REQUEST FOR PROPOSALS

No. 17-07

ROCKDALE COUNTY, GEORGIA

February 1, 2017

DESIGN-BUILD
FIRE STATION #2

ROCKDALE COUNTY FINANCE DEPARTMENT
PROCUREMENT OFFICE
958 Milstead Avenue
CONYERS, GA 30012
770-278-7552

INTRODUCTION:

Rockdale County is requesting Competitive Sealed Proposals for the Design-Build of Fire Station #2. Instructions for preparation and submission of a proposal are contained in this packet. Proposals must be typed or printed in ink.

Rockdale County provides equal opportunity for all businesses and does not discriminate against any person or business because of race, color, religion, sex, national origin, handicap or veterans status. This policy ensures all segments of the business community have access to supplying the goods and services needed by Rockdale County.

PROJECT DESCRIPTION

The project consists of all planning, design, site development, permitting and construction necessary to design and build Fire Station No. 2. The Building will be approximately 8450 square feet. The project is located 778 Bell Road, Conyers, Georgia 30094. The site is approximately 6-acres of land with frontage on Bell Road as shown on the attached Property Map labeled Appendix B. The topographic plans, shown on the attached Property Maps labeled Appendix C, are provided for informational purposes only. Proposers should recognize that actual ground topographic survey may be required in order to adequately design and construct the project.

The building will consist of a three bay fire station with ten bunk rooms, a kitchen and dayroom area, public lobby/office, workout room and storage/repair room as shown in Appendix D. The owner intends for the final construction plans to generally follow the conceptual layout as shown in the provided conceptual plan. While this layout is desired, the Owner recognizes that minor modifications to the floor plan or the other requirements of this RFP may be necessary to comply with laws and regulations including applicable building codes. The Owner will also consider minor revisions or adjustments to the floor plan where cost savings may be recognized.

All Plans, Design work, Blueprints, Architectural drawings, paper or electronic will be considered the property of Rockdale County. At the completion of the project Three (3) paper and Three (3) electronic copies of all plans shall be turned over to Rockdale County and may be used by Rockdale County for any future purpose.

The Owner intends to award a contract to the successful bidder within sixty (60) days of the bid opening date. The project must be designed and constructed one (1) year from notice to proceed.

PURCHASING CONTACT FOR THIS REQUEST:

All questions concerning this RFP and all questions arising subsequent to award are to be addressed to the Purchasing Division via email to Meagan Porch, Buyer, at meagan.porch@rockdalecountyga.gov or the following address:

Rockdale County Finance Department
Purchasing Division
Attn: Meagan Porch
958 Milstead Avenue
Conyers, GA 30012
Phone: (770) 278-7557, Fax: (770) 278-8910
E-mail: meagan.porch@rockdalecountyga.gov

To maintain a "level playing field", and to assure that all proposers receive the same information, proposers are requested **NOT** to contact anyone other than the contact above until after the award of the contract. Doing so could result in disqualification of the proposer.

PROPOSAL COPIES FOR EVALUATION:

Four (4) hard copies and one (1) original hard copy and one (1) CD or Flash Drive in Adobe PDF format will be required for review purposes. *(Original must be clearly marked "Original" and the Copies clearly marked "Copies.")* . CD's that are blank or have incorrect information on them will not be acceptable and may be justification for disqualification. Check your disk(s) to ensure that they have the appropriate material on it before submitting.

CONTRACT TERM:

The Contract Term – One (1) year from notice to proceed.

DUE DATE:

Sealed proposals will be received at the Rockdale County Finance Department, Procurement Division, 958 Milstead Avenue, Conyers, GA 30012 no later than **2:00 P.M., local time, Thursday, March 9, 2017.** Proposals received after this time will not be accepted.

PRE-PROPOSAL CONFERENCE:

There will be a **MANDATORY** Pre-Proposal Conference held at **Rockdale County Fire Station # 9, 2009 Walker Road, Conyers, GA 30012, at 10:00a.m., local time, Monday, February 27, 2017**. Any questions and/or misunderstandings that may arise from this RFP may be asked and answered at the pre-proposal conference; however, oral responses are not authoritative. Proposers are encouraged to review the RFP before attending the pre-proposal conference. Questions received after the pre-proposal conference must be submitted in writing to meagan.porch@rockdalecountyga.gov or at the above address. *Any contractor who intends to submit a proposal is required to attend this meeting.*

QUESTIONS AND CLARIFICATIONS:

All questions and requests for clarifications concerning this RFP must be submitted to the Purchasing Division via email to meagan.porch@rockdalecountyga.gov or at the above address no later than **2:00 p.m., local time, on Thursday, March 2, 2017**. It shall be the proposers responsibility to seek clarification as early as possible prior to the due date and time. Written responses from the County to the questions it receives will be in an addendum and posted to the County's website at **www.rockdalecountyga.gov**, under Bid Opportunities. Questions or requests for clarifications received after this deadline will not receive a response.

ADDENDA:

Answers to questions submitted that materially change the conditions and specifications of this RFP will be issued in an addendum and posted to the County's website at www.rockdalecountyga.gov Bid Opportunities. Any discussions or documents will be considered non-binding unless incorporated and issued in an addendum.

It is the proposer's responsibility to check the Rockdale County website at www.rockdalecountyga.gov, Bid Opportunities for any addenda that may be issued, prior to submitting a proposal for this RFP.

DEFINITIONS

1. Design-build Contractor means a single firm or group of several firms in a prime/subcontractor or joint venture arrangement that will provide both design and construction services for the project.

2. Design means all surveying, planning, analysis, plan preparation and specifications necessary to satisfy the requirements of this RFP and applicable local, state and federal laws and regulations including but not limited to the governing building codes, Occupational Safety and Health Administration (OSHA) requirements and Americans with Disabilities Act (ADA) requirements. The Contractor will be required to obtain all necessary permits from the County. The County will waive permit fees.

3. Construction means all means and methods necessary to complete the structures, buildings, site work, landscaping, or other improvements to real property of every kind and nature provided for and reasonably inferable from the requirements provide in the RFP.

4. Owner means the Rockdale County Board of Commissioners

5. Project means all necessary design and construction necessary to satisfy the requirements of the RFP.

6. Project designer's means the individuals and firms of licensed architects and engineers who have undertaken to design the project.

7. Project budget is the total amount available for design and construction of the project.

8. SPLOST means Special Local Option Sales Tax

PROPOSAL SUBMITTAL INSTRUCTIONS

Procurement will be made in accordance with provisions of O.C.G.A. 36-91-21(c) which requires that firm's be selected on the basis of the evaluation factors set forth in the RFP. The evaluation factors will be based primarily on qualifications with price being one component of the evaluation. Before the deadline for accepting proposals, each proposer shall submit TWO SEPARATE, SEALED PACKAGES: one containing the Technical Qualifications Proposal and one containing the Fee Proposal.

1. The Technical and Fee proposals shall be submitted in separate packages.

2. One original and seven copies of the Technical Proposal and one original and two copies of the Fee Proposal must be received at the issuing office as shown in the bid announcement. Proposers are requested to clearly mark the original set of the proposal.

3. The proposal shall be properly labeled with the date and time the proposals are due, the title of the project, and the name of the person, firm, or corporation making the proposal. The proposals must be in a sealed package.

4. Late proposals cannot be accepted. Proposals delivered to any other location will not be considered received until they arrive at the location specified in the Proposal Advertisement. The owner will not waive delay and delivery resulting from the need to transport a proposal from another location or error or delay on the part of the carrier. Proposals or unsolicited amendments to proposals arriving after the due date and time will not be considered.

5. Proposals shall be prepared simply and economically, providing a straightforward, concise description of the proposer's offer to meet the requirements of the RFP. Technical proposals

shall be limited in length to 30 pages not including the schematic drawings and narrative.

6. The proposal shall include a conceptual or schematic plan for the site layout, for the floor plan, and for the elevation(s). The purpose of the schematics is to evaluate the proposers qualifications and design experience, and to prevent miscommunications and misunderstandings with regard to the scope of the work. It is understood that the schematics are not full construction design documents and that alterations may be necessary as the parameters of the design are fully examined and incorporated.

7. In addition, the proposal shall provide a narrative that addresses structural, mechanical, electrical and plumbing systems.

8. A proposal cannot be withdrawn after it is filed unless bidder makes request in writing to the Owner prior to time set for opening of bids or unless the Owner fails to accept bid within sixty (60) calendar days after date fixed for opening of bids.

ENERGY EFFICIENT, RECYCLING, AND WASTE REDUCTION PURCHASING POLICY

Policy #R-2015-08 includes the following language:

> The Rockdale County Board of Commissioners only purchases energy star rated equipment and appliances that are economically responsible and reduce resource consumption and waste within federal, state, and local laws. The County will only purchase recycled copy, computer, and fax paper with at least 30 percent recycled content.

A copy of the policy may be viewed and downloaded by visiting the website at www.rockdalecountyga.gov Bid Opportunities, and scrolling down to the bottom of the page.

QUALIFICATIONS OF OFFERORS:

Proposers must have a current business license from their home based jurisdiction and provide a copy of that license with the submittal of their proposal response.

Proposals from any offeror that is in default on the payment of any taxes, license fees, or other monies due to Rockdale County will not be accepted.

Any contractor submitting a Proposal must complete the Contractor's Qualification Statement and Questionnaire if provided in this package.

In evaluating Proposals, the County may seek additional information from any contractor concerning such contractor's proposal or its qualifications to construct the Project.

Proposers are to submit at least **three (3) references** from projects with similar experience using the materials and process in this RFP.

LICENSES AND QUALIFICATIONS

Proposers must possess all licenses required by Georgia law, including, at a minimum an unlimited general contractor's license in the building classification under Georgia's statute, and shall submit proof of current licensing with their proposal. Additionally, all plans submitted for permit must be stamped by architects and engineers licensed in the state of Georgia to practice in the area of expertise for which they are responsible on this project.

The Owner reserves the right to require the design build contractor to demonstrate it has the skills, equipment, and other resources to satisfactorily perform the nature and magnitude of work

necessary to complete the project within the proposed contract schedule.

PROPRIETARY INFORMATION

Careful consideration should be given before submitting confidential information to Rockdale County. The Georgia Open Records Act permits public scrutiny of most materials collected as part of this process. Please clearly mark any information that is considered a trade secret, as defined by the Georgia Trade Secrets Act of 1990, O.C.G.A. §10-1-760 et seq., as trade secrets are exempt from disclosure under the Open Records Act. Rockdale County does not guarantee the confidentiality of any information not clearly marked as a trade secret.

FINANCIAL STABILITY

The Offeror will provide financial information that would allow proposal evaluators to ascertain the financial stability of the firm.

- If a public company, the Offeror will provide their most recent audited financial report.
- If a private company, the Offeror will provide a copy of their most recent internal financial statement, and/or a letter from their financial institution, on the financial institution's letterhead, stating the Offeror is in good standing with that financial institution.

SELECTION PROCESS

The Rockdale County Procurement Office and Evaluation Committee makes a recommendation for award. The Board of Commissioners will make the actual award of the contract and has the authority to award the contract to a company different than the company recommended by the Procurement Office and/or Evaluation Committee.

This is a past performance/quality/price trade-off source selection in which competing offeror's past and present performance history and product quality will be evaluated on a basis approximately equal to price. Award will be made to the responsible offeror whose proposal represents the best value after evaluation in accordance with the factors listed below. Rockdale County Board of Commissioners may reject any or all proposals and to waive any technicalities or informalities if such action is in the county's interest.

Rockdale County may evaluate proposals and award a contract without discussions with offerors. Therefore, the offeror's initial proposal should contain the offeror's best terms from a price and technical standpoint. The County reserves the right to conduct discussions if the County later determines them to be necessary.

Proposers will be evaluated based on the following criteria and may be called in for an interview. The County intends to award the contract to the responsible and responsive contractor whose proposal is determined in writing to be the most advantageous to the County taking into consideration all of the evaluation criteria.

SELECTION COMMITTEE SITE VISIT

The selection committee, in part or in its entirety, may conduct a site visit of the Georgia business office of the proposer that is short-listed in this RFP.

RESELECTION

In the event the general conditions of the contract cannot be agreed upon between the owner and

the highest ranked firm, the owners will terminate negotiations and shall repeat notification and negotiation process with the next ranked firm on the selection committee's list. In the event the general conditions of the contract cannot be agreed upon with the second ranked firm, the process will be repeated with the next ranked firm. If the contract still cannot be agreed upon, the owner's representatives will review the history of negotiations and make appropriate determinations including program adjustments in an effort to achieve and negotiate a contract with one of the firms selected. Such negotiation shall be carried out in the original selection order, or the selection committee may submit another list of firms in priority order to the owner for approval. If a contract cannot be agreed to, the owner, at its discretion, can terminate the negotiation process and re-advertise for this project.

JOINT-VENTURE PROPOSERS

If the proposer is a joint venture firm, the proposer must provide all identification information for all parties and all requirements for all parties (i.e., licenses, insurance, etc.). As part of the proposal submission the proposer must identify the responsibilities of each joint-venture party with respect to the scope of services/work. All joint-venture parties will be held responsible for the contract obligations jointly and severally. In the event two or more firms desire a joint venture, it is recommended that one incorporated firm become the prime design-build contractor with the remaining firms being subcontractors.

SITE INVESTIGATION

By submitting a proposal, the proposers acknowledge that they have investigated and satisfied themselves as to the conditions affecting the work including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, and availability of labor, water, and electric power. Any failure by proposers to acquaint themselves with the available information will not relieve them from responsibility for estimating properly the cost of successfully providing the services required. The Owner's representatives shall not be responsible for any conclusions or interpretations made by the Proposer of the information made available by the Owner.

PROPOSAL EVALUATION CRITERIA

Proposals will be evaluated and award will be made on the basis of both cost and technical considerations most advantageous to the owner as listed below:

A. PRIMARY CRITERIA

Evaluations will be based on the following technical criteria:

1. Design: (**15%**) The schematic designs will be evaluated for comprehensiveness, compatibility with the property, traffic flow, design layout, and ascetics.

2. Experience: (**15%**) To be considered, a proposer must have a minimum of five years of experience as a design build contractor. Each member of a joint venture proposal must also have a minimum of five years of design build experience. Each proposer shall submit information on three projects of similar scope and complexity to the proposed fire station project that have been completed by the proposer within the past five years. Projects that were completed by the same members of the design build team as proposed for this project will be given priority.

In describing project design construction experience, provide the following information:

a. Project title, location and brief description including the building use and contracting method.
b. Project owner and name and telephone number of owner's contact person.
c. Project design architect and engineers or consultants if utilized and name and telephone number of contact persons.
d. Project prime contractor and key personnel and name and phone number of contact person.
e. Project statistics including start and completion dates (original versus actual) for design and construction; cost (with brief explanation of what is included in the cost); square footage; foundation type; number of levels; and any awards received.

3. Qualifications of Personnel: (**15%**) Provide a project team organization chart and a detailed but concise resume on each of the key personnel to be assigned to this project. Such personnel shall include, but are not necessarily limited to, the project manager, field superintendent, architect, structural engineer, civil engineer, and mechanical, electrical, and plumbing engineer. Note where these key personnel are located (e.g. local office geographic location, main headquarters location).

4. References: (**15%**) Provide three references. The references must be project owners or project owner's representatives. Provide a contact name, address, telephone number and project name and location for each reference. Such references are to be from different projects; that is, only one reference per project is allowed. The owner reserves the right to contact references given as well as the others associated with the other projects listed under representative experience. Such references will be held in the strictest confidence.

5. Cost: (**15%**) Cost shall not be included in the technical proposal but submitted in a separate sealed fee proposal envelope as described in Section 2 above. A section in the technical proposal shall be included that provides a description of the basis for the fee proposal. This description shall be in the form of a preliminary site plan, floor plan, and elevations and design narrative for each of the disciplines (e.g. architectural civic, etc.) and shall include a schedule or discussion of proposed finishes.

B. SECONDARY REQUIREMENTS

The proposer shall also demonstrate the following, relevant to the subject proposal:

1. Schedule: **(5%)** A schedule for design and construction shall be provided in a time scale bar graph format, similar to Microsoft Project or Primavera. The schedule shall include specific task with dates for each step of the process including the Design Phase, the Permitting Phase, and the Construction Phase. The schedule shall include all dates for critical path items of the general product delivery schedule.

2. Project Control: **(5%)** Provide the following:

    a. Quality Assurance/Quality Control plan. Describe how your firm implements quality-control throughout design and construction.

    b. Project tracking . Describe your firm's approach and procedures for project tracking and reporting, including scheduling, accounting, etc. Describe the software used. Provide examples of a progress report including schedule tracking, cost control and reporting.

    c. Request for information and shop drawings. Describe your firm's approach to handling these documents to ensure accuracy and timeliness. Provide examples of applicable logs preferably on a project noted in the experience above.

3. Safety experience: **(5%)** Please describe your firm's safety program. Provide your firm's insurance experience modification factor for the past five years. Also provide your accident incident rate for the past five years utilizing the following formula: incident rate equals number of injuries divided by number of total man-hours.

4. Financial stability & Bonding Capacity: **(5%)** Provide current Dun & Bradstreet Street report including a Dun & Bradstreet rating or other evidence of financial stability, i.e. audited financials from two previous fiscal years.

5. Provide a letter from a surety company licensed to issue bonds in the state of Georgia or that has an agent licensed to do business in the state of Georgia indicating the proposes capability to provide adequate performance and payment bonds for this project.

6. Pending and past litigation. **(5%)** List by case number and case name all pending litigation in which the proposer are involved in as a party or a proposer's officers are involved in as parties in their official capacity within the firm. Include cases pending in any federal, state or local jurisdictions, court, commissions, regulatory body or other authority having the power to determine the rights of parties appearing before it. Also list all arbitrations proposer is involved in as a party and include a name, location and address of the arbitrator for each listing. All resolved litigation within the past five years and the disposition of this litigation is also to be identified.

INTERVIEWS

Interviews **may** be scheduled. Interviews will be informal, and will provide respondents with an opportunity to answer any questions the selection team may have on a submission.

INSURANCE:
The Company shall maintain in full force and effect the following insurance during the term of the Agreement.

Coverage	Limits of Liability
Workers' Compensation	Statutory
Employers' Liability	$1,000,000.00
Bodily Injury Liability	$1,000,000.00 each occurrence
except Automobile	$1,000,000.00 aggregate
Property Damage Liability	$1,000,000.00 each occurrence
except Automobile	$1,000,000.00 aggregate
Personal & Advertising Injury Limit	$1,000,000.00
Products / Completed Ops.	$2,000,000.00 aggregate
Automobile Bodily Injury	$1,000,000.00 each person
Liability	$1,000,000.00 each occurrence
Automobile Property Damage Liability	$1,000,000.00 each occurrence
Property Coverage /Builders Risk Policy	Equal to or greater than the existing building limit if performing renovations.

(If hazardous substances are involved)
Contractor's Pollution Liability (with 1 year extended reporting period)

Each Occurrence	$1,000,000.00
Aggregate	$2,000,000.00

Environmental Impairment Liability (with 1 year extended reporting period)

Each Occurrence	$1,000,000.00
Aggregate	$2,000,000.00

Professional Liability/General Liability	$1,000,000.00
Excess Umbrella Liability	$3,000,000.00

All insurance shall be provided by an insurer(s) acceptable to the County, and shall provide for thirty (30) days prior notice of cancellation to the County. Upon contract award, Contractor shall deliver to the County a certificate or policy of insurance evidencing Contractor's compliance with this paragraph. Contractor shall abide by all terms and conditions of the insurance and shall do nothing to impair or invalidate the coverage.

Rockdale, GA shall be named as Additional Insured under any General Liability, Business Auto and Umbrella Policies using ISO Additional Insured Endorsement forms CG 2010 or its equivalent. Coverage shall apply as Primary and non-contributory with Waiver of Subrogation in favor of Rockdale County, Georgia.

The insurance carrier must have a minimum rating of A or higher as determined by the rating firm A.M. Best.

Certificates to contain policy number, policy limits and policy expiration date of all policies issued in accordance with this contract.

BONDS:

BID BOND

Each bid shall include a bid bond in the amount of five percent (5%) of the total bid amount as guarantee that the bidder shall not withdraw the bid for 90 days after the scheduled bid opening. If awarded the contract, Bidders shall enter a written agreement with Rockdale County in accordance with the bid.

PERFORMANCE BOND

Upon execution and delivery of the contract, the bidder shall furnish Rockdale County a performance bond for the full amount of the contract. Maintenance provisions of the bond shall remain in effect for a period of twelve (12) months after acceptance of the work by the County. The surety shall be a reputable bonding company authorized to transact business in the State of Georgia.

PAYMENT BOND

Upon execution and delivery of the contract, the bidder shall furnish Rockdale County a payment bond for the full amount of the contract. Maintenance provisions of the bond shall remain in effect for a period of twelve (12) months after acceptance of the work by the County. The surety shall be a reputable bonding company authorized to transact business in the State of Georgia.

All sureties of bonds for Rockdale County must be licensed to do business in the State of Georgia and must be listed on the Department of Treasury Federal Register.

PERMITS:

The awarded contractor will be responsible for acquiring any permits that are required for this project/purchase. Rockdale County will waive fees on all permits issued by Rockdale County.

AWARD OF CONTRACT

The Rockdale County Procurement Office and Evaluation Committee makes a recommendation for award. The Board of Commissioners will make the actual award of the contract and has the authority to award the contract to a company different than the company recommended by the Procurement Office and/or Evaluation Committee.

ILLEGAL IMMIGRATION REFORM AND ENFORCEMENT ACT OF 2011

Vendors submitting a Qualification package in response to this RFP must complete the Contractor Affidavit under O.C.G.A. §13-10-91(b)(1) which is provided with the RFP package to verify compliance with the Illegal Immigration Reform and Enforcement Act of 2011.

A. The form must be signed by an authorized officer of the contractor or their authorized agent.

B. The form must be notarized.

C. The contractor will be required to have all subcontractors and sub-subcontractors who are engaged to complete physical performance of services under the final contract executed between the County and the contractor complete the appropriate subcontractor and sub-subcontractor affidavits and return them to the County a minimum of five (5) days prior to any work being accomplished by said subcontractor or sub-subcontractor. Format for this affidavit can be provided to the contractor if necessary.

INFORMATION TECHNOLOGY DISCLOSURES

This section is intended to obtain a full disclosure from the responder of all requirements related to the use of Information Technology for the successful implementation and operational readiness of the proposed solution. This disclosure should include all computer hardware, software, and network connectivity requirements that are needed.

Software that provides built-in data archiving mechanisms for all documents and files, and that can also be programmed to reflect State-defined retention schedules will receive preference.

Information must include:

- Point of Contact for Technical follow up (Name, title, email address, phone number)
- System Hosting (Cloud-based or Rockdale County Data Center)
- Compute requirements (server, workstations, field devices – Mfg and Model)
- Storage requirements (Mfg and Model, estimated 1st year requirement, estimated rate of growth, total capacity in Gb required for initial 2 years)
- Platforms involved – list all (Windows, iOS, Android, Linux, etc.)
- Scanners, cameras, monitors, printers (Mfg and Model)
- Software requirements (utilities, DB scripts, applications, – Name and Developer)
- High-level diagram of the solution (Host, Storage, DBs, Applications, Interfaces to other applications)

The Total Solution Cost should include all I.T. costs, plus (2) years of Maintenance (Support) Costs of all applications and equipment.

Responses must contain Payment Terms based on project-defined deliverables that include Project Plan Approval, Installation, Training, and Testing – both Systems and End-to-End (E2E) testing.

All systems that have been designated as "live", "in use", or "in Production" must follow the Change Management Procedures of the County in order for any subsequent changes to be approved, scheduled, and implemented. These procedures call for testing and adequate proof of testing.

GENERAL INFORMATION

No proposals received after said time or at any place other than the time and place as stated in the notice shall be considered. No responsibility shall attach to Rockdale County for the premature opening of a proposal not properly addressed and identified.

WITHDRAWAL OF PROPOSAL:

A proposer may withdraw his proposal before the proposal due date, without prejudice to the proposer, by submitting a written request of withdrawal to the Rockdale County Procurement Office.

REJECTION OF PROPOSAL:

Rockdale County may reject any and all proposals and must reject a proposal of any party who has been delinquent or unfaithful in any formal contract with Rockdale County. Also, the right is reserved to waive any irregularities or informalities in any proposal in the proposing procedure. Rockdale County shall be the sole judge as to which proposal is best, and in ascertaining this, will take into consideration the business integrity, financial resources, facilities for performing the work, and experience in similar operations of the various proposers.

STATEMENT OF EXPERIENCE AND QUALIFICATIONS:

The proposer may be required, upon request, to prove to the satisfaction of Rockdale County that he/she has the skill, experience, necessary facilities and ample financial resources to perform the contract(s) in a satisfactory manner and within the required time. If the available evidence of competency of any proposer is not satisfactory, the proposal of such proposer may be rejected. The successful proposer is required to comply with and abide by all applicable federal and state laws in effect at the time the contract is awarded.

NON-COLLUSION AFFIDAVIT:

By submitting a proposal, the proposer represents and warrants that such proposal is genuine and not sham or collusive or made in the interest or in behalf of any person not therein named, that the proposer has not directly or indirectly induced or solicited any other proposer to put in a sham proposal, or any other person, firm or corporation to refrain from proposing and that the proposer has not in any manner sought by collusion to secure to that proposer any advantage over any other proposer.

INTEREST OF:

By submitting a proposal, the proposer represents and warrants that a Commissioner, Administrator, employee, nor any other person employed by Rockdale County has, in any manner, an interest, directly or indirectly, in the proposal or in the contract which may be made under it, or in any expected profits to arise there from.

DOCUMENTS DEEMED PART OF THE CONTRACT:

The notice, invitation to proposers, general conditions, and instructions for proposers, special conditions, specifications, proposal, and addenda, if any, will be deemed part of the contract.

STANDARD INSTRUCTIONS

1. The instructions contained herein shall be construed as a part of any proposal invitation and/or specifications issued by Rockdale County and must be followed by each proposer.

2. The written specifications contained in this proposal shall not be changed or superseded except by written addendum from Rockdale County. Failure to comply with the written specifications for this proposal may result in disqualification by Rockdale County.

3. All goods and materials shall be F.O.B. Destination Conyers, Georgia and no freight or postage charges will be paid by Rockdale County unless such charges are included in the proposal price.

4. The following number, RFP No.**17-07** must be written clearly on the outside of each proposal envelope in order to avoid prior opening in error.

5. All proposals must be received and in-hand at proposal due date and time. Each proposer assumes the responsibility for having his/her proposal received at the designated time and place of proposal due date. Proposals received after the stated time and date may be subject to rejection without consideration, regardless of postmark. Rockdale County accepts no responsibility for mail delivery.

6. Unless otherwise stated, all proposals submitted shall be valid and may not be withdrawn for a period of 120 days from the due date.

7. Each proposal form submitted must include the name of the business, mailing address, the name, title and signature of the person submitting the proposal. When submitting a proposal to Rockdale County the first page of your proposal package should be the proposal form listing the price, delivery date, etc., unless the proposal form is requested to be in a separate envelope.

8. Rockdale County reserves the right to accept a proposal that is not the lowest price if, in the County's judgment, such proposal is in the best interest of the County and the public. The County reserves the right to reject any and all proposals.

9. Telephone, Telegraphic or Facsimile proposals will not be accepted.

10. No sales tax will be charged on any orders except for contracts that include construction materials being purchased through a third party.

    i. Federal I.D. #58-6000882
    ii. Sales Tax Exempt #58-800068K

11. If applicable, completed questionnaires must be signed manually. Rockdale County reserves the right to accept or reject any proposal on the basis of incomplete or inaccurate answers to the questionnaire.

12. If applicable, warranty information shall be provided.

13. Proposers shall state delivery time after receiving order.

14. Proposers shall identify any subcontractors, and include an explanation of the service or product that they may provide.

TECHNICAL REQUIREMENTS

The Design-Build contractor will be responsible for providing all design and construction materials and services necessary to construct the project. The Owner will require the successful proposer to meet all of the following technical requirements:

The building will consist of a three bay fire station with ten bunk rooms, a kitchen and dayroom area, public lobby/office, workout room and storage/repair room as shown in Appendix D. The Owner intends for the final construction plans to generally follow the conceptual layout as shown in the provided conceptual plan. While this layout is desired, the Owner recognizes that minor modifications to the floor plan or the other requirements of this RFP may be necessary to comply with laws and regulations including applicable building codes. The Owner will also consider minor revisions or adjustments to the floor plan where cost savings may be recognized.

SITE CIVIL REQUIREMENTS

Rockdale County will be the reviewing and permitting agency. In addition to satisfying applicable federal, state and local regulations, the Design-Build contractor will be required to obtain a Land Disturbance Permit prior to beginning site construction. A Land Disturbance Permit checklist can be obtained at the Rockdale County Administrative Office Building, Department of Planning and Development, 958 Milstead Avenue, Room 120, Conyers, Georgia Phone # 770-278-7125. Per the County Ordinance, site work must be completed and stabilized prior to obtaining a building permit. All County permit fees will be waived for this project.

A boundary survey will be performed by the Owner prior to Notice to Proceed. A Property Map with Geographic information System (GIS) topographic mapping information is provided as Appendix C for informational purposes.

Following is a list of information and minimum requirements pertaining to site civil requirements:

1. Wastewater Collection. Sanitary sewer is unavailable at the site. An on-site septic system approved by Rockdale County Environmental Health will be required, including grease trap(s) and/or oil/grit separator, if required. A soil survey report is provided as Appendix A.

2. Water Supply. Municipal water is available along Bell Rd (8" PVC main). A new fire hydrant shall be installed along the drive to the rear or side of the building for refilling of vehicle tanks upon return from emergency calls. **This will not be part of the metered water system.**

3. Geotechnical Exploration. Soil test borings have been performed and the Report of Geotechnical Exploration is provided as Appendix A.

4. Parking and driveways. A minimum of 20 parking spaces including required handicap parking shall be included adjacent to the building. These spaces can be configured on side, front and rear of the building or a combination of. Provided that the travel of emergency equipment vehicles is not obstructed. The parking areas may be constructed of light duty paving designed for automobile traffic and occasional delivery trucks. The driveways shall be constructed of heavy duty pavement designed to withstand the daily traffic of a 70,000- pound tandem rear axle vehicle similar to a ladder truck. In addition to fire equipment traffic, the drives shall be designed for the daily movement of rescue vehicles and automobile traffic as well as an occasional delivery or service truck. All pavements shall have a 25-year design life.

5. Sidewalks. Provide concrete sidewalks to allow adequate circulation between the exterior doors of the building and the parking area.

6. Exterior Site Lighting. Provide adequate exterior site lighting for safety and security at night.

ARCHITECTURAL REQUIREMENTS

In addition to satisfying other federal and state laws and regulations including but not limited to the International Building Code, OSHA and ADA considerations, the contractor will be required to obtain a Building Permit from Rockdale County and follow the standard construction inspection process. The permit may be obtained after site work is completed and stabilized according to the county ordinance. The fee for this permit will be waived.

The basic size, layout and spatial relationships of the rooms shall be adequate to conform to the needs of the usage program and meet or exceed all applicable Building Codes. The Owner acknowledges that some adjustment or minor modification to the plan may be necessary to satisfy code requirements, to improve constructability and/ or to provide a more economical design.

Appendix D provides the Owner's intended conceptual layout for the building. A narrative description is provided below to provide further information on the Owner's requirements for the building.

The building shall consist of a three bay fire station with three functional areas:

Sleeping Quarters:

- One area of the building shall be a Sleeping Quarters area that consists of ten bunkrooms. The ceiling in this area shall be 9 feet. Eight (8) of the ten (10) Bunk Rooms shall have a built-in desk and all ten (10) shall have three (3) separate lockers (18" wide 60" tall) for personal items, a ceiling fan with light, and a window-(exterior rooms only). The bunk room walls shall be painted CMU Block or painted gypsum board.

- Three (3) separate restrooms shall be provided. All walls in restrooms shall be constructed of concrete block sealed, primed and painted with high a gloss finish providing a sealed smooth surface for durability and ease of cleaning and maintenance. Restroom doors shall be stained, solid-core wood doors with primed and painted, hollow metal frames. Restrooms shall have water-resistant acoustical ceiling (Armstrong #605 ceramaguard or approved equal). Each restroom shall be equipped with floor drains for wash-down cleaning. Each restroom shall be equipped with a shower. Shower stalls shall be completely lined with tile or a solid surface material from floor to ceiling, no plastic or fiberglass stalls shall be used. Each restroom shall be equipped with a commercial quality toilet, a vanity cabinet with solid surface counter top, sink and mirror, soap dispenser, towel bars and a paper towel dispenser.

- A linen closet shall be included in the Sleeping Quarters area.

- A work-out room shall be provided on the Sleeping Quarters side of the building. This room is approximately 20 feet X 24 feet. The walls shall be constructed of concrete block sealed, primed

and painted with high a gloss finish providing a sealed smooth surface for durability and ease of cleaning and maintenance. The floors shall be sealed concrete with heavy duty rubber matt covering all areas except the laundry area. There shall be one (1) 3'0 door into the interior hall way, one (1) 3'-6" door to the outside and four (4) windows. Plumbing and electrical shall be provided for (owner supplied) washer similar to Model CAE2793BQ and an (owner supplied) electric dryer similar to model CEM2793BQ. A base cabinet with solid surface countertop approximately 6 feet long shall be provided for storage and folding area.

- The Hallway floors shall be polished concrete. It shall have a low slip surface even when wet. The walls shall be constructed of concrete block sealed, primed and painted with high a gloss finish providing a sealed smooth surface for durability and ease of cleaning and maintenance.

Vehicle Bay:

Another area of the building shall be a vehicle bay with three (3) drive-through bays.

- The bays shall be a minimum of 69 feet deep.

- The doors are a minimum of 12 feet wide by 14 feet tall. Vehicle doors shall be painted, insulated metal and glass with painted steel frames. Doors shall have all fixed panels with one (1) row of lights at approximately the eye level. Lights shall be double strength glass. The overhead doors shall be operated, controlled, and protected by lift Master operators to include Lift Master safety sensors, light curtain system, Traffic lights. See appendix E for further information. A 3- Button door controller station to open, close and stop the door shall be located at each door. Two (2) sets of one –button door controller stations (open only) for all doors shall be located at the door from the Dayroom side and one (1) at the Bunkroom side. Two (2) remote controllers shall be provided for each bay that operates both the front and rear door. They must be able to operate the door from a minimum of 100 feet from outside the building.

- The vehicle bay area shall have two (2) 3'0" pedestrian doors for entry/exit to the outside. One in the front of the building and one at the rear. There shall be one (1) 3'0" pedestrian door from the Day Room to the Apparatus bay. There shall be two (2) 3'0" pedestrian doors from the Bunk Room side to the Apparatus bay area. All exterior and interior doors that open to the bay area shall be primed and painted, insulated metal doors with a primed and painted hollow metal frame. All doors shall meet required building codes. Each door shall have a half light (except mechanical room doors).

- The Bay shall have two (2) mechanical rooms one (1) per side for electrical switch gear and panels, telephone, cable, computer equipment and the Heating and Cooling equipment.

- A utility room with mop sink, a single compartment utility sink, work surface and a floor drain shall be provided.

- This area shall include one (1) storage room located on the bunkroom side of the bay.

- A room for a Washer Extractor (Owner-supplied), similar to a Milnor Gear Guardian model 3222V6J shall be provided on the dayroom side of the bay.

- The building design for this area shall include cross ventilation, heating, and adequate lighting per applicable codes.

- Bay heaters shall be auto-switch controlled so the heat will turn off automatically when any one of the vehicle bay doors is open.

- The Apparatus Bay shall be equipped with exhaust fan(s)

- The Apparatus Bays shall be equipped with two (2) sets of hot and cold water faucets with garden hose connections, one (1) set at the front and one (1) set at the rear of the bays, for cleaning fire apparatus and equipment.

- The Apparatus bay shall be equipped with electrical convenience outlets. These outlets shall be on 20 amp breakers.

- 24 turnout gear storage racks with security doors and top security shelf shall be provided hung off the floor along the bay wall. Ready Rack brand or equivalent.

- The floor shall be sloped to a drainage system so that all water in the bay area will go to the floor drains. The concrete floor of the vehicle bay area shall have a finish that is extremely low maintenance, easy to keep clean with no or very little sealing and resealing required. No painting of the apparatus floor will be acceptable. It shall have a low slip surface even when wet.

- The walls shall be constructed of concrete block sealed, primed and painted with high a gloss finish providing a sealed smooth surface for durability and ease of cleaning and maintenance.

Public / Dayroom:

The third area of the building shall be the Public/Dayroom area. It shall consist of a Kitchen and Dining area, a Day room area approximately of 26 feet by 40 feet, an Office area and a Storage room/Work room.

- The kitchen shall have a two-compartment stainless steel sink, three (3) refrigerators (Owner-supplied), one (1) Ice Machine (owner supplied) similar to Scotsman model C0330, one (1) commercial under-counter dishwashers (Owner-supplied) similar to a GE Profile Model PDW9880LSS, and a 36" 6 burner gas commercial stove (Owner-supplied) similar to a Comstock/ Castle Model F330 with a vent hood (Owner-supplied) similar to a Prohoods model PLJW102. **{Owner will supply previously mentioned equipment for the contractor to install. The contractor shall ensure the required Gas, Plumbing and Electrical requirements are provided for installation kitchen equipment.}** Also, included in the kitchen shall be three (3) lockable Pantries adequate for the storage of non-perishable items for three (3) work shifts. A Dining area for no less than twelve (12) persons shall be provided.

- A Lobby and Reception area with a Public Restroom and Office shall be provided. This area must meet all handicap requirements for public use.

- A Storage/Workroom approximately 26 feet by 30 feet shall be provided. It will have one set of double doors into the vehicle bay area. The floors shall be polished concrete and have one (1) floor drain centered in the room. The walls shall be constructed of concrete block sealed, primed and painted with high a gloss finish providing a sealed smooth surface for durability and ease of cleaning and maintenance. 2ft x 2ft lay-in acoustical tile ceiling (Armstrong #756 fissured minaboard or approved equal). This area shall have a separate HVAC unit completely separate from the Kitchen/Day room air.

- The door into the Kitchen/Dayroom shall be equipped and wired for a magnetic card reader lock and set up for entrance monitoring.

Outside of Building

- 120V outlets at each pedestrian door.
- Frost proof hose bibb one (1) per side of building
- Covered pavilion at rear of dayroom side of the building. It shall be provided with a natural gas connection for Grill hookup, one (1) 120v duplex outlet, and a ceiling fan with light.
- 120V power to supply Diesel fuel pump
- LED Outside security lighting for building and parking areas.
- LED Lighting for flag pole
- LED Lighting for station sign.

Landscaping

- The landscaping plan is to match the surrounding neighborhood as much as possible. At this site there are some existing trees and plantings that are to be left in place and worked into the landscape plan.

Interior Finishes:

- Vehicle bay: The concrete floor of the vehicle bay area shall have a finish that is extremely low maintenance, easy to keep clean with no or very little sealing and resealing required. No painting of the apparatus floor will be acceptable. The floor shall have a low slip surface even when wet, painted CMU block walls, and a ceiling that can be easily cleaned.

- The Public/Dayroom area shall have polished concrete floors, 4" rubber cove base, painted gypsum board or painted CMU block walls, and 2ft x 2ft lay-in acoustical tile ceiling (Armstrong #756 fissured minaboard or approved equal).

- The Bunk rooms shall have carpet with 4" rubber cove base, painted gypsum board walls or painted CMU block walls, and 2ft x 2ft lay-in acoustical tile ceiling (Armstrong #756 fissured minaboard or approved equal).

- The hallway shall have polished concrete floors, 4" rubber cove base, painted CMU block walls, and 2ft x 2ft acoustical tile ceiling (Armstrong #756 or approved equal).

- Utility rooms shall have sealed concrete floors and painted CMU block walls.

- Bath rooms shall have polished concrete floors and painted CMU block walls, water-resistant acoustical ceiling (Armstrong #605 ceramaguard or approved equal).

- Storage / Workroom shall have polished concrete floors, painted CMU block walls, and 2ft x 2ft acoustical tile ceiling (Armstrong #756 or approved equal).

- Workout room floors shall be sealed concrete with heavy duty rubber matt covering. 4" rubber cove base, painted CMU block walls, and 2ft x 2ft acoustical tile ceiling (Armstrong #756 or approved equal).

- Samples shall be provided for owner's selection of all finishes both exterior and interior (carpet, paint, brick, etc).

- Public/ Dayroom and Sleeping areas shall have 9 foot ceiling and the Vehicle bay shall be a minimum of 16 feet of overhead clearance in the Vehicle Bay.

The conceptual design intent is based on a pre-engineered metal structure, standing seam metal roof,

painted CMU block walls in the vehicle bays, and metal stud walls with a brick veneer. However, the Owner is receptive to other building types and styles that can be provided within the project budget.

All exterior doors shall have a canopy covering to provide weather shielding to the door. All interior doors (except those leading to the vehicle bay) shall be stained, solid-core wood doors with primed and painted, hollow metal frames. All door hardware shall be lever-type except where push-pull is required.

Mechanical, electrical and telecommunications equipment rooms and spaces must be sized to house all necessary equipment and to provide easy access for maintenance, testing, repair, and removal of equipment.

An exterior patio shall be provided as shown on the conceptual building layout with power and gas hook-ups for a standard grill and a ceiling fan with light.

A. STRUCTURAL REQUIREMENTS

In addition to Building Code and other such requirements, the building shall be designed to accommodate the following loads:

1. The vehicle bay floor slab shall be designed to withstand the static and dynamic loads of a 70,000-pound, tandem rear axle vehicle similar to a ladder truck.

2. The building frame shall be designed to support a wet sprinkler fire suppression system.

MECHANICAL/HVAC REQUIREMENTS

HVAC systems shall be selected based on life cycle cost determinations that take into account the operating and maintenance costs over the anticipated life of the building. The HVAC system shall be designed and specified to the latest industry standards, codes and government regulations. Only standard commercial equipment with replacement parts that are readily available in the marketplace shall be specified.

Testing, adjusting and balancing of the HVAC system will be required before acceptance by the Owner.

The HVAC system and building shall be designed to not exchange any air between the Public/ Dayroom Kitchen area and the vehicle bay area and or Storage Workroom area. The Sleeping quarters area shall be a separate system not to exchange air with the vehicle bay area.

The vehicle bay area shall have adequate cross ventilation and adequate heat to prevent freezing of water pumps and to maintain an ambient temperature of no less than 55° F when the bay doors are closed.

Other Owner-supplied equipment shall be accommodated. This includes such equipment as air compressor equipment for breathing apparatus.

The public/dayroom area shall include a commercial stove with a vent hood to meet or exceed all applicable Building Codes. (owner provided equipment)

The location of mechanical equipment shall allow for reasonable access for routine maintenance.-

PLUMBING REQUIREMENTS

Commercial grade plumbing fixtures shall be used.

- Four (4) toilets, sinks and three (3) showers for the restrooms.
- A two-compartment stainless steel sink.
- Three (3) refrigerators (Owner-supplied)
- One (1) commercial under-counter dishwashers (Owner-supplied) similar to a GE Profile Model PDW9880LSS.
- Commercial washer and dryer (Owner-supplied) similar to a Whirlpool Model GHW9400P/ Model GGW9250S.
- A Washer Extractor, Milnor Gear Guardian (owner supplied) model 3222V6J.or equivalent.
- A one compartment laundry or utility sink.
- A hose bibb shall be provided on each side outside of the building for a total of four (4) locations.
- Two sets of hot and cold hose bibbs in the Apparatus Bay one front and one rear.
- Two (2) Tank-less water heaters

FIRE PROTECTION REQUIREMENTS

The building shall be designed with a wet pipe sprinkler system NFPA 13, and a fire alarm system NFPA 72.

ELECTRICAL REQUIREMENTS

In addition to minimum Code required electrical service, circuits and outlets, the building shall be designed to accommodate the power requirements of the equipment specified.

Panel boards, main service panels, telecommunication panels etc. shall be sized to provide 25% spare spaces and capacity. Electrical circuits shall be adequate for programmed use and shall meet or exceed all applicable Building Codes.

Electrical outlet box locations shall be coordinated with the owner. Conduit and boxes shall also be provided for telecommunication equipment at up to 6 locations in the building to be coordinated with the owner. Wiring from the main telecommunications panel(s) to each outlet box will be performed by the Owner.

Adequate lighting in all spaces shall be provided. Lighting fixtures shall be commercial quality LED. Replacement parts and bulbs must be locally available. In bathroom and other high humidity areas, fixtures shall have gasket on door and diffuser.

Overhead power service is acceptable a long as it does not interfere with the traffic of emergency vehicles and/ or the testing of aerial equipment. If overhead power is to be used a drawing of the exact location and route of the powerlines must be provided to the owner and approved by the owner in writing before installation. Obviously, underground power service is preferred.

A backup emergency power diesel generator with automatic transfer switch large enough to operate the entire fire station shall be provided.

120V power shall be provided for owner supplied diesel fuel pump and tank.

LED outside security lighting for the building and parking area shall be provided. A light for the flag pole and station sign shall be provided.

DESIGN SUBMITTAL AND REVIEW REQUIREMENTS

The Design Build Contractor shall provide a complete, detailed design and shall be fully responsible for that design. A complete, detailed design for this project is defined as plans that satisfy the requirements of this RFP and that result in issuance of all necessary permits for construction. The plans at a minimum shall include civil (including landscape), structural, architectural, mechanical, electrical and plumbing drawings, stamped by a professional licensed to practice within their respective design discipline. The Design Build Contractor shall also provide a final set of Plans and Specifications for the project prior to construction.

Subsequent to award of the contract, a pre-submittal conference will be held. At least two representatives from the design team and one representative from the construction team will be required to attend (e.g. architect, civil engineer and construction manager). The purpose of this conference will be to discuss design criteria, establish communication protocol and develop a detailed project schedule.

The Design Build Contractor shall provide the following submittals during design for Owner approval:
25% complete drawings for review
75% complete drawings for review
100% complete Construction Drawings and Specifications for review and permit by the County. Product data "cut sheets" for finish selection approval by Owner.

Submittals received by the Owner before noon on Fridays will be reviewed and returned two weeks after that Friday. The contractor shall submit three (3) paper copies of each submittal to the Owner's representative.

PROPOSAL FORM

Instructions: Complete all THREE parts of this bid form.

PART I: Proposal Summary

Complete the information below. If you wish to submit more than one brand, make a photocopy of this Proposal Form.

Division	Name		Units	Unit Cost	Cost
01	Gen Conditions				
02	Site Work	Landscaping, Fencing			
		Grading, Eros Control			
		Storm Sewer			
		Sanitary Sewer			
		Water			
		Curb & Gutter			
		Paving			
03	Concrete				
04	Masonry				
05	Metals	Pre-Eng Bldg, Erection, Roof			
06	Woods & Plastics				
07	Thermal/Moisture	Insulation			
08	Doors/Windows				
09	Finishes	Framing, Drywall, Ceiling			
		Painting			
		Flooring, Carpet, Tile, Base			
10	Specialties				
15	Mechanical	HVAC			
		Plumbing			
16	Electrical				
	Contingency Fee				
	Fee				

Total Base Bid $_____($_____.00)

PART II: Addenda Acknowledgements (if applicable)

Each vendor is responsible for determining that all addenda issued by the Rockdale County Finance Department – Purchasing Division have been received before submitting a bid.

Addenda	Date Vendor Received	Initials
"1"		
"2"		
"3"		
"4"		
"5"		
"6"		

The undersigned have familiarized themselves with the local conditions affecting the cost of the work, the RFP documents, and Addenda, if any and submit the following Fee Proposal in good faith and affirm that it meets all of the requirements, both explicit and implicit, of the RFP:

PART III: Vendor Information:

Company Name	
Address	
Telephone	
E-Mail	
Representative (print name)	
Signature of Representative	
Date Submitted	

ROCKDALE COUNTY BOARD OF COMMISSIONERS
NON-COLLUSION AFFIDAVIT OF VENDOR

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

(1) He is_____ (owner, partner officer, representative, or agent) of _____, the Vendor that has submitted the attached RFP;

(2) He is fully informed respecting the preparation and contents of the attached RFP and of all pertinent circumstances respecting such RFP;

(3) Such RFP is genuine and is not a collusive or sham RFP;

(4) Neither the said Vendor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Vendor, firm or person to submit a collusive or sham RFP in connection with the Contract for which the attached RFP has been submitted or refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Vendor, firm or person to fix the price or prices in the attached RFP or of any other Vendor, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Vendor, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached RFP are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Vendor or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

_____
(Signed)

_____
(Title)

Subscribed and Sworn to before me this _____ day of _____, 20

Name_____

Title_____
My commission expires (Date)

ROCKDALE COUNTY BOARD OF COMMISSIONERS
NON-COLLUSION AFFIDAVIT OF SUB-CONTRACTOR

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

(1) He/She is_____ (owner, partner officer, representative, or

agent) of _____, the sub-contractor that has submitted the attached RFP;

(2) He is fully informed respecting the preparation and contents of the attached RFP and of all pertinent circumstances respecting such RFP;

(3) Such RFP is genuine and is not a collusive or sham RFP;

(4) Neither the said sub-contractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Vendor, firm or person to submit a collusive or sham RFP in connection with the Contract for which the attached RFP has been submitted or refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Vendor, firm or person to fix the price or prices in the attached RFP or of any other Vendor, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Vendor, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached RFP are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the sub-contractor or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

_____
(Signed)

_____
(Title)

Subscribed and Sworn to before me this _____ day of _____, 20 ___.

Name_____

Title_____
My commission expires (Date)

Contractor Affidavit under O.C.G.A. §13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. §13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. §13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____
Date of Authorization

_____
Name of Contractor

_____
Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ___, 201__ in _____(city), _____(state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____,201__.

_____
NOTARY PUBLIC
My Commission Expires:
_____

Subcontractor Affidavit under O.C.G.A. § 13-10-91(b)(3)

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with (name of contractor) on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____
Date of Authorization

_____
Name of Subcontractor

_____
Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ___, 201__ in _____(city), _____(state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____,201__.

_____
NOTARY PUBLIC
My Commission Expires:

_____

Sub-subcontractor Affidavit under O.C.G.A. §13-10-91(b)(4)

By executing this affidavit, the undersigned sub-subcontractor verifies it compliance with O.C.G.A. §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract for (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract) and (name of contractor) on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. §13-10-91. Furthermore, the undersigned sub-subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the sub-subcontractor with the information required by O.C.G.A. §13-10-91(b). The undersigned sub-subcontractor shall submit, at the time of such contract, this affidavit to (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Additionally, the undersigned sub-subcontractor will forward notice of the receipt of any affidavit from a sub-subcontractor to (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Sub-subcontractors hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____
Date of Authorization

_____
Name of Sub-Subcontractor

_____
Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ___, 201__ in _____(city), _____(state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____,201__.

_____
NOTARY PUBLIC
My Commission Expires:_____

Affidavit Verifying Status
for County Public Benefit Application

By executing this affidavit under oath, as an applicant for the award of a contract with Rockdale, County Georgia, I _____. [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity] am stating the following as required by O.C.G.A. Section 50-36-1:

1) _____ I am a United States citizen

OR

2) _____ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

_____ _____
Signature of Applicant: Date

_____
Printed Name:

*_____
Alien Registration number for non-citizens

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
_____ DAY OF _____, 20___.

_____
Notary Public
My commission Expires:

***Note**: O.C.G.A. § 50-36-1(e)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provide their registration number. Because legal permanent residents are included in the federal definition of "alien", legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below.

_____

CONTRACTOR'S QUALIFICATION STATEMENT AND QUESTIONNAIRE

NAME OF PROPOSED CONTRACTOR: _____

I. INSTRUCTIONS

A. All questions are to be answered in full. If copies of other documents will answer the question completely, they may be attached and clearly labeled. If additional space is needed, additional pages may be attached and clearly labeled.

B. The owner, Rockdale County, Georgia, its agents and representatives, shall be entitled to contact each and every reference listed in response to this questionnaire, and each entity referenced in any response to any question in this questionnaire. By completing this questionnaire, the contractor expressly agrees that any information concerning the contractor in possession of said entities and references may be made available to the owner.

C. Only complete and accurate information shall be provided by the contractor. The contractor hereby warrants that, to the best of its knowledge and belief, the responses contained herein are true, accurate, and complete. The contractor also acknowledges that the owner is relying on the truth and accuracy of the responses contained herein. If it is later discovered that any material information given in response to a question was provided by the contractor, knowing it was false, it shall constitute grounds for immediate termination or rescission by the owner of any subsequent agreement between the owner and the contractor. The owner shall also have and retain any other remedies provided by law.

D. The completed form shall be submitted with contractor's proposals.

E. This form, its completion by the contractor, and its use by the contractor, and its use by the owner, shall not give rise to any liability on the part of the owner to the contractor or any third party or person.

II. GENERAL BACKGROUND

A. Current address of contractor: _____
_____

B. Previous Name or address of contractor: _____
_____

C. Current president or CEO and years in position: _____

D. Number of permanent employees: _____

E. Name and address of affiliated companies: _____
_____

III. FINANCIAL STATUS

A. Please attach financial statements for the past three years for which they are complete. If such statements are not available, please furnish the following information:

1. LAST COMPLETE FISCAL YEAR:

A.	Revenues (Gross)	_____
B.	Expenditures (Gross)	_____
C.	Overhead & Admin (Gross)	_____
D.	Profit (Gross)	_____

2. YEAR PRIOR TO "1" ABOVE:

A.	Revenues (Gross)	_____
B.	Expenditures (Gross)	_____
C.	Overhead & Admin (Gross)	_____
D.	Profit (Gross)	_____

3. YEAR PRIOR TO "2" ABOVE:

A.	Revenues (Gross)	_____
B.	Expenditures (Gross)	_____
C.	Overhead & Admin (Gross)	_____
D.	Profit (Gross)	_____

B. BANKRUPTCIES

1. Has the Contractor, or any of its parents or subsidiaries, ever had a Bankruptcy Petition filed in its name, voluntarily or involuntarily? (If yes, specify date, circumstances, and resolution).

_____

_____

2. Has any Majority Shareholder ever had a Bankruptcy Petition filed in his/her name, voluntarily or involuntarily? (If yes, specify date, circumstances, and resolution).

_____

_____

C. BONDING

1. What is the Contractor's current bonding capacity? _____

2. What is the value of the Contractor's work currently under contract? _____

IV. COMPANY EXPERIENCE – SIMILAR PROJECTS

A. List three projects of reasonably similar nature, scope, and duration performed by your company in the last five years, specifying, where possible, the name and last known address of each owner of those projects:

Project #1:
Name and Address: _____

_____

_____

Date of Project: _____

Type of Project: _____

Contract Price: _____

Owner contact info: _____
_____
_____

Architect/Engineer contact info: _____
(if applicable) _____
_____

Project #2:
Name and Address: _____
_____
_____

Date of Project: _____

Type of Project: _____

Contract Price: _____

Owner contact info: _____
_____
_____

Architect/Engineer contact info: _____
(if applicable) _____
_____

Project #3:
Name and Address: _____
_____
_____

Date of Project: _____

Type of Project: _____

Contract Price: _____

Owner contact info: _____
_____

Architect/Engineer contact info:
(if applicable)

V ARBITRATIONS, LITIGATIONS, AND OTHER PROCEEDINGS

Has your company been involved in any construction arbitration demands filed by, or against, you in the last five years? _____

Has your company been involved in any construction-related lawsuits (other than labor or personal injury litigation) filed by, or against, you in the last five years? _____

Has your company been involved in any lawsuits, proceedings, or hearings initiated by the National Labor Relations Board or similar state agency in the past seven years? _____

Has your company been involved in any lawsuits, proceedings, or hearings initiated by the Occupational Safety and Health Administration concerning the project safety practices of the Contractor in the last seven years? _____

Has your company be involved in any lawsuits, proceedings, or hearings initiated by the Internal Revenue Service, or any state revenue department, concerning the tax liability of the Contractor (other than audits) in the last seven years? _____

Have any criminal proceedings or investigations been brought against the Contractor in the last ten years? _____

If you answered yes to any of the questions above, please identify the nature of the claim, the amount in dispute, the parties, and the ultimate resolution of the proceeding (attach documentation if needed):

VI COMMENTS

Please list any additional information that you believe would assist the Owner in evaluating the possibility of using the Contractor on this Project. You may attach such additional information as an Exhibit to this Statement and Questionnaire.

I certify to the Owner that the information and responses provided on this Questionnaire are true, accurate and complete. The Owner, or its designated representative, may contact any entity or reference listed in this Questionnaire. Each entity or reference may make any information concerning the Contractor available to the Owner, or its designated representative.

Contractor:

_____ _____

Signature Date

_____

Title

Sworn to and subscribed before me
This _____ day of _____

_____

Signature

Notary Public

My Commission Expires:

Universal
ENGINEERING SCIENCES

REPORT OF GEOTECHNICAL EXPLORATION

Fire Station No. 2 – Rockdale County
778 Bell Road
Conyers, Georgia

UES Project No. 1630.1600014.0000
UES Report No.

May 5, 2016

PREPARED FOR

Rockdale County Department of Fire & Rescue
1496 Rockbridge Road, N.W.
Conyers, GA 30012-3550

PREPARED BY

Universal Engineering Sciences, Inc.
3040 Business Park Drive
Suite F
Norcross, Georgia 30071

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- Rockledge
- Sarasota
- Tampa
- Tifton
- West Palm Beach

May 5, 2016

Rockdale County Department of Fire & Rescue
1496 Rockbridge Road, N.W.
Conyers, GA 30012-3550

Attention: Mr. Joel Yoder

Reference: **REPORT OF GEOTECHNICAL EXPLORATION**
Fire Station #2 - Rockdale County
778 Bell Road, Conyers, Rockdale County, GA
UES Project No. 1630.1600014.0000
UES Report No.

Dear Mr. Yoder:

Universal Engineering Sciences, Inc. has completed a geotechnical evaluation at the above referenced site in Conyers, Georgia. The exploration was conducted in general accordance with an authorized proposal number 1630.0416.00004.

The following report presents the results of our field exploration and a geotechnical engineering interpretation of those results with respect to the project characteristics provided to us. Included are: general recommendations for site preparation procedures, foundation design parameters, pavement design and subgrade preparation, and fill suitability of the soils.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Sincerely yours,
UNIVERSAL ENGINEERING SCIENCES, INC.

GEORGIA REGISTERED No. PE036021 PROFESSIONAL ENGINEER RAMCHANDRA REDDY MOGULA

Ram Mogula, P.E.
Senior Engineer

Thomas A. Tye, P.E.
Principal Engineer

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EXECUTIVE SUMMARY

Based on the completed subsurface exploration, UES did not find adverse geotechnical considerations that would affect the design or construction of the proposed development on shallow foundations. In general, the site is developable. Geotechnical considerations that will impact the planned development include the following:

Soil and Groundwater Conditions

Based on the completed soil borings, the generalized subsurface soil profile in the location of the proposed Fire Station and surrounding pavement areas consists of thin layer of topsoil followed by residual soils. The residual soils consisted of silty sands and sandy silts. The standard penetration resistances within these soils ranged from 8 to 40 bpf with typical values of 15 bpf to 25 bpf.

Groundwater was encountered at boring B-2 at about 18 feet. No other location exhibited presence of ground water at the time of drilling within the depths explored. Fluctuations in groundwater levels should be anticipated throughout the year, primarily due to seasonal variations in rainfall, surface runoff, construction activity, and other site specific factors that may vary from the time the borings were conducted.

Site Preparation

Site preparation will consist of demolition of the existing buildings and pavement structures, clearing vegetation and stripping organics, roots and other deleterious materials, surface densification, proof-rolling, and filling with structural fill or cutting to construction grade.

Foundation Design

We recommend the proposed structure be supported on conventional, shallow spread foundations with an allowable soil bearing pressure of 2,500 pounds per square foot, assuming the site preparation recommendations to be presented our final report are followed. We have assumed a minimum foundation embedment depth of 18 inches or more from the finished site grades.

Pavement Design

It is assumed with the anticipated traffic load from Fire Trucks, both rigid and flexible pavement sections will be used on this project. Flexible pavement combines the strength and durability of several layer components to produce an appropriate and cost-effective combination of available construction materials. Concrete pavement has the advantage of the ability to "bridge" over isolated soft areas, it requires less security lighting, and it typically has a longer service life than asphalt pavement. Disadvantages of rigid pavement include an initial higher cost and more difficult patching of distressed areas than occurs with flexible pavement. Recommendations for both rigid and flexible pavements will be presented in our final report.

Excavation Considerations

Cut depths are expected to be minimal to bring the building area to finished grade. Based on the boring data, we do not anticipate rock to be encountered during mass grading. The soils encountered in our borings should be suitable for reuse as fill material. It should be noted that the onsite soils, due to a high fines content, will be difficult to work with during the wetter months of the year. If these soils are wet, they may exhibit longer than normal drying times.

Seismic, Liquefaction, and Geologic Considerations

Based on the site specific geotechnical subsurface data, and IBC 2012 site class definitions, section 1615, the seismic site classification will be site class C (stiff soil profile). We believe that due to the high fines (silt) content within the on-site soils that the site's susceptibility to liquefaction is low.

Hydraulic Conductivity

Percolation tests were performed at borings B-6, B-7 and B-8 to determine in-situ hydraulic conductivity of the soils in the area. Rates observed at these locations were 7.4, 6.9 and 11.4 Minutes per inch respectively.

1.0 INTRODUCTION

Universal Engineering Sciences, Inc. (Universal) has completed the geotechnical evaluation for the proposed fire station, which is located at 778 Bell Road in Conyers, Georgia. Our evaluation was authorized by you and was conducted as outlined in our proposal. This exploration was performed in accordance with generally accepted soil and foundation engineering practices.

2.0 PROJECT CONSIDERATIONS

The geotechnical evaluation was planned and executed based on a sketch of the proposed Fire station and a Topographic Site Plan for the subject site provided by you. No structural loads or finished floor elevations were provided; however it is anticipated cuts and fill should be minimal in order to achieve the finished floor level. The site is currently occupied by a small single story home and its associated driveway. The driveway is a single lane gravel path. The majority of the site on the east and north is wooded and densely covered in brush.

The provided Site Plan provided a general finished floor elevation of 790 feet in the building area. We have assumed the construction will be similar to other Fire Station locations within Rockdale County. It is assumed that only minimal cut and fill operations will be required to bring the site to the design grades once established.

Two types of pavement sections may be required at the project; standard duty pavement and heavy duty pavement. The standard duty pavement will have primarily car and pickup truck traffic while the heavy duty pavement section will have heavy truck traffic.

UES must review the final site and grading plans, and structural design loads to validate all recommendations rendered herein. Without such a review our recommendations may not be applicable, resulting in potentially unacceptable performance of site improvements for which UES will not be responsible or liable. Depending on the finalized details of the development, alterations to the recommendations provided herein and/or additional field work may be warranted.

No site or project facilities/improvements, other than those described herein, should be designed using the soil information presented in this report. Moreover, UES will not be responsible for the performance of any site improvement so designed and constructed.

3.0 SITE DESCRIPTION

3.1 General

The subject site is located at 778 Bell Road in Conyers, Georgia. The site is currently occupied by a small single story home and its associated driveway. The driveway is a single lane gravel path. The majority of the site on the east and north is wooded and densely covered in brush.

3.2 Geology

The project site is in the Piedmont Physigraphic Province of Georgia. The Piedmont is a relatively broad strip extending from central Alabama across Georgia and the Carolinas into Virginia. Rocks of the Piedmont occur in belts that are some of the oldest formations in the United States. The rock types are primarily metamorphic gneiss and schist with some granite intrusions.

The major portion of the bedrock in the Piedmont is covered with a varying thickness of residual soil that has been derived by chemical decomposition and physical weathering of the underlying rock. Residual soils developed during the weathering of this bedrock consist predominately of micaceous sandy silts and silty sands which grade to clayey silts and clays with nearness to the ground surface. The thickness of the residual soils can vary from only a few feet to in excess of 100 feet.

The boundary between the residual soil and the underlying bedrock is not sharply defined. Generally, a transition zone consisting of very hard soil to soft rock, appropriately classified as "partially weathered rock", is found. For engineering purposes, "partially weathered rock" is defined as any residual soils which exhibit blow counts in excess of 100 blows per foot. Within the transition zone, large boulders or lenses of relatively "fresh" rock that are generally much harder than the surrounding material often exist. The irregular bedrock surface is basically a consequence of differential weathering of the various minerals and joint patterns of the rock mass.

4.0 PURPOSE AND SCOPE OF SERVICES

4.1 Purpose

The purpose of this evaluation was:

- to explore and evaluate the subsurface conditions at the site with special attention to potential geotechnical considerations that may affect the proposed design, construction, or serviceability of the proposed improvements, and

- to provide geotechnical engineering recommendations for site preparation procedures, pavement and foundation design parameters, and the fill suitability of the soil excavated from the proposed detention areas.

4.2 Scope of Service

The services conducted by Universal during this subsurface Evaluation program are as follows:

- Drilling of four (3) Standard Penetration Test (SPT) borings in area of the proposed building for the Fire Station to depths of twenty (20) feet below the existing ground surface (bgs) or auger refusal and one (1) SPT boring to one hundred (100) feet bgs or auger refusal. Boring B-2 was drilled down to auger refusal at 37 feet bgs;
- Drilling of three (3) SPT borings in the planned driveway to depths of 15 feet bgs or auger refusal;
- Drilling of two (2) borings in the planned detention pond 15 feet bgs (to evaluate for fill)
- Drilling of three (3) borings along property boundary to 10 feet bgs (to evaluate for possible borrow site)
- Drilling of three (3) borings for percolation testing along property boundary to 10 feet bgs; and
- Performing three (3) percolation tests.
- Securing samples of representative soils encountered in the soil borings for classification, laboratory analysis and classification by a member of our geotechnical staff
- Measuring the existing site groundwater levels at the boring locations,

- Assessing the existing soil conditions with respect to the proposed construction, and
- Preparing this geotechnical report which documents the results of our subsurface Evaluation and analysis with geotechnical engineering recommendations.

4.3 Limitations

This report has been prepared for the exclusive use of Rockdale County Department of Fire & Rescue and their affiliates, successors, and assigns. This report should aid the architect/engineer in the design of the proposed fire station. The scope is limited to the specific project and locations described herein. Our description of the project's design parameters represents our understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in the design or location of the structures as outlined in this report are planned, we should be informed so the changes can be reviewed and the conclusions of this report modified, if required, and approved in writing by UES. UES cannot be held responsible for problems arising from changes about which we are not informed.

The recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Plan and from other information as referenced. This report does not reflect any variations which may occur between the boring locations. The nature and extent of such variations may not become evident until the course of construction. If variations become evident, it will then be necessary for a re-evaluation of the recommendations of this report after performing on-site observations and/or testing during the construction period and noting the characteristics of the variations.

UES must review the final site and grading plans, and structural design loads to validate all recommendations rendered herein. Without such a review our recommendations may not be applicable, resulting in potentially unacceptable performance of site improvements for which UES will not be responsible or liable. Depending on the finalized details of the development, alterations to the recommendations provided herein and/or additional field work may be warranted.

No site or project facilities/improvements, other than those described herein, should be designed using the soil information presented in this report. Moreover, UES will not be responsible for the performance of any site improvement so designed and constructed.

All users of this report are cautioned that there was no requirement for UES to attempt to locate any man-made buried objects or identify any other potentially hazardous conditions that may exist at the site during the course of this exploration. Therefore no attempt was made by UES to locate or identify such concerns. UES cannot be responsible for any buried man-made objects or subsurface hazards which may be subsequently encountered during construction that are not discussed within the text of this report. We can provide this service if requested.

Borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information to negate presence of anomalous materials or for estimation of material quantities unless our contracted services ***specifically*** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect such anomalous conditions or estimate such quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.

For a further discussion of the scope and limitations of a typical geotechnical report please review the document attached within Appendix 3, "Important Information About Your Geotechnical Engineering Report" prepared by ASFE.

5.0 FIELD EXPLORATION

5.1 General

The geotechnical evaluation was planned and executed based on a sketch of the proposed Fire station and a Topographic Site Plan for the subject site provided by you. The boring locations were marked in the field by Universal Engineering Sciences, Inc. prior to our field exploration. Because of the methods used (i.e. taping from known landmarks) the locations shown should be considered approximate. The approximate locations of the borings are shown on the attached Boring Location Plan, presented in Appendix 2.

5.2 Standard Penetration Test Borings

All SPT borings were performed in general accordance with the procedures of ASTM D 1586 (Standard Method for Penetration Test and Split-Barrel Sampling of Soils). The SPT drilling technique involves driving a standard split-barrel sampler into the soil by a 140-pound hammer, free falling 30 inches. The number of blows required to drive the sampler 1 foot, after an initial seating of 6 inches, is designated the standard penetration resistance, or N-value, an index to soil strength and consistency. All borings were advanced using hollow stem auger drilling techniques

5.3 Percolation Tests

The percolation test involves, digging a hole (generally 2 ft. square), or drilled (4 in. min.) to a depth of the proposed absorption trench, cleaned of loose debris, filled with coarse sand or fine gravel over the bottom 2 in., and saturated for a specified time. To eliminate any smearing during the excavation, the sidewalls should be scratched or scarified to provide open, natural soil which water may percolate. The percolation rate measurement is obtained by filling the hole to a prescribed level (usually 6 in.) and then measuring the drop over a set time limit (usually 30 minutes). In sandy soils, the time limit may be only 10 minutes.

6.0 SOIL STRATIGRAPHY

6.1 Generalized Soil Profile

The results of our field exploration and laboratory analysis, together with pertinent information obtained from the SPT borings, such as soil profiles, penetration resistance and stabilized groundwater levels, where encountered, are shown on the boring logs included in Appendix 2. The Key to Boring Logs is also included in Appendix 2. The soil profiles were prepared from field logs after the recovered soil samples were classified by a member of our geotechnical staff. The stratification lines shown on the boring logs represent the approximate boundaries between soil types, and may not depict exact subsurface soil conditions. The actual soil boundaries may be more gradual than depicted. Also, the soil conditions at locations other than the borings may differ from the boring profiles. A brief review of the typical subsurface materials encountered at the boring locations is indicated below. For detailed soil profiles, please refer to the soil boring logs, Appendix 2.

Topsoil: Approximately 4 to 6 inches of topsoil was generally encountered at the boring locations.

Residual Materials: The residual soils generally consisted of Sandy SILTS(ML) and Silty SANDS(SM). The standard penetration resistances within these soils ranged from 8 to 40 bpf with typical values of 10 bpf to 25 bpf.

Partially Weathered Rock (PWR): PWR was not encountered in any of the borings.

Auger Refusal: Auger refusal was not encountered at the boring location B-2 at approximately 37 feet below ground surface.

7.0 GROUNDWATER CONDITIONS

7.1 Existing Groundwater Level

Groundwater was not encountered during drilling at any of the test boring locations. Boreholes were backfilled upon completion of the drilling operations. Fluctuations in groundwater levels should be anticipated throughout the year, primarily due to seasonal variations in rainfall, surface runoff, construction activity, and other site specific factors that may vary from the time the borings were conducted.

8.0 LABORATORY TESTING

The split-spoon samples obtained in the borings were transported to our laboratory where they were visually classified by our geotechnical engineer. The Unified Soil Classification System was used.

9.0 ANALYSIS AND RECOMMENDATIONS

Our geotechnical engineering evaluation of the site and subsurface conditions with respect to the planned construction and assumed loading conditions and our recommendations for site preparation and foundation design are based on (1) our site observations, (2) the collected field and laboratory data, and (3) our understanding of the project information and structural conditions as presented in this report.

If the structural conditions or other project information is incorrect, contact us immediately so that we can review our recommendations. Also, the discovery of any site or subsurface conditions during construction which deviate from the data obtained during this geotechnical exploration should also be reported to us immediately for further evaluation.

The recommendations presented in the subsequent sections of this report present design and construction techniques which we consider appropriate for the planned construction. ***UES must review the final site and grading plans, and structural design loads to validate all recommendations rendered herein. Without such a review our recommendations may not be applicable, resulting in potentially unacceptable performance of site improvements for which UES will not be responsible or liable. Depending on the finalized details of the development, alterations to the recommendations provided herein and/or additional field work may be warranted.***

9.1 Foundation Design Recommendations

A proposed site plan was provided to us after completion of drilling. Based on the site plan minimal cut and fill will be required over the site. We have not been provided with structural

loads. We have assumed that isolated column loads will not exceed 100 kips and wall loads will not exceed 3 kips per foot.

The recommendations presented below for foundation design and performance should be appropriate for the proposed fire station.

9.1.1 Bearing Pressure

The maximum allowable soil bearing pressure for use in shallow foundation design should not exceed 2,500 psf. The foundations should be designed based on the maximum load which could be imposed by dead plus live loading conditions. The allowable soil bearing pressure may be increased by 25 percent for short duration seismic or wind loads.

9.1.2 Foundation Size

The minimum width recommended for any isolated column or continuous wall footing is 30 and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be fully achieved, this width recommendation should control the minimum size of the foundations.

9.1.3 Bearing Depth

The exterior foundations should bear at a depth of at least 18 inches below the finished exterior grades and the interior foundations should bear at a depth of at least 18 inches below the finish floor elevation to provide confinement of the bearing level soils. It is recommended that stormwater be diverted away from the building area both during and after construction to prevent undermining of bearing support for the foundations.

9.1.4 Bearing Material

The foundations and floor slabs may bear in/on residual soils or newly compacted (tested and documented) structural fill.

9.1.5 Settlement Estimates

Post-construction settlements of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the contractor. Our settlement estimates for the structure are based on the use of site preparation/earthwork construction techniques as recommended in Section 9.3 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Using the recommended maximum bearing pressure, the assumed maximum structural loads, the anticipated fill loading and the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, we estimate that total settlements of the structure should be less than 1 inch if the site preparation recommendations in Section 9.3 are followed. Without appropriate site preparation procedures, total settlements could exceed one inch.

Differential settlements result from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. Because of the recommended site preparation and earthwork construction techniques outlined in Section 9.3, we anticipate that differential settlements of the structure should be about ½ inch or less.

9.1.6 Footing Evaluations

All footings excavations should be evaluated by a geotechnical engineer prior to placement of concrete. It should be anticipated that under cutting of select areas may be required because of variations in the soil matrix, fill quality and/or contractor means and methods. If undercut, the unsuitable soils may be replaced with No. 57 crushed stone, over poured with concrete or placed back with clean structural fill.

9.1.7 Floor Slab

We understand the free-standing building will be a soil supported floor slab throughout. Our recommendations are predicated upon this understanding. The floor slab can be constructed as a slab-on-grade provided unsuitable surface material is removed and replaced with compacted clean structural fill as outlined in our geotechnical report. The floor slab can be designed using a subgrade reaction modulus of 100 pounds per cubic inch for well compacted fill soil.

9.2 Pavement Recommendations

9.2.1 General

We were not provided any traffic loading, however, we have prepared a pavement design based on our experience with similar soils and projects, and an assumed minimum CBR value of 6 percent was utilized for the pavement design. The materials recommended for the pavement design are referenced to the Georgia Department of Transportation's (GDOT) Standard Specifications Construction of Roads and Bridges manual. Based on the subsurface conditions and assuming our grading recommendations will be implemented as specified, the following presents our recommendations regarding typical pavement sections and materials.

9.2.2 Flexible Pavements

It is our opinion that the flexible pavement should consist of a surface course of asphaltic concrete and a base course of granular material. Granular material is necessary for structural support and to help drain rainwater that seeps below the pavement. The thicknesses of our design are summarized in the following table.

TABLE 1 - FLEXIBLE PAVEMENT DESIGN

FLEXIBLE PAVEMENT DESIGN	(Minimum Compacted Thickness)	
	Standard Duty (inches)	Heavy Duty (inches)
Asphalt Surface Course 9.5 mm SuperPave Mix	3.0	2.0
Asphalt Binder Course 19 mm Superpave Mix	----	2.0
Aggregate Base Course	6.0	8.0

9.2.3 Rigid Pavement

Based on our past experience with similar type developments, we recommend the following:

TABLE 2 - RIGID PAVEMENT DESIGN

RIGID PAVEMENT DESIGN	(Minimum Thickness)	
	Standard Duty (Inches)	Heavy Duty (Inches)
Portland Cement Concrete	5.0	6.0
Graded Aggregate Base	4	4

9.2.4 Pavement Materials

9.2.4.1 Flexible Pavements

The aggregate base course should consist of graded aggregate base (Refer to GDOT's Standard Specifications Construction of Roads and Bridges manual, Page 969, Section 815). This base course should be compacted to at least 98 percent of the maximum dry density, as determined by the Modified Proctor compaction test (ASTM D1557, Method D). To confirm that the base course has been uniformly compacted, in-place field density tests should be performed by a qualified engineering technician and the area should be methodically proof-rolled under his evaluation. In addition, all asphalt material and paving operations should meet applicable specifications of the Asphalt Institute and Georgia Department of Transportation.

All materials and workmanship should meet the requirements of GDOT's Standard Specifications Construction of Roads and Bridges. Also, sufficient tests and inspections should be performed during pavement installation to confirm that the required thickness, density, and quality requirements of the specifications are followed.

Our experience indicates that an overlay may be needed in approximately 8 to 10 years due to normal weathering of the asphaltic concrete. Also, some areas could require repair and maintenance in a shorter time period.

9.2.4.2 Rigid Pavements

The concrete mix design should result in a minimum compressive strength of 4000 psi at 28 days and a minimum flexural strength of 600 psi at 28 days. It is recommended that a minimum of 4 inches of crushed stone base underlie the concrete pavement. This granular layer will help provide additional support, provide drainage and will help with the long-term performance of the concrete pavements. All materials, designs and workmanship for rigid pavements should meet the applicable requirements of the GDOT's Standard Specifications Construction of Roads and Bridges.

9.2.4.3 General

The performance of the flexible and rigid pavements will be influenced by a number of factors including the actual condition of subgrade soils at the time of pavement installation, installed thicknesses and compaction, and drainage. The subgrade soils should be reevaluated by thorough proofrolling immediately prior to paving and any unstable areas repaired. This recommendation is very important to the long-term performance of the pavements and slabs. Areas adjacent to pavements (embankments, landscaped island, ditching, etc.) which can drain water (rainwater or sprinklers) should be designed so that water does not seep below the

pavements. This may require the use of French drains or swales.

9.2.4.4 Curbing

Use of extruded curb or elimination of curb entirely, can allow lateral migration of irrigation water from the abutting landscape areas into the base and/or interface between the asphaltic concrete and base. This migration of water may cause base saturation and failure, and/or separation of the asphaltic concrete wearing surface from the base with subsequent rippling and pavement deterioration. For extruded curbing, we recommend that underdrain be installed behind the curb wherever anticipated storm, surface or irrigation waters may collect. In addition, landscape islands should be drained of excess water buildup using an underdrain system. Alternatively, we recommend that curbing around the landscape sections adjacent to the parking lots be constructed using full depth curb sections.

9.2.4.5 Construction Traffic

Light duty roadways and incomplete pavement sections will not perform satisfactorily under construction traffic loadings. We recommend that construction traffic (construction equipment, concrete trucks, sod trucks, garbage trucks, dump trucks, etc.) be re-routed away from these roadways or that the pavement section be designed for these loadings.

9.2.5 Seismic, Liquefaction, and Geologic Considerations

Based on the site specific geotechnical subsurface data, and IBC 2012 site class definitions, section 1615, the seismic site classification will be site class C (stiff soil profile). We believe that due to the high fines (silt) content within the on-site soils that the site's susceptibility to liquefaction is low.

9.2.6 Retaining Walls

Earth pressures on retaining walls are influenced the by structural design of the walls, conditions of wall restraint, construction methods, and the strength of the materials being restrained. The most common conditions assumed for earth retaining wall design are the active and at-rest conditions.

Active conditions apply to relatively flexible earth retention structures, such as free-standing walls, where some movement and rotation may occur to mobilize shear strength. Walls which are rigidly restrained, such as loading dock or service pits walls, should be designed for the at-rest condition. However, if the walls are to be backfilled before they are braced by the floor slabs, they should also be designed to withstand active earth pressures as self supporting cantilever walls.

Development of the full active earth pressure case requires a magnitude of horizontal wall movement that often cannot be tolerated or cannot occur due to the rigidity of the wall and other design restrictions, such as the impact on adjacent structures. In such cases, walls are often designed for either the at-rest condition or a condition intermediate of the active and at-rest conditions, depending on the amount of permissible wall movement.

Passive earth pressure represents the maximum possible pressure when a structure is pushed against the soil, and is used in wall foundation design to help resist active or at-rest pressures. Because significant wall movements are required to develop the passive pressure, the total calculated passive pressure is usually reduced by one-half for design purposes.

We recommend that the retaining walls be backfilled with materials deemed suitable by the

retaining wall designer. Typically, soils found in this region have been used satisfactorily as retaining wall fill. Recommended soil parameters for retaining wall design utilizing soils such as those found on site are indicated in TABLE 3. Once soils to be used as retaining wall backfill have been identified, we recommend that testing of the soils be performed as specified by the retaining wall designer prior to commencement of wall construction.

Based on our experience with soils like those encountered at the project site, we recommend the following earth pressure parameters for use in retaining wall design:

TABLE 3 – LATERAL EARTH PRESSURE DESIGN PARAMETERS (Level Backfill)*

Design Parameter	Recommended Value
At-rest Earth Pressure Coefficient, K_o	0.53
Active Earth Pressure Coefficient, K_a	0.36
Passive Earth Pressure Coefficient, K_p	2.8
Unit Weight of Soil (Moist)	120 pcf
Angle of Internal Friction, φ	28 degrees

The recommended lateral earth pressure coefficients do not consider the development of hydrostatic pressure behind the earth retaining wall structures. As such, positive wall drainage must be provided for all earth retaining structures. These drainage systems can be constructed of open-graded washed stone isolated from the soil backfill with a geosynthetic filter fabric and drained by perforated pipe, or with one of several wall drainage products made specifically for this application.

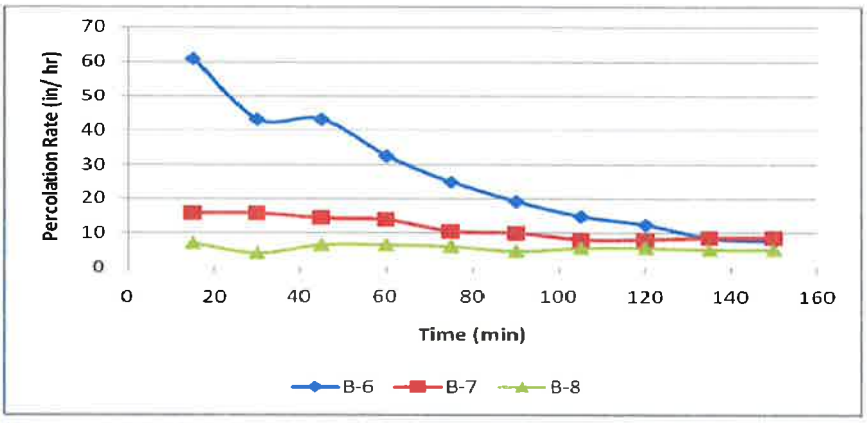
9.2.7 Hydraulic Conductivity

Percolation test was performed at borings B-6, B-7 and B-8 to determine in-situ hydraulic conductivity of the soils in the area. Borings were drilled to depths of 10 feet below existing grades, and percolation tests were performed. The results are as follows:

TABLE 4 – PERCOLATION TEST DATA

Location	Soak Time (hours)	Percolation Rate (inches / hour)	Percolation Rate (minutes / inch)
Percolation Test B-6	3.0	8.2	7.4
Percolation Test B-7	3.0	8.6	6.9
Percolation Test B-8	3.0	5.3	11.4

Figure 1: Percolation Rate Data



9.3 Site Preparation

9.3.1 General

Site preparation for the building, and pavement areas should include the removal of all existing structures, utilities, pavements and unsuitable surface materials. This will include surface vegetation and any unstable surface soils of particular significance.

After stripping the subgrade the newly exposed subgrade should be evaluated by the Geotechnical Engineer to confirm that all unsuitable materials have been removed. To aid the Engineer during this evaluation, the exposed subgrade should be methodically proof-rolled with a heavily loaded tandem axle dump truck or similar rubber-tired equipment. Proof rolling not only helps reveal the presence of any unstable or otherwise unsuitable surface materials, but will densify the exposed subgrade for new fill placement and building support. Any areas that deflect excessively under proof rolling should be undercut, as recommended by the Geotechnical Engineer, and backfilled. All undercutting should be observed by the Geotechnical Engineer to confirm that all unsuitable materials are removed and to prevent unnecessary undercutting of suitable materials.

9.3.2 Difficult Excavation

Cut depths are expected to be minimal to bring the building area to finished grade. Based on the boring data, we do not anticipate rock to be encountered during mass grading. Partially weathered rock was not encountered in any of the borings drilled. However, due to the geologic region the site is in, they may be present in other areas of the site.

9.4 Fill Placement and Compaction

All fill placed in building, pavement and embankment areas should be free of deleterious materials and uniformly compacted to at least 95 percent of the soil's maximum dry density, as compared to a laboratory standard Proctor compaction test (ASTM D-698). We recommend that the upper 12 inches of fill placed in the building and parking areas be compacted to at least 98 percent of the soil's maximum dry density, as compared to a laboratory standard Proctor compaction test (ASTM D-698). The fill should be uniformly spread and compacted in lift thicknesses of 6 to 8 inches (loose measure), and the moisture content should be controlled to at least plus or minus 3 percent of optimum.

It is very important that all fill is uniformly well-compacted. Accordingly, a qualified engineering technician working under the direction of the Geotechnical Engineer should monitor fill placement. In addition to this visual evaluation, the technician should perform a sufficient number of in-place field density tests to confirm compaction.

9.4.1 Use of Excavated Soils as Structural Fill

Based on our visual observations we believe the residual soils encountered on-site should be suitable for use as structural fill. Soils identified as existing fill may be suitable for reuse, but should be evaluated by a geotechnical engineer prior to reuse. Organic materials are not suitable for use as fill. It should be noted that the on site soils, due to a high fines content, will be difficult to work with during the wetter months of the year. If these soils are wet, they may exhibit longer than normal drying times. During wet months care should be taken to "seal off" the soils prior to any significant rain fall.

9.4.2 Underground Utility Lines

All fill placed in underground utility trenches should be placed and compacted as outlined in this section. However, our experience indicates that compacting soils in utility trenches is difficult to perform and achieving the required degree of compaction is difficult, especially below the spring-line of pipes. Accordingly, we recommend that if the required compaction of the utility trench backfill cannot be achieved, flowable fill or crushed stone (No. 57) should be used to backfill the trench up to at least the pipe spring-line. Organic materials should not be used as trench backfill.

9.5 Excavations

Excavations should be sloped as necessary to prevent slope failure and to allow backfilling. As a minimum, temporary excavations below 4-foot depth should be sloped in accordance with OSHA regulations (29 CFR Part 1926) dated October 31, 1989. Where lateral confinement will not permit slopes to be laid back, the excavation should be shored in accordance with OSHA requirements. During excavation, excavated material should not be stockpiled at the top of the slope within a horizontal distance equal to the excavation depth. Provisions for maintaining workman safety within excavations is the sole responsibility of the contractor.

10.0 CLOSURE

Our interpretation of the site soil and groundwater conditions is based on our general knowledge of the area, subsurface borings performed. UES did not identify geotechnical considerations that will significantly impact the planned development of the site, as we currently understand it, using conventional construction practices. We note that removal of weathered and massive rock may be required and is considered a relatively normal occurrence in this area. Standard methods of surficial stripping and removal of topsoil, excavation, proofrolling, compaction and backfilling should adequately prepare the site. Universal should provide the inspection services during the site preparation procedures to confirm that the earthwork operations meet the intent of the recommendations presented in this report.

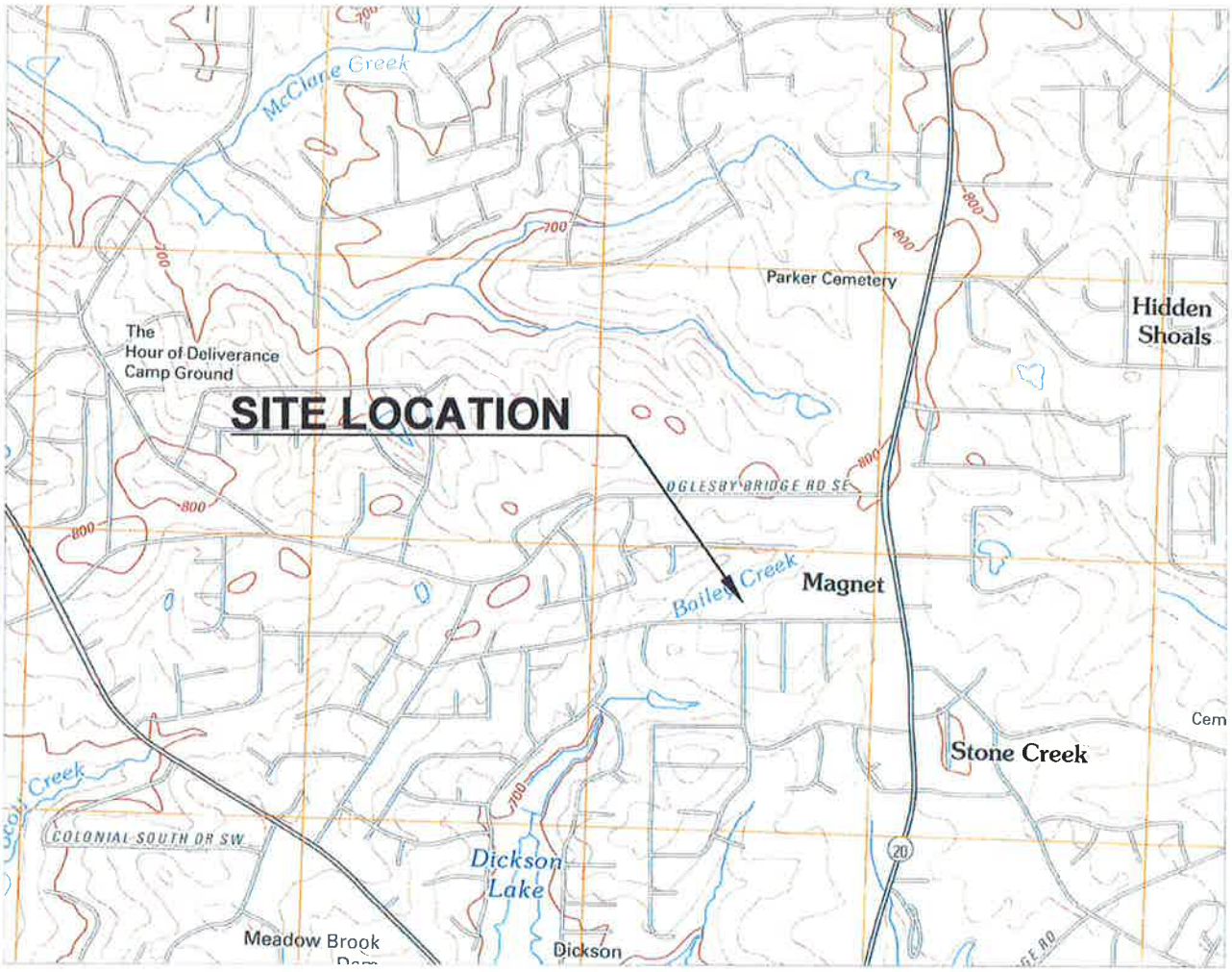
An important aspect of the success of the construction process is the transfer of information between all concerned parties to start of any activities on-site. As such, **Universal Engineering Sciences strongly recommends that a pre-construction meeting be held with the following representatives in attendance at a minimum: Rockdale County, general contractor, site (earthwork) contractor, civil engineer, underground utility contractor, and**

UES geotechnical engineer and materials testing technician. At this meeting, UES would describe in detail the geotechnical considerations that would impact the construction process and future serviceability of the improvements.

★ ★ ★ ★ ★

APPENDIX A

Site Location Map



BASE MAP: "KELLEYTOWN, GA." U.S.G.S. QUADRANGLE MAP

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GEOTECHNICAL EXPLORATION
FIRE STATION # 2 - ROCKDALE COUNTY
778 BELL ROAD
CONYERS, GA

U.S.G.S. SITE LOCATION MAP

DRAWN BY:	R.M.	DATE:	05/03/2016	CHECKED BY:	T.T.	DATE:	05/03/2016
SCALE:	NTS	PROJECT NO:	1630.1600014.0000	REPORT NO:	TBD	PAGE NO:	1-1

APPENDIX B

Boring Location Plan
Boring Logs
Cross section A-A'
Cross section B-B'
Keys to Boring Logs

PROJECT NO:	1630.160001 4.0000		
REPORT NO:	TBD	SCALE:	AS SHOWN
CHECKED BY:	TT	DATE:	05/03/2016
DRAWN BY:	RM	DATE:	05/03/2016

FOR:
TIERNAN & PATRYLO, INC.
MARIETTA, GA

GEOTECHNICAL EXPLORATION
FIRE STATION # 2 - ROCKDALE COUNTY
778 BELL ROAD
CONYERS, GA

BORING LOCATION PLAN

UNIVERSAL ENGINEERING SCIENCES

PAGE NO: 2-1

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 785.50
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785						**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
			5-9-9	18			**RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5	780		7-7-8	15			Stiff, brown, tan, micaceous, Sandy SILT (ML)						
			5-5-5	10									
							Medium dense, red, brown, Silty fine to medium SAND (SM).						
10	775		12-11-18	29									
							Stiff, brown, tan, micaceous, Sandy SILT (ML)						
15	770		5-6-6	12									
20			6-7-8	15			Boring terminated at 20.0 ft.						

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BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

BORING DESIGNATION: **B-2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft): 781.00
WATER TABLE (ft): 18
DATE OF READING: 4/26/16

DATE STARTED: 4/26/16
DATE FINISHED: 4/26/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	780		4-4-5	9			**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
							RESIDUUM: Loose to medium dense, red, brown, Silty fine to medium SAND (SM).						
5			6-11-14	25			Very stiff, brown, tan, very micaceous, Sandy SILT (ML)	83					
	775		8-11-11	22			Medium dense, brown, tan, micaceous, Silty medium to coarse SAND (SM).	47.5					
10			9-11-12	23									
	770						Very stiff to stiff, brown, tan, very micaceous, Sandy SILT (ML)						
15			7-8-9	17									
	765				▼								
20			7-9-13	22									
	760												
25			4-4-6	10									
	755						Medium dense, brown, tan, black, very micaceous, Silty medium to coarse SAND (SM).						
30			8-8-14	22									
	750												
35			6-6-8	14									
	745						Auger refusal at 37.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2, ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

BORING DESIGNATION: **B-3** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft): 789.50
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0							**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
			11-14-15	29			**RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5	785		7-14-11	25									
			9-8-8	16									
10	780		10-8-7	15			Very stiff, brown, tan, very micaceous, Sandy SILT (ML)						
15	775		9-9-7	16									
20	770		7-8-9	17			Boring terminated at 20.0 ft.						

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PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-4** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 786.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785		4-5-5	10			**TOPSOIL:** Topsoil thickness was approximately 4 inches. **RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5			7-9-10	19									
	780		10-11-12	23			Medium dense to dense, brown, tan, black, very micaceous, Silty fine to medium SAND (SM).						
10			17-18-18	36									
	775												
15			8-9-11	20									
	770												
20			18-20-20	40			Boring terminated at 20.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2, ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

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BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-5** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 790.50
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	790						**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
			5-6-7	13			**RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5	785		8-11-11	22			Medium dense; brown; tan, black, very micaceous, Silty fine to medium SAND (SM).						
			6-7-10	17									
10	780		5-8-9	17									
15			10-12-12	24			Boring terminated at 15.0 ft.						

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BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-6** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 786.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785		5-8-3	11			**TOPSOIL:** Topsoil thickness was approximately 4 inches. **RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5	780		5-5-6	11			Medium dense, brown, tan, black, very micaceous, Silty fine to medium SAND (SM).						
10			8-9-10	19									
			12-12-12	24			Boring terminated at 10.0 ft.						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-7** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 784.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0							**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
			4-5-5	10			**RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
	780		4-6-5	11									
5							Medium dense, brown, tan, black, very micaceous, Silty fine to medium SAND (SM).						
			8-9-9	18									
	775												
10			9-9-13	22									
							Boring terminated at 10.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2_ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-8** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 786.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785		4-5-4	9			**TOPSOIL:** Topsoil thickness was approximately 4 inches. **RESIDUUM:** Loose to medium dense, red, brown, Silty fine to medium SAND (SM).						
5	780		4-5-6	11									
			6-7-8	15									
10			9-8-7	15			Boring terminated at 10.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2, ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-9** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 781.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	780		8-9-9	18			**TOPSOIL:** Topsoil thickness was approximately 4 inches. **RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM). Some root matter encountered in the top 2 feet.						
5			8-8-8	16									
	775		12-13-14	27			Stiff, brown, tan, very micaceous, Sandy SILT (ML)						
10			6-7-5	12									
	770		5-5-6	11			Boring terminated at 15.0 ft.						
15													

BORING_LOG 1630.1600014.0000 FIRE STATION #2, ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-10** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 778.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0							**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
	775		5-5-5	10			**RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5			9-11-11	22			Stiff, brown, tan, very micaceous, Sandy SILT (ML)						
	770		6-7-7	14									
10			6-7-8	15			Medium dense, brown, tan, very micaceous, Silty fine to medium SAND (SM).						
	765												
15			6-6-9	15			Boring terminated at 15.0 ft.						

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BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-11** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 777.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0							**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
	775		3-4-4	8			**RESIDUUM:** Loose, red, brown, Silty fine to medium SAND (SM).						
5			5-8-8	16			Medium dense, brown, tan, Silty fine to medium SAND (SM).						
	770		8-11-10	21									
10			5-4-5	9			Stiff to very stiff, brown, tan, very micaceous, Sandy SILT (ML)						
	765												
15			8-8-12	20									
							Boring terminated at 15.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2, ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-12** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 778.50
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0							**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
			5-6-7	13			**RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
	775												
5			7-10-10	20			Stiff, brown, tan, very micaceous, Sandy SILT (ML)						
			5-6-6	12									
	770						Medium dense, brown, tan, black, very micaceous, Silty fine to medium SAND (SM).						
10			9-8-6	14									
	765												
15			8-9-10	19			Boring terminated at 15.0 ft.						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-13** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 786.00
WATER TABLE (ft): NE
DATE OF READING: 4/25/16

DATE STARTED: 4/25/16
DATE FINISHED: 4/25/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785		3-4-5	9			**TOPSOIL:** Topsoil thickness was approximately 4 inches. **RESIDUUM:** Loose, red, brown, Silty fine to medium SAND (SM).						
5	780		7-12-13	25			Medium dense, brown, tan, very micaceous, Silty fine to medium SAND (SM).						
			12-12-13	25									
10			7-9-12	21			Boring terminated at 10.0 ft.						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 1630.1600014.0000
REPORT NO.:

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-14** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 786.00
WATER TABLE (ft): NE
DATE OF READING: 4/26/16

DATE STARTED: 4/26/16
DATE FINISHED: 4/26/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785		5-6-7	13			**TOPSOIL:** Topsoil thickness was approximately 4 inches. **RESIDUUM:** Medium dense, red, brown, Silty fine to medium SAND (SM).						
5	780		7-7-8	15									
			8-8-8	16				42					
10			7-7-7	14			Stiff to very stiff, brown, tan, very micaceous, Sandy SILT (ML)						
							Boring terminated at 10.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2, ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1630.1600014.0000
REPORT NO.:	

PROJECT: Fire Station #2 - Rockdale County
778 Bell Road
Conyers, GA

BORING DESIGNATION: **B-15** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Department of Fire and Rescue

LOCATION: See boring location plan

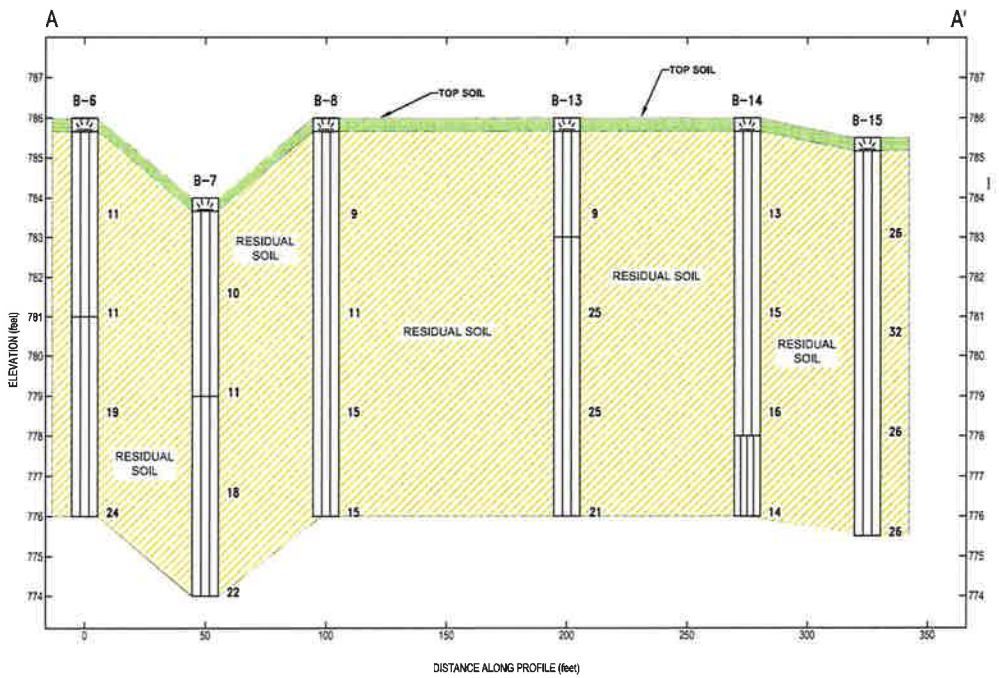
REMARKS:

G.S. ELEVATION (ft): 785.50
WATER TABLE (ft): NE
DATE OF READING: 4/26/16

DATE STARTED: 4/26/16
DATE FINISHED: 4/26/16
DRILLED BY: Sunrise
TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	ELEV (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	POCKET PEN. (tsf)
0	785						**TOPSOIL:** Topsoil thickness was approximately 4 inches.						
			9-11-15	26			**RESIDUUM:** Medium dense to dense, red, brown, Silty fine to medium SAND (SM).						
5	780		17-19-13	32									
			10-13-13	26									
10			12-13-13	26			Boring terminated at 10.0 ft.						

BORING_LOG 1630.1600014.0000 FIRE STATION #2_ROCKDALE COUNTY.GPJ 20141005_UES.GDT 5/5/16



LEGEND

- Topsoil
- USCS Silt
- USCS Clayey Sand
- Fill (made ground)
- Concrete
- Asphalt
- USCS Low Plasticity Clay
- USCS High Plasticity Clay
- USCS Silty Sand

B-12 — Borehole Number

Borehole Lithology — N (Blows Per Ft.)

MC

AR = Auger Refusal

▽ Water Level Reading

0 — 50

Horizontal Scale (feet)

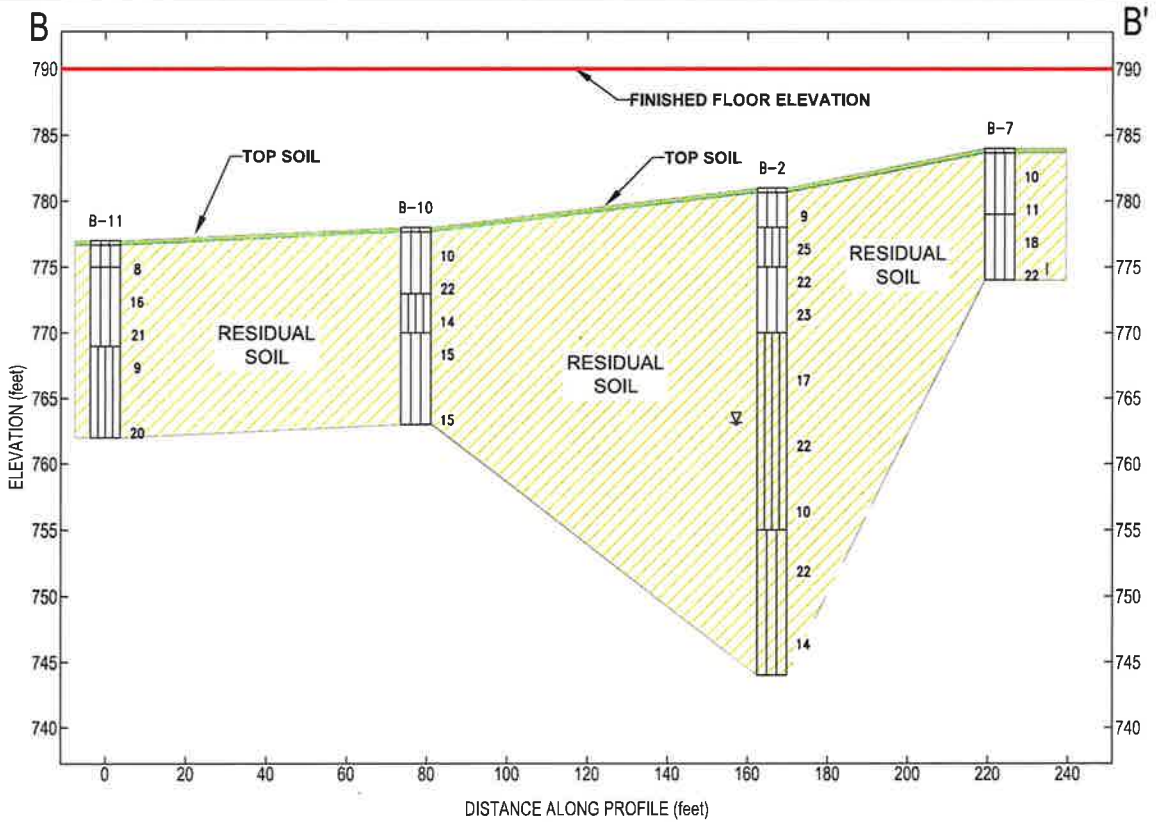
FOR: CHELSEA PROPERTY GROUP INTERNATIONAL

DRAWN BY:	RM	DATE:	05/04/2016
CHECKED BY:	TT	DATE:	05/04/2016
REPORT NO:		SCALE:	AS SHOWN
PROJECT NO:	1630.1600014.0000		

GEOTECHNICAL EXPLORATION
FIRE STATION # 2 - ROCKDALE COUNTY
778 BELL ROAD
CONYERS, GEORGIA

CROSS SECTION A-A'

UNIVERSAL ENGINEERING SCIENCES



LEGEND

- Topsoil
- USCS Silt
- USCS Clayey Sand
- Fill (made ground)
- Concrete
- Asphalt
- USCS Low Plasticity Clay
- USCS High Plasticity Clay
- USCS Silty Sand

B-12 — Borehole Number

Borehole Lithology

MC

N (Blows Per Ft.)

AR = Auger Refusal

▽ Water Level Reading

0 30

Horizontal Scale (feet)

FOR: CHELSEA PROPERTY GROUP INTERNATIONAL

DRAWN BY:	RM	DATE:	05/04/2016
CHECKED BY:	TT	DATE:	05/04/2016
REPORT NO:		SCALE:	AS SHOWN
PROJECT NO:	1630.1600014.0000		

GEOTECHNICAL EXPLORATION
FIRE STATION # 2 - ROCKDALE COUNTY
778 BELL ROAD
CONYERS, GEORGIA

CROSS SECTION B-B'

UNIVERSAL ENGINEERING SCIENCES

UNIVERSAL ENGINEERING SCIENCES

KEY TO BORING LOGS

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
N-Value	No. of Blows of a 140-lb. Weight Falling 30 Inches Required to Drive a Standard Spoon 1 Foot
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
	Sample from Auger Cuttings
	Standard Penetration Test Sample
	Thin-wall Shelby Tube Sample (Undisturbed Sampler Used)
RQD	Rock Quality Designation
	Stabilized Groundwater Level
	Seasonal High Groundwater Level (also referred to as the W.S.W.T.)
NE	Not Encountered
GNE	Groundwater Not Encountered
BT	Boring Terminated
-200 (%)	Fines Content or % Passing No. 200 Sieve
MC (%)	Moisture Content
LL	Liquid Limit (Atterberg Limits Test)
PI	Plasticity Index (Atterberg Limits Test)
NP	Non-Plastic (Atterberg Limits Test)
K	Coefficient of Permeability
Org. Cont.	Organic Content
G.S. Elevation	Ground Surface Elevation

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS More than 50% retained on the No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels and gravel-sand-silt mixtures
			GC	Clayey gravels and gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS 5% or less passing No. 200 sieve	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Poorly graded sands and gravelly sands, little or no fines
		SANDS with 12% or more passing No. 200 sieve	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SIOLS 50% or more passes the No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diamicaceous fine sands or silts, elastic silts
			CH	Inorganic clays or clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
			PT	Peat, muck and other highly organic soils

*Based on the material passing the 3-inch (75 mm) sieve
** Use dual symbol (such as SP-SM and SP-SC) for soils with more than 5% but less than 12% passing the No. 200 sieve

RELATIVE DENSITY
(Sands and Gravels)
Very loose – Less than 4 Blow/Foot
Loose – 4 to 10 Blows/Foot
Medium Dense – 11 to 30 Blows/Foot
Dense – 31 to 50 Blows/Foot
Very Dense – More than 50 Blows/Foot

CONSISTENCY
(Silts and Clays)
Very Soft – Less than 2 Blows/Foot
Soft – 2 to 4 Blows/Foot
Firm – 5 to 8 Blows/Foot
Stiff – 9 to 15 Blows/Foot
Very Stiff – 16 to 30 Blows/Foot
Hard – More than 30 Blows/Foot

RELATIVE HARDNESS
(Limestone)
Soft – 100 Blows for more than 2 Inches
Hard – 100 Blows for less than 2 Inches

MODIFIERS

These modifiers Provide Our Estimate of the Amount of Minor Constituents (Silt or Clay Size Particles) in the Soil Sample
Trace – 5% or less
With Silt or With Clay – 6% to 11%
Silty or Clayey – 12% to 30%
Very Silty or Very Clayey – 31% to 50%

These Modifiers Provide Our Estimate of the Amount of Organic Components in the Soil Sample
Trace – Less than 3%
Few – 3% to 4%
Some – 5% to 8%
Many – Greater than 8%

These Modifiers Provide Our Estimate of the Amount of Other Components (Shell, Gravel, Etc.) in the Soil Sample
Trace – 5% or less
Few – 6% to 12%
Some – 13% to 30%
Many – 31% to 50%

APPENDIX C

GBC Document:

Important Information About This Geotechnical Engineering Report

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by*: the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

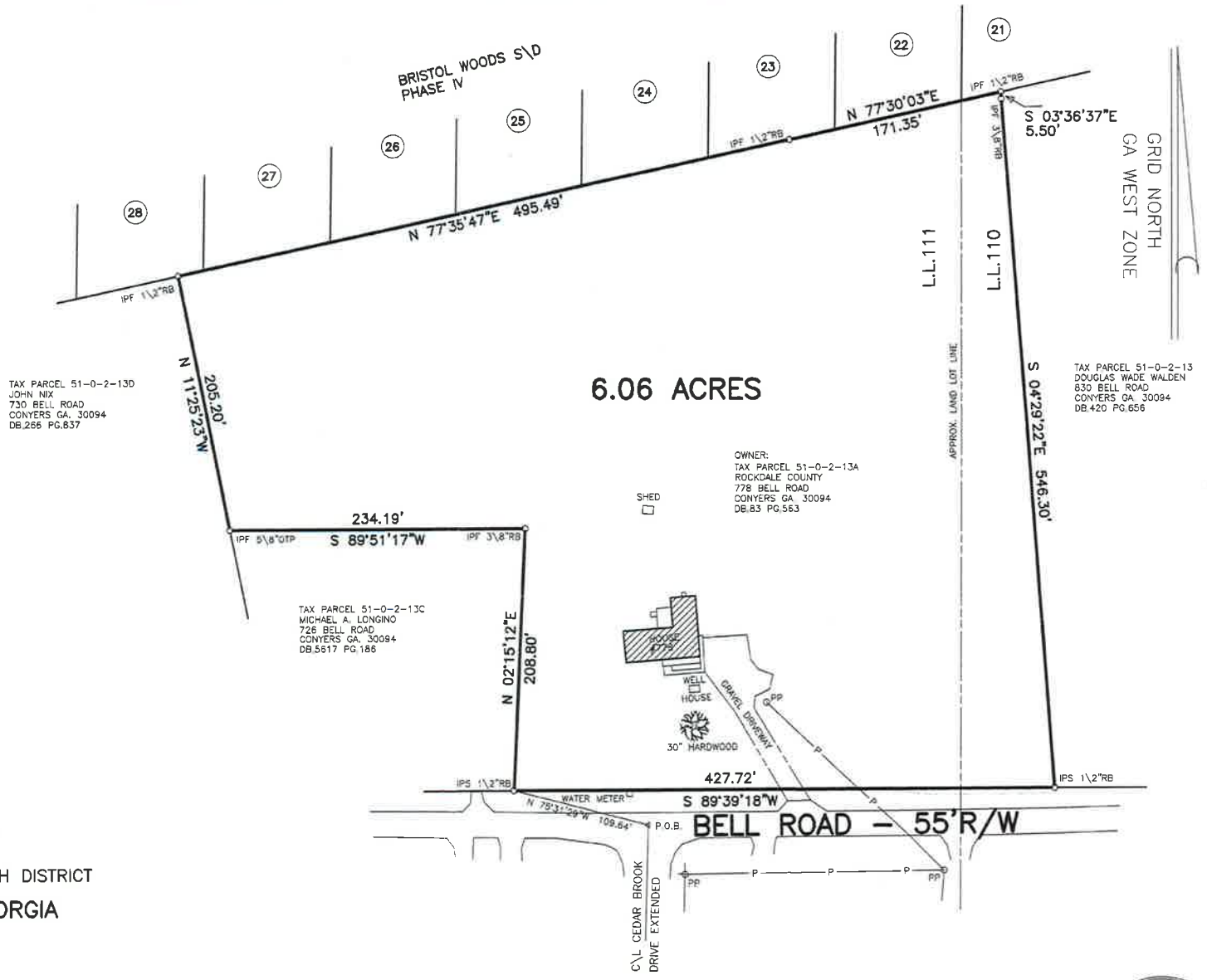
Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A. 15-6-167. AUTHORITY O.C.G.A. SECS. 15-6-67,43-15-4, 43-15-6, 43-15-19, 43-15-22.

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 28,485 FEET AND AN ANGULAR ERROR OF 10" PER ANGLE POINT AND WAS ADJUSTED USING COMPASS RULE. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND WAS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 359,054 FEET.



RETRACEMENT SURVEY FOR:

ROCKDALE COUNTY

LAND LOTS 110 & 111 - 10TH DISTRICT

ROCKDALE COUNTY, GEORGIA

DATE OF FIELD WORK 7-28-2016
DATE OF PLAT PREPARATION 8-10-2016
EQUIPMENT USED: TRIMBLE S6

60 0 60 120 180
GRAPHIC SCALE - 1 INCH = 60 FEET

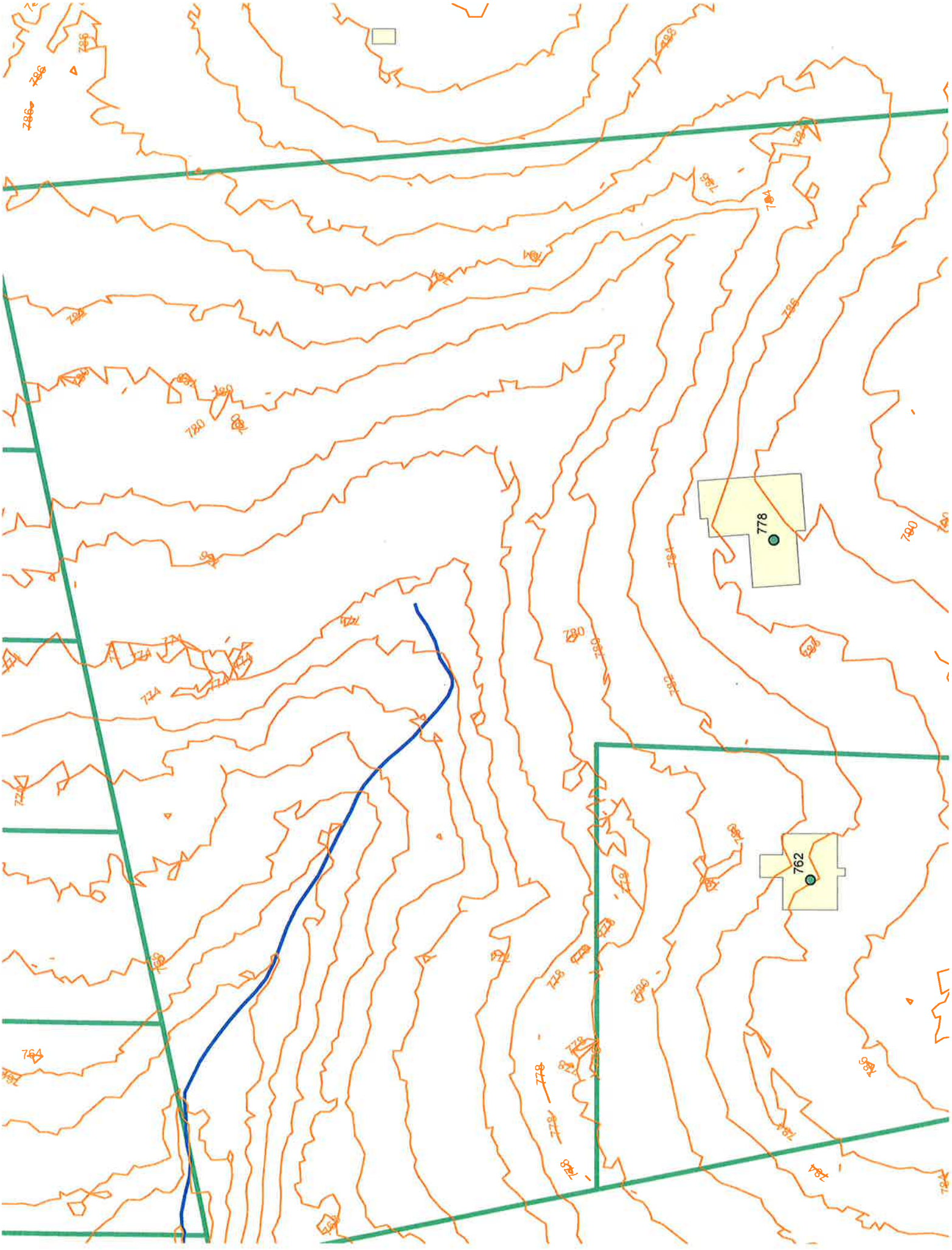
PATRICK & ASSOCIATES, INC.
SURVEYING & ENGINEERING
928 BLACKLAWN ROAD
CONYERS, GEORGIA 30094
PHONE: 770-483-9745 - FAX: 770-483-9219

I CERTIFY THIS IS AN EXISTING TAX PARCEL (NO.51-2-13A) AND IS NOT A "PLAT OF SUBDIVISION" AND DOES NOT REQUIRE APPROVAL OF THE CONYERS-ROCKDALE PLANNING COMMISSION PRIOR TO RECORDING PURSUANT TO O.C.G.A.15-6-67 (D).

GEORGIA REGISTERED NO. 2858 LAND SURVEYOR JAMES S. HULL, JR.

JOB NO. 16-318

DWG. NO. 30565


778
762


Hamlet
760
770
780
790
PROPOSED
FIRE STATION
FFE = +/-790
48.1
70.1
6"
x=790
x=792
Bell Road
Brook Drive
Bell Circle
6"
POOL
POOL


Covered Patio
Emergency Generator
Storage Area
pantry
pantry
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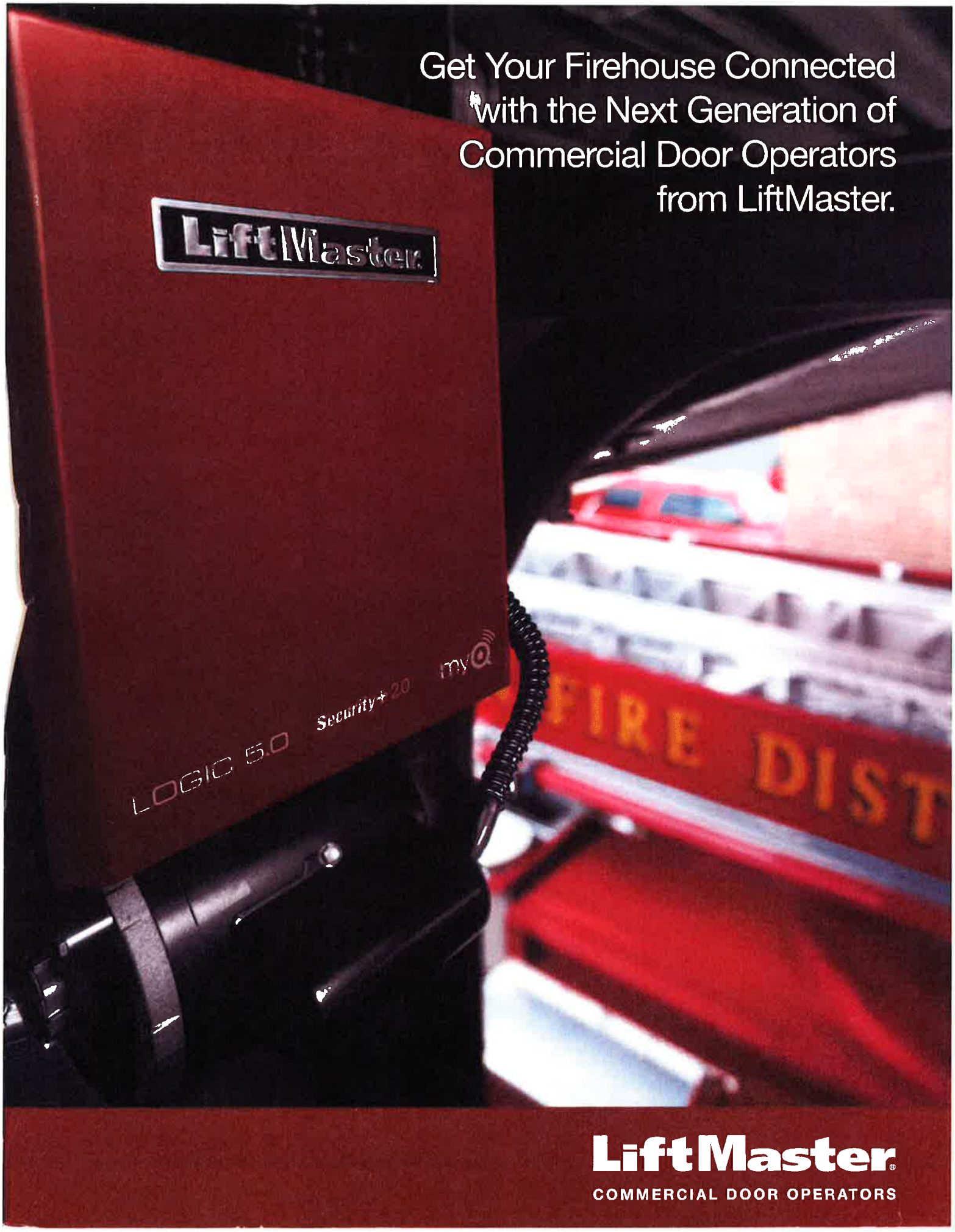
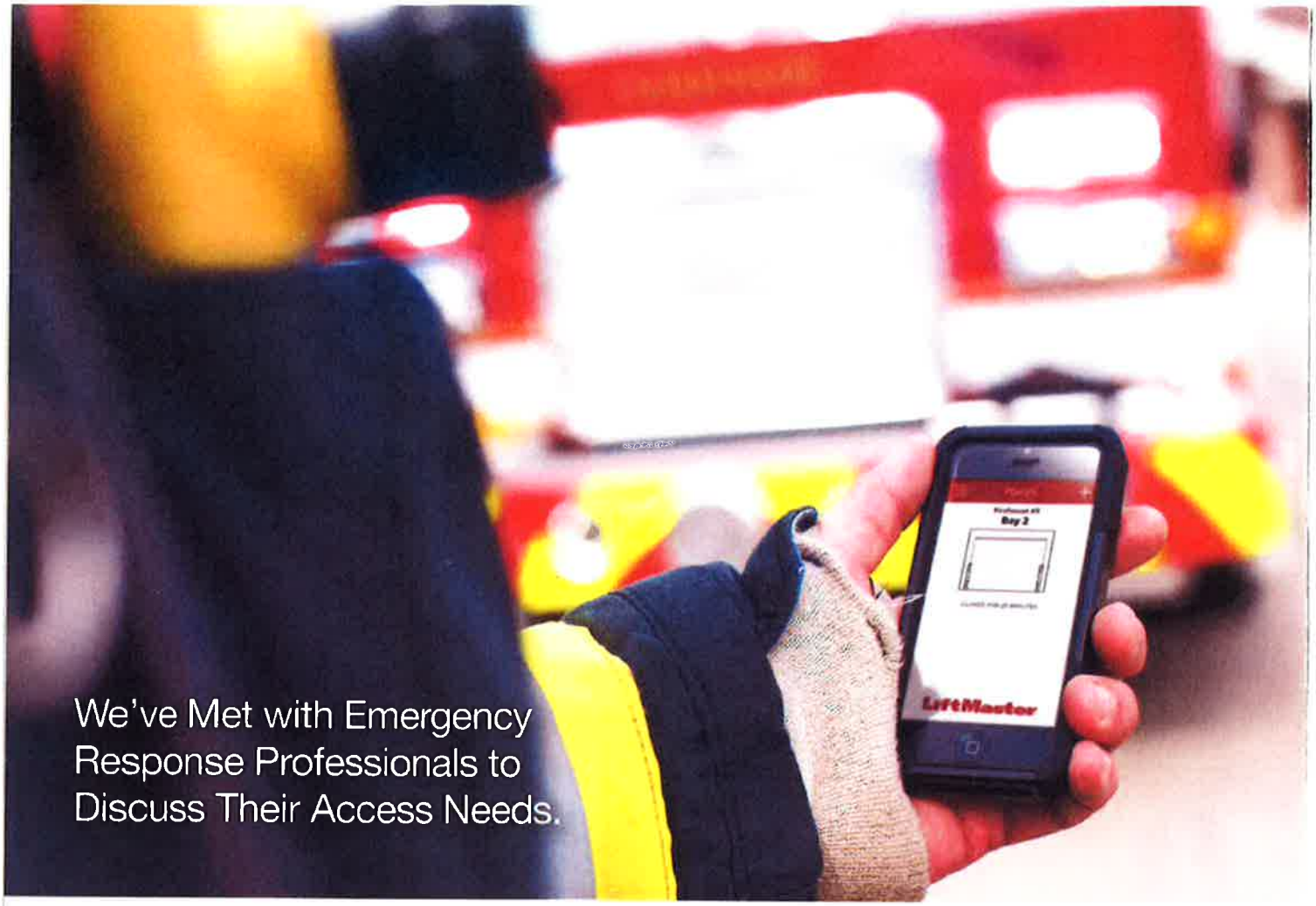
REF
Mechanical room
Communications room
Flat screen


Workout room with rubber floor mat
Washer
Dryer


Get Your Firehouse Connected
with the Next Generation of
Commercial Door Operators
from LiftMaster.
LiftMaster
LOGIC 5.0
Security+ 2.0
myQ
FIRE DIST
LiftMaster
COMMERCIAL DOOR OPERATORS



In response to your needs, we've created solutions specifically for you. LiftMaster® understands your biggest concerns are the potential for theft of expensive life-saving equipment and vandalism while you're away from the facility. In addition, costly repairs and re-certifications after driving through a door create unplanned expenditures and time consuming paperwork. LiftMaster's MyQ® Technology delivers the industry's first internet-enabled commercial door operator which allows you to securely monitor and control your commercial doors with a smartphone, tablet or computer.

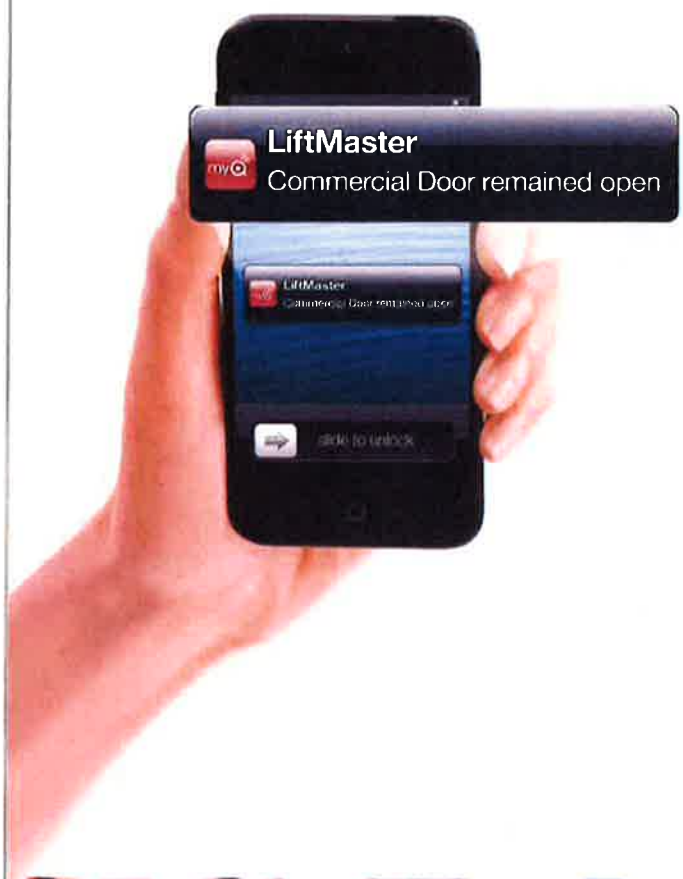
LiftMaster's Emergency Response Solutions are integrated packages; assuring seamless integration of a motorized commercial door system. The combination of advanced technology, features and accessories provided by LiftMaster, simplifies the process of determining the best solution to meet the needs of your firehouse.

After two major door repairs, The Albemarle Fire Department of Albemarle, North Carolina, recently had the opportunity to make much needed safety upgrades to their main firehouse door systems. Chief Shawn Oke was thrilled with the results.

"Our LiftMaster door enhancements are providing a safer workplace for our firefighters, have eliminated costly door repairs and are allowing our units to respond to emergencies faster."

-Chief Shawn Oke

Stay Connected and In Control of Your Doors No Matter Where You are with MyQ Technology.



Exclusive Technology

MyQ® Technology provides revolutionary technology only found in LiftMaster Logic 5.0 Commercial Door Operators.

Easy Setup

Connect easily to the internet via your current business network.

MyQ Mobile App

- Download the FREE MyQ Mobile App and easily register your account at MyLiftMaster.com.
- Enables secure monitoring and control of the operator with a smartphone, tablet or computer.
- Alerts can be received as email or pop-up (push) notifications on a mobile device, ensuring the status of your commercial door.

No Fees

Requires no annual activation fee.

Control Firehouse Doors Remotely While You are Out on a Call.

Whether You Need Trolley or Hoist Operators, we Offer Innovative Industry-Proven Solutions.

Gearhead Hoist Operator
Optimal for heavy industrial, high cycle applications. These operators employ lubricated gears and include a floor level chain hoist to ease manual operation in an emergency or power outage.

Gearhead Trolley Operator
Optimal for heavy industrial, high cycle applications for use on sectional overhead doors. These operators employ lubricated gears.

LiftMaster® Operators Come Standard with These Advanced Features:

MyQ Technology:

- Provides revolutionary technology only found in LiftMaster Commercial Door Operators.
- Enables secure monitoring and control of the operator with a smartphone, tablet or computer.
- Each Internet Gateway device (828LM) can manage up to 16 operators or devices. Multiple internet gateways may be installed to accommodate additional commercial devices.

Built-in Security+ 2.0™ Radio Receiver:

- Provides industry leading technology only found in LiftMaster Commercial Door Operators.
- Increased security – with every click, a new code is sent to the commercial door operator ensuring the door opens only for the individual pressing the remote.
- Enhanced radio communicates with tri-band frequency to improve range and reduce interference – assuring the door opens, stops and closes conveniently and reliably every time.

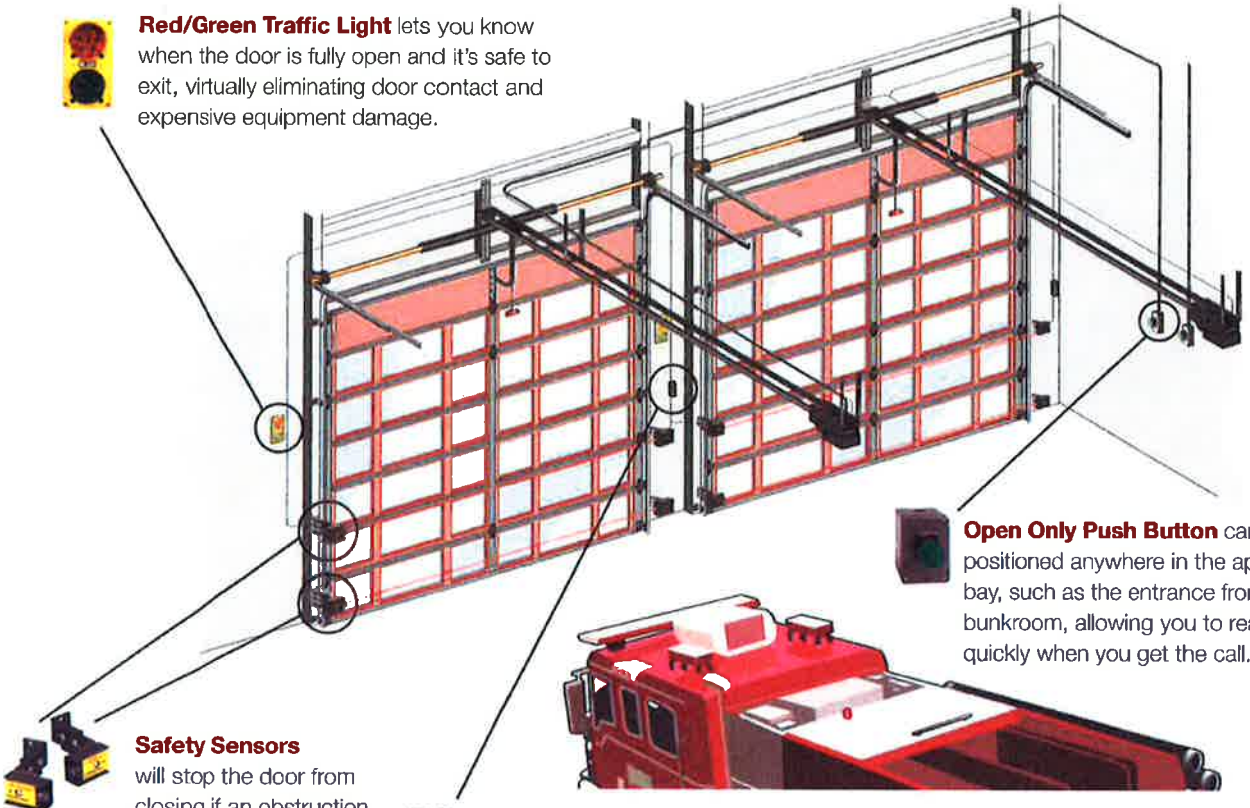
Timer-to-Close

- Provides functionality for the operator to automatically close the door as soon as your emergency vehicle is clear, eliminating the potential for theft and damage, keeping your fire station secure while you're away.
- MyQ provides confirmation the doors have closed, enabling you to focus on the emergency response call and not be concerned about someone gaining access to the firehouse.

Maintenance Alert System

- Provides reminder to contact your LiftMaster Dealer for routine maintenance.
- System can be set to alert upon a calendar date or after a selected number of operator cycles.

LiftMaster Accessories Enhance Safety and Efficiency.



Red/Green Traffic Light lets you know when the door is fully open and it's safe to exit, virtually eliminating door contact and expensive equipment damage.

Open Only Push Button can be positioned anywhere in the apparatus bay, such as the entrance from the bunkroom, allowing you to react quickly when you get the call.

Safety Sensors will stop the door from closing if an obstruction is detected, protecting personnel, vehicles, aerial ladders and other high apparatus obstructions.

3-Button Station with Maintenance Alert System allows you to open, close and stop the door quickly. An indicator light lets you know when it's time for routine maintenance.

Why Automate Your Commercial Doors?

- ✓ Assists with quick departure when responding to an emergency call by eliminating the need to manually open and close doors. Use of Timer-to-Close and MyQ verify your station doors close automatically.
- ✓ Assures commercial doors cannot be manually opened from the outside by someone trying to gain access to commit a theft.
- ✓ Increases the life expectancy of the door and reduces service costs associated with ensuring proper operation of commercial doors. Commercial door operators open and close doors in a controlled manner eliminating the potential for doors to raise too quickly or slam when being closed.
- ✓ Reduces the opportunity for a soft tissue injury to occur when opening or closing a commercial door manually, preventing workplace injury claims, loss of time and potential increased insurance premiums.

LiftMaster®

COMMERCIAL DOOR OPERATORS

LC-36A
LIGHT CURTAIN

Protection for Personnel and Equipment

LiftMaster's® LC-36A Light Curtains provide 36 in. of coverage to keep your customers, employees and equipment safe. The LC-36A must be used with a primary entrapment device and be installed along the vertical plane of the door. The light curtains are NEMA 4 rated which provides protection against direct water spray and makes the LC-36A ideal for use in auto dealerships, fire stations, municipal garages and commercial storage facilities.

Performance

- **Color-coded transmitter and receiver** for easy identification.
- **Provides 36 in. of effective height coverage** to increase the area of protection.
- **Multiple sets of LC-36A curtains** can be mounted on a door providing coverage flexibility*.
- **Maximum door width of 33 ft.** ensures coverage for most commercial doors.
- **Eight (8) LEDs per side and 22 cross-beams** produce an invisible curtain of infrared light for maximum detection capability.
- **Solid LED lights** indicate correct sensor alignment, simplifying installation.
- **Green LED** on receiver flashes when interrupted, providing visible interrupt detection.

* See instruction manual for requirements.

The LiftMaster LC-36A is an ancillary device and must be used with a primary monitored entrapment device to maintain compliance with UL 325. The LiftMaster CPS-UN4, CPS-RPEN4, CPS-OPEN4 and CPS-U meet this requirement. Failure to use the appropriate sensor or failure to install the sensors properly, may expose the installer and customer to liability, should an accident occur.

LiftMaster's full line of Primary Monitored Photo Eyes

CPS-UN4 CPS-RPEN4 CPS-OPEN4 CPS-U

Optional Accessories:

External Power Supply (100MAPS)**

Provides enough power to operate two LC-36A Light Curtains. Includes 38 ft. cable leads.

** Required for use with LiftMaster Medium-Duty Operators. Available as an extra power source for use with LiftMaster Logic 3, 4 and 5.0 Operators.

2-Strand Bell Wire (20-2LM)

500 ft., 22 gauge, white and red/white wiring.

2-Strand Bell Wire (21-2LM)

500 ft., 22 gauge, white and black/white wiring.

7-Conductor Cable (65-7WIREL)

500 ft., 20 gauge, 7-wire spool. For use with all standard control stations, sensing edges or photo eyes.

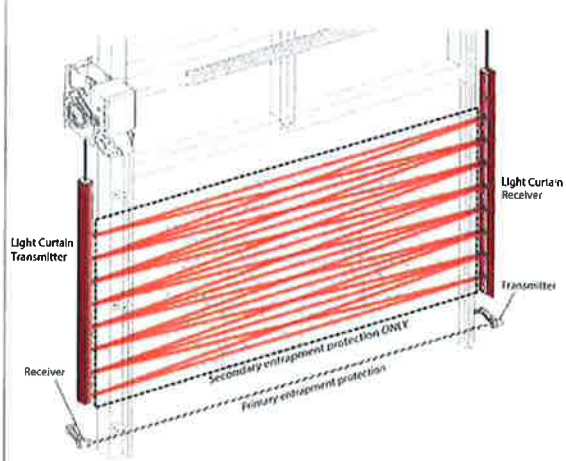


Image shows infrared beam pattern which is not visible to the naked eye.

LiftMaster

3 EASY STEPS TO CONFIGURE YOUR COMMERCIAL DOOR OPERATOR SYSTEM

STEP 1 SELECT OPERATOR MODEL TYPE

- ☐ GT: Gearhead Trolley
- ☐ T: Trolley
- ☐ GH: Gearhead Hoist
- ☐ H: Hoist

STEP 2 SELECT ENTRAPMENT PROTECTION DEVICES

Effective August 2010, Underwriters Laboratories (UL), the leading independent, not-for-profit product safety testing and certification organization, mandated that all commercial door operators bearing the UL label must be equipped with constant pressure to close functionality or continuously monitored safety devices, such as photo sensors or sensing edges, that will detect and reverse the door if a person or object enters the path of the door when closing.

LiftMaster offers a variety of entrapment protection devices such as:

- ☐ CPS-U: Photo Eye, Standard
- ☐ CPS-OPEN4: Photo Eye, NEMA 4X, Flexible
- ☐ CPS-RPEN4: Photo Eye, NEMA 4X, Reflective
- ☐ CPS-UN4: Photo Eyes, NEMA 4
- ☐ OES: Optical Edge System
- ☐ CPS3CARD: To monitor second entrapment protection device

If photo eyes are selected as the primary entrapment protection device, they must be installed no greater than six (6) inches or above the ground. A second set of photo eyes is recommended to be installed above six inches to detect vehicles with higher ground clearance moving through a door space.

STEP 3 SELECT ACCESSORIES

- ☐ 811LM: Universal DIP Single-Button Remote Control
- ☐ 813LM: Universal DIP 3-Button Remote Control
- ☐ 893MAX: 3-Button Remote Control
- ☐ 829LM: Door and Gate Monitor*
- ☐ 828LM: Internet Gateway
- ☐ 823LM: Remote Light Switch*
- ☐ 825LM: Remote Light Control*
- ☐ RGL24LY: Red/Green Traffic Light
- ☐ 02-401M: Mushroom Button Control Station
- ☐ TLS1CARD: Plug-in Interface Card for Timer/Light Control
- ☐ 50-HERK2: Motion Detector (Recommended for use with 50-HERK-RC2 Remote Control)
- ☐ 02-111: Pull Switch Control
- ☐ 50450: Interlock Switch for Sectional Doors

*MyQ® accessory, requires Internet Gateway

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