



PURCHASING DEPARTMENT
1772 County Services Parkway
Marietta, Georgia 30008-4012
(770) 528-8400/FAX (770) 528-1154

Mark Kohntopp
INTERIM DIRECTOR

ADDENDUM No. 1

**Sealed Bid # 12-5637
CCT Mobility Center (Paratransit Facility)**

DATE: February 17, 2012

Page 1 of 62

The following addendum hereby amends and/or modifies the Proposal Documents and specifications as originally issued for this project. All proposers are subject to the provisions of this Addendum.

Proposers shall acknowledge receipt of this addendum.

Include this original form inside your proposal package.

This Addendum consists of:

- **Questions submitted in writing**
- **Minutes of the February 7, 2012 Pre-Bid Meeting**
- **Substitution Requests**
- **Project Manual Clarifications**
- **Revised Bid Form**
- **Drawing Clarifications**
- **Pre-Bid meeting Attendee List**
- **Attachments**

All bids must be received before 12:00 (noon) by the Bid Opening date. Bids shall be delivered to Cobb County Purchasing Department, 1772 County Services Parkway, Marietta, GA 30008.

Electronic / faxed bid response will not be considered.

I acknowledge that I have received Addendum No. 1

**Sealed Bid # 12-5637
CCT Mobility Center (Paratransit Facility)**

Company Name

Signature

Date Sent to Purchasing

Please Print Name

Please sign, date, and return this form ONLY to:
Cobb County Purchasing Department
Fax #: 770-528-1154
E-Mail: purchasing@cobbcounty.org

Please note: The deadline for questions is: **February 14, 2012** by 5:00 pm
Any questions received after this deadline will not be considered.

CCT ADDENDUM NO. 1
NBA Project No. 110044.00
February 16, 2012

Email nba@nilesbolton.com

A. RESPONSE TO BIDDERS' QUESTIONS

Q.1 Please clarify fluid types to be present in new maintenance area. Specification Section 11-11-19-4, item 2.01 C 1a through 1k shows a total of (1) chassis grease, (1) engine coolant, (7) oils, (1) water and (1) windshield washer solvent. Drawing number P2.4 shows only (1) chassis grease, (1) engine coolant and (3) oils originating from the existing facility. In addition, drawing P2.4 shows an additional oil product (ATF 2) in new addition that has no origination point.

A.1 Specification Section 11 11 19, 2.01 describes reels and accessories for many commodities. The commodities that are listed in Specification Section 2.02 and 2.03 are the ones that are used in this project. These are CG, ATF1, ATF2, EC, EO1, and EO2. The ATF2 reel will be a spare.

Q.2 Please clarify number of (CA) Compressed Air down to Reels and Air Drops shown on Drawing P2.4. Plumbing Key Notes show Air to Reels identified as Number 2. This shows 13 locations in New Addition. There are also 4 unidentified hose reels shown next to grease reels identified as Number 8 on the drawing.

A.2

1. The plumbing drawing note 8 identifies these reels as chassis grease.
2. There are no compressed air reels.
3. The compressed air drops are correct as shown on Sheet P2.4, with the following modification: Sheet P2.4 Note B calls for "COMPRESSED AIR DROP TO EQUIPMENT". There is no equipment specified at these locations. At each of these locations the General Contractor shall supply a wall mounted filter, regulator, lubricator with piping and devices as described in Specification Section 13 60 00, 2.02, B, 5 and 6.

Q.3 For doors 01A and 01B in room 01 on drawing A8.00, what are their rough openings (RO)?

A.3 As indicated in the contract documents.



Alexandria,
Virginia
703.836.0915
FAX 703.684.3653

San Jose,
California
408.279.5476
FAX 408.297.2995

Q.4 What is the existing Fire Alarm system to be tied to?

A.4 Cobb County contracts with Alliance Fire Protection, Inc. for monitoring of the fire alarm system. The main panel is located in Suite 114 (1 door down from our entrance). The expectation is that the Mobility Center panel will be connected to main panel in Suite 114. The main panel model no. is EST 2 and was made by Edwards System Technology.

Q.5 To verify, the streetscape lights are by the utility company.

A.5 Provide lighting per contract documents unless otherwise noted by Owner.

Q.6 Spec Sections 002113 and 001113 state that the project is to have a duration of 280 days from the Notice to Proceed. However, Bid proposal form 004113 Section 3 states 320 days from NTP. Which is correct?

A.6 Sections 002113 and 001113 are correct. Revise Specification Section 00 41 13 Bid Proposal Form, Article 3, Time of Completion to read as follows:

Bidder hereby agrees to commence actual physical work on the site with an adequate force and equipment within ten (10) days of a date to be specified in a written order of Owner's (Notice to Proceed), to achieve Substantial Completion of the Work within two hundred eighty (280) calendar days, and to achieve Final Completion of the Work within forty-five (45) calendar days after the date of Substantial Completion.

Q.7 Spec Section 26 05 19 2.1C lists MC Cable as an approved multi conductor cable. It is not stated as applicable in the execution sections of the specs. IT states EMT Conduit ¾" minimum with CU Conductors must be used. Is MC Cable an acceptable method for branch circuit wiring?

A.7 No

Q.8 Detail 4 Page E6.0 shows a flexible Fixture whip. Are standard 6' fixture whips acceptable as connections between light fixtures and junction boxes?

A.8 Contractor shall coordinate exact length with actual field conditions.

Q.9 Sheet E2.0 Shows a Type “J” Fixture in the Men’s and Women’s restrooms, there is no fixture shown for this designation on the fixture schedule. Please provide a fixture type or allowance amount to be carried.

A.9 Provide attached “J” type fixture or equivalent. (See attached Type “J” fixture cut sheet).

Q10. The fixture schedule on Sheet E2.0 is based upon a single manufacturer, were alternate fixtures approved or will they be allowed?

A.10 Alternate lighting fixtures can be approved as long as they meet or exceed the performance of the specified fixtures and the Request for Substitution is submitted in accordance with Specification Section 01 25 00 Substitution Procedures.

Q11. Sheet E7.0 shows a (2) headed Type P1 fixture and also lists a P2 fixture that is not listed on the fixture schedule. Please clarify.

A11. P2 type fixture is equivalent to (2) headed P1 type fixture.

Q12. In the existing Maintenance Building Switchboard MSA is being utilized to feed Panel 1L22 in the new addition for the Maintenance Building. Who is the manufacturer of this switchgear and what is the model of the gear?

A.12 There is a combination of Cutler-Hammer, Square D, and GE electrical equipment on site. Per photograph, the existing MSA switchboard appears to be GE Spectra Series. (See attached existing MSA switchboard photograph).

Q.13 The Fire Alarm Spec lists a Game-well/Honeywell system as the approved manufacturer. Since the system will tie between the main building and the maintenance building which is existing, is there a company that services this system already that should be contacted for pricing?

A.13 No.

Q.14 There does not appear from any of the “Fire Protection” drawings that there is any requirement except sprinklers. If the sprinkler system water flow and tamper sensors need to be monitored, we can easily provide a quote for that. If there is a requirement for an Electronic Fire Alarm System (with control panel, pull stations, horn/strobes, etc.) please ask the Architect if it is intended to be a “design-build” or should I wait to receive specifications?

A.14 Fire alarm system and fire protection are included in contract drawings and specifications. Fire alarm system is in the electrical contractor’s scope of work. See E drawings and Divisions 26 and 28 Specifications for additional information on fire alarm system. See FP drawings and Division 21 Specifications for additional information on fire protection.

Q.15 Ref. details 2/A5.08 and 3/A6.03 – Due to fabrication, installation and material limitations we recommend adding an additional horizontal joint +/- 0’-9” (far enough for an attachment point) down from the top of skyward facing plane.

A.15 At the high roof component above the clerestory and porte cochere, add a continuous horizontal joint in the aluminum composite panels fascia approximately 9” below the top of the parapet. On the east and west sides, the joint will slope parallel to the slope of the parapet. Coordinate exact location of joint with Architect.

Q.16 Ref. details 2/A5.08 and 3/A6.03 – Due to fabrication, installation and material limitations we recommend adding an additional horizontal joint +/- 0’-4” in to the soffit plane.

A.16 At the high roof component above the porte cochere, add a continuous horizontal joint in the aluminum composite panels soffit approximately 4” in from the outside edge of the soffit (south, east, and west sides). Coordinate exact location of joint with Architect.

Q.17 Please note that there are multiple panels currently design that exceed material limitations. Please adjust the panel joint layout by not exceeding 60” in more than one direction.

A.17 Panel joints will be adjusted by the Architect so as to not exceed 60” in more than one direction.

Q.18 Please note that the color selected for the ACM panels at the Driver's Entrance would be a custom color. This selection has significant affects to the cost of this project. When ordering a custom color there is a 2,500 SF minimum and a SF price that would be 2 – 3 times the cost of a standard color.

a. To achieve a "Charcoal" look we recommend selected Reynolbond's Pewter which is a standard 3-coat color.

A.18 a. Change the color of the aluminum composite panel above door surround for door 30B to "MP-1" in lieu of "Match SF-1 Charcoal Color". All aluminum composite panel color called out to be MP-2, PPG #17036 to remain unchanged.

Q.19 Ref. specifications 074100, Part 2.01 C – Please strike RB240 (6mm) = 0.236" which leads to confusion on which material thickness is required.

A.19 Delete "RB240 (6 mm) = 0.236" from Specification Section 07 41 00, Article 2.01 C.

Q.20 Ref. specifications 074100, Part 2.01 D – Please strike RB240 (6mm) = 1.49 lbs/sft which leads to confusion on which material thickness is required.

A.20 Delete "RB240 (6mm) = 1.49 lbs/sft" from Specification Section 07 41 00, Article 2.01 D.

Q.21 Ref. specifications 074100, Part 2.02 E – Please strike descriptions 2 and 3 these conflicting attachment systems to your desired and selected attachment system.

A.21 Delete E.2 and E.3 from Specification Section 07 41 00, Article 2.02 E.

Q.22 It appears that our attachment system was used as the Basis of Design for the drawings. Would it be possible to list us at the Basis of Design Fabricator in the specifications.

A.22 Miller Clapperton is approved as a fabricator for the aluminum composite panels.

Q. 23 Where in the specs are the information on data cabling with accepted manufacturer?

A.23 Electrical drawings indicate location of tele/data outlets. The actual tele/data equipment and cables are provided by others.

Q.24 Are there any Access Control in this project? Which drawings are they on?

A.24 Card readers will be provided and installed by the Owner's separate contractor. Providing power and raceways for card readers and door position switches is included in the contract documents. Cooperate fully with the Owner's separate contractor so work on that contract may be carried out smoothly, without interfering or delaying work under this contract with work performed under separate contract.

Q.25 Where are the specs for the Access Control?

A.25 See above response.

B. SUBSTITUTION REQUESTS

- By including an approved substitution in their bid, the General Contractor agrees to all conditions set forth in Specification Section 01 25 00 – Substitution Procedures.
- Substitution approval does not represent Submittal approval. The submittal process must still be followed for any approved substitution requests.

Request 1 From Norton Industries (Mark Spitz, 216-228-6650) requesting approval of NLP Linear Wood Plank for Armstrong World Industries, Inc. in Specification Section 09 54 29 Linear Wood Panel Ceilings.

Response 1 Requested Approved.

Request 2 From Insulation Solutions, Inc. (Jason Andrew, 866-698-6562) requesting approval of Viper VaporCheck II, 10-mil "Class C" in Specification Section 03 30 00, Cast-In-Place Concrete, Article 2.07 Vapor Retarders.

Response 2 Request Approved.

- Request 3 From Georgia Air Associates (Kirk Douglas, 687-736-5100) requesting approval of:
- a. Nailor Model 1370 Backdraft Dampers in Specification Section 23 33 00, Air Duct Accessories, Article 2.2, Backdraft and Pressure Relief Dampers.
 - b. Atco UPC #039 Flexible Ductwork in Specification Section 23 33 00, Air Duct Accessories, Article 2.13, Flexible Ducts.
 - c. Raywall 5100 Series and 3000 Series in Specification Section 23 82 39, Unit Heaters, Article 2.1, Wall and Ceiling Heaters.

Response 3 Request for a, b, and c approved.

- Request 4 From Heavy Duty Lift and Equipment, Inc. (Matt Lennemann, 410-643-9001) requesting approval of:
- a. Steril Koni: Eco 60-17 in Specification Section 14 45 00, Vehicle Lifts, Article 2.01, Lift, Axel, Adjustable, 2 Post, Modular, 60,000 pounds.
 - b. Steril Koni Sky 200-9 in Specification Section 14 45 00, Vehicle Lifts, Article 2.02, Lift, Drive-On, Parallelogram, 36,000 lb. capacity, 28 ft.

Response 4 The requests do not meet the requirements of the specifications. The request for substitution is not approved.

- Request 5 From Georgia Masonry Supply (Kevin Torok, 770-963-5888) requesting approval of Custom Cast Stone in Specification Section 04 73 13 Calcium Silicate Masonry Units.

Response 5 The standard color range from Custom Cast Stone does not provide a match close enough to the specified color or texture to be an acceptable complement to the exterior material palette. This request for substitution is not approved.

- Request 6 From Harvey Industries, Inc. (Keith Morris, 866-633-0122) requesting approval of:
- a. Harvey Industries, Inc. RHR-6R-MHR-33 motorized exhaust hose reel in Specification Section 11 96 00 Shop Equipment, Article 2.05 Reel Vehicle Exhaust, Motor Operated, with 6" Hose.
 - b. Harvey Industries, Inc. BD-11 Belt Drive Exhaust Blower for Performance and Sizing Information taken from Fan Schedule.

- Response 6 Request a. is approved. Regarding Request b., Harvey Industries is approved as a manufacturer. However, compliance relative to any model numbers cannot be confirmed at this time based on the information submitted.

C. PROJECT MANUAL CLARIFICATIONS

Section 00 41 13 – Bid Proposal

1. Delete current Bid Proposal Form and replace with attached Bid Proposal Form that includes an allowance for the Building Department and Water and Sewer Permit fees. The attached Bid Proposal Form also corrects paragraph 3, Time of Completion.

Section 01 21 00 – Allowances

1. Add the attached new Section 01 21 00 Allowances to the body of the specifications and to the Table of Contents.

Section 07 41 00 – Aluminum Composite Material Building Panels (ACMBP)

1. Part 2 – Products, Article 2.01 F. Panel Finishes: Add the following “Custom color PPG #17036 as indicated on the Drawings”.

Section 10 51 13 – Metal Lockers

1. Article 2.03, Paragraph M: revise locker depth to 12 inches in lieu of 22 inches.

Section 11 00 00 – Equipment Schedule

1. ***#35601 Tank, parts cleaning solvent, medium*** –Specification Section 11 00 00 incorrectly lists this item as appearing in Specification Section 11 96 00. This is an existing piece of equipment and does not have a specification section.

Section 11 96 00 – Shop Equipment

1. ***#2205 Drill press, variable speed, 15”*** –Specification Section 11 96 00, 2.02, D states, “Utilities Available: 440 VAC, 3 Hp.” This should be replaced by, “Utilities Available: 115 VAC, 1 phase, 3 HP.”

Section 14 45 00 – Vehicle Lifts

1. **#5650- AA Lift axle, adj. 2 post, modular, 60,000 lb** –Specification Section 14 45 00, 2.01, F states, “Utilities Available: Electric 460 VAC, 3 phase, 12.5 HP.” This should be replaced by, “Utilities Available: 208 VAC, 1 phase, 10.5 HP.”
2. **#5701-AA Lift, drive-on, parallelogram, 36,000 lb, 28 ft.** - Specification Section 14 45 00, 2.02, G states, “Utilities Available: Electric 460 VAC, 3 phase, 10 HP.” This should be replaced by, “Utilities Available: 208 VAC, 1 phase, 10 HP.”

Section 28 31 11 – Digital, Addressable Fire-Alarm System

1. Part 2 – Products, Article 2.1A Manufacturers, add Edwards System Technology as an approved manufacturer.

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1. Specification Section 28 31 11 Digital, Addressable Fire-Alarm System should be listed under Division 28 – Electronic Safety and Security in lieu of Division 26 – Electrical.

D. DRAWING CLARIFICATIONS

1. Sheet P2.4 Calls out fixtures P12 and P13 as “TO BE SUPPLIED BY THE EQUIPMENT DESIGNER.” These fixtures appear in the Plumbing Fixture Schedule and should be supplied by the General Contractor.
2. Sheet P2.4 Note B calls for “COMPRESSED AIR DROP TO EQUIPMENT.” There is no equipment specified at these locations. At each of these locations the General Contractor shall supply a wall mounted filter, regulator, lubricator with piping and devices as described in Specification Section 13 60 00, 2.02, B, 5 and 6.

E. ATTACHMENTS

1. Minutes of the February 7, 2012 Pre-Bid Meeting
2. United Consulting Report of Geotechnical Explorations dated December 27, 2010
3. What is the Buy American Act?
4. Type “J” Fixture Catalogue Cut
5. Existing MSA Switchboard Photograph
6. Specification Section 00 41 13 – Bid Proposal Form.
7. Specification Section 01 21 00 – Allowances.

Addendum 1
CCT Mobility Center Paratransit Facility
Seal Bid 12-5637

Minutes of the February 7, 2012 Pre-Bid Meeting

A pre-bid meeting was conducted on February 7, 2012 at the Cobb County Purchasing Department.

In Attendance:

John Flood (Cobb County Purchasing)	Lester Love (Niles Bolton Associates)
David A. Jackson (Cobb County Transit)	David M. McDowell (Cobb County Property Mgmt.)
Tamie McKenzie (Cobb County Transit)	March Johnson (MultiPlex, LLC)
Marcia Rose (Cobb County Transit)	Charlie Wilson (Hogan Construction Group)
Mike Tomlin (Hogan Construction Group)	Gerry Kasslanos (Southcore Construction)
Anotin Pruitt (JM Wilkerson Construction)	Trevor Sas (CRS Building Corporation)
D.J. Schell (Albion Scaccia Enterprises)	Ennis Mobley (Rotary Lift)
Jeff Casey (Reliable Hydraulics)	Steve McTighe (Catamount Construction)
Chad Thames (Reeves Contracting Co.)	Ed McNear (Excel Electric Technologies)
Daryl Davis (Talbot Construction)	Carmon White (Mooney Construction, Inc.)
Cyndi Wallace (Earth 1 st)	Jeff Hacknoy (Hohy Commercial)
Kecia Tomlin (Classic Plains Construction)	

John Flood, Purchasing Technician of the Purchasing Department, welcomed everyone and circulated the sign-in sheet. He mentioned that this is Seal Bid 12-5637 CCT Mobility Center Paratransit Facility. John introduced Tami McKenzie (Cobb County DOT/CCT), David McDowell (Cobb County Property Management), Lester Love (Niles Bolton Associates) and David Jackson (Cobb County DOT/CCT).

John said the deadline for receiving bids is February 23 before 12 Noon and late bids will **not** be accepted. The clock will be governed by the clock in the Purchasing lobby, which will be the official timekeeper. Bids will open at 2:00 p.m. the same day at the Purchasing Department located at 1772 County Services Parkway, Marietta, Georgia upstairs on the 2nd floor in the Bid Room.

This project requires a bid bond and the GA Security and Immigration Act Affidavit Form must be submitted with the bid. The vendor must sign and have that form notarized. Please submit an original and two (2) copies with the original clearly marked so it can be kept separate from the copies. Please mark all packages with company name and bid number. If more than one box is used to submit the bid, please clearly mark the originals and place them in Box #1 if possible.

The cutoff date for questions is February 14 at 5:00 p.m. Question can be submitted to the Purchasing Department via fax at 770-528-1154 or email to purchasing@cobbcounty.org. This will be a televised bid opening and will be available on TV-23 or you can watch it on the Cobb County website by clicking on the live stream. You are also welcome to view the bid live.

Tami addressed DBE and federal requirements. She referenced the back of the proposal where there is a combination of certifications (all federal forms) required to be submitted with the bids. Tami emphasized that there should be no blank certifications that are not addressed. All certifications must be signed regardless of whether they are not applicable, otherwise the bid will be considered unresponsive. David Jackson cautioned to pay attention to this so the bid will not be unresponsive.

David Jackson said the project consists of construction of a 10,560 square foot single-story Administrative and Operations Building with an addition of a 6,171 square foot single-story Maintenance Building. Upon completion of this meeting, the opportunity will be provided to walk the site. The civil work will include 79 spaces for paratransit vehicles, parking for 109 employee vehicles, and all other work shown on the project drawings and described in project manual.

David Jackson pointed out that it will be necessary to continue parking CCT and Cobb County Senior Service vehicles on a portion of the construction site. It is the Contractor's responsibility to coordinate the sequencing of those vehicles with him and David McDowell so there are no surprises. They will work to accommodate the Contractor, as other spaces are available on a short-term basis to move the vehicles. It is not an impossible challenge, just a matter of coordination.

The Notice of Intent (NOI) as required on the project is already in place, as far as approval, but a NOI must be given when it is time. Be very aware of all that needs to be submitted with the bid proposal. The bid itself must be put on the Bid Proposal Form found in the Project Manual as well as other forms, which is pretty easy to follow. The site is fronted by S. Marietta Parkway, Commerce Park Drive and also a lesser amount Fairground Road. There are public utilities all around that area and across the site, reflected on the plans. It is the Contractor's responsibility to coordinate any relocation as shown on the plans and any notification to the various utilities.

The County has purchased and owns all of these properties well in advance of this project; therefore there will be no delay in waiting for right of way. The project site is located within the City of Marietta limits and therefore subject to their rules and regulations. However, do not be discouraged because the City of Marietta works well with CCT. CCT has already obtained or is close to obtaining majority of the plan approvals, so it is just a matter of pulling a Building Permit with the City.

A City of Marietta Sidewalk Project may impact the CCT Mobility Center Project along the S. Marietta Parkway frontage where there is an enhanced sidewalk multi-use trail that goes by various names. If their project is ahead of ours, CCT will let them build the sidewalk and negotiate perhaps a deduction from the CCT Mobility Center contract. If the worst case scenario occurs that their project does not start before or happen at all, the Contractor will build the sidewalk as shown in the plan. Again, there will be a need for coordination with the City of Marietta.

John mentioned that there are alternates so make sure you look at Specs Section 012300. Regarding Substitution Requests, there is Specs Section 012500 that outlines the procedure and a form to complete if there is any substitution request. In case you question how to put your profit and do your estimating, Cobb County believes there is adequate funding to build this entire facility including the add alternates.

David Jackson said, understanding that there is a need to coordinate the maintenance of the parking of CCT's vehicles, are there any questions after reviewing the plans or are there any concerns about this occurring. There were no responses. David Jackson asked if those who attempted to download the documents were successful and able to look at them. Again, there were no responses. He opened the floor for questions.

Question 1: What is the anticipated start date?

Answer 1: *The anticipated start date is the end of March. Cobb County is able to get to the Board of Commissioners (BOC) for approval at the March 13 Agenda, provided the bids are reviewed and the apparent lowest bidder is a good bid. CCT will move forward with getting contracts to the bidder to sign in anticipation of the Board approving it. As soon as it is approved on March 13 the contracts will be taking to the Board for signatures so the contract can start by the end of March. The Contractor will have 280 consecutive calendar days. The project is expected to be substantially completion by the end of December and an additional 45 days for final completion by the end of February*

Question 2: With respect to the specifications, if a particular item that is specified has some technological improvements (i.e. a part number or two has changed or something) do we follow the same protocol for a substitution or do we say that part number is not available and has been changed to so and so?

Answer 2: *If there is a specific item, it can be submitted as a question.*

Question 3: Is there a RFI Form within the packet or is it just in a body letter?

Answer 3: *There is no specific format, just email your questions.*

Question 4: Will today attendees also be listed on the website?

Answer 4: *Addendum #1 will be issued and will include the sign-in list. The minutes for this meeting will be sent to all plan holders in record, which means those who signed in and anyone else who have been notified. The minutes will also be posted at www.cobbcounty.ga.gov on the Bidding Opportunity Section under where the initial solicitation was found.*

Question 5: Do you anticipate just one addendum coming out after the due date or will there be a couple out there?

Answer 5: *The amount of addendums depends on the amount of questions we received and we can answer.*

Question 6: Is there an estimated budget?

Answer 6: *The estimated budget for this project is about five million dollars (\$5,000,000).*

Question 7: Are there liquidated damages?

Answer 7: *Yes, there will be liquidated damage of \$200 per day from substantial completion, \$100 per day past final completion and after a certain date \$300 per day as described in the Construction Manual.*

Question 8: Is the five million dollars (\$5,000,000) construction cost or overall cost?

Answer 8: *It is the project as presented on the plans in the Project Manual.*

Question 9: The front-end document indicates that all fees (sewer impact, water impact, etc.) are to be paid by the General Contractors. Does that mean that the Building Department Fees are paid to the City of Marietta?

Answer 9: *Yes.*

Question 10: From experiences in the past, when you call other municipalities and departments you sometimes get amounts that don't always match what you end up getting later on in the project. Has Cobb entertained maybe just a Permit Allowance or a Impact Fee Allowance or something where you can draw from that amount in lieu of 15 Contractors calling all these departments and asking them for prices so there is a level playing field?

Answer 10: *We will certainly consider it. The City of Marietta has reviewed, basically approved and is aware of the plans; therefore, when a phone call is made they have an idea of the project and what permits are required.*

Question 11: Who is the Water Department?

Answer 11: *Marietta Power and Water and they also have the plans.*

Question 12: The front-end document referenced a Buy America Form but there aren't a lot of details that tells what is involved. Is there any information you can provide?

Answer 12: *Buy America requires that Fifty-one (51) percentage or better of the components used on the project must be domestically produced. Specific Information regarding this will be sent with Addendum #1.*

Question 13: Is compliance with Buy America proven in the Bid Submittal Process or how does that work?

Answer 13: *The Contractor certifies that they will comply, but must provide proof of the items purchased that are manufactured in America during the construction process.*

Question 14: Is Buy America tied to federal funds?

Answer 14: *Yes.*

Question 15: The front-end document referenced 305 Qualification Contractor's Statement and a Current Review Financial Statement. Is that necessary or can the lowest bidder provide them afterwards so their Financial Statement will not be a public record?

Answer 15: *If they are required in the specs, you must provide them with the bid.*

Question 16: Will those documents remain confidential?

Answer 16: *No. Once they are received by the County, they become County property and are subject to the Open Records Act.*

Question 17: What is the bid due date?

Answer 17: *February 23 before 12 Noon.*

Question 18: Is the Pre-Bid mandatory?

Answer 18: *No, the Pre-Bid is not mandatory. There is federal disallowance for that.*

Meeting Adjourned.

PRE-BID CONFERENCE

SEALED BID # 12-5637
 CCT MOBILITY CENTER
 PARATRANSIT FACILITY
 FEBRUARY 7, 2012

REPRESENTATIVE NAME	COMPANY NAME & COMPLETE ADDRESS	PHONE (INCLUDE AREA CODE)	FAX # (INCLUDE AREA CODE)	E-MAIL ADDRESS
JOHN FLOOD	C.C. Purchasing DEPT 1772 COUNTY SERVICES PARK MARIETTA, GA 30008	770-528-8418	770-528-1154	JOHN.FLOOD@COBPCOUNTY.ORG
LESTER LOUE	NILES BOUTON ASSOC. 3060 PERCHMANE ROAD SWEDESBORO, NJ. 08863	404 365.7600		lloue@nilesbouton.com
DAVID A. JACKSON	CCT 463 COMMENCE PARK DR MARIETTA GA 30060	770-528-1660		david.jackson@cobcounty.org
DAVID MCDONNELL	CS-PROPERTY MGMT 1150 P'SPRINGS ST - SUITE 200 MARIETTA, GA 30067	770-528-1978		david.mcdonnell@cobcounty.org
Tami McKenzie	CCT	770-528-1604	770-528-4360	tamisha.mckenzie@cobcounty.org
MARC Johnson	MULTIPLY LLC 3505 Koger blvd dunwoody GA 30096	678-317-2040	678-317-2044	ADMIN@MULTIPLYLLC.COM
Marcia Rose	CCT	770-528-1610		Marcia.rose@cobcounty.org
CHARLIE WILSON	HOGAN CONSTRUCTION GROUP 5075 ANAHEIM RIDGE PKWY NORCROSS, GA. 30071	770.242.8588	770.242.7741	Charlie.Wilson@HOGANCONSTRUCTIONGROUP.COM

PRE-BID CONFERENCE

SEALED BID # 12-5637
 CCT MOBILITY CENTER
 PARATRANSIT FACILITY
 FEBRUARY 7, 2012

REPRESENTATIVE NAME	COMPANY NAME & COMPLETE ADDRESS	PHONE (INCLUDE AREA CODE)	FAX # (INCLUDE AREA CODE)	E-MAIL ADDRESS
MIKE TOMLIN	HOGAN Construction Group 5075 Aviation Kildee Pkwy NORCROSS GA 30071	770-242-8588	770-242-7741	MTOMLIN@HOGAN CONSTRUCTION GROUP.COM
GERTY KASSIDAKIS	Southcore Construction 6095 Pike Mountain Road Kennesaw GA 30152	770 499 1393	770 499 1394	JGason@Southcore.com
AUSTIN PENNITT	JM Wilkerson Construction 1734 Sands Pl. Marietta GA 30067	770/953-2659	770/933-9665	apennitt@jmwilkerson.com
Trevor Sas	CRS Building Corporation 6995 Shiloh Rd, Suite 230	7-509-4000	7-509-4030	tsas@crsbuildingcorp.com
D.J. Schell	Albion Scaccia Enterprises, LLC 8601 Dunwoody Place Bld. 300 Suite 340 Sandy Springs, GA 30350	6-325-5900	6-325-5905	djsche11@a1b150m-scaccia.com
ENNIS MOBLEY	ROTARY LEFT 38 SPARROWS WALK POWDER SPRUNGS, GA 30127	7-439-9200	7-943-7463	emobley@ALSAKES.COM
Jeff Casey	Reliable Hydraulics 2600 S. COBB DR. SMYRNA, GA 30080	(770) 432-5410	(770) 432-3103	jeff@reliablehydraulics.c
Steve McTighe	Catamount Construction 10 Hanceville Court East, Suite 150 Roswell, GA 30076	(770) 518-2800	(770) 518-2233	smctighe@catamountconstruction.com

PRE-BID CONFERENCE

SEALED BID # 12-5637
 CCT MOBILITY CENTER
 PARATRANSIT FACILITY
 FEBRUARY 7, 2012

REPRESENTATIVE NAME	COMPANY NAME & COMPLETE ADDRESS	PHONE (INCLUDE AREA CODE)	FAX # (INCLUDE AREA CODE)	E-MAIL ADDRESS
CHAD THAMES	REEVES CONTRACTING CO	770-271-1159	770-271-5856	estimating@reevescontracting.com
ED McNEAR	EXCEL ELECTRICAL TECHNOLOGIES 3322 SW PINEAPPLE PARK DR DECATUR GA 30033	678-518-9740	678-518-9741	Bidroom@reevescontracting.com
DARYL DAVIS ANDREW JAMES	TALBOT CONSTRUCTION 5000 RESEARCH CT. SUITE 750 SUMNER GA 30024	770 998 9938	770 998 9930	ed.mcnear@excel-electrical.co.
Carmen White	Mooney Construction, Inc. 251 Heritase Walk, Ste 100 Woodstock, GA 30188	770-516-8860	770-516-0877	ESTIMATING@TA-BOT-INC.NET
Cyndi Wallace	5888 Gallye Dr Stockbridge GA 30281	678 637 9809	678 637 9809	Kevin@mooneyconstructioninc.com
Jeff HACKNEY	Licity Commercial Construction INC	770-480-5478	770-502-9415	cyndi53@yahoo.com
Kecia Tomlin	Classic Plains Construction	770-977-8945	770-977-8946	srancifere@licitybrothers.com
				ktomlin@classicplains.com

Report

**Geotechnical Exploration
Cobb County Transit
Paratransit Facility
463 Commerce Park Drive
Marietta, Cobb County, Georgia**

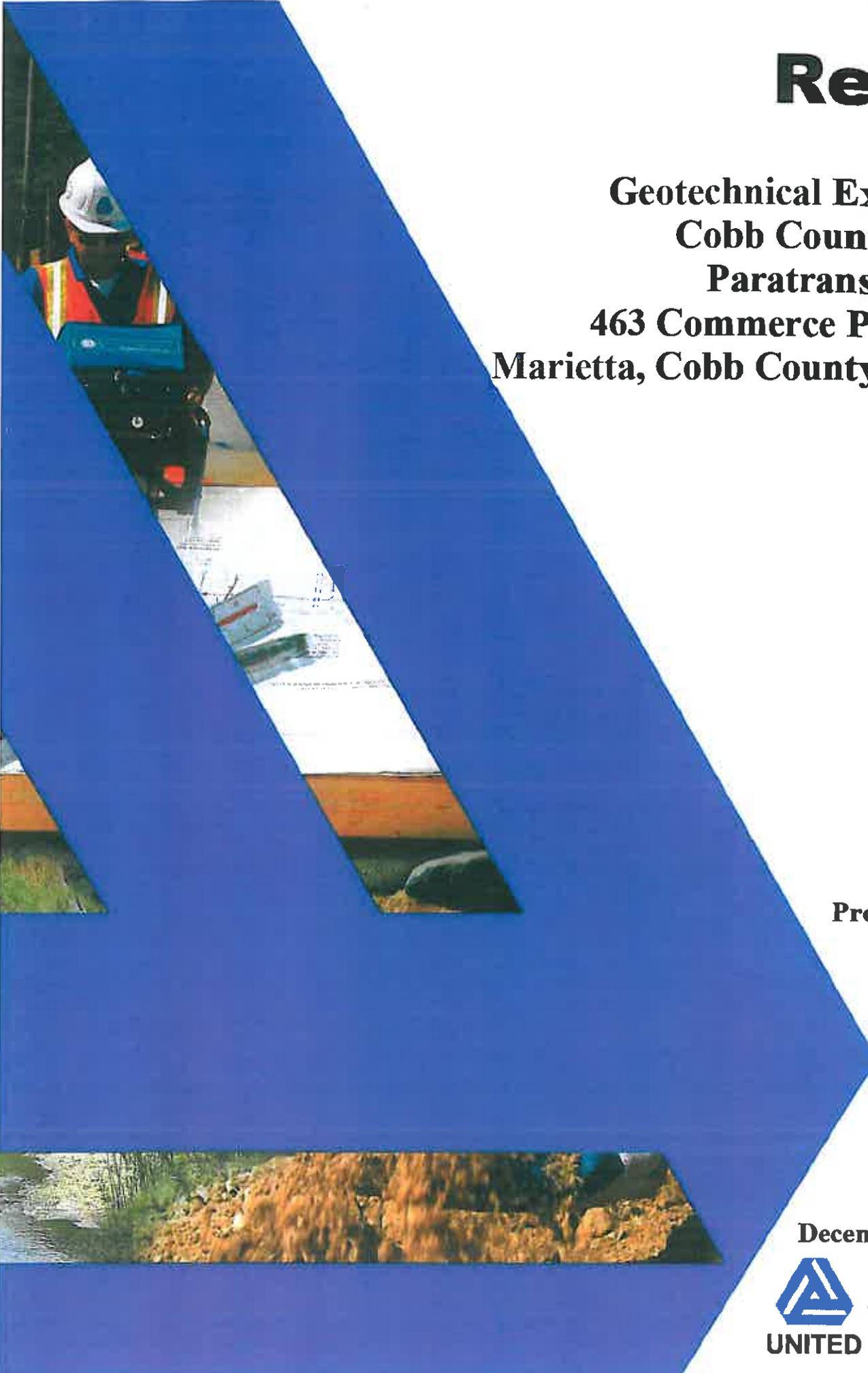
**Project Number
2010.0470.02**

December 27, 2010



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UNITED CONSULTING





December 27, 2010

Mr. Lester Love
Niles Bolton Associates
3060 Peachtree Road NW
Suite 600
Atlanta, Georgia 30305

RE: Report of Geotechnical Exploration
Cobb County Transit
Paratransit Facility
463 Commerce Park Drive
Marietta, Cobb County, Georgia
Project No. 2010.0470.02

Dear Mr. Love:

United Consulting is pleased to submit this report of geotechnical exploration for the above-referenced project. We appreciate the opportunity to assist you with this project. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

UNITED CONSULTING


Mehdi Moazzami, P.E.
Senior Geotechnical Engineer


Chris L. Roberds, P.G.
Senior Executive Vice President

SMT/MM/nj

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FIGURE

Figure 1 - Boring Location Plan

APPENDIX

- General Notes/Narrative of Drilling Operations
- SPT Boring logs (B-1 through B-10)
- Moisture Density Relationship
- Exploration Procedures
- Laboratory Procedures

EXECUTIVE SUMMARY

United Consulting has completed a Geotechnical Exploration for the Cobb County Transit Paratransit Facility in Marietta, Cobb County, Georgia. The results of this exploration are briefly summarized below. The text of the report should be reviewed for a discussion of these items.

1. A complete geotechnical engineering service is performed through the Observational Method as an indivisible two-phase process. The first phase provides advice about project specific risks and represents our firm's opinion of subsurface conditions with preliminary recommendations. Field observation during construction comprises the second phase of our service and provides us the opportunity to assess the reliability of the subsurface data and the appropriateness of our preliminary recommendations. Actual conditions may differ from those encountered in the exploration phase.
2. Borings B-2, B-3, B-7, B-8, B-9 and B-10 encountered fill or previously disturbed soils to depths ranging from 2 to 8 feet. The fill generally appeared to be clean, and based on the N-values, compacted. However undocumented fill might contain zones of soft soils, boulders, buried debris, or other unsuitable materials. United Consulting recommends a thorough evaluation of the footing excavation in the fill areas. Contingency funds should be available to remediate any unsuitable materials encountered.
3. Provided the site is prepared as recommended, the planned paratransit building and the expansion building can be supported on conventional shallow foundations designed for an allowable soil bearing pressure of up to 2,500 psf. If new footings are to be constructed adjacent to and/or within 4 feet of existing footings, we recommend that these footings be designed for a reduced allowable soil bearing pressure of 1,500 psf.
4. Groundwater was encountered in borings B-1, B-5, B-7 and B-10 at depths ranging from 16 to 17.5 feet at the time of drilling. No water was encountered in the remaining borings.
5. Partially weathered rock (PWR) was encountered in boring B-3 at a depth of 23.5 feet. Auger refusal occurred in borings B-1, B-2, B-3, B-5 and B-7 at depths ranging from 21 feet to 31 feet. Difficult excavation conditions associated with PWR or rock are not generally expected for the proposed construction.
6. United Consulting recommends that a seismic site classification of "Site Class D" for the facility building and "Site Class C" for the expansion of the operation building per Chapter 16 of the 2006 International Building Code (IBC) be utilized for the site. The potential of the on-site soils for liquefaction, slope instability, and surface rupture due to faulting or lateral spreading resulting from earthquake motions is considered low.



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PROJECT INFORMATION

The parent tract of the project site is located at 463 Commerce Park Drive in Marietta, Cobb County, Georgia. The project site occupies the western half of the parent tract and a 65± x 90± feet addition on the eastern side of the existing operations building. The western half of the parent tract was previously occupied with commercial buildings that are now demolished. The area is now fenced and paved and used for bus parking. The area of the proposed expansion is currently a parking lot for employee vehicles and a driveway to access the bus garage and maintenance area on the north side of the existing building. A gas station and several fast food restaurants were noted near the northwest corner of the site.

Based on our visual observations and review of the provided topographic plan, the topography at the site generally slopes down to the southeast. Based on the provided plan, high elevations were located around the northwestern area of the property at around 1,070 feet. Lower elevations around 1,065 feet were located on the southeastern area of the site. Total relief across the site is about 5 feet. We understand that the proposed construction will consist of a single story facility building with an FFE of 1,066 feet and construction of a parking lot on the western half of the parent tract. The proposed extension of the operation building will also have a FFE of 1,066 feet. A Boundary and Topography Survey with no legible date, prepared by Agility Surveying Co. Inc. and aerial photographs provided by the client were used as a guide to locate the borings.

The foundation loads were not provided at the time of completion of this report. The recommendations of this report are based on column and wall loads not exceeding 100 kips and 7 kips per liner foot (klf), respectively.

PURPOSE

The purpose of this Geotechnical Exploration was to assess the general type and condition of the subsurface materials at the project site and to provide recommendations to guide the design and construction of foundations, grading, earthwork, quality control and other geotechnical-engineering related issues.

SCOPE

The scope of our Geotechnical Exploration has included the following items:

1. A visual reconnaissance of the Site from a geotechnical standpoint;
2. Drilling ten (10) Standard Penetration Test (SPT) borings to assess subsurface conditions;
3. Obtaining bulk soil samples for laboratory testing;
4. A visual evaluation of the soil samples obtained during our field exploration program for further identification and classification;

5. Running two (2) standard Proctor tests and one (1) California Bearing Ratio (CBR) test;
6. Analyzing subsurface conditions with respect to the proposed construction; and
7. Preparing this report to document the results of our field-testing program, engineering analysis, foundation design, earthwork, and quality assurance recommendations.

SUBSURFACE CONDITIONS

Borings B-2 and B-3 initially encountered approximately one (1) inch of asphalt and seven (7) inches of concrete whereas the remaining borings encountered about two (2) to five (5) inches of asphalt and zero (0) to four (4) inches of gravel. Below the pavement layer, borings B-2, B-3, B-7, B-8, B-9 and B-10 encountered about 2 to 8 feet of fill/disturbed soils. Fill soils are those transported and placed by man. The fill encountered generally consisted of stiff to very stiff sandy clay with various amounts of silt and traces of gravel or loose to medium dense sand with various amounts of clay, silt, mica and gravel. The standard penetration test resistances (N-values) recorded in the fill soils ranged from 9 to 28 blows per foot (bpf). The deepest fill (up to 8 feet) and a layer of gravel from 2 to 3 feet was encountered in boring B-3.

Typical residual soils of the Piedmont Geologic Region were encountered below the pavement layer in borings B-1, B-4, B-5 and B-6 and below the fill in the remaining borings. The residual soils encountered typically consisted of loose to very dense sand with varying amounts of silt, clay and mica or firm to very stiff sandy clay or silt with varying amounts of sand. The N-values in residual soils encountered ranged from 5 to 57 bpf.

Partially weathered rock (PWR) was encountered in boring B-3 at a depth of 23.5 feet. The PWR encountered consisted of very dense silty sand. Partially weathered rock is a term for the residuum that can be penetrated by soil drilling techniques and has standard penetration resistance values in excess of 100 blows per foot.

Auger refusal occurred in borings B-1, B-2, B-3, B-5 and B-7 at depths ranging from 21 to 31 feet. Auger refusal material is defined as material, which cannot be penetrated with conventional drilling equipment. Auger refusal levels may represent the top of massive bedrock, a boulder or other obstruction. Based on the consistency of the refusal depths, auger refusal at this site is believed to represent the top of mass rock.

Groundwater was encountered in borings B-1, B-5, B-7 and B-10 at depths ranging from 16 to 17.5 feet at the time of drilling. Groundwater levels should be anticipated to fluctuate with the change of seasons, during periods of very low or high precipitation, or due to changes in the floodplain or watershed upstream from the area. For a more precise description of the subsurface conditions encountered within the soil test borings, we refer you to the Boring Logs included in the Appendix.

LABORATORY TESTING PROGRAM

Laboratory testing for this project included two standard proctor tests and a CBR test. The results of the laboratory tests and a narrative of the testing procedures are included in The Appendix. The results of the tests are summarized in the following table:

TABLE 1: STANDARD PROCTOR AND CBR TEST RESULTS

Boring No.	Depth (ft)	Maximum Dry Density (pcf)	Optimum Moisture (%)	Natural Moisture (%)	CBR Result	
					95% Compaction	98% Compaction
B-6	0 - 6	92.3	22.5	20.6	-	-
B-10		112.5	16.4	26.2	4.5	7.0

DISCUSSION AND RECOMMENDATIONS

The following recommendations are based on our understanding of the proposed construction, the data obtained in our soil test borings, a site reconnaissance, and our experience with subsurface conditions similar to those encountered at the project site.

We also recommend that United Consulting as the Geotechnical Engineer of record be consulted during construction to conduct Geotechnical Evaluations as described elsewhere in this report. The purpose is to verify the similarity of the actual subsurface conditions versus conditions anticipated by the designers.

Existing Fill

Six (6) of the borings encountered about 2 to 8 feet of fill. Based on the field test results (N-values) and our visual evaluation of the soil, most of the fill encountered generally appeared to be clean and compacted. The deepest fill was found in the area of B-3 (the proposed expansion of the operation building) with a depth of 8 feet. A layer of gravel was also observed from a depth 2 to 3 feet in boring B-3. We understand that the area once contained underground storage tank (UST) that was removed in January 1999 by Blasland, Bouck & Lee, Inc. We caution that previously filled sites might contain areas of soft soils, buried debris, burn pits, or other deleterious materials. Areas containing deeper fill or fill containing zones of soft soils or unsuitable materials might be present between or away from the areas explored. Construction over undocumented fill entails risk. The only true way to evaluate the condition of an undocumented fill is to completely remove and replace the fill under the observation of a Geotechnical engineer. We recommend that the footing excavations within the fill areas be rigorously checked prior to concrete placement. United Consulting suggest that the project budget includes contingency funds in the event that soft soils or unsuitable materials requiring removal are encountered within the fill.

Site Preparation

Vegetation, topsoil, trees and their root balls which may extend to several feet below grade, root mats, boulders, and other deleterious materials should be completely removed from the areas of the planned construction. Existing pavement, concrete, or other remnants of prior construction should also be completely removed from the planned building footprint and areas that are to receive new fill. After site stripping and lowering of the grades where needed, areas to receive fill, foundations, and pavements should be proofrolled. Proofrolling should be performed under the observation of the Geotechnical Engineer or a qualified representative. Areas, which exhibit "pumping" (wave type displacement) during proofrolling, should be treated by a method recommended by the Geotechnical Engineer. This method may consist of undercutting and backfilling with suitable compacted fill, replacing with surge stone and a layer of crusher run, or some other method that is deemed suitable.

Due to presence of existing fill, areas of fill that would require removal that were not identified during this subsurface exploration should be anticipated.

Excavations

All excavations should be conducted in accordance with the Occupational Safety and Health Administration (OSHA) guidelines. Flattening of the excavation sidewalls and/or the use of bracing may be needed to maintain stability during construction.

Earthwork

The on-site low to moderate plasticity soils should generally be suitable for reuse as engineered fill with appropriate moisture adjustment. Due to presence of high clay content, the onsite soils may be sensitive to moisture variation. **During rainy seasons, these soils may become unstable and their reuse as engineered fill may not be feasible. These soils should be placed within a narrow range of their optimum moisture content to achieve proper compaction.** The geotechnical engineer should evaluate excavated soils to assess their suitability for reuse as engineered fill. Typical restrictions on suitable fill are no organics, plasticity index less than 20, and maximum particle size of four inches, with not more than 30 percent greater than $\frac{3}{4}$ -inch. These restrictions should also be applied to imported borrow soils if needed.

Positive drainage should be maintained at all times to prevent saturation of exposed soils in case of sudden rains. Rolling the surface of disturbed soils will also improve runoff and reduce the fill soil moisture and construction delays.

Difficult Excavation

Partially weathered rock (PWR) was encountered in boring B-3 at a depth of 23.5 feet. Auger refusal occurred in borings B-1, B-2, B-3, B-5 and B-7 at depths of 21 to 31 feet. Therefore, we anticipate that conventional excavation equipment should be suitable for mass grading, foundation excavation, and utility trench excavation. However, due to the geology of the area, it is not unusual to encounter shallow pinnacles of PWR and rock between and away from the



boring locations. If PWR and rock is encountered, reduced excavation rate should be anticipated.

Groundwater Considerations

Groundwater was encountered at depths ranging from 16 to 17.5 feet in borings B-1, B-5, B-7 and B-10 the time of drilling. No groundwater was encountered in the remaining borings. We do not envision the shallow groundwater will be problematic for mass grading and construction in the areas explored. However, due to presence of up to 8 feet of existing fill, the site is susceptible for formation of perched water. Perched water is surface water that infiltrates the high permeability surficial soils and is trapped above the less permeable residual soils. The contractor should be prepared to remove perched water, if encountered.

Shallow Foundations

Provided the site is prepared as recommended the soils at the site are generally suitable to support the planned structure on conventional shallow foundations. An allowable soil bearing pressure of up to 2,500 psf may be considered for the design of conventional shallow foundations supporting the proposed single-story facility building and expansion of the operation building.

Where new footings are constructed adjacent to or within 4 feet of existing footings, we recommend that these footings be designed for an allowable soil bearing pressure of 1,500 psf. Furthermore, these adjacent footings should be founded at the same bearing depth as the existing footings. Care should be exercised during construction not to undermine the existing foundations. If excavations are needed adjacent to and below the existing foundations, a shoring system may be required.

The provided allowable bearing pressure values are based on an assumed total settlement value of about 1 inch with differential settlements of about ½ inch over a 30 – foot span.

We recommend footing dimensions of at least 20 inches for strip footings, and 24 inches for square footings. A minimum embedment depth of 12 inches is recommended to protect against frost action. Each footing excavation must be evaluated by a representative of our firm prior to concrete placement. The conditions observed should be compared to test boring data and design requirements. **For the foundations underlain by fill, we recommend a thorough evaluation of the footing prior to concrete placement. The footings in the residual soils should also be evaluated prior to concrete placement, but less rigorously.**

Surface water control should be maintained to prevent accumulation of water in footing excavations. Standing water in footing excavations should be removed promptly. Soil softened by the water should be removed also, and the Geotechnical Engineer or his representative should re-examine the area.



Floor Slabs

A slab-on-grade may be utilized for the proposed structures. We recommend that the floor subgrade in the proposed buildings pad areas be evaluated by the geotechnical engineer prior to placing the concrete. A subgrade modulus of 125 pounds per cubic inch (pci) may be used to design the slabs.

The designer may elect to place a drainage layer of crushed stone below the slabs if grading is to occur during wet weather. This would provide more uniform support and help prevent delays caused by rain saturation of the subgrade soils at slab locations. We note that the stone layer is a convenience to facilitate construction and may be eliminated if the subgrade is dry and stable at the time of construction.

Retaining Walls

The following retaining wall recommendations pertain to cast-in-place building and site retaining walls and are not intended for modular block or MSE walls. If modular block or MSE walls are planned elsewhere on the site, United Consulting should be notified and additional evaluations will be required to provide recommendations specific to the planned wall types and locations.

The design of retaining walls must include the determination of the lateral pressure that will act on the wall. The lateral earth pressure is a function of the soil properties, surcharge loads behind the wall, and amount of deformation that the wall can undergo. This deformation is basically dependent upon the relative rigidity of the wall system.

The active earth pressure condition develops when the wall moves away from the soil over a sufficient distance, such as for a freestanding cantilever wall. The at-rest condition exists when there is no lateral strain on the soil, such as walls which are rigidly restrained like a basement, or sub-foundation wall. The passive condition occurs when the wall moves forward into the soil for a significant distance.

The following equivalent fluid pressures are recommended for different earth pressure conditions.

TABLE 2: LATERAL EARTH PRESSURES

Earth Pressure Condition	Earth Pressure Coefficient	Recommended Equivalent Fluid Pressure
Active	$K_A = 0.33$	40 psf/foot
At-Rest	$K_O = 0.50$	60 psf/foot
Passive	$K_P = 3.00$	360 psf/foot

We note that considerable horizontal deflections are required to mobilize the passive pressure; therefore, the designer may often wish to consider a safety factor of at least 2 to the stated ultimate passive earth pressure in design. For site walls, it may also be appropriate to design the wall with a slight batter into the backfill.

The recommended equivalent fluid pressures are based on an assumed soil density of 120 pcf, an internal friction angle of 30 degrees and cohesion of zero. An allowable bearing pressure of up to 2,500 psf and a coefficient of friction of 0.36 for sliding may be used for the retaining wall design.

The parameters listed above are based on a level properly compacted backfill, no friction at the wall-soil interface, and no surcharge effects. For design of retaining walls, which could be inundated, the buoyant unit weight of the inundated soil should be used to determine the lateral earth pressure. The hydrostatic pressure based on the maximum ponding elevation should be utilized in the analysis.

Heavy compaction equipment should not be used to compact backfill within 5 feet laterally behind any retaining wall unless the wall is designed for the increased pressure or temporarily braced. Therefore, light compaction equipment may be required in this zone. Retaining wall backfill should be compacted to 95 percent of the Standard Proctor maximum dry density. A permanent drainage system such as a footing drain, or a fabric drain such as Enka drain, Mira drain, etc., is recommended for any retaining walls which are more than 5 feet in height.

The retaining walls should be designed by a professional engineer familiar with retaining wall design and registered in Georgia. The designer should consider sloping backfill, surcharges and other factors affecting wall loadings.

Seismic Design Considerations

The seismic design is covered by the provisions of Chapter 16 of the 2006 International Building Code (IBC). The site categories referenced in the IBC are defined in terms of the average shear wave velocity (V_s) in the top 100 ft of the profile. In absence of shear wave velocities, geotechnical parameters such as standard penetration resistance (N) and the undrained shear strength (S_u) can be utilized.

United Consulting utilized available geotechnical information (N-values) and our experience with the similar soil conditions to provide a seismic site class for the Site. United Consulting recommends that a seismic site classification of "Site Class D" be used for the facility building and "Site Class C" be used for the expansion of the operation building.

The potential of the on-site soils for liquefaction, slope instability, and surface rupture due to faulting or lateral spreading resulting from earthquake motions is considered low.

Fill Placement

Moisture-density determinations should be performed for each soil type used, to provide data necessary for quality assurance testing. The natural moisture content at the time of compaction should be within moisture content limits, which will allow the required compaction to be obtained. The contractor should be prepared to increase or decrease soil water content.

The fill should be placed in thin lifts and compacted. We recommend that fill be compacted to at least 98% of Standard Proctor (ASTM D 698) maximum dry density within two feet below pavement subgrade or floor slabs and at least 95% of the Standard Proctor maximum dry density elsewhere.

A Geotechnical Engineer on a full-time basis should observe all grading operations. In-place density tests taken by that individual will assess the degree of compaction being obtained. The frequency of the testing should be determined by the Geotechnical Engineer at the time of construction.

Pavement Design Recommendations

Based on the laboratory test results, the CBR value of the sample tested if compacted to 98% of the Standard Proctor maximum dry density is 7. However, based on our experience with the area, we do not recommend using a CBR value of more than 5 for this project. Therefore, a CBR value of 5 may be used in flexible pavement thickness design for the proposed parking and driveway areas. This value corresponds to a vertical subgrade modulus (k) value of approximately 140 pci for rigid pavement design.

The following pavement design recommendations are based on an assumed traffic load of 50,000 EAL (18-kip equivalent axle load) over the 20-year service life, which is considered typical for similar developments. We recommend that we be provided with the actual traffic load if the aforementioned EAL is not adequate.

For standard-duty areas subjected to an the above assumed traffic load including H-20 truck traffic, we recommend a minimum pavement section consisting of 1.5 inch of asphalt (type "E" or "F" or 9.5 mm Superpave) underlain by 2.0 inches of binder (type "B" or 19 mm Superpave) over 6 inches of graded aggregate base (GAB). This is the minimum section recommended in any area where a truck can access, whether truck traffic is planned or not. If more trucks including garbage trucks, etc. are anticipated, this section should be thickened.

For light duty areas, restricted to passenger cars traffic only, with an average maximum daily traffic of approximately 400 cars and an occasional delivery truck per day, we recommend a minimum pavement section consisting of 2.0 inches of asphalt (type "E" or "F" or 9.5 mm Superpave) underlain by 6.0 inches of graded aggregate base (GAB). For full depth asphalt pavement, we recommend a 5-inch section of asphaltic concrete for light duty and a 6-inch section of asphaltic concrete in areas that may be accessed by trucks Full depth asphalt must be placed over a well-prepared subgrade.



We recommend that the subgrade beneath all pavement areas be compacted to at least 98% of the Standard Proctor density in the upper two feet below subgrade, and to at least 95% of the Standard Proctor maximum dry density elsewhere. We recommend that the graded aggregate base course for each of the preceding pavement sections be compacted to 100% of the materials modified proctor value (ASTM D-1557). Also, all subgrades, base and asphalt materials, concrete, and construction procedures should conform to Georgia DOT "Standard Specifications for Construction of Roads and Bridges".

We recommend that a rigid (concrete) slab at least 6-inches thick using 4,000 psi concrete over 12 inches of prepared subgrade be used for dumpster pad area, if any. This pad should be large enough to accommodate the front wheels of the dumpster truck when the dumpster is being emptied. Concrete pavement is also recommended in any loading areas where heavy trucks will maneuver or trailer jacks will be supported.

The pavement sections selected will require adequate drainage to provide long-term serviceability. Pavement areas should be sloped to drain and ditches or underdrains should be incorporated to promote drainage away from the pavement areas. The most critical factor in providing long-term serviceability for a pavement is a well-prepared, uniform, subgrade. Small areas, which are not adequately prepared by thorough proofrolling and treating of soft or wet areas, can result in potholes or cracking. Even though the potholes will affect only a small percentage of the pavement area, the overall pavement serviceability will be significantly reduced.

Pavement should be installed late in construction when most heavy construction traffic will no longer come on-site. If desired, a layer of crushed stone or graded aggregate base can be placed earlier to provide a working surface. However, this is a convenience and some loss of usable stone should be expected. Prior to paving, the site should be proofrolled again, new soft areas treated, the base leveled and thickened as required, and the site paved at the end of construction. This will reduce pavement damage due to construction traffic.

LIMITATIONS

This report is for the exclusive use of Niles Bolton Associates and the designers of the project described herein, and may only be applied to this specific project. Our conclusions and recommendations have been prepared using generally accepted standards of Geotechnical Engineering practice in the State of Georgia. No other warranty is expressed or implied. Our firm is not responsible for conclusions, opinions or recommendations of others.

The right to rely upon this report and the data within may not be assigned without UNITED CONSULTING'S written permission.

The scope of this evaluation was limited to an evaluation of the load-carrying capabilities and stability of the subsoils. Oil, hazardous waste, radioactivity, irritants, pollutants, molds, or other dangerous substance and conditions were not the subject of this study. Their presence and/or absence are not implied or suggested by this report, and should not be inferred.

Our conclusions and recommendations are based upon design information furnished us, data obtained from the previously described exploration and testing program and our past experience. They do not reflect variations in subsurface conditions that may exist intermediate of our borings and in unexplored areas of the site. Should such variations become apparent during construction, it will be necessary to re-evaluate our conclusions and recommendations based upon "on-site" observations of the conditions.

If the design or location of the project is changed, the recommendations contained herein must be considered invalid, unless our firm reviews the changes and our recommendations are either verified or modified in writing. When design is complete, we should be given the opportunity to review the foundation plan, grading plan, and applicable portions of the specifications to confirm that they are consistent with the intent of our recommendations.

UNITED CONSULTING

CLIENT: NILES BOLTON ASSOCIATES		UNITED CONSULTING 625 Norcomb Bridge Road, Norcross, GA 30071 TEL 770-209-0029 FAX 770-582-5900 www.unitedconsulting.com	
SCALE: NTS	DATE: 12/13/10	PROJECT NO: 2010.0470.02	TITLE: Boring Location Plan Cobb County Transit Partnership Marietta, Cobb County, Georgia
PREPARED: SMT	CHECKED:	REVISIONS:	

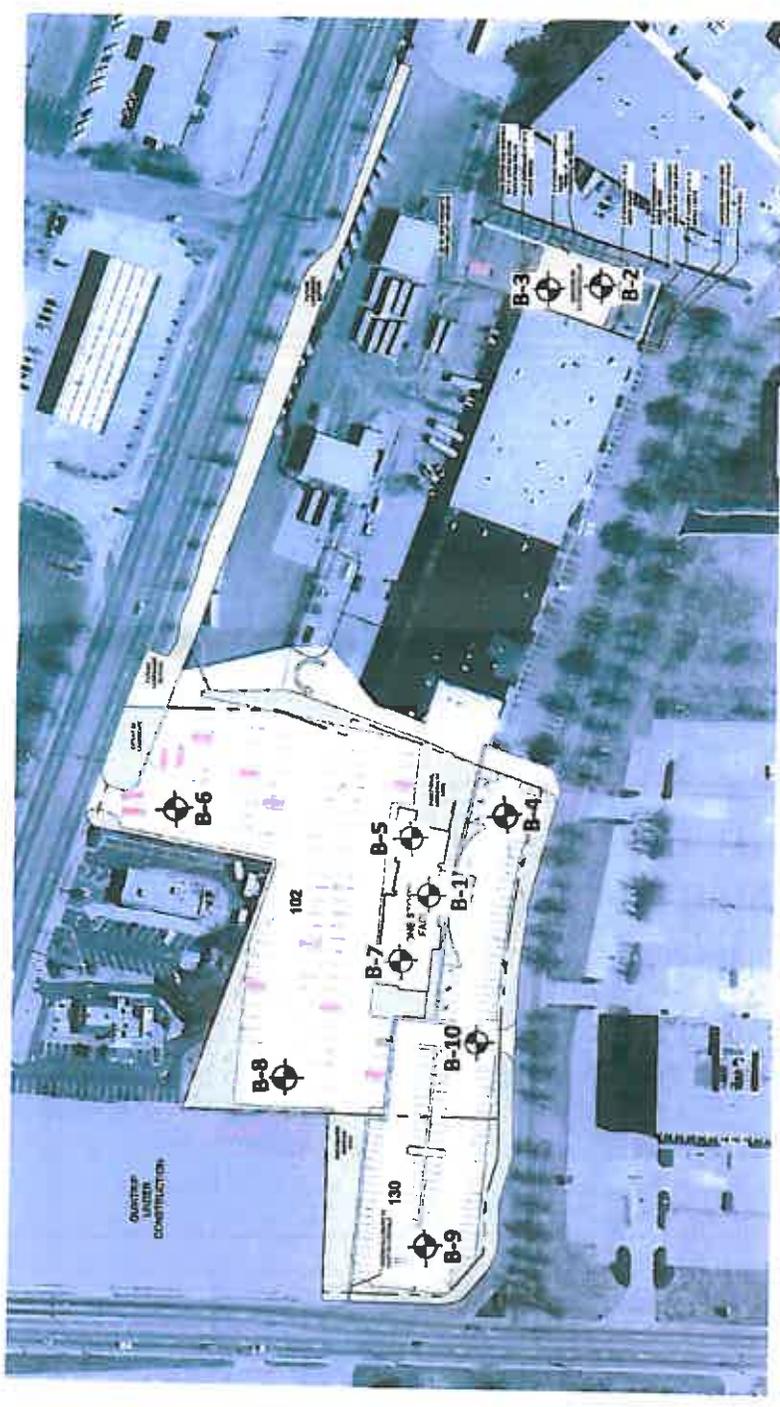


FIG 1

APPENDIX

General Notes/Narrative of Drilling Operations

SPT Boring logs (B-1 through B-10)

Moisture Density Relationship

Exploration Procedures

Laboratory Procedures

GENERAL NOTES

The soil classifications noted on the Boring Logs are visual classifications unless otherwise noted. Minor constituents of a soil sample are termed as follows:

Trace	0 - 10%
Some	11 - 35%
Suffix "y" or "ey"	36 - 49%

LEGEND



Split Spoon Sample obtained during Standard Penetration Testing



Relatively Undisturbed Shelby Tube Sample



Groundwater Level at Time of Boring Completion



Groundwater Level at 24 hours (or as noted) after Termination of Boring

w Natural Moisture Content

LL Liquid Limit

PL Plastic Limit Atterberg Limits

PI Plasticity Index

PF Percent Finés (Percent Passing #200 Sieve)

γ_d Dry Unit Weight (Pounds per Cubic Foot or PCF)

γ_m Moist or In-Situ Unit Weight (PCF)

γ_{sat} Saturated Unit Weight (PCF)

BORING LOG DATA AND NARRATIVE OF DRILLING OPERATIONS

The test borings were made by mechanically advancing helical hollow stem augers into the ground. Samples were covered at regular intervals in each of the borings following established procedures for performing the Standard Penetration Test in accordance with ASTM Specification D-1586. Soil samples were obtained with a standard 1.4" I.D. x 2.0" O.D. split barrel sampler. The sampler is first seated 6" to penetrate any loose cuttings and then driven an additional foot with the blows of a 140 pound hammer freely falling a distance of 30." The number of blows required to drive the sampler each six inches is recorded on the Boring Logs. The total number of blows required to drive the sampler the final foot is designated the "standard penetration resistance." This driving resistance, known as the "N" value, is a measure of the relative density of granular soils and is an indication of the consistency of cohesive deposits.

The following table describes soil consistencies and relative densities based on standard-penetration resistance values (N) determined by the Standard Penetration Test.

	"N"	Consistency
Clay and Silt	0-2	Very Soft
	3-4	Soft
	5-8	Firm
	9-15	Stiff
	16-30	Very Stiff
	Over 31	Hard
	"N"	Relative Density
Sand	0-4	Very Loose
	5-10	Loose
	10-19	Firm
	20-29	Medium Dense
	30-49	Dense
	50+	Very Dense



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES

BORING NO.: B-1

PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT

DATE: 12/10/10

JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45

LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH In FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	
FFE=1066	2" ASPHALT / 4" GRAVEL	0					
1065	Sand-some clay, trace silt; dense; tan, red (Residual)		1		8-12-18	18	
		5	2		10-14-16	18	
1060							
	-silty, trace clay; loose; tan, white, red		3		3-4-5	18	
1055		10					
	-trace mica; brown, black		4		3-3-4	18	
1050		16					
			5		2-2-4	18	Groundwater encountered at 17.5' at time of boring
1045		20					
			6		2-4-4	18	
1040		25					
	AUGER REFUSAL @ 29'		7		50/0	0	
1035		30					
1030		35					
1025		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-2
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	
FFE=1066	1" ASPHALT / 7" CONCRETE	0					
1065	Clay-sandy, trace silt and gravel; very stiff; red (Fill)		1		3-7-13	18	
	Clay-sandy, trace silt; very stiff; red (Residual)		2		5-10-13	18	
1060		6					
	Sand-some silt and clay; firm; red		3		7-8-10	18	
1055		10					
	-silty, trace mica; tan, red		4		4-6-6	18	
1050		15					
	-trace silt and clay; white, black		5		4-7-8	18	
1045		20					
	AUGER REFUSAL @ 21'						No groundwater encountered at time of boring
1040		25					
1035		30					
1030		35					
1025		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-3
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/8"	RECOV.	
FFE=1066	1" ASPHALT / 7" CONCRETE	0					
1065	Clay-sandy, trace silt and gravel; very stiff; red (Fill)		1		9-9-9	18	
	Gravel						
	Sand-trace clay, silt and gravel; firm; grey	5	2		3-8-10	18	
1060							
	Sand-some clay, trace silt; medium dense; red (Residual)	10	3		8-11-13	18	
1055							
	-silty, trace clay and mica; firm	15	4		5-6-6	18	
1050							
	-trace silt, medium dense; black, white	20	5		13-9-12	18	
1045							
	PWR sampled as Sand-silty, micaceous; very dense; tan	25	6		50/1	1	
1040							
	AUGER REFUSAL @ 27.5'						No groundwater encountered at time of boring
1035		30					
1030		35					
1025		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-4
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES	
			NO.	TYPE	BLOWS/6"	RECOV.		W%
1065	2" ASPHALT / 3" GRAVEL	0					No groundwater encountered at time of boring	
	Sand-clayey, trace silt; firm; red, tan (Residual)		1		3-7-11	18		
	-medium dense	5	2		9-13-15	18		
1060								
		10	3		11-14-15	18		
1055								
	Silt-some sand, trace clay; firm; tan							
		15	4		2-2-4	18		
1050								
	Sand-silty, trace clay and mica; loose; brown, black							
		20	5		2-3-5	18		
1045	BORING TERMINATED @ 20'							
1040		25						
1035		30						
1030		35						
1025		40						



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-5
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	
FFE=1066	2" ASPHALT / 4" GRAVEL	0					
1085	Sand-clayey, trace silt; medium dense; red (Residual)		1		12-13-14	18	Groundwater encountered at 16' at time of boring
	-firm; tan	5	2		7-9-9	18	
1060							
	-some silt, trace clay; loose; brown, tan	10	3		3-3-4	18	
1055							
	-some mica	15	4		2-2-3	18	
1050							
	-micaceous	20	5		3-4-4	18	
1045							
		25	6		2-3-5	18	
1040							
	-firm	30	7		3-4-6	18	
1035							
	AUGER REFUSAL @ 31'						
1030		35					
1025		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-6
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	
1070	2" ASPHALT / 4" GRAVEL	0					No groundwater encountered at time of boring
	Sand-silty, trace clay; medium dense; red, tan (Residual)		1		6-8-13	18	
	-firm						
1085		5	2		2-3-9	18	
	-trace mica; loose; tan						
1080		10	3		5-4-6	18	
	-some silt, micaceous						
1055	BORING TERMINATED @ 15'	15	4		3-4-5	18	
1050		20					
1045		25					
1040		30					
1035		35					
1030		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-7
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES					NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	W%	
FFE=1066	2" ASPHALT / 4" GRAVEL	0						
1065	Sand-some clay and silt, trace mica; medium dense; red (Fill)		1		10-14-14	18		
	Sand-some clay, trace silt; firm; tan (Residual)							
1060		5	2		5-7-7	18		
1055	-silty	10	3		4-7-8	18		
1050	-micaceous; brown, tan	16	4		5-5-7	18		
1045	-trace silt and clay; very dense	20	5		17-27-30	18		
1040	AUGER REFUSAL @ 23.5	25						
1035		30						
1030		35						
1025		40						

Groundwater encountered at 17' at time of boring



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-8
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	
1070	2" ASPHALT / 4" GRAVEL	0					No groundwater encountered at time of boring
	Sand-clayey, some silt; medium dense; tan, red (Fill)		1		9-11-13	18	
	Sand-clayey, some silt; loose; tan (Residual)						
1065		5	2		4-4-4	18	
	-firm						
1060		10	3		5-8-9	18	
	-trace clay, micaceous; loose; grey, tan						
1055		15	4		3-3-4	18	
	BORING TERMINATED @ 15'						
1050		20					
1045		25					
1040		30					
1035		35					
1030		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES BORING NO.: B-9
 PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT DATE: 12/10/10
 JOB NO.: 2010.0470.02 DRILLER: MIKE RIG: CME-45 LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/6"	RECOV.	
1070	5" ASPHALT	0					No groundwater encountered at time of boring
	Sand-clayey, some silt, trace gravel; firm; red, brown (Fill)		1		4-7-8	18	
	-no gravel; loose; brown						
1085		5	2		4-4-5	18	
	Sand-some clay and silt; loose; tan, red (Residual)						
1080		10	3		3-4-6	18	
	-silty, some mica; tan, pink						
1056		15	4		2-3-4	18	
	BORING TERMINATED @ 15'						
1050		20					
1045		25					
1040		30					
1035		35					
1030		40					



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BORING LOG

CONTRACTED WITH: NILES BOLTON ASSOCIATES

BORING NO.: B-10

PROJECT NAME: COBB COUNTY TRANSIT PARATRANSIT

DATE: 12/10/10

JOB NO.: 2010.0470.02 DRILLER: MIKE

RIG: CME-45

LOGGED BY: SMT

ELEV.	DESCRIPTION	DEPTH in FEET	SAMPLES				NOTES
			NO.	TYPE	BLOWS/8"	RECOV.	
	4" ASPHALT	0					
1085	Clay-sandy, some silt, trace gravel; stiff; brown (Fill)		1		4-4-11	18	
	Sand-trace clay, silt and gravel; firm, brown		2		8-8-8	18	
1080		5					
	Clay-sandy, trace silt; firm; tan, grey (Residual)						
			3		3-3-3	18	
1055		10					
	Sand-some silt, trace clay; loose; brown, tan		4		3-3-3	18	
1050		15					
							Groundwater encountered at 16' at time of boring
	-dense		5		17-14-20	18	
1045	BORING TERMINATED @ 20'	20					
		25					
1040							
		30					
1035							
		35					
1030							
		40					
1025							

MOISTURE-DENSITY RELATIONSHIP

Project No.: 2010047002

Date: 12/13/10

Project: Cobb County Paratransit Facility

Client: Niles Bolton Associates

Sample Number: B-6 Depth: 0-6 ft.

Remarks:

MATERIAL DESCRIPTION

Description: Sand, silty, some clay, brown

Classifications -

USCS:

AASHTO:

Nat. Moist. = 20.6 %

Sp.G. =

Liquid Limit =

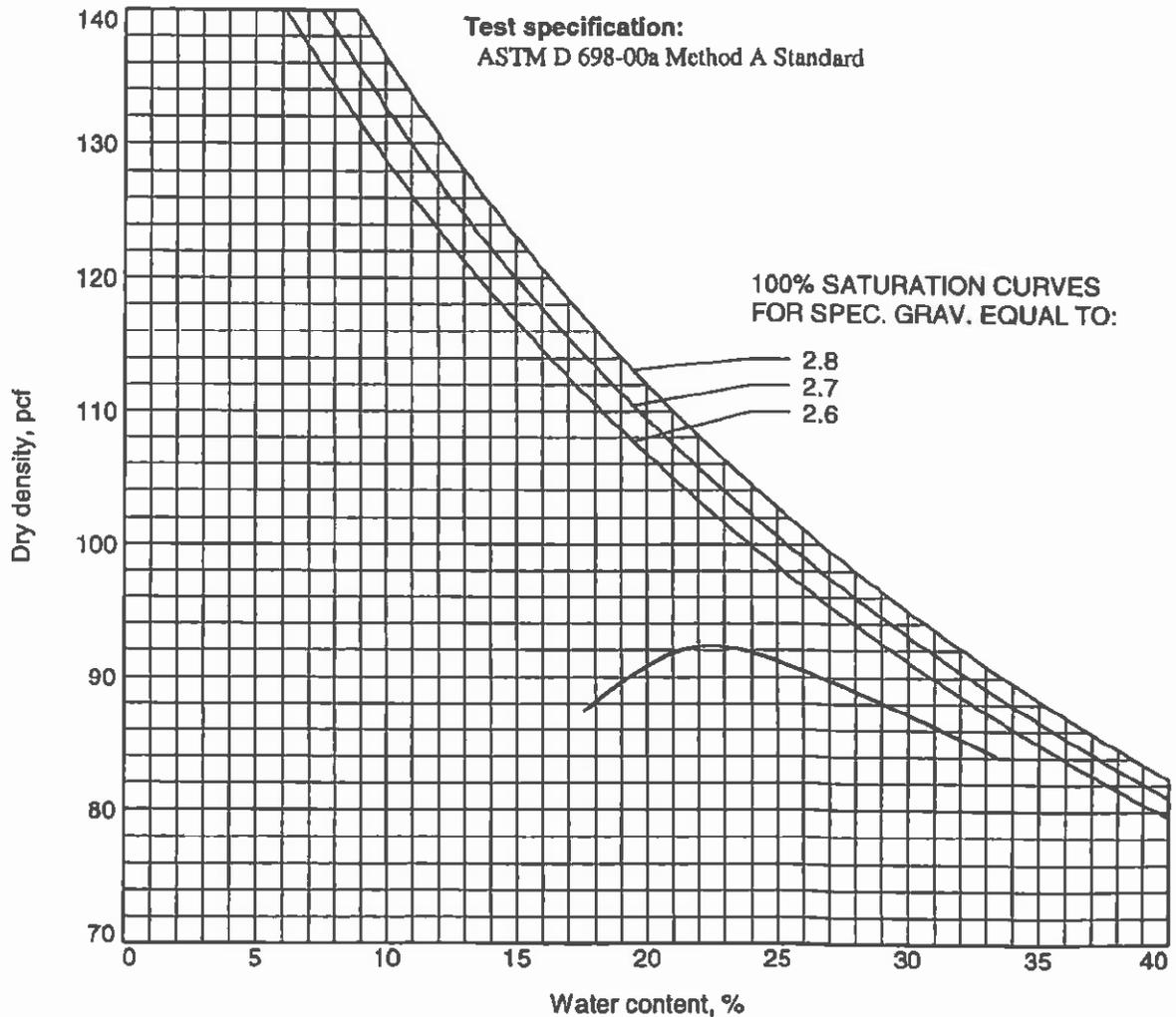
Plasticity Index =

% < No.200 =

TEST RESULTS

Maximum dry density = 92.3 pcf

Optimum moisture = 22.5 %



Figure

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MOISTURE-DENSITY RELATIONSHIP

Project No.: 2010047002

Date: 12/14/10

Project: Cobb County Paratransit Facility

Client: Niles Bolton Associates

Sample Number: B-10

Remarks:

MATERIAL DESCRIPTION

Description: Sand, silty, some clay, brown

Classifications -

USCS:

AASHTO:

Nat. Moist. = 26.2 %

Sp.G. =

Liquid Limit =

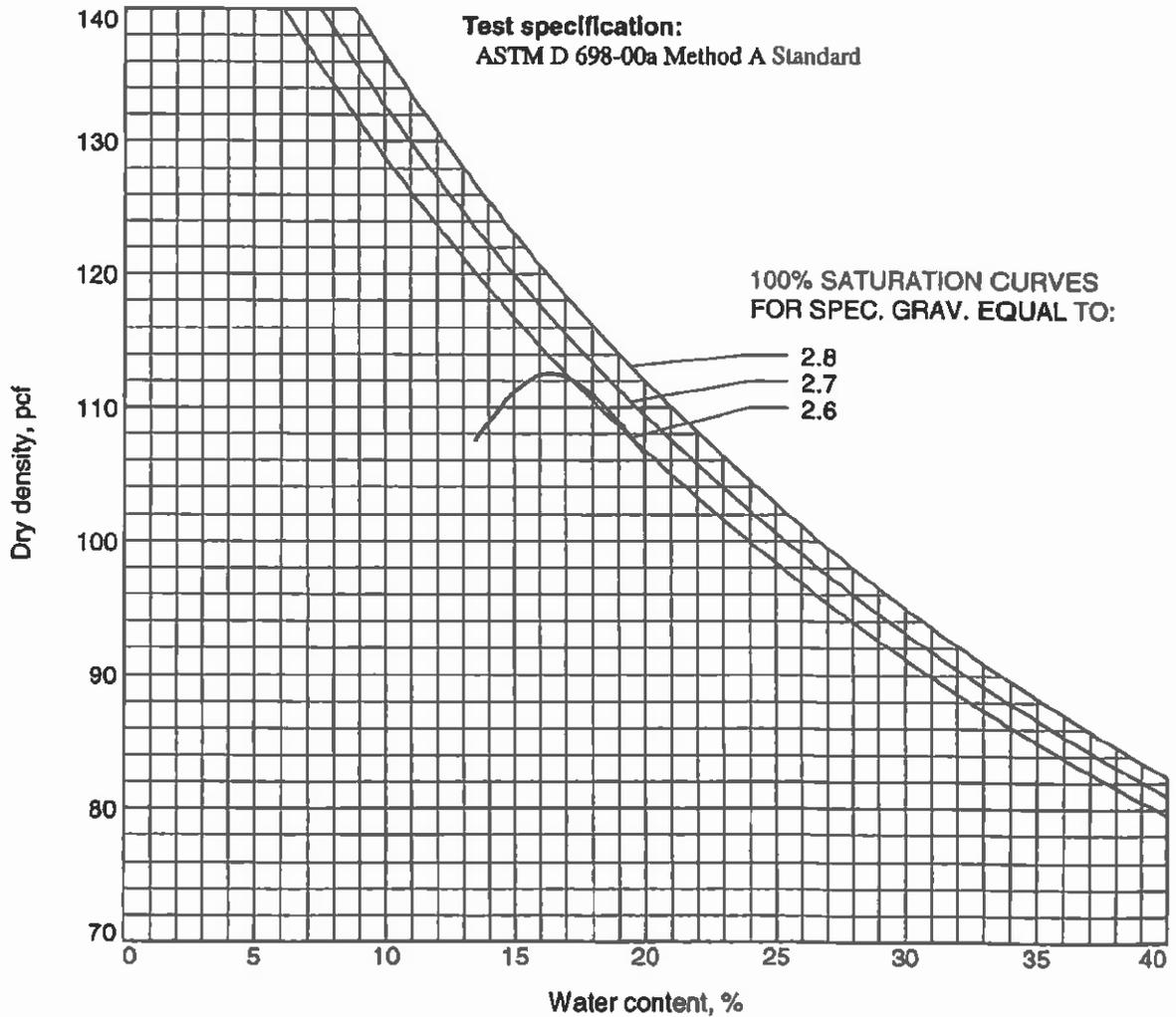
Plasticity Index =

% < No.200 =

TEST RESULTS

Maximum dry density = 112.5 pcf

Optimum moisture = 16.4 %



EXPLORATION PROCEDURES

Ten (10) SPT soil test borings were drilled at the approximate locations shown on the attached Boring Location Plans (Fig. 1). The borings were drilled in the proposed location of the new paratransit building, expansion area of the existing building, and the new parking areas. Soil samples obtained using the split spoon sampler were examined by the Geotechnical Engineer and classified according to the visual-manual procedure described in ASTM D 2488. Soil test borings were performed in general accordance with ASTM D 1586. A narrative of field operations is included in the Appendix.

Boring locations were determined in the field by the Geotechnical Engineer who measured distances and estimated angles from existing site features with a measuring tape and a hand-held compass. An undated site drawing with the planned addition and boring locations sketched on it was provided by the client and was used as a guide to locate the site and boring locations. Therefore, the boring locations indicated on the attached boring location plan should be considered approximate. The borings were backfilled with auger cuttings upon completion of drilling.

LABORATORY TEST PROCEDURES

Soil Compaction (Standard/Modified Proctor Test)

This test determines the maximum dry density that could be achieved by using a uniform compactive effort at varying moisture contents. Two primary methods of compaction are used. For standard Proctor, 5.5-lb (2.49-kg) rammer is dropped 12 inches (305-mm) and for modified Proctor, 10-lb (4.54-kg) rammer is dropped 18 inches (457-mm) for compaction on the bulk sample in the cylindrical mold. Compaction is done in 3 and 5 equal layers respectively. The methods are explained in ASTM D 698 and ASTM D 1557, respectively.

California Bearing Ratio (CBR)

The California Bearing Ratio, generally abbreviated to CBR, is a punching shear test and is a comparative measure of the shearing resistance of a soil. The CBR is a semi-empirical index of the strength and deflection characteristics of a soil that has been correlated with pavement performance to establish pavement thickness design curves. The CBR is used with these empirical curves to select thickness of pavement components (i.e., surface course, base course, and subbase).

A laboratory CBR test was run generally as described in ASTM D 1883. A representative sample was compacted using 10, 25 and 56 blows per layer at a preselected moisture content. The test was performed on a 6-inch diameter, 4.585 inch thick disc of compacted soil that was confined in a cylindrical steel mold. The test samples were soaked in water for 96 hours before testing. CBR tests may be run on the compacted samples in either soaked or unsoaked conditions.

During testing, a piston apparently 2 inches in diameter is forced into the soil sample at the rate of 0.05 resistance to penetration. A surcharge load of 4.54 kg (10 lbs) was used. The CBR number is obtained as the ratio of the load to penetrate the sample to a certain depth to the load required (1000 and 1500 psi) to penetrate a standard sample of crushed stone to the sample depth. The CBR number is usually based on the load ratio for a penetration of 0.10 inches. If, however, the CBR value at a penetration of 0.20 inches is significantly larger, the test is redone. If a second test yields also a larger CBR number at 0.20 inches, the CBR for 0.20 inches is used.

Important Information About Your Geotechnical Engineering Report

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

The following information is provided to help you manage your risks.

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 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 your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply the 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.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of 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,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- 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 study was performed. *Do not rely on a geotechnical engineering report whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. Always contact the geotechnical engineer before applying the 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 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 construction recommendations included in your report. *Those 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 recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower 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. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing 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 Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors 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 contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors 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 contractors do not 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.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental 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 geoenvironmental 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, a number of 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 ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you ASFE-member geotechnical engineer for more information.



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

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What is the Buy American Act?

The Buy American Act (Buy American) requires that all iron, steel, and manufactured goods used in any project funded wholly or partially by the American Recovery and Reinvestment Act involving a governmental entity, be produced in the United States.

Section 1605 of the American Recovery and Reinvestment Act (ARRA) states “None of the funds appropriated or otherwise made available by this Act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States”.

What are Buy American requirements?

- Requires all iron, steel, and manufactured goods that are incorporated into a public building or public work be produced in the U.S.
- Does not require individual components and raw materials that comprise a manufactured good originate in the U.S. Only the final manufactured product, which will be incorporated into the public building or public work, must be assembled or manufactured into its final form in the United States.
- Does not require machinery and tools used by project laborers be produced in the U.S.
- Requires the subgrantee retain adequate records documenting their compliance with Buy American.

To meet Buy America requirements:

the cost of components produced in the U.S. must be more than 60% of the cost of all components (detailed rules on calculating the cost of a component as well as examples of components may be found in [49 CFR 661.11](#)); and final assembly must occur in the U.S. In a "[Dear Colleague](#)" letter dated 18 March 1997, available on its website, the FTA defines "final assembly" of railcars and busses.

The FTA realizes that U.S. suppliers are not capable of fulfilling all manufacturing needs and will grant waivers to allow the use of foreign materials. Depending on the type of waiver sought, waivers must be requested by the grantee, the prime contractor, or suppliers and should be sought early in the bidding process. Waivers may be granted on one of the following grounds:

use of U.S. materials would be inconsistent with the public interest; or materials are not produced in the U.S. in sufficient and reasonably available quantities of a satisfactory quality; or U.S. materials cost significantly more (i.e. 25%) than foreign products.

General waivers exist for some products, e.g. microprocessors and software.

TYPE "J" FIXTURE

COOPER LIGHTING - METALUX®

DESCRIPTION

The BA Series features a brushed aluminum finish that is a quiet complement to any interior environment. The injection molded end plates have been designed to match the brushed housing finish. The wall bracket offers effective down and up lighting functions that have been incorporated with contemporary styling and architectural appeal. The BA Series also features the latest in energy efficient technology for outstanding performance. The BA Series architectural wall bracket styling contributes aesthetic appeal to contemporary decor, providing ideal lighting conditions for all areas in which comfortable, concentrated illumination is specified.

Catalog #	BA-132-ER81-BT	Type	D4
Project	CAT O+M FACILITY	Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

A ... Lens Housing Construction

Lens housing is constructed of premium grade extruded anodized aluminum with a brushed finish. It's easily removed for installation and maintenance. High impact, injection molded end plates have matching brushed aluminum finish.

B ... Internal Channel Construction

Internal steel channel is die formed of code gauge prime cold rolled steel. Channel cover is secured by quarter-turn fasteners for easy wireway access. Internal channel back has numerous KO's for easy installation.

C ... Electrical

Ballast are CBM/ETL Class "P" and positively secured by mounting bolts. Pressure lock lampholders. UL/CUL listed. Suitable for damp locations.

D ... Lens Housing Finish

Extruded brushed aluminum lens housing has a clear anodic coating. Sturdy, high impact injection molded end plates have matching brushed aluminum-type finish. Decorative recessed walnut trim-stripe, front and ends.

E ... Internal Channel Finish

Internal channel and all steel reflective surfaces are finished with electrostatically applied baked white polyester powder enamel. Multi-stage cleaning cycle, iron phosphate coating with rust inhibitor. Conveyorized application and baking time are accurately controlled at an elevated temperature.

F ... Internal Light Baffle

Optional internal light baffle is available for up, down or combination lighting. (BAUB)

G ... Latching

Lens housing secured to internal channel by spring-loaded latches.

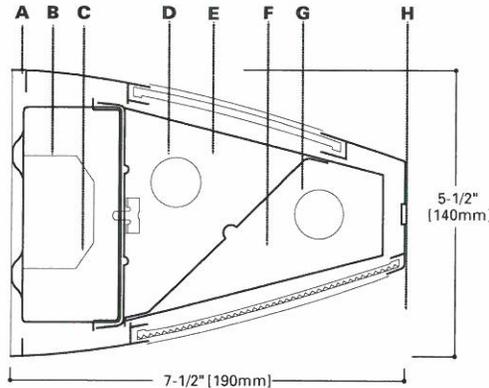
H ... Shielding

Downlight diffuser is 100% virgin prismatic acrylic, #12 pattern. Low brightness even illumination is provided. Uplight diffuser is smooth matte opal acrylic.

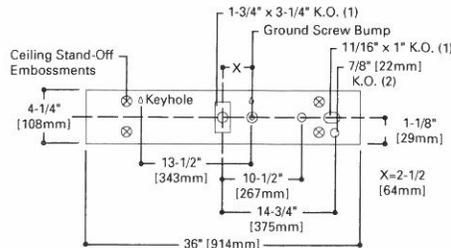
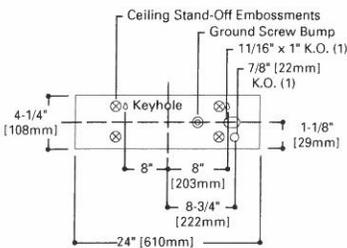


- BA, BAU**
- 220
 - 217
 - 230
 - 225
 - 240
 - 232

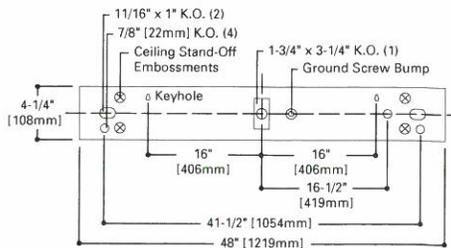
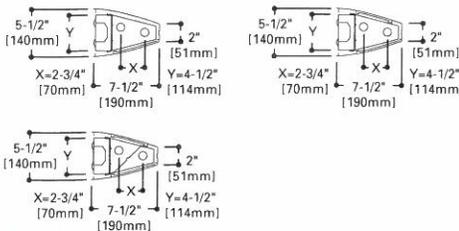
SPECIFICATION
WALL BRACKET
 2' Wall Bracket
 2 Lamp LTS or HTS
 3' or 4' Wall Bracket
 2 Lamp



MOUNTING DATA



LAMP CONFIGURATIONS



ENERGY DATA

Input Watts:

- EB Ballast & STD Lamps**
- 217 (36)
 - 230 (60)
 - 225 (47)
 - 240 (72)
 - 232 (61)

- ES Ballast & STD Lamps**
- 220 (58)
 - 217 (45)
 - 230 (74)
 - 225 (65)
 - 240 (86)
 - 232 (71)

Luminaire Efficacy Rating

LER = FL-44

Catalog Number: BA-232A

Yearly Cost of 1000 lumens,
 3000 hrs at .08 KWH = \$5.45

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING
 TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
 Safe and convenient means of
 disconnecting power



Energy Saving Ballast, F32T8 lamps rated at 2850 lumens. Spacing Criterion: (H)1.6 x mounting height, (L)1.2 x mounting height.

Light Loss Factor .74. For complete photometric report request report BA232.IES

BA-232A

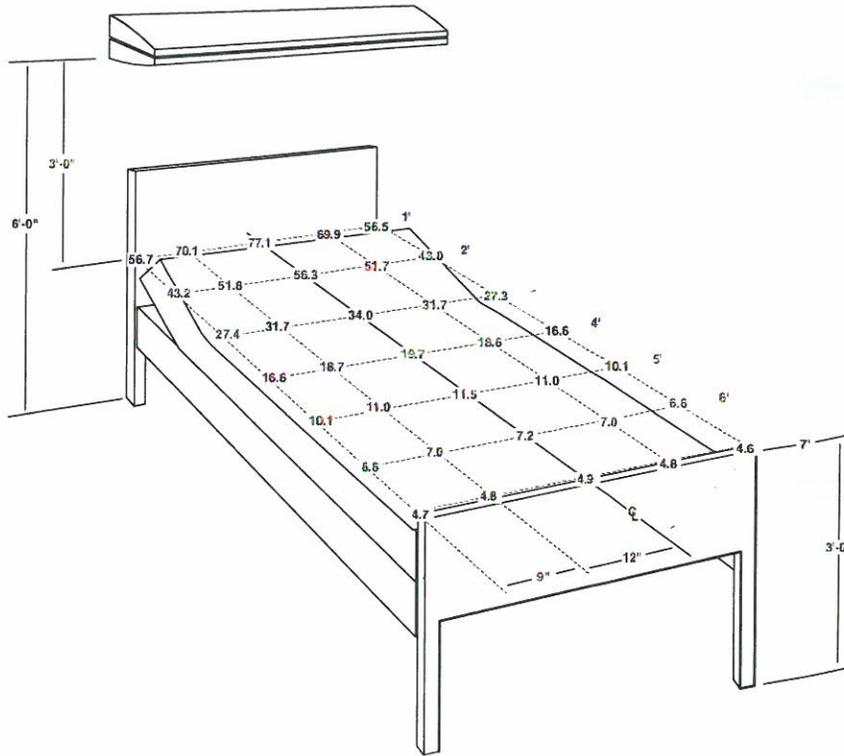
Lamps (2) F32T8/35K
Lumens 2850

Conditions

Room Size 12' Width x 14' Length
Ceiling Height 9'-0"

Reflectance

Ceiling 80%
Walls 50%
Floor 20%



Scale is Exaggerated on Fixture Application and Mounting

ORDERING INFORMATION

TYPE 'D4' BA-132-UNV-ER81-BT

Sample Number: BA-232-120V-EB81-U

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Series
BA = Wall Bracket Downlight only
BAU = Wall Bracket (Up and Down Light)
BAUB = Wall Bracket (Up, Down, or Combination Light)

Number of Lamps
1 Lamp (Not Included)
2 Lamps (Not Included)

Wattage
20 = 20W T12 (24")
17 = 17W T8 (24")
25 = 25W T8 (36")
30 = 30W T12 (36")
32 = 32W T8 (48")
40 = 40W T12 (48")

Notes:
1 Products also available in non-US voltage and frequencies for international markets.
2 Not available when specifying emergencies, voltage must be specific.
3 Not available for 2' version.

Ballast Start Type
LTS = Low Trigger Start (20W only) (120V only)
HTS = High Trigger Start (20W only)

Voltage 1
120V = 120 Volt
277V = 277 Volt
347V = 347 Volt
UNV = Universal Voltage 2 120-277

Options
GL = Single Element Fuse
GM = Double Element Fuse
Emergency = EM Installed 3

Ballast Type 1
_ = Standard Magnetic T12 Ballast
LE3 = T12 Magnetic Energy Saving
EB = Electronic Instant Start
ER = T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%

Lamp Size
2 = T12
8 = T8

Number of Ballasts
1 = 1 Ballast
2 = 2 Ballast

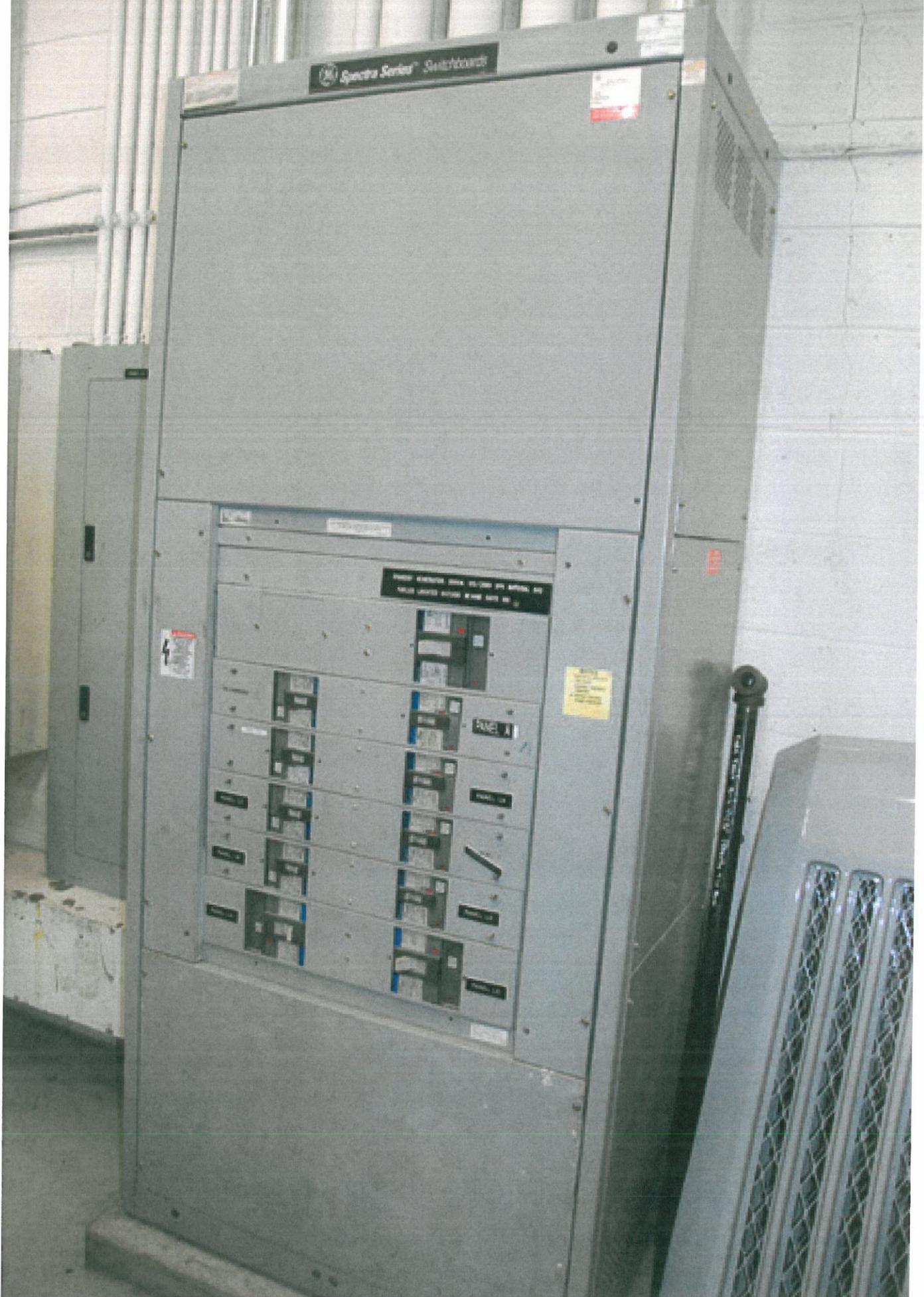
Options
/PLUS = Higher Ballast Factor > 1.13. Total Harmonic Distortion < 20%
RLS = Rotor Lock Socket (T8 Lamp only)
2/1LB = (2) One-Lamp Ballasts (When RS4 or PS4 option is used)
PL5 or PL7 = Fluorescent Night Light (5 or 7 Watt) only available in fixtures without a baffle
BH = Matte Black Finish (Lens Housing)
WH = White Finish (Lens Housing)
IH = Almond Finish (Lens Housing)
CO = Convenience Outlet (120V only)
RS1 = Rotary Switch (1 Circuit, 120V only)
PS1 = Pull Switch (1 Circuit)
RS1D = Rotary Switch wired to Downlight Circuit on a two circuit fixture (120V only)
PS1D = Pull Switch, wired to Downlight Circuit on a two circuit fixture (120V only)
RS4 = Four-way rotary switch, for two 1 circuit, two lamp fixture (120V only)
PS4 = Four-way pull switch, for two circuit 2 lamp fixture (120V only)
BT = Black Accent Trim
OT = Oak Accent Trim

Packaging
U = Unit Pack

SHIPPING INFORMATION

Catalog No.	Wt.
BA-217	18 lbs.
BA-225	25 lbs.
BA-232	32 lbs.
BAU-217	18 lbs.
BAU-225	25 lbs.
BAU-232	32 lbs.
BAUB-217	18 lbs.
BAUB-225	25 lbs.
BAUB-232	32 lbs.

EXISTING MSA SWITCHBOARD



SECTION 00 41 13

BID PROPOSAL FORM

DATE: _____

BIDDER'S NAME AND ADDRESS

THE BOARD OF COMMISSIONERS
OF COBB COUNTY GEORGIA
C/O THE OFFICES OF THE
COBB COUNTY PURCHASING DEPARTMENT
1772 COUNTY SERVICES PARKWAY
MARIETTA, GEORGIA 30008

Gentlemen:

1. BASE BID:

Pursuant to and in compliance with the Advertisement for Bids and the proposed Contract Documents relating to the construction of:

PROJECT NAME: Cobb County, Department of Transportation, Paratransit Facility
BID NUMBER:

including Addenda _____, the undersigned, having become thoroughly familiar with terms and conditions of the proposed Contract Documents and with local conditions affecting the performance, progress and cost of the work that is to be completed and having fully inspected the site in all particulars, hereby proposes and agrees to fully perform the work within the time stated and in accordance with the Contract Documents including furnishing any and all services, labor, materials, and equipment and to do all the work required to construct and complete said work in accordance with the Contract Documents for the following sum:

_____ Dollars

(\$ _____) including Allowances listed in Section 01 21 00 Allowances which sum is hereinafter called the "Base Bid".

2. ALTERNATES:

The Undersigned proposes that should any of the following Alternates be accepted and incorporated into the Contract, the Base Bid will be altered in each case as follows. (See "Alternates" section of the specifications for a complete description of Alternates.)

Alternate No. 1: Add One Parallelogram Lift (S701-AA)

(Add) _____

Dollars (\$ _____) to/from Base Bid.

Alternate No. 2: Add Two Parallelogram Lifts (S701-AA)

(Add) _____

Dollars (\$ _____) to/from Base Bid.

Alternate No. 3: Add Three Parallelogram Lifts (S701-AA)

(Add) _____

Dollars (\$ _____) to/from Base Bid.

Alternate No. 4: Add Four Parallelogram Lifts (S701-AA)

(Add) _____

Dollars (\$ _____) to/from Base Bid.

Alternate No. 5: Add Axle Lift (5650-AA)

(Add) _____

Dollars (\$ _____) to/from Base Bid.

Alternate No. 6: Delete Maintenance Building Addition

(Deduct) _____

Dollars (\$ _____) to/from Base Bid.

3. **TIME OF COMPLETION:** Bidder hereby agrees to commence actual physical work on the site with an adequate force and equipment within ten (10) days of a date to be specified in a written order of the Owner's (Notice to Proceed), to achieve Substantial Completion of the Work within two hundred eighty (280) calendar days, and to achieve Final Completion of the Work within forty-five (45) calendar days after the date of Substantial Completion.

4. For and in consideration of the sum of \$1.00, the receipt of which is hereby acknowledged, the Undersigned agrees that this proposal may not be revoked or withdrawn after the time set for the opening of bids but will remain open for acceptance for a period of sixty (60) days following such time.

5. BID SECURITY:

Bid security in the amount of five percent (5%) of the Base Bid is attached in the amount of _____ Dollars (\$_____), which is to become the property of the Owner in the event the Contract and Performance Bonds are not executed within the time set forth, as liquidated damages for the delay and additional cost caused the Owner.

The Undersigned agrees that upon receipt of the Notice of Acceptance of his Bid (NOTICE OF AWARD), he will, within ten (10) days from the Notice of Award, execute the formal Contract and will deliver a Surety Bond for the faithful performance of this Contract and such other bonds and insurance as required by the specifications.

The Undersigned further agrees that if he fails or neglects to appear within the specified time to execute the Contract of which this Proposal, the Bidding Documents and the Contract Documents are a part, the Undersigned will be considered as having abandoned the Contract, and the Bidder's Bond accompanying this Proposal will be forfeited to the Owner by reason of such failure on the part of the Undersigned.

6. If awarded a contract, the Undersigned's surety will be _____.

Respectfully submitted,

Signature of an Individual: _____

Doing Business as: _____

Business Address: _____

If a Partnership:

By: _____ Member of Firm

Member of Firm

Business Address: _____

If Corporation:

By: _____ Title: _____

Business Address: _____

Telephone Number: _____

(Seal - If bid is by Corporation)

DATE OF BID

- 8. Certificates/Attachments included in Section 004113 must show that they have been acknowledged (completely filled out, signed, stated "N/A", with reasons) and submitted with bid. Any forms not submitted with bid will cause bid to be non-responsive and thus not considered.**

END OF SECTION 00 41 13

SECTION 01 21 00

ALLOWANCES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Work included: To provide adequate budget to cover items not precisely determined by the Owner prior to bidding, allow within the proposed Contract Sum the amounts described below.

1.03 ALLOWANCES

- A. Allow the following sum for the actual Building Department Permit fee and Water and Sewer fee required by the City of Marietta. All other costs associated with obtaining required approvals shall be included in the Contract Sum and are not part of this allowance. Any balance remaining in the allowance after obtaining the above noted permits will be used as directed by the Owner as an Owner's contingency.

TOTAL ALLOWANCE:.....\$50,000.00

END OF SECTION