIME BAR TO LEGAL ACTION - Unless prohibited by law, and notwithstanding any Statute that may provide additional protection, CLIENT and ECS agree that a lawsuit by either party alleging a breach of this agreement, violation of the Standard of Care, non-payment of invoices, or arising out of the Services provided hereunder, must be initiated in a court of competent jurisdiction no more than two (2) years from the time the party knew, or should have known, of the facts and conditions giving rise to its claim, and shall under no circumstances shall such lawsuit be initiated more than three (3) years from the date of substantial completion of ECS' Services.

27.0 ASSIGNMENT - CLIENT and ECS respectively bind themselves, their successors, assigns, heirs, and legal representatives to the other party and the successors, assigns, heirs and legal representatives of such other party with respect to all covenants of these Terms. Neither CLIENT nor ECS shall assign these Terms, any rights thereunder, or any cause of action arising therefrom, in whole or in part, without the written consent of the other. Any purported assignment or transfer, except as permitted above, shall be deemed null, void and invalid, the purported assignee shall acquire no rights as a result of the purported assignment or transfer and the non-assigning party shall not recognize any such purported assignment or transfer.

28.0 SEVERABILITY - Any provision of these Terms later held to violate any law, statute, or regulation, shall be deemed void, and all remaining provisions shall continue in full force and effect. CLIENT and ECS shall endeavor to quickly replace a voided provision with a valid substitute that expresses the intent of the issues covered by the original provision.

29.0 SURVIVAL - All obligations arising prior to the termination of the agreement represented by these Terms and all provisions allocating responsibility or liability between the CLIENT and ECS shall survive the substantial completion of Services and the termination of the agreement.

30.0 TITLES; ENTIRE AGREEMENT

30.1 The titles used herein are for general reference only and are not part of the Terms and Conditions.

30.2 These Terms and Conditions of Service together with the Proposal, including all exhibits, appendixes, and other documents appended to it, constitute the entire agreement between CLIENT and ECS. CLIENT acknowledges that all prior understandings and negotiations are superseded by this agreement.

30.3 CLIENT and ECS agree that subsequent modifications to the agreement represented by these shall not be binding unless made in writing and signed by authorized representatives of both parties.

30.4 All preprinted terms and conditions on CLIENT'S purchase order, Work Authorization, or other service acknowledgement forms, are inapplicable and superseded by these Terms and Conditions of Service.

30.5 CLIENT's execution of a Work Authorization, the submission of a start work authorization (oral or written) or issuance of a purchase order constitutes CLIENT's acceptance of this Proposal and its agreement to be fully bound the foregoing Terms. If CLIENT fails to provide ECS with a signed copy of these Terms or the attached Work Authorization, CLIENT agrees that by authorizing and accepting the services of ECS, it will be fully bound by these Terms as if they had been signed by CLIENT

Atlantic Shores Environmental Services, Ltd.

December 2, 2015

Mr. Reed Whitesell
FMA Administrator
Holland Consulting Planners, Inc.
3329 Wrightsville Avenue, Suite F
Wilmington, North Carolina 28403

Reference: Proposal for Asbestos Surveys
Pender County FY2014 Flood Mitigation Assistance
(FMA) Elevation Program Request for Asbestos Inspection Services
ASE Proposal No. 881-P

Dear Mr. Whitesell:

Atlantic Shores Environmental Services, Ltd. (ASE) is pleased to provide this proposal for environmental services for the site. This proposal contains our understanding of the project, relevant experience, contact administrator information, project organization, technical approach, outsourcing and schedule.

PROJECT UNDERSTANDING

It is our understanding that the site consists of full asbestos inspections for five (5) residential structures and partial asbestos inspections (existing crawl space or downstairs storage only) on six (6) residential structures in Pender County. The project understanding is based on the attached FEMA FMA approval sheets dated June 19, 2015.

SCOPE OF SERVICES

Based on our understanding of your needs, we propose the following scope of services:

- A North Carolina accredited asbestos inspector will perform a visual survey of the on-site buildings or portions of buildings as described above. The visual survey will involve walking through and around the building and observing accessible areas for the presence of suspect asbestos-containing materials. The U.S. Environmental Protection Agency (EPA) has published guidelines and recommendations regarding inspection and sampling of friable and nonfriable Asbestos Containing Material (ACM). Friable materials are those that can be pulverized or

reduced to powder by hand pressure when dry. Nonfriable materials are those that can be reduced to a powder when sawn, sanded, drilled or pulverized. These guidelines will be adhered to during the survey, when appropriate.

- The asbestos survey will address both friable and nonfriable materials so that they may be properly addressed prior to being disturbed (as required by EPA regulations). Sample areas will be selected based on homogeneous areas (suspect material which appears to be of the same type and applied during the same general time period). Areas that appear to be damaged will be scrutinized more closely during sample collection. During the survey, emphasis will be placed on detecting friable materials. The possible presence of nonfriable ACM will also be considered.

- Once sample areas have been identified, representative bulk samples of the suspect materials will be collected. We will follow NESHAP/OSHA sample protocols during sample collection (three samples of each surfacing and/or thermal system insulation materials will be collected and two samples of each miscellaneous suspect asbestos material will be collected). A positive stop approach will be used. Essentially, if the first sample in each homogeneous set is identified to contain asbestos, the remaining samples in each set will not be analyzed. The samples will be placed in sealed containers and the location and description recorded on standard forms prepared by ASE. The bulk samples will be submitted to a North Carolina certified laboratory where they will be analyzed using the EPA recommended method (EPA 600/M4-82-020, Dec. 1982) of Polarized Light Microscopy (PLM) coupled with dispersion staining.

- We will complete a written report for each of the eleven (11) sites as identified in the attached documents. The reports will detail our findings and will include the site observations, information on each asbestos material identified, analytical results, recommended response actions, and our conclusions and recommendations. The reports will be supplied in electronic format, unless otherwise stated.

If asbestos containing materials have been identified at the site, ASE will discuss options for abatement. The cost for abatement or creating an asbestos abatement management plan has not been included in this estimate.

COST OF SERVICES

We will provide the above inspection services for a lump sum fee of $1,985.00. This fee is contingent on conducting the inspections concurrently.

The fee for sample analysis will be $7.00/per sample. We will use a positive stop approach to reduce sample costs. Some building materials contain multiple layers that are analyzed in the laboratory as separate samples.

SCHEDULE

We anticipate that the inspections will require two to three days to complete. We can begin this scope of work within one week of authorization and will coordinate the inspections with the

local site contact. The written reports will be submitted electronically within two weeks of completion of the inspections.

CLOSURE

We are pleased to have the opportunity to offer our services to you and look forward to working with you on your project. If you have questions concerning the content of this proposal, or if we can be of further service, please contact us at (910) 371-5980.

Respectfully submitted,

ATLANTIC SHORES ENVIRONMENTAL SERVICES, LTD.

Cheryl J. Moody, REM, CIEC, CMRS
Principal Scientist

Elliot Swain
Staff Scientist

Enclosures: FEMA FMA approval sheets
Terms and Conditions of Service

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

June 19, 2015

Michael A. Sprayberry, Director
NC Department of Public Safety
Division of Emergency Management
4236 Mail Service Center
Raleigh, NC 27699-4236

Attention: Nicholas Burk, Section Manager for Hazard Mitigation Grants

Reference: FLOOD MITIGATION ASSISTANCE (FMA),
PROJECT APPROVAL: FMA-PJ-04-NC-2014-010, PENDER COUNTY
ACQUISITION OF FIVE RESIDENTIAL STRUCTURES

FULL UNIT INSPECTIONS

Mr. Sprayberry:

It is my pleasure to confirm that the following project sub-grant has been approved through the FMA grant program pursuant to the Congressional appropriations for Fiscal Year 2014. The Scope of Work (SOW) and Budget submitted by the State for this project sub-grant is approved except as noted in the Conditions below. Please be advised that any proposed change in the list of participating properties represents an SOW change and must be approved by our office prior to issuance of a contract or start of construction.

Project Number & Title	Federal Share	Non-Federal Share	Total Project Cost
FMA-PJ-04-NC-2014-010 Pender County: Acquisition	$1,162,434.00	$ 0.00	$1,162,434.00

13069 NC HWY 53 E. Maple Hill, NC 28454	34.643036, -77.740327
1420 N. Shore Dr. Surf City, NC 28445	34.439328, -77.521404
1422 N. Shore Dr. Surf City, NC 28445	34.439425, -77.521254
1206 S. Anderson Blvd Topsail Beach, NC 28445	34.359771, -77.637215
1310 N. Shore Dr. Surf City, NC 28445	34.437985, -77523567

This letter constitutes programmatic approval for use of FY2014 FMA funds. Sandra McNease, Assistance Officer, has issued the financial award and documentation in support of this approval through eGrants on 09/30/2017, and the State has accepted the award. The funds have been obligated to the appropriate PARS account.

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

June 19, 2015

Michael A. Sprayberry, Director
NC Department of Public Safety
Division of Emergency Management
4236 Mail Service Center
Raleigh, NC 27699-4236

Attention: Nicholas Burk, Section Manager for Hazard Mitigation Grants

Reference: FLOOD MITIGATION ASSISTANCE (FMA),
PROJECT APPROVAL: FMA-PJ-04-NC-2014-008, PENDER COUNTY
ELEVATION OF SIX RESIDENTIAL STRUCTURES

EXISTING CRAWL SPACE OR DOWNSTAIRS STORAGE ONLY

Mr. Sprayberry:

It is my pleasure to confirm that the following project sub-grant has been approved through the FMA grant program pursuant to the Congressional appropriations for Fiscal Year 2014. The Scope of Work (SOW) and Budget submitted by the State for this project sub-grant is approved except as noted in the Conditions below. Please be advised that any proposed change in the list of participating properties represents an SOW change and must be approved by our office prior to issuance of a contract or start of construction.

Project Number & Title	Federal Share	Non-Federal Share	Total Project Cost
FMA-PJ-04-NC-2014-008 Pender County: Elevation Project	$936,820.02	$ 0.00	$936,820.02

1117 Ocean Blvd, Topsail Beach 28445	34.359873, -77.635474
1121 Ocean Blvd, Topsail Beach 28445	34.359745, -77.635643
1802 Ocean Blvd, Topsail Beach 28445	34.351299, -77.646414
1614 Ocean Blvd, Topsail Beach 28445	34.352538, -77.635079
1105 Ocean Blvd, Topsail Beach 28445	34.360515, -77.634787
1123 Ocean Blvd, Topsail Beach 28445	34.359635, -77.635815

This letter constitutes programmatic approval for use of FY2014 FMA funds. Sandra McNease, Assistance Officer, has issued the financial award and documentation in support of this approval through eGrants on 09/30/2017, and the State has accepted the award. The funds have been obligated to the appropriate PARS account.

Atlantic Shores Environmental Services, Ltd.
Terms & Conditions of Service

These Terms and Conditions of Service, including any supplements that may be agreed to, along with the accompanying Scope of Services and Professional Fees constitute the entire Agreement ("Agreement") under which Services are to be provided by Atlantic Shores Environmental Services ("ASE"), including its employees, officers, successors and assigns for the Client ("Client"), including its employees, officers, successors and assigns.

1.0 Independent Consultant Status

1.1 Except as may be otherwise noted herein, ASE shall serve as an independent professional to Client and shall have control over, and responsibility for, the means and methods for providing the services under this Agreement, including the retention of Subcontractors and sub consultants. Unless expressly stated in ASE's scope of services, ASE shall not serve as Client's agent or representative.

2.0 Scope of Services

2.1 The Scope of Services includes only those service identified in the Scope of Services.

2.2 It is understood that the Scope of Services Professional Fees, and time schedule defined in the Scope of Services are based on information provided by the Client and/or Client's contractors and consultants. Client acknowledges that if this information is not current, is incomplete or inaccurate, or if conditions are discovered that could not be foreseen by a reasonable person, the Scope of Services may change, even while the service is in progress.

2.3 Additional Services shall be provided at the unit rates contained in this Agreement, or if not previously provided, at the Fee Schedule rates in effect at the time that the Additional Services are provided.

3.0 Standard of Care

3.1 ASE shall strive to perform its professional Services in a manner consistent with the level of skill and care ordinarily exercised by competent members of the same profession providing similar Services in the same geographic region, under similar conditions during the same period of time. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this Agreement, or in any ASE report, plan, opinion or other document or Service in connection with ASE's Service.

3.2 Client understands and agrees that ASE's professional judgment must rely on the facts learned during the performance of the Scope of Services. Client acknowledges that such data collection is limited to the immediate area that is sampled, tested, and/or observed. Consequently, Client agrees that Client shall not bring a claim, based upon facts subsequently learned, regarding conditions in areas not evaluated by ASE, or which were not part of the immediate area(s) explicitly evaluated by ASE.

3.3 The Client recognizes that tested or explored conditions may vary from those encountered by ASE and that the analyses and recommendations developed by ASE are based predominately on the information available from such testing, surveys and exploration.

4.0 Compliance with Codes

4.1 ASE's professional Services shall be provided in a manner consistent with sound engineering practices and shall comply with applicable codes, laws, regulations, standards, and ordinances ("Standards") in effect and publicly announced as of the time the Services are provided by ASE. ASE shall make reasonable and professional efforts to comply with Clients lawful direction and requests governing the performance of the Services. If a situation arises that causes ASE to believe compliance with Clients whishes could result in ASE Violating an applicable Standard or will expose ASE to claims or other charges, or if ASE believes Clients actions or inaction will be in violation of applicable Standards, ASE shall so advise Client. If Clients actions or inaction result in a violation of applicable standards, ASE shall have the right to terminate its Services in accordance with the Termination provisions of this Agreement.

4.2 If Client decides to disregard ASE's recommendations with respect to complying with Applicable Standards, ASE shall determine of ASE is required to notify the appropriate public officials. Client agrees that such determinations are ASE's sole right to make. Client also agrees that ASE shall not bear liability for failing to report conditions that are Clients responsibility to report.

4.3 Client understands that certain prescriptive profession practice Standards ("Standard practices and Standard guides) exist (such as The American Society for Testing and Materials (ASTM), among others) that identify specific methods, professionals could or should use to attain certain results. Such prescriptive practice Standards fail to consider: the unique needs of the Client; the Clients Project Specific expectations; the requirements and obligations of the professionals engaged to provide Service; and more effective techniques that may have been developed subsequent to the issuance of such Standards. ASE shall identify any deviations from such standards to Client, and the reasons for deviation, in the scope of Services and/or documents of Service.

4.4 Unless other wise indicated, compliance with any practice Standards, referred to as "general compliance", specifically excludes considerations of any practice Standard referenced in the Standards sited in the Documents of Service provided by ASE.

5.0 Client Disclosures

5.1 Client shall furnish and/or shall direct Client's consultant(s) or agent(s) to furnish ASE information identifying the type and location of utility lines and other man-made objects known, suspected, or assumed beneath the Site's surface, where the scope of Services requires ASE to penetrate the Site surface.

5.2 Client shall notify ASE of any known, assumed, or suspected, regulated, contaminated, or Hazardous Materials that may exist at the Site (surficial and subsurface) prior to ASE mobilizing to the Site. Such Hazardous Materials shall include but not be limited to any substance, which poses or may pose a potential hazard to human health or the environment whether contained in a product, material, by product, waste or sample, and whether it exists in a solid, liquid, semi solid or gaseous form ("hazardous materials").

5.3 If any Hazardous Materials are discovered or are reasonably suspected by ASE after its Services are initiated, a Changed Condition shall exist.

5.4 If all or any part of the Scope of Services are to be provided in the general vicinity of a facility, or in an area where dust, fumes, gas, noise, vibrations or other particulate or nonparticulate matter is in the atmosphere where it raises a potential health hazard, or nuisance to those working in the area of such conditions, Client shall notify ASE of such condition(s), potential health hazards or nuisances. ASE shall take any necessary and reasonable measures deemed appropriate to ASE to protect its employees against such possible health hazards or nuisances. The cost for such protective measures shall be borne by the Client.

5.5 Client shall disclose any unsafe condition at the site prior to entrance by ASE.

6.0 Information Provided by Others

6.1 Client shall provide ASE with existing information necessary for rendering Services hereunder, as well as likely sources of this information, with such sources to include but not be limited to Client. Client understands that information provided to ASE may contain errors, inaccuracies, and/or omissions, and that it is impossible for ASE to assure the sufficiency of such information. Client therefore waives any claim of liability against ASE regarding any claim for injury or loss allegedly arising from errors, omissions, or inaccuracies in documents and other information in any form provided to ASE, including such information that becomes incorporated into ASE Documents of Services.

7.0 Concealed Risks

Client acknowledges that special risks are associated with the identification of concealed conditions (i.e., subsurface conditions, conditions behind a wall, etc., that are hidden from view, are not readily apparent, or can not be accessed for sampling/testing). Even a comprehensive sampling and testing program implemented by experienced personnel using appropriate equipment under the direction of a trained professional may fail to detect certain conditions, because such conditions are concealed and can not be targeted in development of an exploration or reconnaissance plan, or sampling/testing program.

7.2 Conditions that ASE infers to exist between sampling/testing points may differ significantly from the conditions that exist at the sampling/testing points. Since some conditions can change substantially over time, the Client recognizes that, because of natural occurrences or human intervention at or near the Site, actual conditions discovered through sampling/testing may be subject to rapid or gradual change.

7.3 ASE will make reasonable efforts to anticipate and identify potential concealed conditions for exploration, sampling, or testing. However, Client understands that such risks can not be eliminated and agrees that that Scope of Services is that which Client agrees suits Clients own risk tolerances. Client may request ASE to evaluate the risks and provide a higher level of exploration to reduce such risks, if desired or appropriate.

8.0 Right of Entry/Damage Resulting From Services

8.1 Client warrants that it possesses the authority to provide right of entry permission for the performance of ASE's Services. Client hereby grants ASE and its subcontractors and/or agents, the right to enter from time to time onto the property owned by client and/or other(s) in order for ASE to perform the Scope of Services.

8.2 Except where ASE's Scope of Service explicitly includes obtaining permits, licenses, and/or utility clearances for the performance of ASE's Services, Client warrants that it possess all necessary permits, licenses and/or utility clearances for the Services to be provided be ASE.

8.3 ASE will take reasonable precautions to limit damage to the Site and improvements during the performance of ASE's services. Client understands that use of exploration, sampling, or testing equipment may cause some damage, the correction and restoration of which is not part of this Agreement, unless explicitly stated in ASE's Scope of Services, and reflected in the Professional Fees.

8.4 Client understands that the discovery of certain conditions and/or the taking of preventive measures relative to such conditions may result in a reduction of the Property's value. Client agrees that it will not bring any claims for liability or for injury or loss allegedly arising from procedure associated with exploration, sampling or testing activities, or discovery of Hazardous Materials, or suspected Hazardous Materials, or ASE's findings, conclusions, opinions, recommendations, plans, and/or specifications related to discovery of such contamination.

9.0 **Underground Utilities**

9.1 In addition to Client furnishing information regarding underground utilities, ASE shall take reasonable and locally customary precautions, possibly including contacting local public and/or private utility locating services, and/or conducting research of publicly available information, to identify underground utilities as deemed appropriate in ASE's professional opinion. The extent of such precautions shall be at ASE's sole discretion.

9.2 Client recognizes that despite due care, ASE may be unable to identify the locations of all subsurface utility lines and man-made features, and that information obtained by ASE and/or ASE's subcontractor(s) or provided to ASE from any entity may contain errors or be incomplete.

9.3 Client's approval or absence of Client's approval of a subsurface exploration sketch or the absence of a sketch shall not alter Clients responsibilities for furnishing information regarding underground features.

9.4 Client agrees that ASE shall not be liable for damage or injury, consequential economic damages, and/or penalties resulting from damages to subterranean structures (pipes, tanks, cables, or other utilities, etc.) which are not called to ASE's attention in writing and correctly shown on the diagram(s) furnished by Client or Client's consultants or for underground features not marked or improperly located by governmental or quasi-governmental locators, utility owners, or private utility locating services.

10.0 **Samples**

10.1 Soil, rock, building materials and/or samples and sampling by-products obtained from the site are the property of Client. ASE will store samples not consumed in laboratory testing for up to sixty (60) calendar days from the issuance of any document containing data obtained from those samples, unless other arrangements are mutually agreed upon in writing. Samples consumed by laboratory testing procedures will not be stored as outlined above.

10.2 Unless Client directs otherwise, Client authorizes ASE to dispose of Clients non-hazardous samples and sampling or testing byproducts in accordance with applicable laws.

11.0 **Hazardous Materials**

11.1 All substances on, in, or under Client's Site, or obtained from Client's Site as samples or as byproducts of the sampling process, are and will remains the Client's property.

11.2 When Hazardous Materials are known, assumed, or suspected to exist at the Site, ASE shall take appropriate precautions deemed prudent by ASE's sole and professional opinion to comply with applicable laws and regulations and to reduce the risks to ASE's employees, public health, safety and welfare, and the environment. Client agrees to compensate ASE for such services.

11.3 Hazardous Materials may exist even where there is no reason to believe they are present. Should ASE discover that such unanticipated or suspected Hazardous Materials exist, ASE shall notify Client as soon as practicable. Discovery of unanticipated Hazardous Materials constitutes a Changed Condition.

11.4 When hazardous Materials are known, assumed, or suspected to exist at the Site, ASE will handle such materials as Hazardous Materials. ASE or ASE's subcontractors will containerize and label such Materials in accordance with applicable law, and will leave the containers on Site. Client is responsible for the retrieval and lawful removal, transport and disposal of such contaminated samples, and sampling process byproducts.

11.5 Any of ASE's field, laboratory, or other equipment that becomes contaminated by Hazardous materials encountered at the Site must be decontaminated. Any contaminated consumables must be disposed of properly and replaced. Client shall compensate ASE for the decontamination of the equipment and disposal and replacement of contaminated consumables. For purposes of this Agreement, equipment that cannot be readily decontaminated shall be considered a consumable.

11.6 Unless explicitly stated in ASE's Scope of Service, ASE shall not subcontract nor arrange for the transport, disposal, or treatment of Hazardous Materials. At Client's request, ASE may assist Client in identifying appropriate alternatives for transport, off-site treatment, storage, or disposal of such substances, but Client, not ASE shall make final selection of methods and firms to provide such service. Client shall sign all manifests for the disposal of substances affected by Hazardous Materials contaminants and shall otherwise exercise prudence in arranging for lawful disposal.

11.7 In those instances where ASE is expressly retained by Client to assist Client in the disposal of Hazardous Materials, samples, or wastes, ASE shall do so only as Client's agent (notwithstanding any other provision of this Agreement to the contrary) so that ASE shall not assume the role, nor be considered a generator, storer, transporter, or disposer of Hazardous Materials.

11.8 Where the Scope of Services includes identifying existing sources of asbestos, lead, or other Hazardous Materials, ASE will attempt to identify such materials which are accessible and which, in ASE's professional opinion, have the potential to pose significant exposure risk. Client acknowledges that ASE may not be able to identify all sources of such materials, or that identification of all materials may not be practical, or may be cost prohibitive.

12.0 **Aquifer Cross-Contamination**

12.1 Subsurface sampling may result in unavoidable cross-contamination of certain subsurface areas, as when a probe or excavation/boring device moves through a contaminated zone and links it to an aquifer, underground stream, or other hydrous body not previously contaminated, or connects an uncontaminated zone with a contaminated zone. Because sampling is an essential element of ASE's services indicated herein, Client agrees this risk cannot be eliminated. Client will not hold ASE liable for such cross-contamination if ASE provides its Services in accordance with the applicable Standard of Care.

13.0 **Phase I Environmental Site Assessments**

13.1 Client understands that an Assessment (ESA) is conducted solely to permit ASE to render a professional opinion about the likelihood of the site having a Recognized Environmental Condition on, in, beneath, or near the Site at the time the Services are conducted.

13.2 No matter how thorough a Phase I ESA study may be, findings derived from its conduct are highly limited and ASE cannot know or state for an absolute fact that the Site is unaffected by one or more Recognized Environmental conditions. Furthermore, even if ASE believes that reportable qualities of Hazardous Materials are not present, Client agrees that it still bears the risk that such contaminates may be present, or may migrate to the Site after the Scope of Services is complete.

13.3 Given the foregoing, Client's acceptance of this Agreement shall signify that Client understands the limitations associated with Phase I ESAs.

14.0 **Ownership of Documents**

14.1 With the exception of the copies of the ASE Documents of Service provided to the Client, all documents, including original boring logs, field data, field notes, laboratory test data, calculations and estimates, maintained in any form deemed appropriate by ASE , are and remain, the property of ASE.

14.2 Any exploration, reconnaissance, data review, observations, testing, surveys, or similar Services, analyses and recommendations associated with the Services shall be provided by ASE (including subcontracted Services) for the Client's sole use. Client understands and agrees that any use of the Documents of Service by anyone other than the Client is not permitted.

14.3 Client has retained ASE to provide professional Services, resulting in, but not limited to, technical reports, letters, photos, boring logs, field data, field notes, laboratory test data, calculations, designs, plans, specifications, reports, or similar documents and estimates of any kind furnished by ASE ("Documents of Service"). Such Documents of Service are not being purchased under this Agreement.

14.4 Client agrees to not use ASE's Documents of Service for any other projects, or for the Project, which has changed in scope, or extensions of the Project, from the details contemplated in ASE's Documents of Service. Any reuse without ASE's written consent shall be at Client's sole risk and without liability to ASE or to ASE's subcontractor(s).

14.5 Client agrees that ASE's Documents of Service may not under any circumstances be altered by any party except ASE. Client warrants that ASE's Documents of Service shall be used only and exactly as submitted by ASE.
14.6 If ASE at Client's request verifies or adapts any Document of Service for extensions of the Project, or for any other project, then Client shall compensate ASE at rates on in an amount to be agreed upon in advance by Client and ASE.
14.7 Client may make and retain copies of the ASE Documents of Service for information and reference in connection with the Project.
14.8 Except for daily field reports and concrete test reports sent electronically by ASE to Client and Client's designees, the following shall apply to all electronic files: Files in electronic media format of text, data, graphics, or other types that are furnished by ASE are furnished only for convenience, not reliance by the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies shall govern.
14.9 Client agrees that all reports, documents, and other Documents of Service furnished to the Client but not paid for in full will be returned to ASE upon request and will not be used for design, construction, permitting or licensing.
14.10 Client agrees that any patentable or copyrightable concepts developed by ASE as a consequence of its Services hereunder are the sole and exclusive property of ASE.

15.0 **Safety**
15.1 Client agrees that ASE is responsible solely for the safety of ASE's employees on the Project Site. These responsibilities shall not be inferred by any party to mean that ASE has responsibility for any portion of the site safety for any reason. Unless otherwise expressly agreed to in writing, ASE's Scope of Services excludes responsibility for any aspect of site safety other than for ASE's own employees and nothing herein shall be construed to relieve Client and/or its other contractors, consultants, or other parties from their responsibility for the safety of their own employees.
15.2 For active construction sites, Client also agrees that the General Contractor is solely responsible for Project Site safety. Client agrees that Client's agreement with the General Contractor shall require the Contractor, to the extent of Contractor's negligence, to indemnify, defend, and hold Client and ASE harmless from any fine, penalty, claim or liability for injury or loss arising from Client's or ASE's alleged failure to exercise site safety responsibility.
15.3 Client shall to the fullest extent permitted by law comply with the Indemnification provisions of this Agreement as a result of any claim or liability for injury or loss arising from:
15.3.1 ASE's alleged failure to notice safety hazard of any kind;
15.3.2 ASE taking direct and immediate action as a Good Samaritan, to prevent or mitigate the effects of what ASE believes is a hazardous condition or an imminent accident;
15.3.3 ASE's alleged failure to exercise site safety responsibility.
15.4 In the event ASE expressly assumes health and safety responsibilities for toxic or other concerns specified, the acceptance of such responsibility does not and shall not be deemed an acceptance of responsibility for any other health and safety requirements, such as those relating to excavating, trenching, shoring, drilling, backfilling, blasting or similar construction activities.

16.0 **Construction Testing and Remediation Services**
16.1 Client understands that construction testing and observation Services are conducted to reduce, not eliminate the risk of problems arising during or after construction or remediation, and that provision of such Services does not create a warranty or guarantee of any type.
16.2 Monitoring and/or testing Services provided by ASE shall not in any way relieve the Client's contractor (s) from their responsibilities and obligations for the quality and completeness of construction, nor for com plying with applicable laws and codes.
16.3 The professional activities of ASE, or the presence of ASE employees and subcontractors, shall not be construed to imply ASE has any responsibility for the means, methods, techniques, sequencing of construction, or procedures of construction selected, for safety precautions, and programs incidental to the Contractor's Work. Furthermore ASE does not and shall not have or accept authority to supervise, direct, control or stop Contractor's Work.
16.4 Construction monitoring generally consists of visual observation and monitoring of construction materials, equipment operation and/or installation procedures, possibly including applicable testing, to permit ASE to render a professional opinion as to the contractor's conformance with the Project plans and specifications, and applicable laws and regulations. Client is the only party who may accept or reject the work based partially on ASE's professional opinion.
16.5 ASE strongly recommends that Client retain ASE to provide its services on a full time basis to lower the risk of defective or incomplete work being installed by the contractor. If Client elects to retain ASE on less than a full time basis for any aspect of construction monitoring and/or testing, Client accepts the increased risks that a significantly lower level of construction quality may occur, and waives any and all claims against ASE related to unsatisfactory quality or performance of elements observed or tested by ASE on a part time basis.
16.6 Under no circumstances shall ASE be liable for extra work or other consequences due to Changed Conditions, or costs related to recommendations provided by ASE, or failure of the General Contractor, subcontractors, material men, or service providers to install the Work in accordance with the plans and specifications, and applicable laws and regulations. Client agrees that it will not hold ASE liable for problems that arise when ASE's plans, specifications, recommendations, reports or other Documents of Service are not followed.

17.0 **Certifications**
17.1 Client may request or require ASE to provide a "certification" regarding Services provided by ASE. Any "certification" required of ASE by the Client, or jurisdiction (s) having authority over some or all aspects of the Project, shall consist of ASE's inferences and professional opinions based on limited sampling, observations, tests, and/or analyses performed by ASE at discrete locations and times. ASE's "certification" shall consist of ASE's professional opinion of a condition's existence, but ASE does not guarantee that such condition exists, nor does it relieve other parties of responsibilities or obligations such parties have. Client agrees not to make resolution of any dispute with ASE or payment of any amount due to ASE in any way contingent upon ASE signing any such documents.

18.0 **Changed Conditions/Agreement Renegotiation**
18.1 Should ASE identify a Changed Condition, ASE shall notify the Client of the Changed Condition (s) that in ASE's professional judgment require an amendment of the Professional Fees, time schedule, and/or Scope of Services. ASE and Client shall promptly and in good faith negotiate an amendment to this Agreement.

19.0 **Billings and Payments**
19.1 Billings will be based on the unit rates, travel costs, and other reimbursable expenses stated in the Professional Fees.
19.2 Any Estimate of Professional Fees stated in the Agreement shall not be considered as a not-to-exceed or lump sum amount unless otherwise explicitly stated in this Agreement.
19.3 Client recognizes that time is of the essence with respect of payment of ASE's invoices and that timely payment is a material part of the consideration of this Agreement. Payment shall be in U. S. funds drawn upon U. S. banks and in accordance with the rates and charges set forth in the Professional Fees. ASE will submit invoices no more frequently than every two weeks, which shall be due and payable upon receipt.
19.4 If Client disputes all or part of an invoice, Client shall provide ASE with written notice stating in detail the facts of the dispute within twenty-one (21) calendar days of the invoice date and agrees to pay the undisputed amount of such invoice promptly.
19.5 ASE reserves the right to charge the Client an additional charge of one-and-one-half (1.5) percent (or the maximum percentage allowed by law, whichever is lower) of the invoiced amount per month for any payment received by ASE more than thirty (30) calendar days from the date of the invoice, excepting any portion of the invoice amount in dispute and resolved in favor of Client. Payment will first be applied to accrued interest and then to the unpaid principal amount. Payment of invoices shall not be subject to unilateral discounting or set-offs by Client.
19.6 Application of the percentage rate indicated above as a consequence of Client's late payments does not constitute any willingness of ASE to finance Client's operations, and no such willingness shall be inferred. If Client fails to pay invoiced amounts in thirty (30) calendar days of the date of invoice, ASE may at any time, without waiving any other claim against Client and without incurring any liability to Client, suspend or terminate all or part of its Services. Termination shall not relieve Client of its obligation to pay amounts incurred up to termination plus additional costs associated with ASE's termination of Services.
19.7 Client agrees that its obligation to pay for Services is not contingent upon Client's ability to obtain financing, zoning, approval of governmental or regulatory agencies, permits, final adjudication of a lawsuit in which ASE in not involved, upon Client's, successful completion of the Project, settlement of a real estate transaction,

receipt of payment from Client's client, or any other event. Retainage shall not, be withheld from any payment, nor shall any deduction be made from any invoice on account of penalty, liquidated damages, or other sums incurred by Client. It is agreed that all costs and legal fees including actual attorney's fees, and expenses incurred by ASE in enforcing any provision of the Agreement, in perfecting or obtaining a lien, recovery under a bond, collecting any delinquent amounts due, or executing judgments, shall be reimbursed by Client.

19.8 In the event that Client has not provided payments such that ASE's ability to file a property lien is about to expire, ASE reserves the right to file property/mechanic's liens to secure payment. All fees associated with filing and removing a lien shall be paid by Client.

19.9 Should Client decide to retain other consultants to complete the Services contemplated in this Agreement, or change consultants at the next phase of the Project, Client agrees to compensate ASE in full for all Services performed to date prior to engagement of subsequent consultants.

19.10 Payment of an invoice by the Client shall be taken to mean that the Client agrees to provisions of the Agreement and is satisfied with ASE's Services and is not aware of any defects in those Services, unless Client has provided notice to ASE in accordance with the Defects In Service provisions of this Agreement.

19.11 The Professional Fees shall remain valid for a period of twelve (12) months from the date of Agreement. Thereafter, Fee unit rates shall be adjusted in accordance with the Average Consumer Price Index (CPI) for the last twelve (12) months, as required by any applicable collective bargaining agreement, or as mutually agreed to by Client and ASE.

20.0 Defects In Service

20.1 Client and Client's personnel and contractors shall promptly inform ASE of any actual or suspected defects in ASE's Services, to help ASE take those prompt, effective measures that in ASE's opinion will help reduce or eliminate the consequences of any such defect. Corrections of defects attributable to ASE's Services shall be provided at no cost to Client, except in the case that the deficiency is directly attributable to Client-furnished information, Client shall compensate ASE for the costs of correcting such defects.

20.2 Modifications to reports, documents and plans required as a result of jurisdictional reviews or Client requests shall not be considered to be Defects In Service. Client shall compensate ASE for additional Services required as a result of jurisdictional review requirements.

21.0 Insurance

21.1 ASE represents that it and its subcontractors and subconsultants are protected by Workers Compensation Insurance, and that ASE is covered by general liability, automobile and professional liability insurance policies, which it deems reasonable and adequate.

21.2 ASE shall furnish certificates of insurance upon request. The Client is responsible for requesting specific inclusions or limits of coverage that are not present in ASE's insurance, the cost of such inclusions or coverage increases, if available, will be at the expense of the Client.

22.0 Limitation of Liability

22.1 Client agrees to allocate certain of the risks associated with the project by limiting ASE's total liability to Client, subject to available insurance proceeds, arising from ASE's Professional Acts, Errors, or omissions and for any and all causes including Negligence, Strict Liability, Breach of Contract, or Breach of Warranty, injuries, Damages, Claims, Losses, Expenses, or Claim expenses (including reasonable attorney's fees) under this Agreement to the fullest extent permitted by law, as follows. For Projects where ASE's fee estimate or proposed fees are:

22.1.1 $2,500 or less, ASE's total aggregate liability to Client shall not exceed $5,000.

22.1.2 Greater than $2,500 but not $25,000 or less, ASE's aggregate liability to Client shall not exceed $50,000.

22.1.3 Greater than $25,000 but $100,000 or less, ASE's total aggregate liability to Client shall not exceed $200,000.

22.1.4 Greater than $100,000 but $500,000 or less, ASE's total aggregate liability to client shall not exceed $1,000,000.

22.1.4.1 If Client wishes to increase ASE's limitation of liability from $1,000,000 to $2,000,000, where ASE's Fee Estimate or actual fees are greater than $100,000, Client agrees to remit an additional fee of $3,000 to gain the additional coverage. Such request shall be indicated by Client's initials: _____. This additional fee shall be invoiced immediately upon the execution of this Agreement and shall be due upon receipt.

22.2 Client agrees to require of the Client's General Contractor and its subcontractors an identical limitation of ASE's liability for damages that may be suffered by the Contractor or the subcontractors arising from ASE's Professional Acts, errors, or Omissions. In the event that Client in unwilling or unable to obtain such identical limitation of liability in favor of ASE, Client agrees to indemnify ASE for any amounts that ASE would not owe were such a limitation of liability in place.

22.3 Client agrees that ASE shall not be responsible for bodily injury and property damage or losses arising directly or indirectly, in whole or in part, from acts or omissions by the Client, its employees, agents, staff, consultants, or subcontractors or by any other person or combination of persons to the extent such injury, damage, or loss is caused by acts or omissions of Client, its employees, agents, staff, consultants or subcontractors.

23.0 Indemnification

23.1 ASE agrees, subject to the limitation of liability provisions of this Agreement, to hold harmless and indemnify Client from and against damages arising from ASE's negligent performance of its Services to the extent that such injury is found to be caused by ASE's negligent Acts, errors or omissions, specifically excluding any damages caused by any third party or by the Client.

23.2 To the fullest extent permitted by applicable law, Client agrees to indemnify, defend, and hold ASE harmless from and against any and all liability, claims, damages, demands, fines, penalties, costs, and expenditures (including reasonable attorney's fees and costs of litigation defense and/or settlement) ["Damages"] caused in whole or in part by the negligent acts, errors, or omissions of the Client and Client's employees, agents, staff, contractors, subcontractors, consultants, and clients, provided such Damages are attributable to : (a) the bodily injury, personal injury, sickness, disease and/or death of any person; (b) injury to or loss of value to tangible personal property; (c) a breach of this Agreement, except to the extent such Damage is caused by the sole negligence or willful misconduct of ASE.

23.3 It is specifically understood and agreed that in no case shall ASE be required to pay an amount of Damages disproportional to ASE's culpability, or any share of any amount levied to recognize more than actual economic damages, **subject to any limitations and Indemnification provisions contained in this Agreement.**

23.4 Client shall require that General Contractor and general Contractor's subcontractors include Client and ASE as additional insured under their general liability insurance policies, whose insurance protection shall be primary protection for Client and ASE, and shall hold Client and ASE harmless from claims, losses, and defense costs arising from the General Contractor's and General Contractor's subcontractors on any tier.

23.5 If Client fails to obtain indemnifications from General Contractor and General Contractor's subcontractors, Client agrees to indemnify, defend and hold harmless ASE from any and all claims brought by the General Contractor or General Contractor's subcontractor for any amounts ASE would not owe were such a limitation of liability in place.

23.6 If Client is a homeowner, homeowner's association, condominium owner, condominium owner's association, or similar residential owner, ASE recommends that legal counsel be retained by Client before entering into this Agreement to explain Client's rights, and the limitations and restrictions imposed by this Agreement. Client agrees that failure to retain such counsel shall be a knowing waiver of legal counsel and shall not be allowed on grounds of avoiding any provision of this Agreement.

23.7 If Client is a residential builder, or residential developer, Client shall indemnify, defend and hold harmless ASE against any and all claims or demands due to injury or loss initiated by one or more homeowners, unit owners, or their homeowner's association, cooperative board, or similar entity against Client which results in ASE being brought into the dispute.

24.0 Consequential Damages

24.1 Client shall not be liable to ASE and ASE shall not be liable to Client for any consequential damages incurred by either due to the fault of the other, regardless of the nature of the fault, or wherever committed by the Client or ASE, their employees, consultants, agents, contractors or subcontractors, or whether such liability arises in breach of contract or warranty, tort, (including negligence), statute, or any other cause of action. Consequential damages include, but are not limited to, loss of use and loss of profit.

24.2 ASE shall not be liable to Client, or any entity engaged directly or indirectly by Client, for any liquidated damages due to any fault, or failure to act, in part or in total by ASE, its employees, agents, or subcontractors.

25.0 **Sources Of Recovery**
25.1 All claims for damages related top the Services provided under this Agreement shall be made against the ASE entity contracting with the Client for the Services, and no other person or entity. Client agrees that it shall not name any affiliated entity including parent, peer, or subsidiary entity or any individual officer, director, or employee of ASE, unless such claims are based on acts unrelated to the provision of Services under this Agreement.
25.2 Client agrees that it will not seek damages from any individual associated with ASE as an officer, principal, partner, employee, or owner, from any and all claims or liability for injury or loss that would require such individual to relinquish personal assets to satisfy such claim.

26.0 **Third Party Claims Exclusion**
26.1 This Agreement shall not create any rights or benefits to parties other than Client and ASE. No third-party shall have the right to rely on ASE's opinions rendered in connection with ASE's Services without both Client's and ASE's written consent and the third-party's agreement to be bound to the same terms and conditions contained in this Agreement as Client, and third-party's agreement that ASE's Scope of Services performed is adequate.

27.0 **Dispute Resolution**
27.1 All claims, disputes or controversies ["Disputes"] arising out of, or in relation to the interpretation, application or enforcement of this Agreement shall be decided as follows:
27.1.1 Client and ASE agree to attend a dispute resolution meeting within fourteen (14) days of identification of a Dispute by either party. Client and ASE agree to negotiate in good faith to resolve the dispute.
27.1.2 Should negotiation fail to resolve the dispute, Client and ASE agree to mediate their dispute via a mediator selected by either party and acceptable to both parties.
27.1.3 Should mediation fail to result in resolution of the Dispute, Client and ASE agree that litigation may be brought by either party.
27.2 Should third-party dispute resolution be required, through mediation or litigation, the non prevailing party shall reimburse the prevailing party for the prevailing party's documented legal costs, in addition to whatever other judgments or settlement sums may be due. Such legal costs include but are not limited to, reasonable attorney's fees, court costs, forensic consultants and expert witness fees, and other documented expenses.
27.3 Where legal action is brought by either party to resolve a dispute, the claim shall be brought and tried in the judicial jurisdiction of the county in which ASE's office contracting with the Client is located. Client waives the right to remove any litigation action to any other jurisdiction, unless mutually agreed to by both parties.
27.4 This Agreement including all maters related to performance and remediation shall be interpreted according to the substantive laws of the State of North Carolina (but not including its choice of law rules).

28.0 **Curing A Breach**
28.1 A party that believes the other has materially breached this Agreement shall issue a written termination notice to the other, identifying the cause for termination within five (5) business days of identifying such cause. Both parties shall then bargain promptly and in good faith to cure this cause. If an acceptable cure can be achieved within fourteen (14) calendar days from the date of the termination notice, the parties shall commit their understandings to writing and termination shall not occur.
28.2 Either party may waive any right provided by this Agreement in curing an actual or alleged breach; however, such waiver shall not affect future application of such provision or any other provision.

29.0 **Termination**
29.1 Client or ASE may terminate this Agreement for breach of this Agreement, or for any other reasons that may arise. In the event of termination, the party effecting termination shall so notify the other party in writing, and termination shall become effective fourteen (14) calendar days after receipt of the termination notice.
29.2 Irrespective of which party shall effect termination, or the cause therefore, ASE shall promptly render to Client a final invoice and Client shall immediately compensate ASE for services rendered and costs incurred, in accordance with ASE's prevailing Fee Schedule and expense reimbursement policy. Services shall include those rendered up to the time of termination, as well as those associated with termination itself, including without limitation, demobilizing, modifying schedules, and reassigning personnel.

30.0 **Time Bar To Legal Action**
30.1 Unless prohibited by law, and notwithstanding any statute that may provide additional protection, Client and ASE agree that claims by either party arising out of this Agreement or the Services provided hereunder shall not be initiated more than two (2) years from the time the party knew, or should have known, of the condition giving rise to its claim, and shall under no circumstances be initiated more than three (3) years from the date of substantial completion of ASE's Services.

31.0 **Assignment**
Except for Services normally or customarily subcontracted by ASE in the performance of its Services including, but not limited to surveyors, specialized consultants, drilling and excavating subcontractors, and testing laboratories, neither Client nor ASE may delegate, assign, sublet, or transfer its duties, responsibilities or interests in this Agreement without the written consent of the other party.

32.0 **Severability**
32.1 Any provision of this Agreement later held to violate a law, statute, or regulation, shall be deemed void, and all remaining provisions shall continue in full force and effect. Client and ASE shall endeavor to quickly replace a voided provision with a valid substitute that expresses the intent of, or at least addresses, the issues covered by the original provision.

33.0 **Titles**
33.1 The titles used in this Agreement are for general reference only and are not part of this Agreement.

34.0 **Survival**
34.1 All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between the Client and ASE shall survive the substantial completion of Services and the termination of this Agreement.

35.0 **Entire Agreement**
35.1 This Agreement including the Scope of Services and Professional Fees and all exhibits, appendixes, and other documents appended to it, constitute the entire Agreement between Client and ASE. Client acknowledges that all prior understandings and negotiations are superseded by this Agreement. Client acknowledges acceptance of these terms by submitting a Client Work Authorization to ASE.
35.2 Client and ASE agree that subsequent modifications to this Agreement shall not be binding unless made in writing and signed by authorized representatives of both parties.
35.3 Client's or ASE's unilateral modification of this Agreement subsequent to ASE's initiation of Services is expressly prohibited. Furthermore, all preprinted Terms and Conditions on Clients purchase order or Work Authorization, or other service acknowledgement forms, are inapplicable and superseded by this Agreement.
35.4 If Client fails to provide ASE with a signed copy of this Agreement or a Work Authorization, by the act of authorizing and accepting the Services of ASE, Client agrees to be fully bound by the terms of this Agreement.

<END OF TERMS AND CONDITIONS OF SERVICE>

WESTON LYALL PE, PLS
Structural & Civil Engineering Land Surveying Serving Eastern North Carolina
STRUCTURAL ENGINEERING~CIVIL ENGINEERING ~LAND SURVEYING
Weston Lyall, PE, PLS, PLLC
214 Highway 17 N. Suite 1
Holly Ridge, NC 28445
910-329-9961 Office 910-329-9963 Fax
Firm License Number P-0937
www.WestonLyall.com

December 2, 2015

PROPOSAL FOR

PENDER COUNTY
FY2014 FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM
Structural Engineering Activities
Elevation and retrofitting of approximately six(6) residential structures located in Pender County, NC

Firm Name: Weston Lyall, PE, PLS, PLLC
Weston Lyall (President)

214 Highway 17N Suite 1
Holly Ridge, NC 28445

References:

McKee Building Group
Craig Bradley (owner)
301 Fayetteville St. Unit 2607
Raleigh, NC

Thornton Builders
Lee Thornton (owner)
214 Highway 17N
Holly Ridge, NC

C. T. Duff Builders, Inc.
Carl Duff (owner)
212 Tar Landing Road
Sneads Ferry, NC

Pollard Enterprises
Tommy Pollard (owner)
2965 Richlands Highway
Jacksonville, NC

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Experience:
The firm, Weston Lyall, PE, PLS, PLLC, was established in 2004 in Onslow County. The firm offers Structural Engineering, Civil Engineering and Land Surveying services. Approximately two-thirds of the engineering for the firm pertains to residential engineering. The firm designs and engineers residential house plans for new construction, additions and remodeling. A large portion of the residential designs are on or near Topsail Island. The firm develops engineered foundation plans using prescriptive engineering methods and per the NC Residential Building Code. With most designs, consideration of both High-wind and floodzones are utilized. The firm has also been involved in the design of new foundations for homes that have been moved.

The firm has worked with many insurance companies, contractors, County Inspectors and individuals in evaluating miscellaneous structural concerns and failures for many homes. Some evaluations were from Hurricane storms, Nor-Easters and recent tornados. The firm has been engaged in storm related damages for many of the Coastal Counties in North Carolina. The owner, Weston Lyall, was employed with NC Department of Transportation (NCDOT) as a manager when Hurricane Floyd hit in 1999. Mr. Lyall was extremely active in coordination with road repairs and all associated forms and paper work for the State and Federal agencies. Lastly, in 2012 and 2014 the firm worked with HMGP residence's in Craven County.

The firm is capable of performing the desired services within a timely fashion and within financial constraints. The firm has the ability and availability to have qualified personnel for inspections and designs. Currently our personnel consist of:

Weston Lyall, PE, PLS
Gina Polanco, EI
John Kamm, Survey Party Chief
Paula Wright, PE
Joel Watters, PE(Part-time)
Linda Humphrey, PLS(Part-time)

At this time the firm's workload is light to moderate. The firm does not anticipate a large increase in workload over the next few months.

If awarded the contract, all staff members will be involved in the project, as required, though Weston, Gina and Paula will take the lead on the projects.

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Rates:		Estimated time % for project
Licensed Engineer	$125/hr	60%
Licensed Surveyor	$125/hr	
Engineer Intern	$80/hr	20%
CADD Operator	$80/hr	20%
Technician	$55/hr	

Sincerely,

Weston Lyall

Weston Lyall, PE, PLS

Appian
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES

December 2, 2015

Holland Consulting Planners, Inc.
Attn: Mr. J. Reed Whitesell, AICP
Pender County 2014 FMA Engineering Services Proposal
3329 Wrightsville Avenue, Suite F
Wilmington, NC 28403

RE: Request for Proposals for Structural Engineering
Pender County 2014 FMA Engineering Services Proposal

Dear **Mr. Whitesell:**

Appian Consulting Engineers, PA, is pleased to submit the attached proposal for the requested services for the work related to the Pender County 2014 Flood Mitigation Assistance (FMA) Program for Elevation.

Our team is eager to provide engineering, inspection and surveying services for this project and is looking forward to working again with Pender County. Thank you for allowing us the opportunity to submit this proposal. Please let me know if you have any questions or would like additional information about our team.

Respectfully,
Appian Consulting Engineers, P.A.

Bobby L. Joyner, P.E.
President

Post Office Box 7966 · Rocky Mount, NC 27804 · 252.972.7703 · 252.972.7638, Fax
www.appianengineers.com · admin@appianengineers.com

Appian Consulting Engineers, PA

Post Office Box 7966	Bobby L, Joyner, PE, President
154 Roundabout Court	252.972.7703, phone
Rocky Mount, NC 27084	252.972.7638, fax
www.AppianEngineers.com	bjoyner@appianengineers.com

Appian Consulting Engineers, P.A. is an engineering design firm structured to serve North Carolina and southeastern Virginia with our office located in Rocky Mount, North Carolina. Appian has been a reliable presence in eastern North Carolina since its inception in 1986 by its owner and President Bobby L. Joyner, PE. Mr. Joyner's experience is extensive in the area of municipal engineering and design as he worked for the City of Rocky Mount for more than 18 years, with the last four years as the Director of Engineering.

Our team's extensive multi-disciplinary experience will ensure that all construction work is performed in conformance with safety requirements, contract requirements, and quality control/ quality assurance practices. Appian will work closely with all parties involved to ensure that a superior construction product is delivered on time and within budget. Hourly rates are attached.

The Appian Team

The Appian Team will consist of the following personnel providing exceptional expertise:

Bobby L. Joyner, P.E., President: Mr. Joyner obtained his Civil Engineering Diploma in 1972 and became a professional engineer in 1978. He has extensive experience in municipal engineering and planning as he worked for the City of Rocky Mount as the Rocky Mount City Engineer (1982-1986) and in the engineering department for more than 18 years. Mr. Joyner has more than three decades of experience in design for FMA, HGMP, SRL, CDBG, municipal, industrial, commercial and residential projects including structural and retrofit design, water system distribution, drainage improvements, sewer rehabilitation and sewage pump station design, pier and bridge design, wave modeling, and flood studies. Mr. Joyner provides forensic studies on both mold and crawl space moisture control in commercial and residential buildings. Recognized as an expert in NC and VA, consultants and attorneys frequently refer their clients to Appian for investigations, design and expert testimony in court cases. In addition to acquiring three patents, he has authored a state of the art *Manual of Specifications, Standards and Design,* which Appian has developed for numerous cities in Virginia and North Carolina. He was involved in *all* of Appian's projects listed below. Mr. Joyner will be the Project Engineer and Inspector (as needed) for the project.

David C. Revoir, P.E.: Bringing experience from Maryland State Highway Administration and Greenhorne & O'Mara, Mr. Revoir has a broad range of experience in CDBG, municipal, industrial, commercial and residential projects including water distribution analysis, street design, stormwater modeling, sewer design, and erosion control. Mr. Revoir routinely leads projects through conceptual layout, detailed design, permitting, contract bidding, construction administration and as-built certification. He is adept at providing railroad design, no-net rise flood studies, SWPPP/SPCC Plans, and swimming pool compliance for the Virginia-Graeme Baker Pool and Spa Safety Act. Contributing

> "The construction drawings and specifications that your firm produces are ***detailed*** and ***comprehensive*** and portray a ***thorough understanding*** of the construction process. As a matter of fact, the U.S. Department of Commerce Economic Development Administration will be using your firm's specifications and contract documents as ***the model*** for other engineering firms to follow..."
>
> Milton Cochran, Sr.
> US Department of Commerce
> Economic Development Administration

author for Stormwater Design for the *Manual of Specifications, Standards and Design,* Mr. Revoir is *the* engineer for Franklin County Stormwater Review. He has extensive experience with stormwater modeling, stormwater BMP design and writing municipal stormwater ordinances. He is a Sustainable Land Development International *(SLDI)* Associate Member and LEED Accredited Professional *(LEED AP Building Design + Construction)* with the U.S. Green Building Council. Mr. Revoir's responsibility on this project will be that of project manager.

Michael Gallina, Jr., CAD Manager: Mr. Gallina has been with Appian for more than 21 years and has extensive experience in creating master plans, site plans, street plans, and profiles, water and sewer lines, grading, and erosion sedimentation control, construction plans, utility plans and staking plans. He has also developed both 3D and isometric details on all our plans to clearly convey the intent of the detail to those in the trenches. As a result, Appian developed catalogues for a number of national precast manufacturers, including: *NC Precast* (Hanson, Needville, TX), *Fralo Plastics* (Syracuse, NY), *Dellinger* (Mecklenburg County, NC), *Mack Industries* (Sharpsburg, NC and Valley City, OH), *Albuquerque Vault* (Albuquerque, NM) and *Ideal Precast* (Raleigh, NC).

Appian will strive to maintain equal participation of *Disadvantaged Business Enterprises (DBEs)* and to utilize DBE's to the maximum extent as possible. Appian will use Small Business Administration (SBA) information and other agencies to determine and develop a list of local DBE's qualified for this project. We are committed to advancing the *Historically Underutilized Business* community.

Engineering & Project Experience

Appian has extensive experience with many municipalities ranging from small to large projects, involving a full range of engineering services. As you can see below, Appian has been involved in a plethora of similar projects in eastern North Carolina for the past three decades:

APPIAN'S FLOOD MITIGATION WORK INCLUDES:

Residential Elevation Raising Projects:

- Craven County
- Beaufort County
- Carolina Beach
- Pamlico County
- Hyde County
- Washington, NC
- Belhaven, NC

Some of the Most Recent Projects:

Pender/ Onslow County House Raising and Foundation Plans (2013)

Craven County 2015/16 (FY 13) FMA

Pamlico County 2015/16 HMGP

Beaufort County 2014 HMGP

Beaufort County 2013 HMGP

Beaufort County 2012 PDM

Beaufort County FY 2010 SRL Program and Hurricane Irene HMGP

Beaufort County SRL Program FY 2008

Beaufort County Isabel HMGP Grant FY 2006

Carolina Beach HMGP 2009 (New Hanover County)
Hyde County 2012 PDM
Hyde County 2013 HMGP
Hyde County 2014 HMGP

RELATED STRUCTURAL WORK INCLUDES:

1. Residential & Commercial Forensic Investigations:
   - Mr. Joyner has performed over 2500+ residential structural inspections; many of which related to foundation problems. His charge was to determine cause and provide recommendations and/or design documents for foundation stabilization/repair.
   - Design pre- and post-construction helical piering plans for both residential and commercial buildings throughout NC & VA. This particularly includes HMGP elevation raisings in high wind zones.
   - Mr. Joyner has extensive soils experience having managed and overseen soils testing services while employed with the City of Rocky Mount and as a branch of Appian Consulting Engineers.

2. Examples of other types of foundation design include:
   - Building & Foundation design for Engineered Metal buildings for Industrial, Commercial, Churches, Municipal and Private companies/individuals.
   - Asphalt Batch Plants Foundations
   - Drying Towers Foundations
   - Microwave Antenna Guy foundations (using helical piers)
   - Drying Pits
   - Rail loading facilities (dump pits, push walls, etc.)
   - Conveyor trusses and foundations for same
   - Grain Silo foundations

3. Design, Contract Documents, Specifications & Project Management Examples:
   - Craven County CDBG Contingency Infrastructure
   - Craven County CDBG-CR
   - Craven County Stormwater Ordinance
   - Site Drainage Mitigation Plan 2013 for QVC Distribution warehouse, Florence, SC,
   - Nash County CDBG 2010: Drake Community Center
   - Town of Wake Forest Street Paving Program 2009-2011
   - Town of Wake Forest Street Paving Program 2012/2013
   - City of Rocky Mount Candlewood Road Culvert Replacement 2015
   - City of Rocky Mount Wastewater Treatment Plant Sludge Pumping Station (2 stations) 2013
   - City of Rocky Mount Fleet Maintenance Tire Repair Facility 2013
   - City of Rocky Mount Annexations Infrastructure 2009-2011
   - City of Raleigh WWTP Maintenance Facility 2013
   - City of Henderson CDBG-HD 2007
   - City of Henderson CDBG 2005

4. Related Contract Document Experience: Appian authored & copyrighted a Public Facilities Manual developed specifically for Engineering & Public Works Departments. Some of the municipalities that have our manuals include:
   - City of Wilson Manual of Specifications, Standards and Design 2008 with annual updates
   - Town of Clayton Manual of Specifications, Standards and Design
   - City of Greenville Manual of Specifications, Standards and Design 2010
   - City of Durham Manual of Specifications, Standards and Design 2012
   - Town of Wake Forest Manual of Specifications, Standards, and Design 2000 & 2012 updates
   - OWASA W&S Manual of Specifications, Standards and Design

OTHER ARCHITECTURAL/STRUCTURAL ENGINEERING PROJECTS PERFORMED BY APPIAN:

- ABC Store – Beaufort County
- ABC Store – Atlantic Beach
- ABC Store – Cape Carteret
- Edgecombe County Farm Bureau (Tarboro)
- Sara Lee (Tarboro), 2009
- South Rocky Mount Community Center
- Smith Creek Wastewater Treatment Plant Maintenance Building 2013 (City of Raleigh)
- Edwards Crane Steel Fabrication Complex
- QVC Distribution Center High Roof Drainage
- Nash Community College Culinary Arts Shelter
- Red Oak Volunteer Fire Depart Cast-in-place UG water storage tank
- Performance Small Engine Center
- Southside Baptist Church, 2014
- Church on the Rise
- Golden East Mall Expansion
- Terminix Conference Center
- Whitakers Business Center Shell Building
- OIC for the City of Rocky Mount
- Coopers Volunteer Fire Department
- Englewood Baptist Church in Roanoke Rapids
- Eyemart, Durham, NC
- Retaining Wall (NC 98 By Pass)
- City of Rocky Mount L&M Stemmery Building (SSMR Roof repair)
- Nash Community College Maintenance Facility Expansion.
- Sylvan Water Fowl Visitor Center

Appian has extensive experience in elevation raising projects; specifically for *Hurricane Isabel* and *Hurricane Irene* though much of the latter has focused on structural inspections, elevation design relating to repairs and recovery. Elevation raising projects have been performed in ***Craven County, New Hanover County, Beaufort County, Carolina Beach, Pamlico County, Hyde County, Belhaven and Washington***. In addition, we assisted in repairs, recovery and elevation raisings for projects relating to *Hurricane Fran* and *Floyd* though not through the Severe Repetitive Loss Hazard Mitigation Grant Programs.

Elevation Raising
Belhaven, NC

PROPOSED SCOPE OF SERVICES:

Obtain elevation certificates from licensed surveyors and determined the final finished floor elevation based on the BFE plus the applicable locally required freeboard.

- Compile an engineering report on each structure and make recommendations to the program administrator as to whether or not the structure could either economically or structurally be elevated. Detailed photographic survey of structure will be made logging locations and types of existing distress observed during the initial inspection.
- Inspect each house (attic framing, interior, exterior and crawl space). If areas of the crawl space are inaccessible, we can send in our "Spiderbot" camera to inspect the inaccessible areas (photo at right).

- Obtain field measurements of the interior, exterior and crawl space of each house. After a comprehensive load analysis (wind and

gravity loads), and using field notes and inspection findings, develop new foundation plans. From the engineered drawings, prepare construction documents which include:

- Existing and proposed foundation plan, foundation and floor framing notes, and construction details (connecting existing wall to the new floor, piling/ floor framing connection, cross bracing, etc.).

Construction Phase:

- Appian will provide limited on-site inspection and review of Contractor's work at the request of the County, including written documentation that the completed foundation and accesses were properly constructed.
- Depending on the conditions exposed during demolition, modify plans as needed to adapt to latent field discoveries. In most cases Appian's engineers are able to evaluate the soils and render an opinion as to suitability or recommend subgrade improvements necessary to stabilize a weak subgrade. For difficult projects, we call in a Geotechnical Engineer.

Sample plan excerpts from both previous *Beaufort County* and *Carolina Beach* elevation projects are included in this proposal.

Hurricane Isabel & Irene HMGP Elevation Projects:

Appian performed a pre-elevation inspection of each structure, provided a technical feasibility analysis for structures requiring design modifications, developed foundation drawings and specifications based on the NC Residential Building Code and provided on-site inspections and review of contractor's work as needed. Appian engaged in contracts with *Beaufort County, Carolina Beach, Pamlico County, Hyde County, and the Town of Belhaven*, elevating *more than 150 houses* in NC coastal regions.

Elevation Raising
Carolina Beach HMGP 2009

Featured Projects & Capabilities

Ocean Ridge Village: Appian provided complete structural design for a number of new single family beachfront dwellings in *North Topsail Island* (135 mph wind zone design speed, a finished floor elevation two feet above the 100 BFE, knock out panels, flood vents, deck assemblies isolated from the main structure, corrosion resistant fasteners, and bracing/reinforcing for pilings, tall walls, window jack studs, headers, etc.).

City of Rocky Mount Tar River Bikeway

Appian provided design for the Tar-River Bikeway in Rocky Mount, NC: providing topographical survey, grading plans, HEC-2 studies, no-net rise certification, and design of both a cantilevered aluminum bridge and the iconic timber arch bridge. The timber arch suspension bridge (right) was part of the Tar-River Bikeway project we designed for the City, and was erected in 2001. The bridge has the *World Record for Timber Arch Bridge Span* of 220 feet, which is 40 feet longer than the next longest span. The bridges were part of more than two (2) miles of scenic bike paths and elevated timber walkways for which Appian provided plans and permitting along the Tar River. This Tar River Greenway Trail runs along its namesake and passes through several city landmarks. Flood studies of the Tar River were required for both structures.

Craven County CDBG-CR 2008: Holland Consulting Planners contacted Appian in 2008 to provide a Preliminary Engineering Report (PER) with construction cost estimates for the Community Revitalization Project in James City, NC. The project consists of establishing the existing road right-of-way, 1,420 LF of street paving, 1,200 LF of 6" watermain, 850 LF of 2" sewer forcemain relocation, storm drainage, and rehabilitation by replacement of existing sewer tank effluent pumping *(STEP)* systems. This includes coordination with various governmental agencies including: NCDENR Land Quality, NCDENR Division of Water Quality, NCDENR CAMA, NCDOT, NC Railroad and Norfolk-Southern. Craven County awarded the design, surveying, construction administration, and inspections to Appian.

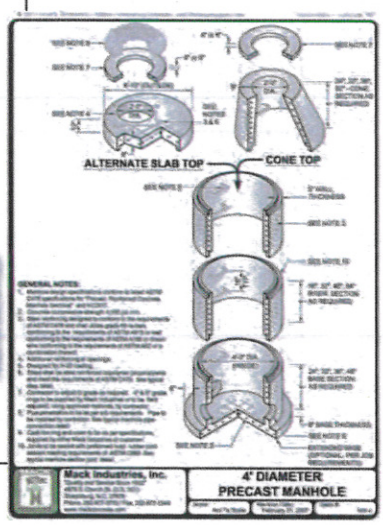
Manuals of Specifications, Standards and Design

With user-friendly isometric and exploded views of each detail, City staff and Contractors know exactly what's expected… at a glance. Appian has partnered with numerous municipalities to provide the technical expertise to a public facilities manual using our Copyrighted MuniSpec© data base. We provide: standard details and specifications, design modules (streets, water, sewer, storm drainage, flexible pavement, etc.), and policies. The City-specific Manual of Specifications, Standard Details and Design is developed *by* former city engineers *for* city engineers and public works officials.

> "None of the other firms we talked to had a Municipal Manual that was as ***comprehensive, detailed*** and easily ***customized to our needs.*** The standard details are great."
>
> Tom Wilson, PE
> Director of Streets
> City of Lynchburg, VA

Typical Features of Manuals we Provide:

1. User friendly
2. Contains latest ASTM, AASHTO and AWWA Specification
3. Searchable (in editable and uneditable versions), iPad friendly version
4. FREE Web Hosting of Manual
5. Isometric and Exploded views on all details
6. Details are hyperlinked to Specs
7. Table of Contents is hyperlinked to text
8. Optional update service.
9. Specifications are detailed in execution and product description
10. Pre-approved product list

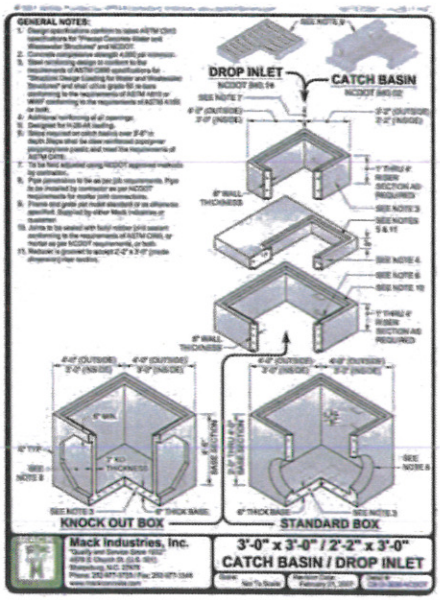


Municipalities to whom we have provided a copyrighted Manual of Specifications, Standards and Design include:

- ***Craven County Stormwater***
- ***City of Greenville***
- ***City of Durham (UC)***
- ***City of Wilson***
- ***City of Jacksonville***
- ***Town of Wake Forest***
- ***Town of Clayton***
- ***Franklin County Stormwater***
- ***Orange County Water and Sewer Authority (OWASA)***, serving Orange County, Carrboro, Chapel Hill and UNC at Chapel Hill

Details for Pre-Cast Manufacturers

For the past 15 years, Appian has provided isometric and exploded view details on our construction drawings and Public Facilities Manuals; the purpose being to clearly convey the intent of the detail to those in the trenches. Two-dimensional details can often be confusing. As a result of precast manufacturers using our drawings to prepare takeoffs for the contractor, the clarity and simplicity of the details caught the eye of management. Appian was asked to develop catalogues for a number of precasters on a national basis... *order their catalogue and you'll see Appian's name in the border of every detail!*



National Precast Manufacturer Catalogues Include:

- Carolina Precast (Hanson)
- Fralo Plastics/ Roth Global (NY)
- Dellinger (NC)
- Mack Industries (NC, OH)
- NC Pipe (TX)
- Albuquerque Vault Company (NM)
- Ideal Precast (NC)

Patents and Copyrights

Appian's extraordinary breadth and depth of expertise is demonstrated by the fact that our company president has three (3) patents with the United States Patent Office. The *"Downspout Energy Dissipater Splash Pad with Spillway"* is an industrial sized splash pad on large industrial buildings with large roof areas that has been used on several Appian projects. The *"Method of Treating Stormwater Runoff and Domestic Waste with Coal Ash"* is a "green" BMP that treats stormwater runoff and domestic sewage using recycled high carbon coal ash (research conducted and confirmed by Virginia Tech). Appian has been designing site with recycled coal ash for more than 20 years, saving clients great expense while protecting the environment. Appian also has one patent pending on a design to protect crawl space from mold decay due to crawl space high humidity. Mr. Joyner has also authored a book entitled, *"10 Successful Steps to Successfully Developing a Public Facilities Manual,"* and is in the process of completing his second book, *"Wholehouse Mold Solutions."*

> "After 25 years of... construction, I can genuinely say that I have never seen a more ***complete, detailed, accurate*** and generally professional set of civil documents... Working with your firm has been one of those experiences I will remember for the rest of my career, and will set my future ***standard for judging excellence*** in civil engineering consultants. It has truly been a pleasure."
>
> Thomas R. Gilcrest
> Director, Design Build Services
> Butler Construction

Other

Appian is also on the *NCDOT Prequalification Register* of Hydraulic Design Studies and is regularly referred to for industrial rail spur design by *CSX Railroad.*

Current HMGP Workload

Pamlico County Hurricane Irene HMGP Elevation Projects:

Appian was selected by Pamlico County for the Hurricane Irene Hazard Mitigation Grant Program for the elevation of approximately 44 residential structures in 2014. Design will be completed in the next few months, and construction of all projects will be completed by August 2016.

Craven County FY 13-14 FMA Elevation Projects:

Craven County recently selected Appian for the Flood Mitigation Assistance (FMA) Program for the elevation of approximately 17 residential structures. Design will be completed in the next several months, and construction of all projects will be completed next year.

Legal

There are no lawsuits, Federal, State or Local tax liens, or any potential claims or liabilities pending against Appian or any of the officers of our firms. *In fact, in the past 29 years of the company's existence, there has never been a lawsuit filed against our firm for any reason.*

Appian carries and maintains professional liability insurance.

Poised to Proceed

We look forward to serving Pender County on this project.

END OF RFP

Appian
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES
P.O. Box 7966 • Rocky Mount, NC 27804
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Schedule of Reimbursables/ Hourly Rates

2016 Unit Rate Fee Schedule

Schedule of Reimbursables	
Mileage	$ 0.61/mile
Prints	$ 1.15/sheet
Copies	$ 0.15/sheet
Photos, Phone & Fax (long distance), etc.	At cost
Plan submission fees, permits, etc.	At cost
Mailings	At cost

It is Appian's practice to try to absorb all reasonable "reimbursable" expenses with the exception of mileage, and advertising and permit fees. If absorbing such expenses becomes overly burdensome, we will advise and request consideration for remuneration for overly burdensome reimbursable expenses.

Schedule of Hourly Rates		Percentage of Total Work (estimated)
Engineering Staff (Appian):		
Administrative Staff	$ 48.00	5%
Field Technician (Tech 1)	$ 49.00	-
Construction Inspector/Project Manager	$ 69.00	20%
Drafting, CADD Technician	$ 49.00	5%
Senior CADD Manager	$ 95.00	10%
Environmental Specialist (NC LSS)	$ 110.00	-
Project Engineer (NC PE)	$ 110.00	15%
Principal/ President (NC PE)	$ 150.00	45%

These rates are subject to revision in accordance with our firm's review process and may result in changes to the hourly rates listed above. Any changes shall be considered an amendment to and part of the original contract or proposal.

P.O. Box 7966 · Rocky Mount, NC 27804 · (252) 972-7703 · (252) 972-7638 (Fax)
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E-mail bjoyner@appianengineers.com • Website www.appianengineers.com

BOBBY L. JOYNER, P.E.

President

Education

1974 Mathematics
1972 Civil Engineering Studies
1968 Associate Degree in Mechanical Engineering

Professional Memberships

Professional Engineer – North Carolina, 1978, Virginia, 1979

Strengths

Creativity in problem solving, innovative, broad based experience in municipal, Civil and Structural engineering, forensic engineering inspections.

Professional Experience

PRIOR TO APPIAN

Experienced in wide range of civil, municipal, and structural projects. Responsible for complete design, contract and construction administration of all public works projects for City of Rocky Mount as Director of Engineering from 1982-1986. Extensive experience in water transmission, sewer collection, and sewerage lift stations, roadway/street design and rebuilding, building design, and hydrological studies and design of large complex drainage systems. As City Engineer, he also established an on-site soils lab to provide staff-based testing and evaluation of soils on City projects. Mr. Joyner as well as staff inspectors were trained in soil testing and evaluation. The lab also provided testing of private development work as it related to projects that would become part of city maintenance. Experience prior to becoming City Engineer was in the capacity of Asst. City Engineer, Traffic Engineer & Staff Engineer.

WITH APPIAN

Mr. Joyner opened Appian Consulting Engineers, PA in 1986. Since then, he has designed many commercial and residential subdivisions, performed site design for hospitals and schools, industrial sites, and large shopping centers. He also has extensive experience in municipal engineering projects such as water distribution systems, booster pump stations, elevated tanks, sewer rehabilitation and complex potable well/tank systems for industrial and rural school applications. Most recently he was responsible, from conception to completion, for site, grading, drainage, and utility design for a 1.2 million SF Universal Leaf Tobacco Processing Plant located on a 1000-acre site in Nash County, NC and a 1 million SF QVC Distribution Facility in located in Edgecombe County. Mr. Joyner has been employed by various industries to solve drainage problems relating to both large roofs and site related issues in NC and SC.

He has experience in retrofit roofing surveys, design, and inspections and structural investigations, water distribution system modeling and analysis, HEC 1 & HEC 2 Flood studies, levee and floodwall design, flood pumps, and NFIP FEMA Map Amendments.

Mr. Joyner has been involved with the EDA grant process at all stages of project development including assisting with the preparation of pre-application, meeting with EDA and governmental officials in preliminary phases, assisting with the grant

application, complete project design and project administration/execution in conformance with EDA regulations.

STRUCTURAL

Mr. Joyner is the principal structural Engineer for Appian providing design services for bridges, buildings, and municipal infrastructure such as box culverts, deep drainage structures, etc.

Residential and Commercial Inspections: Mr. Joyner has conducted in excess of 3000 residential, commercial and industrial inspections in North Carolina and Virginia with an emphasis on cause and effect. Forensic investigations often focus on the structure as a whole which may include air quality testing and the contribution of the HVAC to air quality, structural analysis, exterior grading and drainage plans, partial site topographical surveys, and soils investigation.

Hurricane Elevation Raisings: Since 1999, Appian has partnered with Holland Consulting Planners, Wilmington, NC to provide structural inspection and design of foundation systems for more than 200 homes that had been approved for elevating. These homes, approved for Federal assistance, were flooded during a number of Hurricanes. The Counties include Hyde, Pamlico, New Hanover, and Beaufort Counties.

Expert Witness: Mr. Joyner is often employed by Insurance Companies and Attorneys to perform inspections and provide expert testimony on cases involving both residential and commercial structures.

PATENTS

1. Holds 3 U. S. patents from the US Patent Office on the following:

   A. **Industrial Splash Pad – Patent No. 7,052,212**: The Industrial Splashpad is designed to kill the energy from downspouts serving large roof areas, distribute the flow over a wide ogee spillway, and then deposit the flow nearly parallel to the ground at very low non-erosive velocities. 65 of the prototype pads were first installed at Universal Leaf Tobacco's 1.2 million square foot tobacco processing plant. The splashpad is being manufactured and distributed locally. Manufactured from high density polyethylene, the first units are scheduled to come off line in 2013. A second patent was applied for in the summer of 2012 and involved significant improvements to the original patent. Also, the second patent included unique Splashpads for middle-range roofs (i.e. commercial).

   B. **Method of Using High Carbon Coal Ash for Treatment of Stormwater Runoff – Patent No. 7,311,844**: Research conducted by Virginia Tech in 2008. Treatment system significantly reduces Nitrogen, Phosphorus, and other constituents from stormwater runoff. Field trials will be underway shortly

   C. **Method of Using High Carbon Coal Ash for Treatment of Domestic Wastewater – Patent No. 7,455,780**: Research conducted by Virginia Tech in 2008. Tertiary treatment system of domestic waste significantly reduces Nitrogen, Phosphorus, and other constituents and polishes effluent prior to placement in underground nitrification field.

   D. **Patents Pending**: Two patents pending in stormwater management (information relating to these two pending patents is proprietary).

OTHER

1. **Book Authored**: Authored a book in 2006 titled *"10 Successful Steps to Successfully Developing a Public Facilities Manual."* Like the manual, the book is sold at trade shows and can be purchased on-line.

2. **MuniSPEC© – A Municipal Public Facilities Manual**: Authored and copyrighted (Registration Number TXu 1-788-389, February 7, 2011) a state-of-the-art Manual of Specifications, Standards and Design that is marketed to municipalities. The manual, a 1,200+ page document, includes Standard Municipal Specifications, 150 to 225 pages of standard Public Works Details, and an extensive design developed by Appian that covers:

   Municipal Design Manual Elements:
   a. Municipal street design Manual (which includes soils evaluation and analysis of traffic loads),
   b. Segmental Retaining Wall Design,
   c. Boardwalk & Footbridge Design,
   d. Water Distribution, Gravity Sewer, Pressure Sewer, and Sanitary Sewer Pump Station Design Manual,
   e. Traffic Calming (design and measures),
   f. Traffic Impact Analysis, and
   g. Stormwater Design: Stormwater design covers hydrological analysis, hydraulic design of surface and subsurface piped systems, BMP design, nutrient management and Low Impact Design (LID) considerations. The stormwater design section provides the minimum design requirements and methods required of a designer when designing systems that will be reviewed and taken over for maintenance by a municipality.

   Example problems are provided throughout the entire design section.

   The Manual, tailored to the municipality, is offered in hardcopy, searchable CD, or web format. The Manual is marketed nationwide and shown at public works tradeshows annually. Some of our clients include: the City of Wilson, NC, the City of Greenville, the Town of Clayton, NC, Orange Water and Sewer Authority (OWASA), NC; the Town of Wake Forest, NC, Kittrell Water Association, Kittrell, NC, The City of Durham, and others.

   In addition, Appian has set up MuniSPEC© as a user-friendly interactive and searchable digital file that uploads to both the web and iPads.

3. **Public Works Details Drawing Base**: Developed a comprehensive in-house library of standard public works details in AutoCAD format. The drawing base is comprised of over 2000 separate details for water, streets, drainage, sewer, traffic calming, BMP's and erosion. Rarely seen in civil/municipal projects, the details we offer are in exploded view and isometric. The details, used extensively by municipalities and private engineering firms across the nation, are available for purchase from Appian. Our catalogue of details also includes a large number of NCDOT standard details in AutoCAD format; drawings generated by our CAD staff directly from NCDOT drawings.

4. **Precasters Catalogues**: As a direct result of our efforts in conveying structures in isometric and exploded view formats, Appian has developed manufacturer's catalogues (hard copy and CD) for concrete precasting companies and plastic septic tank manufacturers located all over the United States. Some of these catalogues are rendered in color. A unique feature we offer is a standard detail of a specific tank line (e.g. septic, pump, or grease trap) that uses a database to automatically fill in the dimensions, and displays volume, weight, and product number. For grease traps, we provide a separate

spreadsheet that computes the average and maximum flow, storage volume and maximum grease volume (based on the uniform plumbing code method). The designer need only select the desired tank size and the drawing instantaneously provides all necessary data for the drawing to be used as a shop drawing or for submittal.

5. **Seminar Speaker**: Mr. Joyner holds/teaches seminars on *How to Develop Your Own Public Facilities Manual* for Public Works Directors and City Engineers; moisture prevention in crawl spaces; and mold detection and prevention in new and existing construction.

Appian Consulting Engineers, PA
PO Box 7966 • Rocky Mount, NC 27804
Phone 252-972-7703 • Fax 252-972-7638
drevoir@appianengineers.com • www.appianengineers.com

DAVID C. REVOIR, P.E.

Project Engineer

Education

BSCE 1996, North Carolina State University
Cum Laude

Professional Memberships

Professional Engineer:
- North Carolina, 2001
- South Carolina, 2009
- Virginia, 2009
- Florida, 2011
- Georgia, 2011

LEED Accredited Professional (LEED AP), 2008
LEED AP Building Design + Construction (LEED AP BD+C), 2009 – present
Sustainable Land Development International (SLDI), Associate Member, 2008
National Eagle Scout Association

Professional Experience

Bringing experience from the Maryland State Highway Administration and Greenhorne & O'Mara, Mr. Revoir has a broad range of experience in municipal, industrial, commercial and residential projects including site design, street design, water distribution analysis, stormwater modeling, sewer design, and erosion control. Mr. Revoir has performed preliminary and detailed design for numerous subdivisions and commercial development projects, ranging from small one acre convenience store sites to hundred acre industrial sites. Mr. Revoir routinely leads projects through conceptual design, detailed design, permitting, contract bidding, construction administration and as-built certification. He has experience in obtaining LCID and demolition landfill permits, and coal ash placement permits. He is adept at providing flood studies, Stormwater Pollution Prevention Plans (SWPPP), Spill Prevention Control and Countermeasure Plans (SPCC), and swimming pool compliance for the Virginia-Graeme Baker Pool and Spa Safety Act. Mr. Revoir participated in a Study Circle for the *Twin Counties Visioning and Strategic Plan Process* (2012).

Assisting municipalities and counties obtain EDA grants, Mr. Revoir has prepared preliminary engineering reports and environmental narratives and budget worksheets for EDA grant applications. He has been involved with the CDBG, IDF and EDA grant process at all stages of project development: including assisting with the preparation of pre-application, meeting with governmental officials in preliminary phases, assisting with the grant application, complete project design and project administration/ execution in conformance with federal and state regulations.

Mr. Revoir has been on retainer by both private landowners and the NC Department of Justice Attorney General's office as an expert witness for several NCDOT right-of-way acquisition projects.

Appian
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES

References for Appian Consulting Engineers

Mr. Roe O'Donnell, P.E.
Town of Wake Forest
Deputy Town Manager
301 South Brooks Street
Wake Forest, NC 27857
919.435.9412
roe.odonnell@ci.wake-forest.nc.us

Mr. J. Reed Whitesell, AICP
Holland Consulting Planners
3329 Wrightsville Avenue, Suite F
Wilmington, NC 28403
910.392.0060
rwhitesell@hcpplanning.com

Ms. Oppie N. Jordan
Carolinas Gateway Partnership
Vice President
427 Falls Road
Rocky Mount, NC 27804
252.442.6224
onjordon@aol.com

Additional references available upon request.

U.S. DEPARTMENT OF COMMERCE
Economic Development Administration
ATLANTA REGIONAL OFFICE
Suite 1820
401 West Peachtree St., N.W.
Atlanta, Georgia 30308-3510

August 22, 2001

In reply refer to:
EDA Project No. 04-79-04621
Nashville, North Carolina

Mr. Bobby L. Joyner, P.E.
President
Appian Consulting Engineers, PA
841 South Wesleyan Blvd.
Rocky Mount, North Carolina 27804

Dear Mr. Joyner:

It has been a pleasure to work your firm in recent years on various infrastructure projects partially funded by Economic Development Administration (EDA) grants. Without question, the construction drawings and specifications that your firm produces are detailed and comprehensive, and portray a thorough understanding of the construction process. As a matter of fact, the U. S. Department of Commerce Economic Development Administration will be using your firm's specifications and construction documents as the model for other engineering firms to follow when preparing construction documents for EDA funding.

Thank you for the level of thought and preparation you offer your clients in the design phase to avoid problems during the construction phase. I greatly appreciate the thoroughness of your design and friendliness of your service.

Sincerely,

Milton Cochran, Sr.

Milton Cochran, Sr.
Project Manager

BUTLER

BUTLER CONSTRUCTION

The Construction Subsidiary of Butler Manufacturing Company
6601 Executive Drive • Post Office Box 269000 • Kansas City, MO 64120-2107 • (816) 245-6000 • Telefax: (816) 245-6099

August 17, 2001

Mr. Bobby L. Joyner
APPIAN CONSULTING ENGINEERS, PA
841 South Wesleyan Blvd.
Rocky Mt., NC 27804

Universal Leaf Tobacco Processing Center
Nashville, North Carolina

Dear Mr. Joyner:

I have never hesitated expressing my displeasure with a consultant or subcontractor whose services I judge to be inadequate, so I try to be just as free with my commendations when they are warranted, as is the case with your work on this project.

In 25 years of design build construction, I can genuinely say that I have never seen a more complete, detailed, accurate and generally professional set of civil documents. Our project architect, as well as my Manager of Field Operations, have voiced this same impression regarding the bid set, the construction set and all revisions.

Even after we started you late and then introduced continuous changes, you kept up with the moving target and allowed us to actually commence work in advance of our original schedule. We know that you don't individually deserve the credit, so I ask that you pass our gratitude and appreciation along to those on your staff who collectively made this happen. I don't know how they could have been more responsive or cooperative.

If only you worked nationwide, or had a dozen branch offices in locations I could pick each year, I could guarantee you a great deal of repeat business. Working with your firm has been one of those experiences I will remember the rest of my career, and will set my future standard for judging excellence in civil engineering consultants. It has truly been a pleasure.

With kind regards,

Thomas R. Gilcrest
Director, Design Build Services

c: Mr. John Coleman - ULTC

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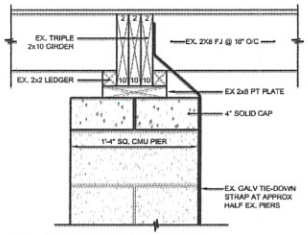

101 TYP EX. CMU PIER
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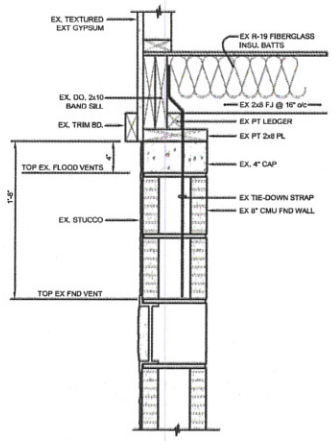
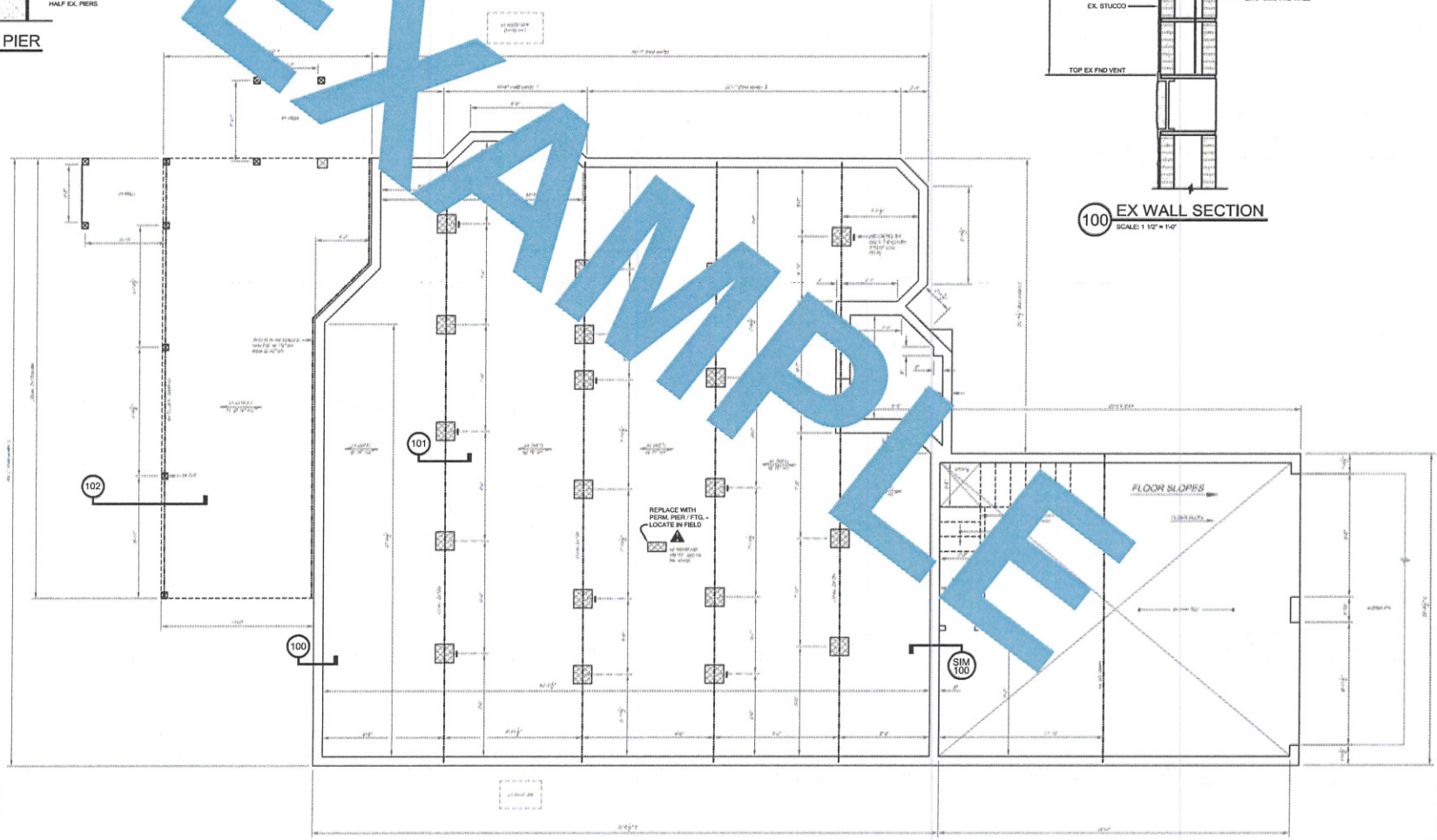


100 EX WALL SECTION
SCALE: 1 1/2" = 1'-0"



EXISTING FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

EXAMPLE

BEFORE YOU DIG, CALL 811 NORTH CAROLINA ONE-CALL CENTER www.ncocc.org

CONSTRUCTION SAFETY
These drawings do not contain the requirements for job safety. All provisions for safety shall be the sole responsibility of the contractor.

EXISTING CONDITIONS
The contractor shall be responsible for reviewing all existing job conditions. Any adverse existing conditions affecting work shown on these drawings shall be brought to the attention of the engineer for possible clarification or reconciliation.

ADA AND LEGAL DISCLAIMER
This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws or give advice concerning laws, the owner should have this document reviewed by his attorney to determine legal compliance.

DR. SCALE:	-	DATE:	December, 2015	DESIGN: Bobby Joyner	-
CK. SCALE:	N/A	DRAW BY:	Mike Collins	CHK:	

REVISIONS

NO.	DATE:	DESCRIPTION:	BY:	CKD:

Appian
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Fax: (252) 972-7658

www.appianengineers.com
admin@appianengineers.com

Final Drawings
Review Purposes ONLY

(#101) 987 PIRATES WAY
ORIENTAL N.C. - J. DEPP
Your County HMGP
2015 Elevation Project

14-087
D-0000
101-A

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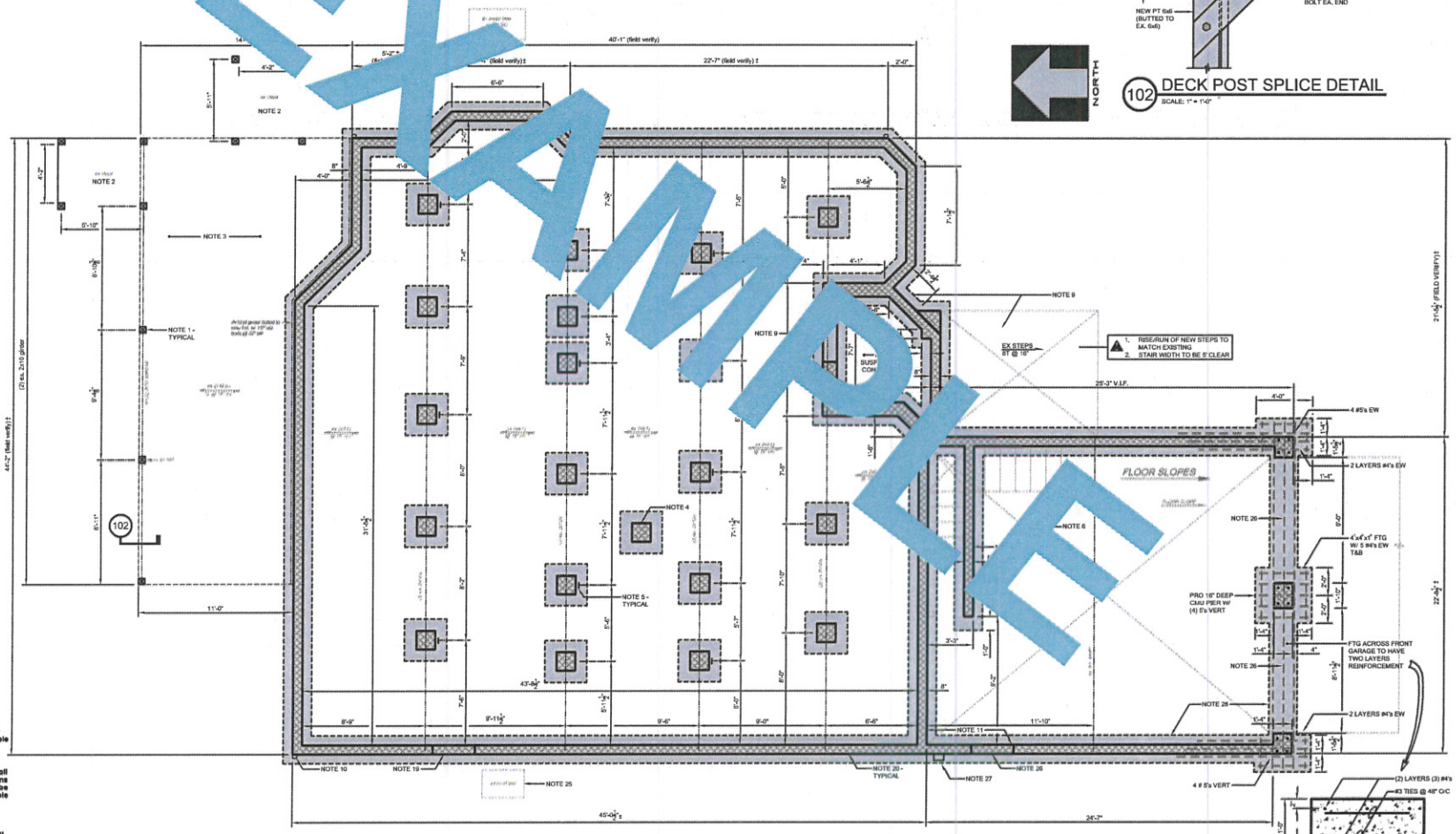
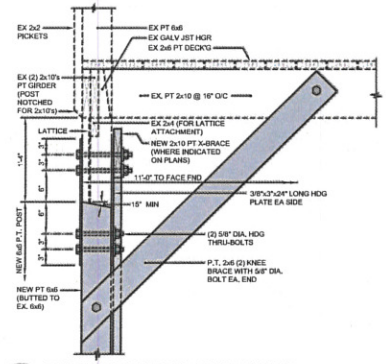


PROPOSED FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

1850 S.F. HTD. / 576 S.F. GARAGE



102 DECK POST SPLICE DETAIL

SCALE: 1" = 1'-0"

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APR. SCALE:	-	DATE: December, 2015	DESIGN: Bobby Joyner
APR. SCALE:	N/A	DRAWN BY: Mike Collins	CHKD: -
REVISIONS			
NO.	DATE:	DESCRIPTION:	BY: CKD:

Appian

CONSULTING ENGINEERS, P.A.
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
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Phone: (252) 972-7703
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Final Drawings Review Purposes ONLY

(#101) 987 PIRATES WAY ORIENTAL N.C. - J. DEPP Your County HMGP 2015 Elevation Project

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101-B

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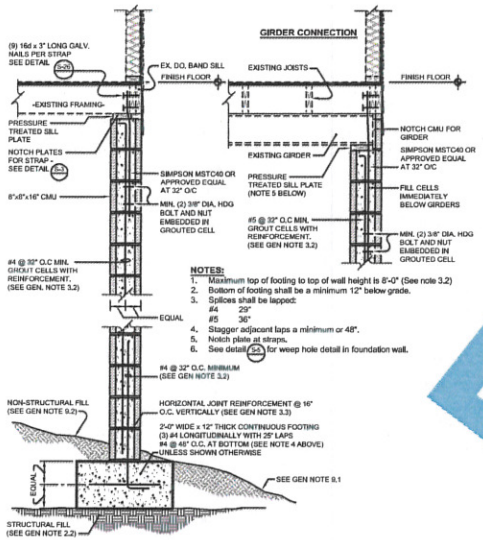
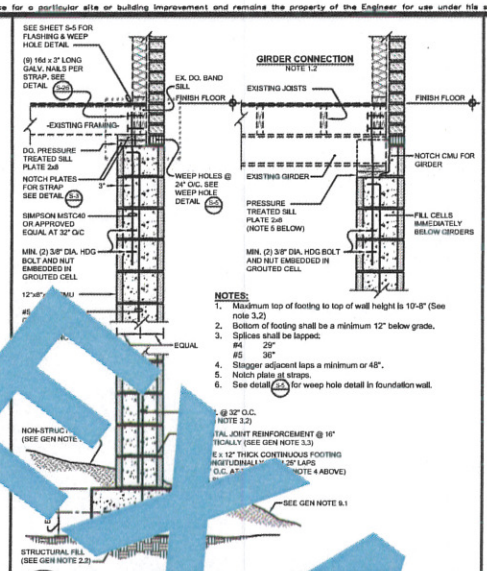


NOTES:
1. Maximum top of footing to top of wall height is 8'-0" (See note 3.2)
2. Bottom of footing shall be a minimum 12" below grade.
3. Splices shall be lapped:
   #4 29"
   #5 36"
4. Stagger adjacent laps a minimum or 48".
5. Notch plate at straps.
6. See detail S-2C for weep hole detail in foundation wall.

S-1 WOOD FRAME PERIMETER WALL SECTION (UP TO 8'-0")

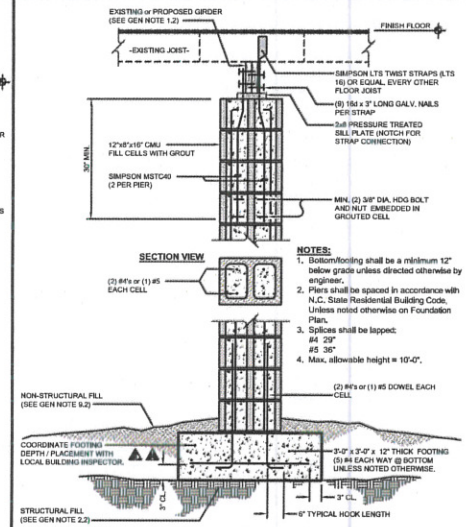
SCALE: 3/4"=1'-0" Details Developed By APPIAN Consulting Engineers DATE: 9-30-15



NOTES:
1. Maximum top of footing to top of wall height is 10'-8" (See note 3.2)
2. Bottom of footing shall be a minimum 12" below grade.
3. Splices shall be lapped:
   #4 29"
   #5 36"
4. Stagger adjacent laps a minimum or 48".
5. Notch plate at straps.
6. See detail S-2C for weep hole detail in foundation wall.

S-2 WOOD FRAME BRICK VENEER PERIMETER WALL SECTION

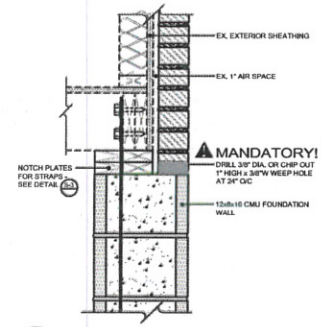
SCALE: 3/4"=1'-0" Details Developed By APPIAN Consulting Engineers DATE: 9-30-15



NOTES:
1. Bottom/footing shall be a minimum 12" below grade unless directed otherwise by engineer.
2. Piers shall be spaced in accordance with N.C. State Residential Building Code, Unless noted otherwise on Foundation Plan.
3. Splices shall be lapped:
   #4 29"
   #5 36"
4. Max. allowable height = 10'-0".

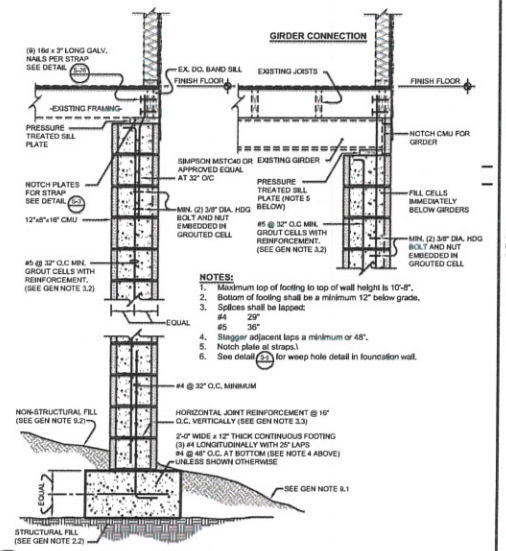
S-4 12x16 WOOD FRAME INTERIOR PIER

SCALE: 3/4"=1'-0" DATE: 9-30-15
Details Developed By APPIAN Consulting Engineers



S-5 WEEP HOLE DETAIL

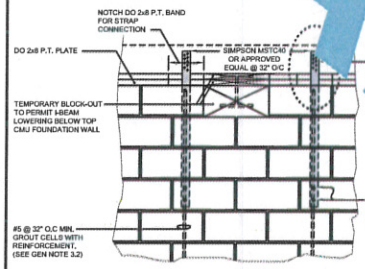
SCALE: 1 1/2"=1'-0" DATE: 9-30-15
Details Developed By APPIAN Consulting Engineers



NOTES:
1. Maximum top of footing to top of wall height is 10'-8".
2. Bottom of footing shall be a minimum 12" below grade.
3. Splices shall be lapped:
   #4 29"
   #5 36"
4. Stagger adjacent laps a minimum or 48".
5. Notch plate at straps.
6. See detail S-2C for weep hole detail in foundation wall.

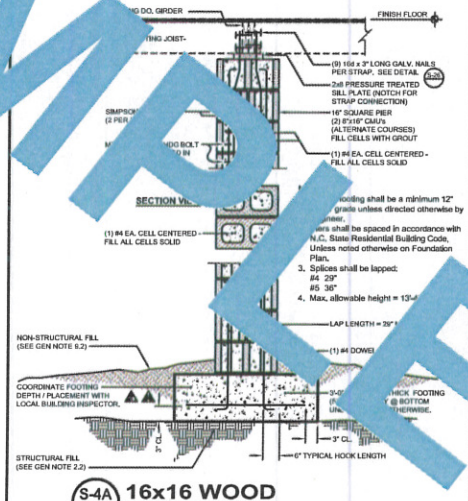
S-1A WOOD FRAME TALL PERIMETER WALL SECTION (8'-1" TO 14'-6" MAX)

SCALE: 3/4"=1'-0" Details Developed By APPIAN Consulting Engineers DATE: 9-30-15



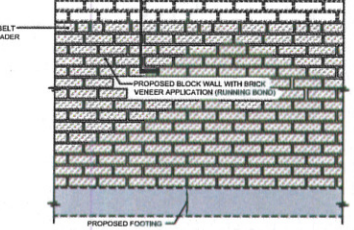
S-3 PARTIAL INTERIOR ELEVATION OF FOUNDATION WALL

SCALE: 3/4"=1'-0" (WHERE APPLICABLE) DATE: 9-30-15
Details Developed By APPIAN Consulting Engineers



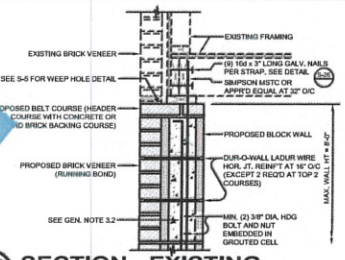
S-4A 16x16 WOOD FRAME INTERIOR PIER

SCALE: 3/4"=1'-0" DATE: 9-30-15
Details Developed By APPIAN Consulting Engineers



S-6 ELEVATION-BLOCK WALL W/ BRICK VENEER APPLICATION (BRICK VENEER UNIT)

NOT TO SCALE DATE: 1-21-15
(FOR HISTORICAL BUILDING APPLICATIONS AND WHERE BRICK VENEER OTHERWISE SPECIFIED BY DESIGN ENGINEER OR ALLOWED IN PROGRAM)
Details Developed By APPIAN Consulting Engineers



S-7 SECTION - EXISTING BRICK VENEER WITH BRICK VENEER FOUNDATION

NOT TO SCALE DATE: 9-30-15
(FOR HISTORICAL BUILDING APPLICATIONS AND WHERE BRICK VENEER OTHERWISE SPECIFIED BY DESIGN ENGINEER OR ALLOWED IN PROGRAM)
Details Developed By APPIAN Consulting Engineers

EXAMPLE

JOB SCALE:	-	DATE:	December, 2015
NO. SCALE:	N/A	DRAWN BY:	Mike Collins
		CHK:	Bobby Joyner

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK
1				

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www.appianengineers.com
admin@appianengineers.com

Final Drawings Review Purposes ONLY

STANDARD DETAILS For Your County HMGP 2015 Elevation Project North Carolina

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C:\Users\Appian Consulting\Dropbox\Appian Consulting Shared Folder\Projects\2014 Projects\14-087 HMGP Elevation Project\Drawings\14-087 HMGP Elevation Project.dwg -D-1- 12/08/2015 - 11:55:15 AM

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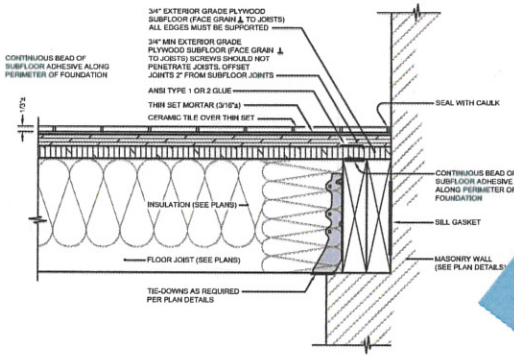
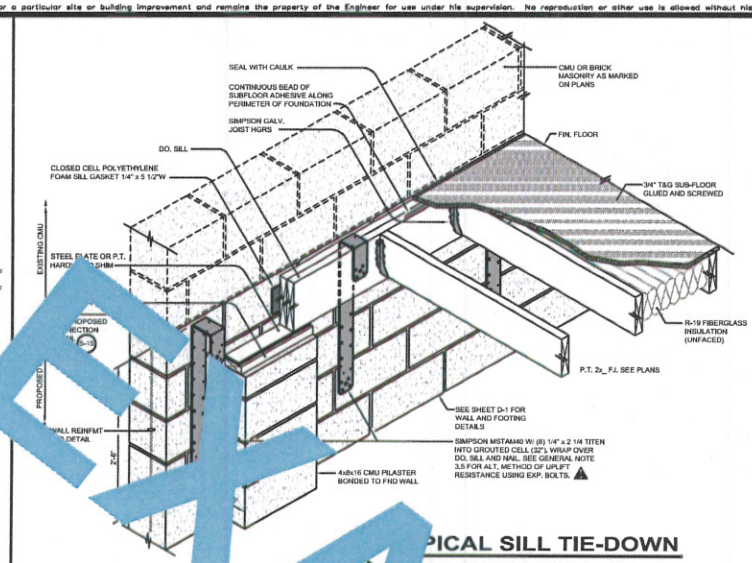


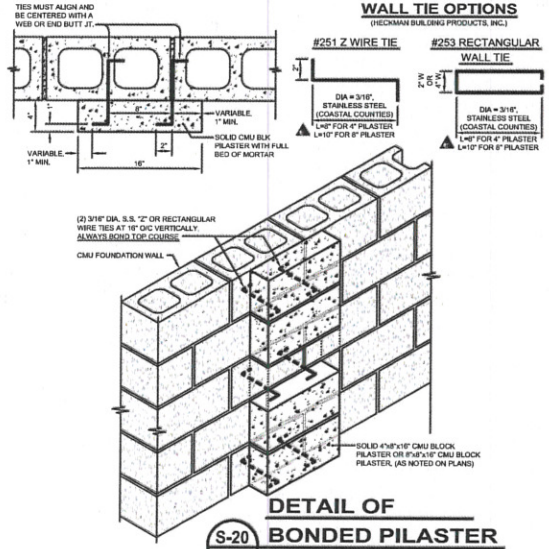
FLOOR FRAMING SECTION FOR CERAMIC TILE

S-14 NOT TO SCALE REV 6-18-15
Details Developed By APPIAN Consulting Engineers



TYPICAL SILL TIE-DOWN BLOCK WALL

S-16 DATE: 6-1-15
Details Developed By APPIAN Consulting Engineers



DETAIL OF BONDED PILASTER

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

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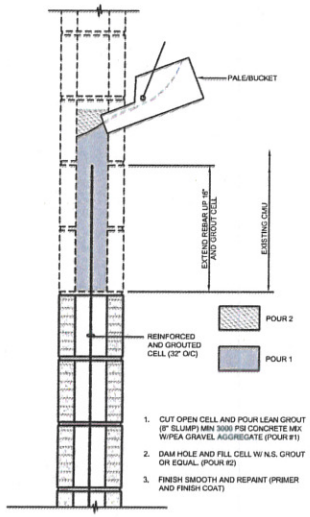
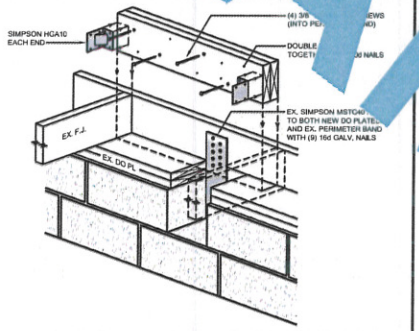
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1			

Final Drawings Review Purposes ONLY



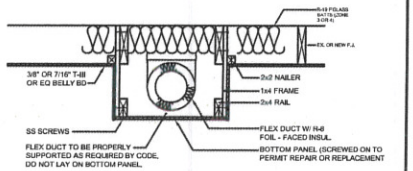
CONNECTING EXISTING CMU WALL TO NEW CMU FOUNDATION

S-15 NOT TO SCALE Details Developed By APPIAN Consulting Engineers DATE: 3-25-15



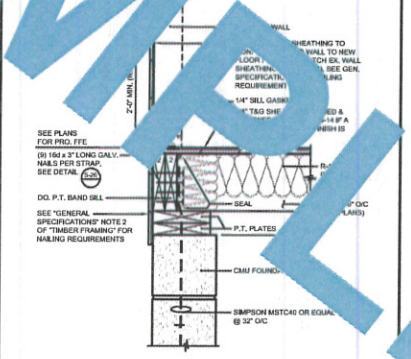
SINGLE BAND ATTACHMENT TO CMU FOUNDATION

S-17 NOT TO SCALE (WHEN ORDERED BY ENGINEER) DATE: 9-30-15
Details Developed By APPIAN Consulting Engineers



DETAIL SHOWING COWLING FOR EXPOSED FLEX-DUCT

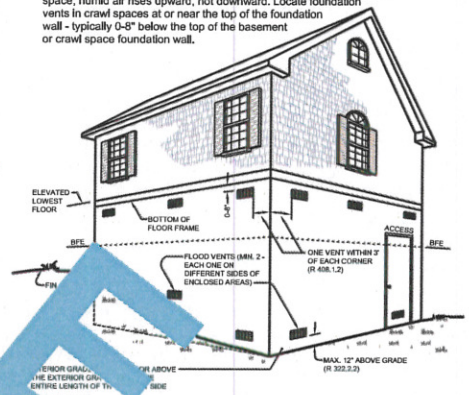
S-18 NOT TO SCALE (WHEN ORDERED BY ENGINEER) DATE: 9-30-15
Details Developed By APPIAN Consulting Engineers



EXISTING STUD WALL CONNECTION TO NEW FLOOR FRAME

S-19 NOT TO SCALE DATE: 9-30-15
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.



NOTES:

1. 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.
2. Openings should be installed on at least two sides of each enclosed area to decrease the [illegible] that all openings could be blocked with floating debris and to allow for more even filling by flo[illegible] and draining of the enclosed area. Openings should be reasonably distributed around the perim[illegible] 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]
3. 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.

FOUNDATION VENT LOCATION

S-21 NOT TO SCALE Details Developed By APPIAN Consulting Engineers DATE: 9-30-15

STANDARD DETAILS For Your County HMGP 2015 Elevation Project North Carolina

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EXAMPLE

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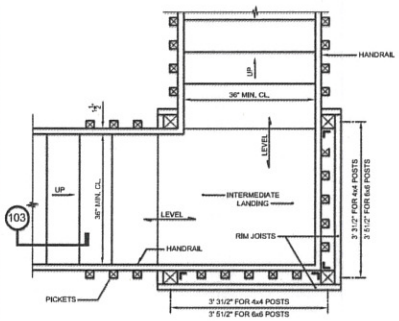
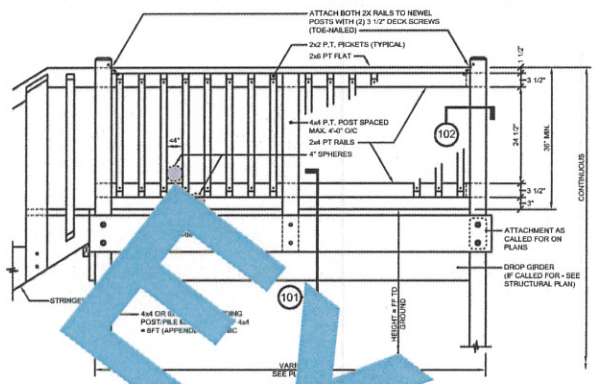


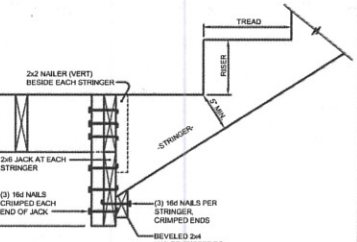
FLOOR PLAN INTERMEDIATE LANDING OR STAIR LEAVING PORCH

SCALE: 3/4"=1'-0" DATE: 12-15-14
Details Developed By APPIAN Consulting Engineers



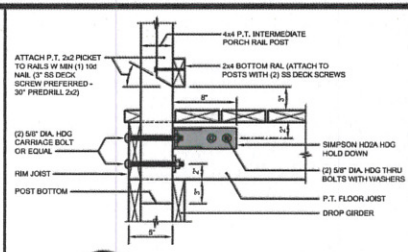
TYPICAL FRONT ELEVATION

SCALE: 3/4"=1'-0" DATE: 12-15-14



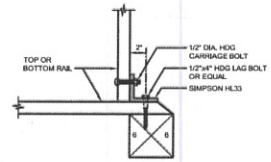
P100 DETAIL

SCALE: 1 1/2"=1'-0" DATE: 12-15-14



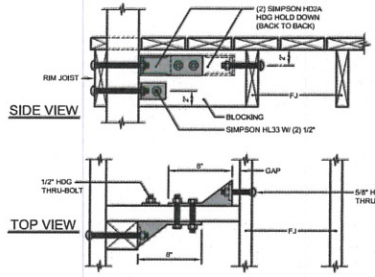
P101 INTERMEDIATE POST CONNECTION AT DECK

SCALE: 1 1/2"=1'-0" DATE: 12-15-14
(PERPENDICULAR TO FJ's)
Details Developed By APPIAN Consulting Engineers



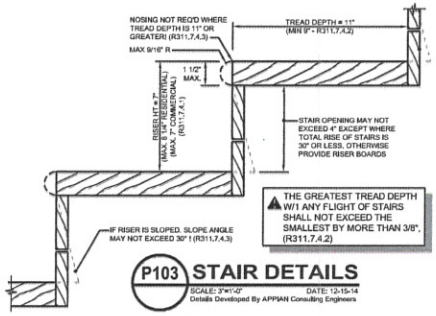
P102 ATTACHMENT OF RAILS TO NEWEL POSTS

SCALE: 1 1/2"=1'-0" DATE: 12-15-14
Details Developed By APPIAN Consulting Engineers



INTERMEDIATE POST CONNECTION AT DECK

SCALE: 1 1/2"=1'-0" DATE: 5-9-14
(PARALLEL TO FJ's)
Details Developed By APPIAN Consulting Engineers



THE GREATEST TREAD DEPTH W/1 ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8". (R311.7.4.2)

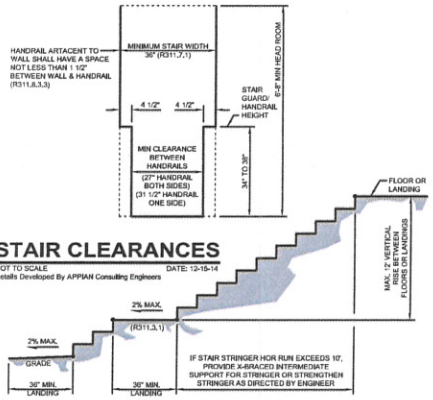
P103 STAIR DETAILS

SCALE: 3"=1'-0" DATE: 12-15-14
Details Developed By APPIAN Consulting Engineers

NOTES:

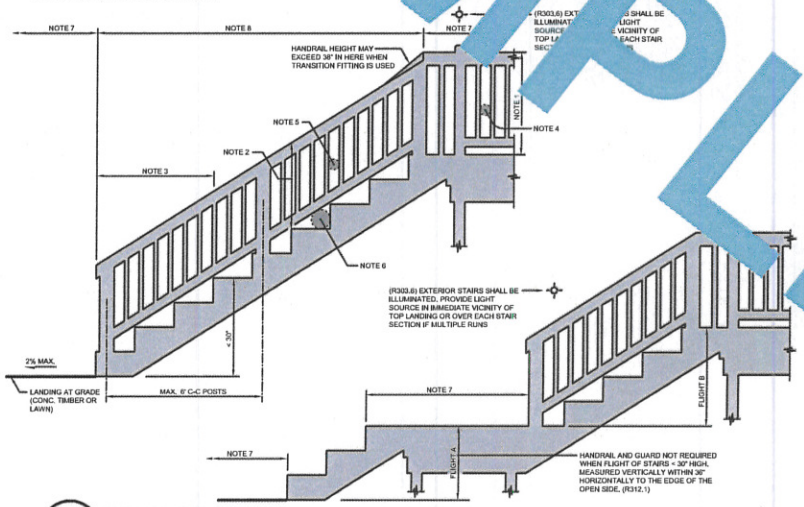
1. GUARD HEIGHT 36", (R312.2.
2. STAIR GUARD HEIGHT 34" AND 38" ... NNECT ... DS. (R312.2)
3. STAIR GUARD MUST CONTINUE FO ... 30" ... OR ... E STAIRS ARE ON FLIGHT WITH NO LANDING.
4. GUARD OPENING MUST NOT PASS 4" DIAMETER SPHERE ...
5. STAIR GUARD OPENING MUST NOT PASS 4 3/8" DIAMETER ... .3).
6. INTERSECTION OF BOTTOM RAIL, RISER, AND TREAD MUST N ... 3" DIAMETER ... (R312.3).
7. FLOOR OR LANDING (MIN 36" MEASURED IN DIRECTION OF T ... REQUIRED TOP AND BOTTOM OF EACH STAIRWAY. WIDTH OF LANDING ... OT BE LES WIDTH OF STAIRWAY SERVED.
8. HANDRAILS SHALL BE CONTINUOUS FOR FULL LENGTH OF TH ... NT FRO DIRECTLY ABOVE THE TOP RISER TO A POINT DIRECTLY ABOVE THE LOW ... R OF T FLIGHT. HANDRAILS SHALL BE RETURNED OR SHALL TERMINATE AT A ... ST SAF TERMINATE (R311.7.7.2.).

TWO OR MORE HANDRAILS ARE CONSIDERED CONTINUOUS IF THE TERMINATION OF ... RAIL OCCURS WITHIN 6" OF EACH OTHER.



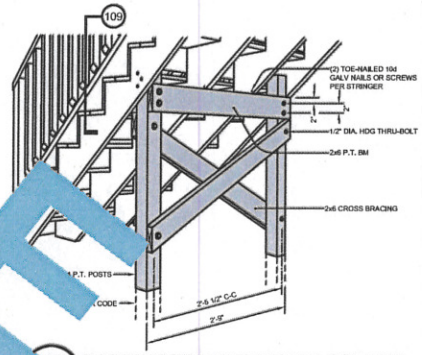
P106 STAIR CLEARANCES

NOT TO SCALE DATE: 12-15-14
Details Developed By APPIAN Consulting Engineers



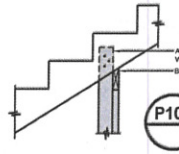
P107 STAIR GUARDS

NOT TO SCALE DATE: 12-15-14
Details Developed By APPIAN Consulting Engineers



P108 INTERMEDIATE STAIR BRACE

NOT TO SCALE DATE: 12-15-14
REQ'D WHEN STRINGER HOR SPAN EXCEEDS 10 FT, WHEN INTERMEDIATE BRACE IS REQ'D, LOCATE AT MID SPAN OF STRINGER
Details Developed By APPIAN Consulting Engineers



P109 SECTION

SCALE: 3/4"=1'-0"
DATE: 12-15-14

REVISIONS			
DESCRIPTION	DATE	BY	CKD

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STANDARD DETAILS For Your County HMGP 2015 Elevation Project North Carolina

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P-2

EXAMPLE

MOORE & KENAN

ATTORNEYS AT LAW
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EMAIL robert@mkattorneys.com
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Clifton L. Moore, Jr. (1936-2013)
Robert C. Kenan, Jr.

MAILING ADDRESS:
Post Office Box 957
Burgaw, N.C. 28425

November 19, 2015

VIA UNITED STATES POSTAL SERVICE CERTIFIED MAIL RETURN RECEIPT REQUESTED ATRICLE NUMBER 7015 1660 0000 7896 1702

J. Reed Whitesell
Holland Consulting Planners, Inc.
3329 Wrightsville Avenue, Suite F
Wilmington, NC 28403

Re: Pender County FY 2014 Flood Mitigation Assistance Program

Dear Mr. Whitesell:

I am in receipt of your letter dated November 16, 2015, regarding your firm's solicitation of legal services for the above-referenced Flood Mitigation Assistance Program on behalf of Pender County. Our firm is interested in providing legal services for the program.

As requested within your letter, our firm's hourly rate for providing general legal advice is $250.00. The rate for searching the title for each parcel and providing a preliminary opinion on title for each parcel is $350.00. The closing fee for conducting a real estate closing is $500.00. These fees exclude the costs for any recording fees payable to the Pender County Register of Deeds, costs associated with removing any title defects such as judgment satisfactions and liens, and the costs for the current year or past year real property taxes.

The turnaround time for our firm to perform the title search and return a preliminary title opinion report to Pender County or its agent would be seven (7) calendar days from the date that our firm receives a written request from Pender County or its agent to perform a title search.

Approximately forty percent (40%) of our firm's business is devoted to real estate transactions that include, title searches, preparation of deeds, lease agreements, offers to purchase contracts, and the closing of residential and commercial real estate transactions. Between 1999 and 2001, our firm handled between thirty to fifty closings for Pender County as part of the Hazard Mitigation Grant Program that was administered after Hurricane Floyd. Our law firm has been actively practicing in Pender County for approximately 18 years.

In closing should you have any questions regarding the matters set forth herein, please do not hesitate to contact me at (910) 259-9800 or via email at robert@mkattorneys.com. Further, as a follow up to this letter, could you inform me as to who Pender County selects to perform the legal services as stated within your letter dated November 16, 2015.

Respectfully,

Robert C. Kenan, Jr.

Sherman & Rodgers
Attorneys-at-Law

POST OFFICE BOX 250
BURGAW, NC 28425
(910) 259-2615 (TEL.)
CHIP@SHERMANANDRODGERS.COM
SCOTT@SHERMANANDRODGERS.COM

December 1, 2015

VIA HAND DELIVERY

Holland Consulting Planners
Attn.: J. Reed Whitesell, AICP
3329 Wrightsville Avenue, Ste. F
Wilmington, NC 28403

Re: Pender County FY2014 Flood Mitigation Assistance Program
Request for Legal Services

Dear Mr. Whitesell:

I am in receipt of your letter of November 16, 2015, a photocopy of which is attached hereto for your ready-reference. Our firm is delighted that you have contacted us to do more work for Pender County.

Please be advised that our hourly rate is $250 an hour. We generally charge $250 for a title search and preliminary opinion on title. We charge anywhere from $300 to $500 for a closing depending upon the type of settlement. If we encounter a title search that does not fall into this general range, we will contact you for instructions prior to incurring any additional charges.

Our firms average response time for a title request is generally three (3) days, though it is difficult to provide a timeframe with any degree of certainty because each title is different and some involve exceptional work.

Regarding experience, please be advised that Scott Sherman has been practicing law for 25 years and Richard T. Rodgers ("Chip") has been practicing law for 13 years. We have closed over 5000 transactions and in the last 2 years we have conducted 255 title exams in Pender County in connection with the work we do for the Pender County Tax Collector.

If we can be of assistance to you, please do not hesitate to contact us by whatever method is most convenient to you.

Yours very truly,

Scott G. Sherman for the Firm

ROBERT H. GOSLEE & ASSOCIATES, PA
LAND SURVEYORS – LAND PLANNERS
P.O. Box 133
Wallace, North Carolina 28466
Phone: 910-285-4210 Fax: 910-285-2485
rhgwal@embarqmail.com

November 25, 2015

RECEIVED
NOV 30 2015

Mr. Reed Whitesell
FMA Administrator, Holland Consulting Planners, Inc.
3329 Wrightsville Avenue, Suite F
Wilmington, NC 28403

Re: Letter of Interest:

Dear Mr. Whitesell,

This letter is to express our interest in working with Holland Consulting Planners, Inc. on the Pender County FY2014 Flood Mitigation Assistance (FMA) Elevation Program.

Robert H. Goslee & Associates, PA have been surveying in Southeastern North Carolina since 1969 and has offices located in Wilmington, NC and Wallace, NC with survey field crews working in each office. We have four professional surveyors on staff, two of which are FEMA Certified Floodplain Surveyors. We have extensive experience working in Pender County doing boundary surveys, subdivision of property and elevation certificates including elevation certificates based on construction drawings, buildings under construction and final elevation certificates.

Our hourly rates are as follows:	2 man survey crew	$ 100.00/hr
	3 man survey crew	$ 125.00/hr
	GPS surveying	$ 150.00/hr
	Office research or cad	$ 95.00/hr
	Elevation Certificates	$ 500.00 ea

Our average response time to start the field work is usually 2-4 working days from the notice to proceed.

I look forward to working with you on this project and await your instructions to proceed.

Sincerely

Manley D. Carr, PLS,CFS
President

Progressive Land Development Consultants, PLLC
102 Coppers Trail
Wilmington, NC 28411 (Pender County)
L. Scott Baggie, PLS lsbaggie@pldcpa.com

December 2, 2015

Holland Consulting Planners
J. Reed Whitesell, AICP
FMA Administrator
3329 Wrightsville Ave. Suite F
Wilmington, NC 28403

RE: Surveying Services Proposal
Pender County Flood Mitigation Assistance (FMA)
Elevation Program

Dear Mr. Whitesell,

We are pleased to advise you of *Progressive Land Development Consultants', PLLC* (PLDC) interest in fulfilling the surveying services for the project noted above.

Partners in PLDC have been providing professional services in the area since 1991. PLDC was organized in 2010 as a veterans owned small business and since then, we have provided elevation certificates and performed several hundred lot and parcel surveys, many documented and recorded in Pender County Record of Deeds. For the previous 8 years, our survey manager, Scott Baggie, PLS, has routinely performed elevation certificates, boundary, topographic, site plans and other typical surveys for residential and commercial properties in the Wilmington area, including Pender County. We have performed professional land surveying services for residential properties for a wide variety of client types and needs including lenders, title and flood insurers, homeowners, and for acquisition, refinances, construction, boundary adjustments, land divisions, lot consolidation and new conveyances, etc.

Clients have included, among many others, universities, local governments, engineering firms, builders and developers. References from past and current clients are available.

From the time a notice to proceed is received, we are able to provide, on average, the completed work product (survey and elevations, etc.), within 3 to 5 work days for typical surveys requested. This time may be halved by assigning additional staff. A large number of surveys and elevation certificates in Pender County and elsewhere have required quick turnaround times such as mortgage closings. Our familiarity with Pender County from previous survey work, flexibility in scheduling, and state-of-the-art surveying equipment are just part of our seamless field-to-office automation and quality control.

Please find the fee schedule for PLDC on the following page and note that lump-sum quotes are available.

Thank you for the opportunity to provide this information and please let me know if I can provide additional information or answer any questions. Please also note we are a veteran-owned small business.

Sincerely,

L. Scott Baggie, PLS (910) 367-0066
Gerald DeVito, P.E. (910) 520-3661

PROGRESSIVE LAND DEVELOPMENT CONSULTANTS

PROFESSIONAL SERVICES FOR A SUCCESSFUL PROJECT

A Veteran Owned Small Business.

Fee Schedule
Effective January 1, 2015 through December 31, 2015

	BASE RATE
PROFESSIONAL ENGINEER	$125.00/HOUR
ADMINISTRATIVE ASSISTANT	$45.00/HOUR
G.I.S. TECHNICIAN	$60.00/HOUR
G.I.S. PLANNER / COORDINATOR	$65.00/HOUR
PROJECT MANAGER (PLS)	$95.00/HOUR
SURVEY CADD TECH.	$65.00/HOUR
FIELD SURVEY CREW	$95.00/HOUR
TYPICAL RESIDENTIAL LOT SURVEY	UNIT PRICE $300 - $450
ELEVATION CERTIFICATES	UNIT PRICE $450
RESIDENTIAL CONSTRUCTION FOR PERMITTING (LOT SURVEY, PLOT PLAN, HOUSE STAKE, FOUNDATION SURVEY & FINAL).....	UNIT PRICE $850
RURAL PARCEL SURVEYS LESS THAN 5 ACRES	COST RANGE $750 TO $1,200
LESS THAN 10 ACRES	COST RANGE $1,200 TO $1,800

OVER 10 ACRE BOUNDARY SURVEYS WILL BE COST ESTIMATED ON A LUMP SUM BASIS.

COMMERCIAL CONSTRUCTION TO BE QUOTED ON A PROJECT-BY-PROJECT BASIS

Lump Sum Quotes available for any project at clients request

For field work, these rates include wood stakes, hubs, iron pipes, rebar and flagging. These rates do NOT include per diem expenses (such as: meals, motel, mileage), special equipment (boats, fathometer, etc.), concrete/pre-cast aluminium monuments, etc. All projects will be associated with a Client/Contractor agreement, detailing scope of work, time of delivery and final estimated cost of services.

Thank you for your business!
L. Scott Baggie, PLS
Director of Surveying
lsbaggie@pldcpa.com

CAPE FEAR SURVEYING, P.C.

1 North Sixth Street
Wilmington, North Carolina 28401
Office (910) 762-9496
Fax (910) 762-5949

November 19, 2015

Holland Consulting Planners
3329 Wrightsville Avenue Suite F
Wilmington, NC 28403

Attention: J. Reed Whitesell, AICP
FMA Administrator
RE: Pender County FY2014 Flood Mitigation Assistance (FMA)
Elevation Program Request for Professional Surveying Services

Dear J. Reed,

Thank you for inquiring about our services. To introduce myself, I am Stuart Benson and I have been in business for about 35 years, surveying both residential and commercial properties in Southeastern North Carolina. In most cases this office is able to provide a completed map or documentation within 10 working days, and very often, within a 5 day work-week. Our hourly rate is $125.

Thank you for the opportunity to submit this offer, and if there are any questions, please do not hesitate to call.

Best Regards,

Stuart Y. Benson, P.L.S. (L-2675)

PENDER COUNTY FY2014 FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM
Elevation and Demolition Contracts Award Policy

During the performance of housing elevation and demolition activities included in the Pender County Flood Mitigation Assistance (FMA) Program, the county will utilize the following guidelines in the award of contracts to contractors who bid on the elevation or demolition of specific dwelling units:

1) The county shall reserve the right to reject bids and rescind contract awards if one of the following conditions has not been met:

    a. The contractor must have submitted all required forms, credit report, references, etc., with his bid;

    b. The contractor must have references and a past working record acceptable to the FMA Administrator prior to the FMA Administrator=s recommendation of award to the Pender County Board of Commissioners;

    c. The contractor must have demonstrated the ability to meet the performance criteria established in the Instructions to Bidders and the elevation or demolition contract.

    d. The contractor must have demonstrated the ability to meet standards of workmanship outlined in the Instructions to Bidders as witnessed by the FMA Administrator.

2) Assessment of conditions 1(c) and 1(d) above shall be based on the FMA Administrator=s review of contractor references and work performed in other locations, if the contractor has not performed recent elevation or demolition work for Pender County.

3) If construction estimates are prepared, no contract award shall be made if the contract price is less than 85% or more than 115% of the FMA Administrator's final estimate. The FMA Administrator will document negotiation of bids and/or estimates before contract awards are made.

4) In a case where an individual contractor is performing adequately, but he is the low bidder on more houses than he can complete within 180 days following the bid opening, (based on past performance), the county shall reserve the right to reject bids for those surplus houses, and award those houses to the next lowest bidders meeting the guidelines outlined herein, in the interest of efficient completion of elevation or demolition activities. The county also reserves the right to reject bids and award contracts to alternate bidders in the interest of maintaining an efficient work schedule consistent with performance standards mandated by the funding agency.

5) The county reserves the right to rescind contract awards made prior to contract execution if circumstances beyond the control of the county, including directives by the funding agency or homeowner=s non-participation, prohibit the county=s participation in the contract as Owner=s Representative.

6) Any action, either restrictive or affirmative, taken under these guidelines, shall be in the interest of an efficiently managed FMA program, and will be without self-interest on the part of any member of the Pender County Board of Commissioners or county staff; and furthermore, shall be without regard to race, creed, sex, color, or national origin.

7) The Pender County Planning Director (FMA Designated Agent) has demonstrated the ability to coordinate grant program activities with this Board. The Pender County Board of Commissioners also realizes the importance of prompt action in the interest of maintaining satisfactory work progress. Therefore, the Pender County Planning Director (FMA Designated Agent) is hereby authorized to approve and execute all elevation change orders less than 20% of current contract value.

Adopted this 14th day of December, 2015.

George R. Brown

George R. Brown, Chairman
Pender County Board of Commissioners

ATTEST:

Melissa Pedersen

Melissa Pedersen, Clerk to the Board