CHATHAM COUNTY PURCHASING DEPARTMENT

ADDENDUM NO. 1 TO **ITB # 17-0074-4**

FOR: MEMORIAL STADIUM

Please note that the deadline for questions has been changed to Wednesday, September 6, 2017 at 1:00 p.m.

Please note that the basis of award has been changed. Also note clarifications to the bid documents.

Please find attached:

Asbestos and Hazardous Materials Report
Limited Site investigation
Changes to Project Drawings

BID DUE DATE REMAINS SEPTEMBER 14, 2017 AT 2:00 P.M.

MARGARET H. JOYNER
PURCHASING DIRECTOR
CHATHAM COUNTY

MEMORIAL STADIUM
ITB #17-0074-4

ADDENDUM NO. 1

August 29, 2017

FROM: CHATHAM COUNTY PURCHASING & CONTRACTING DIVISION
1117 Eisenhower Drive, Suite C
Savannah, GA 31406

TO: To All Prime Contract Bidders

This Addendum forms a part of the Contract Documents and modifies the original Invitation to Bid. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so shall subject Bidder to disqualification.

CHANGES TO THE INVITATION TO BID:

1. Last Day for written questions from Bidders is extended to Wednesday, September 6, 2017 at 1:00 pm.

2. Award of the construction contract shall be to the **LOWEST RESPONSIVE, RESPONSIBLE BIDDER**

   a. **All references** related to the bid being awarded to the lowest responsive, responsible base Bidder shall be deleted.
   b. Revision to Instruction To Bidders Section 1.18, replace Paragraph 2 with: The contract if awarded will be to the lowest responsive, responsible Bidder. Bidder shall be required to be responsive and responsible to all Alternates and Unit Prices.
   c. Revision to Instruction to Bidders Section 1.19, replace with Basis of Contract Award: Award shall be made to the lowest responsible, responsive bidder.

CHANGES TO PROJECT MANUAL:

3. Please see attached for reference the *Asbestos and Hazardous Materials Report* from Terracon dated August 22, 2017. The report identifies a limited amount of suspect asbestos-containing material that will need to be removed by a State of Georgia licensed asbestos abatement contractor prior to building demolition. The report is provided for general information only. Contractors are to draw their own conclusions regarding any further investigation and remediation that may be necessary.

4. Please see attached for reference a *Limited Site Investigation* from Terracon dated August 24, 2017. The report includes an assessment of soil and shallow groundwater conditions in the vicinity of two (2) former aboveground storage tanks (ASTs) used for the storage and distribution of petroleum products in the east parking lot. For bidding purposes, Contractors shall include in their bids the costs to excavate 200 CF (approximately 10 tons) of unsuitable soil at the location of the existing fuel tank and

dispose of the soils at a Subtitle D landfill. Contractors shall backfill with suitable subbase material for the parking lot and compact.

5. Revision to SECTION 102800 – TOILET AND BATH ACCESSORIES:
   Revise paragraph 2.3.A to include the following additional manufacturers:
   "9. Dyson (AirBlade V Electric Hand Dryer)
   10. Saniflow Corporation (Speedflow Model No. M06ACS-UL)"

6. Revision to SECTION 321813 – SYNTHETIC TURF PLAYING FIELD SYSTEM:
   Revise paragraph 2.3.C.6.c to read "Astroturf: ZeoFill CoolCap"

CHANGES TO PROJECT DRAWINGS:

7. Drawing A-301: Revise drawing to include four (4) electric hand dryers in the team toilet rooms according to supplemental drawing A-301_Rev 01 issued with this addendum.

8. Drawing A-701: Revise drawing to include four (4) electric hand dryers in the team toilet rooms according to supplemental drawing A-701_Rev 01 issued with this addendum.

9. Drawing E1.1: Revise drawing to include Area of Refuge Lights in Second Floor Lighting Plan according to supplemental drawing E1.1_Rev 01 issued with this addendum.

10. Drawing E2.1: Revise drawing to include power for electric hand dryers according to supplemental drawing E2.1_Rev 01 issued with this addendum.

11. Drawing E3.1: Revise drawing according to supplemental drawing E3.1_Rev 01 issued with this addendum.

12. Drawing E4.1: Revise drawing according to supplemental drawing E4.1_Rev 01 issued with this addendum.

13. Drawing E4.2: Revise drawing according to supplemental drawing E4.2 _Rev 01 issued with this addendum.

14. Drawing T1.1: Revise drawing to include Area of Refuge call system according to supplemental drawing T1.1_Rev 01 issued with this addendum.

CLARIFICATIONS:

15. Question: The drawings indicate CCTV cameras, but I am unable to locate any specifications for the CCTV system in the project specifications. Where may I find the CCTV system specifications?
    Answer: The cameras and associated electronics are to be provided by Chatham County. The cabling system is the responsibility of the contractor and is specified in Division 27 – Communications of the Project Manual and in the Project Drawings.

16. Question: I have a question regarding the non infill synthetic turf shown on the drawings. Can you please provide specifications for that scope of work? I didn't see any specs in the package.

Answer: The specifications for the short-pile, non-infill synthetic turf are provided in the Project Drawings in Detail 5 of Drawing SR605.

ATTACHED DOCUMENTS:

Asbestos and Hazardous Materials Report by Terracon
Limited Site Investigation report by Terracon
Drawing A-301_Rev 01
Drawing A-701_Rev 01
Drawing E1.1_Rev 01
Drawing E2.1_Rev 01
Drawing E3.1_Rev 01
Drawing E4.1_Rev 01
Drawing E4.2_Rev 01
Drawing T1.1_Rev 01

END OF ADDENDUM NO. 1

Asbestos and Hazardous Materials Report

Memorial Stadium
101 Scott Drive
Savannah, Chatham County, Georgia

August 22, 2017
Terracon Project No. ES177225

Prepared for:

Chatham County Department of Engineering
Savannah, Georgia

Prepared by:

Terracon Consultants, Inc.
Savannah, Georgia

Terracon

August 22, 2017

Chatham County Department of Engineering
Post Office Box 8161
Savannah, Georgia 31412

Attn: Ms. Parveez Yousuf, Senior Construction Project Manager
E: pyousuf@chathamcounty.org

Re: Asbestos and Hazardous Materials Report
Memorial Stadium
101 Scott Drive
Savannah, Chatham County, Georgia
Terracon Project No. ES177225

Dear Ms. Yousuf:

Terracon Consultants, Inc. (Terracon) is pleased to submit this asbestos and hazardous materials report for the above-referenced site located in Savannah, Georgia. The site inspection and sampling were performed on August 11 and August 18, 2017 for the planned demolition of the site structures.

Suspect asbestos-containing materials (ACMs) were identified and sampled by certified asbestos building inspector, Philip Kucera of Terracon. **Asbestos was detected at greater than 1% in exterior window frame caulk located on the two locker room buildings.** Other items visually identified which may contain potentially hazardous materials included: electrical transformers, light fixtures, fluorescent light tubes and ballasts, and refrigeration and air conditioning equipment.

Please refer to the attached report for details.

Sincerely,
Terracon Consultants, Inc.

Philp Kucera
AHERA Accredited Asbestos Building Inspector
Certificate No. 0712.301-15, Expires 7/11/2018

William S. Anderson, III, PE
Senior Principal

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APPENDICES

ASBESTOS and HAZARDOUS MATERIALS REPORT

Memorial Stadium
101 Scott Drive
Savannah, Chatham County, Georgia

Terracon Project No. ES177225
August 22, 2017

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) is pleased to submit this report to the Chatham County Department of Engineering documenting the hazardous materials survey of the buildings and structures scheduled for demolition at 101 Scott Drive in Savannah, Georgia. The inspection and sampling were performed on August 11 and August 18, 2017.

Interior and exterior building materials were surveyed, with homogeneous areas of suspect asbestos containing materials (ACMs) visually identified, documented, and sampled for laboratory analysis. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA). Samples were delivered under Chain of Custody to an accredited laboratory for analysis by Polarized Light Microscopy (PLM).

Other items which may contain potentially hazardous materials were visually surveyed including thermostats, exit signs, light fixtures, cooling/refrigeration equipment, and electrical equipment as applicable to the site. This report was prepared to document the observations, analytical results, and findings from the inspection.

Although reasonable efforts were made to identify and sample all accessible suspect ACMs, additional suspect materials could have been located behind walls, above ceilings, in voids or in other concealed areas. Our conclusions and recommendations, with respect to abatement and/or demolition of these structures, were based on the available analytical data.

1.1 Project Objective

We understand that this hazardous material survey was requested because of the planned demolition of the structures. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated

asbestos-containing building materials (ACBMs) be identified, classified and quantified prior to planned disturbances or demolition activities.

1.2 Standard of Care

This investigation was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our investigation. Consequently, the information contained herein should not be relied upon to represent conditions that existed prior to or after this investigation. Terracon does not warrant the services of regulatory agencies, laboratories, or other third parties supplying information that may have been used in the preparation of this report.

1.3 Reliance

This report was prepared for the exclusive use and reliance of the Chatham County Engineering Department, the Client, as well as their respective affiliates, and prospective contractors. Use or reliance by any other party is prohibited without the written authorization of the Client and Terracon. Reliance on this report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal and/or Terracon's Agreement for Services. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. No warranty, expressed or implied is made.

2.0 ASBESTOS REGULATORY OVERVIEW

The asbestos National Emissions Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61, Subpart M regulates asbestos fiber emissions and asbestos waste disposal practices. Under the NESHAP regulations, asbestos-containing building materials are classified as either Friable, Category I Non-Friable, or Category II Non-Friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I Non-Friable ACM include packings, gaskets, resilient floor coverings and asphalt roofing products containing greater than 1% asbestos. Category II Non-Friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

A Friable ACM, Category I and Category II Non-Friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading, and

which could be crushed or pulverized during anticipated renovation or demolition activities is considered regulated ACM (RACM). RACM must be removed (abated) prior to renovation or demolition activities which will disturb the material. If the amount of RACM exceeds 10 linear feet or 10 square feet, the owner or operator must provide the State of Georgia with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by an appropriately accredited and licensed asbestos abatement contractor.

The Occupational Safety and Health (OSHA) asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (f/cc). The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

3.0 BUILDING DESCRIPTION

The Memorial Stadium site located at 101 Scott Drive in Savannah, Georgia consists of several structures and buildings including: the concrete stadium structure, a 2-story enclosed press box, locker rooms, restrooms, concessions buildings, storage buildings, ticket booths, an electrical equipment room, and a maintenance shop and equipment storage. The stadium structure is constructed of steel-reinforced concrete. The restroom and locker room walls are painted CMU (concrete masonry unit) block walls with metal ceiling structural members.

The roofing materials over most of the structures are a rolled asphalt membrane over a built-up fiber layer. The two concession stand buildings have layered felt, tar, and gravel over wood decking. The ceilings of most of the building are open steel structures. The referee room ceiling is clad with gypsum wallboard, which is finished with a trowel-applied surfacing material. The flooring materials on site include concrete, glued-down carpet in the press box, and an epoxy-type coating in the restrooms.

4.0 FIELD ACTIVITIES

The field activities were conducted on August 11 and August 18, 2017 by Philip Kucera, an AHERA accredited asbestos building inspector. A copy of Mr. Kucera's asbestos building inspector certificate is provided in Appendix D.

The buildings were visually inspected to identify interior and exterior homogeneous areas of suspect asbestos containing materials (ACM). A homogeneous area consists of building

materials that appear similar throughout in terms of color, texture, date of application, and general appearance. Materials identified as concrete, glass, wood, masonry, metal or rubber were not considered suspect ACM.
There were 42 samples representing 18 homogeneous areas collected from the building. The materials sampled included:

- Caulk and expansion joint filler,
- Window glazing,
- Wallboard, joint tape, joint compound, and surface texture material,
- Roofing materials,
- Carpet glue, and
- Exterior paint.

Samples of the suspect materials were shipped via FedEx, under chain of custody, to the contract laboratory, EMSL Analytical, Inc. (EMSL) in Kernersville, North Carolina for asbestos content analysis.

5.0 LABORATORY RESULTS

Bulk samples of suspect asbestos-containing materials were analyzed by EMSL using polarized light microscopy (PLM) with dispersion staining techniques, per the Environmental Protection Agency (EPA) Method for the Determination of Asbestos in Bulk Building Materials (600/R-93/116). Some of the collected samples included layers. The layers were analyzed individually resulting in 73 individual sample analyses. The items which had greater than 1% asbestos content, and therefore designated as asbestos containing materials (ACMs), were:

- **Samples M-CA1-1, 2**: The exterior window frame caulk found on the locker rooms (building portions extending about 32 feet to the north and south from beneath the east stadium structure) contained 3% to 5% Chrysotile asbestos. This caulk was rigid/brittle and located between the metal window frame and CMU walls. Note, the flexible caulk, located around window frames on the restroom and maintenance buildings was sampled and asbestos was not detected.

Figure 1 in Appendix A shows the site plan and asbestos sample locations. Table 1 in Appendix B lists the samples collected, their descriptions, locations, and asbestos contents. The laboratory analytical report from EMSL, National Voluntary Laboratory Accreditation Program (NVLAP) Lab Code 102104-0, and chain of custody form are included in Appendix C.

6.0 OTHER HAZARDOUS MATERIALS VISUAL SURVEY

Additional materials with potentially hazardous components were visually surveyed and the findings are summarized as follows:

Fluorescent Light Tubes

The buildings on site have at least 35 fixtures containing two, 4-foot long light tubes, 7 fixtures containing four, 4-foot long tubes, and 4 fixtures containing two, 8-foot long tubes. Some types of fluorescent light tubes may contain enough mercury and/or lead to be RCRA hazardous waste based on a Toxicity Characteristic Leaching Procedure (TCLP) test.

It is not known if the fluorescent light tubes in service at Memorial Stadium contain mercury or lead, but that may be determined by contacting the manufacturer(s) with the model number printed on the tubes. Regardless of the hazardous waste status, the tubes should not be discarded or thrown in a waste collection dumpster or broken. They should be reused at another location or packaged and picked up for recycling by one of the light tube recycling companies that service the area. Batteries Plus located at 7170 Hodgson Memorial Drive in Savannah may also recycle the tubes; they can be contacted at 912-352-0650 for more information.

Fluorescent Light Tube Ballasts

The fluorescent light tube fixtures contain ballasts which can contain polychlorinated biphenyls (PCBs) if they were manufactured before July 1, 1979. Ballasts manufactured between July 1, 1978 and July 1, 1998 that do not contain PCBs are labeled "**NO PCBs**". Ballasts manufactured after 1998 are not required to be labeled "**NO PCBs**". The types of ballasts present in the building can be determined by disassembling and examining the ballast labels and/or obtaining confirmation that they were manufactured after July 1, 1979.

Sodium Vapor Lights

The light fixtures mounted on the underside of the concrete stadium bleacher structures appear to be sodium vapor type lamps. There are at least 30 of these lamps which may contain xenon gas and trace amounts of mercury. These lamps should not be disposed by breaking and/or throwing them into a dumpster to be landfilled. Mercury and mercury vapors are listed as hazardous components even at low quantities and concentrations. It is recommended that these lamps be reused or recycled, and a website such as *lamprecycle.org* identifies facilities and locations that may accept such materials.

Transformers

Mounted on 8 of the stadium concrete bleacher columns are 10 electrical transformers. The transformers are part of the Memorial Stadium property, but it is not known if the transformers

contain PCBs. Chatham County management personnel Lorenzo, phone number (912) 660-4741, was researching the type of transformers that are on site, but he has not provided a response at the issuance of this report.

There are 3 pole-mounted transformers located outside the northeast corner of the stadium in a fenced enclosure labelled as property of the Georgia Power Company. There are also pad-mounted electrical enclosures with at least one transformer located outside the north end of the stadium near Scott Drive. The cabinets are utility company property and PCB contents were not labeled or determined.

Electrical Switches

The wall-mounted switch fixtures located in the electrical room at the north end beneath the east stadium structure are labeled as oil-filled. These items should not be discarded as waste to be landfilled, but recycled by removing the oil and separating it from the metal components to be recycled.

Cooling and Refrigeration Equipment

Located throughout the site are several portable electric air conditioner window units. These units contain hydrofluorocarbon gases which are EPA-regulated materials that are not to be vented to the atmosphere. These units should be recycled or reused, but not discarded as waste which would result in a release of the compressed gases.

Located in the two concession buildings were several refrigerators and ice-making machines. These units contain oils and compressed refrigerant gases. These units should be recycled or reused, but not discarded as waste which would result in a release of the compressed gases and oils.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Asbestos

The State of Georgia requires removal and disposal of Category I non-friable ACM, Category II non-friable ACM, and RACM prior to demolition activities. Therefore, Terracon recommends that the window frame caulk identified in Section 5.1 of this report be removed by a State of Georgia licensed asbestos abatement contractor prior to building demolition (in accordance with all Federal and State regulations, including notification requirements described in Section 2.0 of this report).

Waste materials containing asbestos which are removed during abatement activities cannot be disposed in a regular municipal or inert materials landfill. All such waste materials must be

collected in properly sealed containers and disposed of at a facility which is permitted to accept asbestos containing materials.

Although reasonable efforts were made to identify and sample all accessible suspect materials, additional suspect materials could have been located behind walls, above ceilings, in voids or in other concealed areas. Should suspect materials, other than those which were identified in this survey, be uncovered prior to, or during the demolition process, those materials should be assumed to contain asbestos until sampling and analysis can confirm (or deny) the asbestos content.

7.2 Other Potentially Hazardous Materials

As described in Section 6.0 of this report, items such as the stadium-mounted electrical transformers and fluorescent light tube ballasts, need additional investigation to qualify the extent of potential hazards that are present. Recommendations for determining the hazards and handling the subject materials were also stated in Section 6.0. The objective for all of the identified materials is to reuse them at another site, if possible. Another option is to recycle the materials, which may require separating or removing individual constituents. Discarding the identified materials as wastes to be directly landfilled is not an acceptable action based on the contents of the items described.

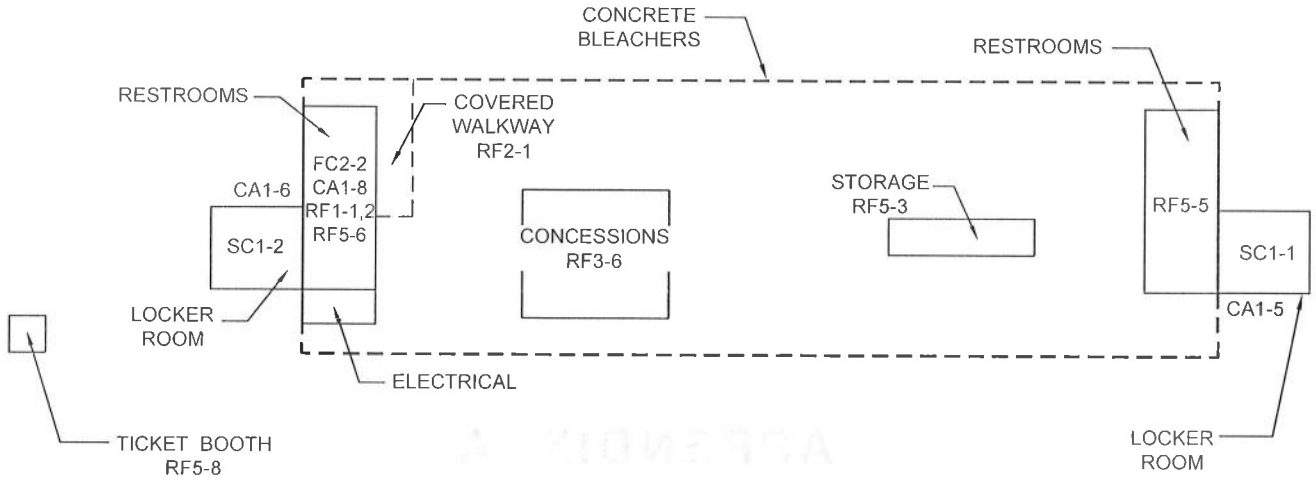
APPENDIX A

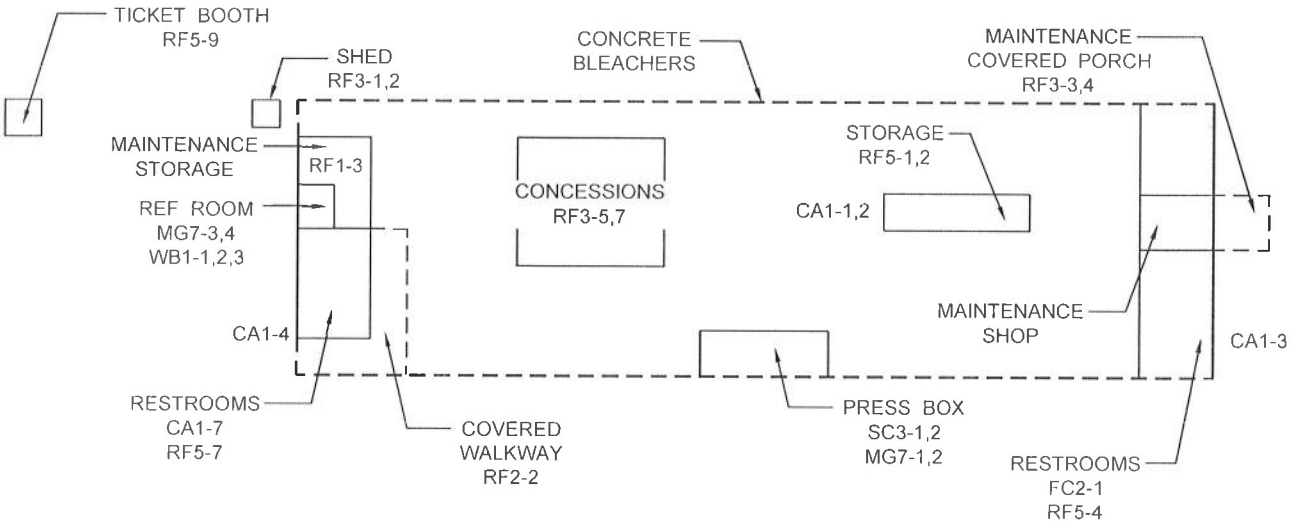
Figures

EXPLANATION

RF2-1 SAMPLES TESTING "NONE DETECTED" FOR ASBESTOS

CA1-6 SAMPLES TESTING POSITIVE (>1%) FOR ASBESTOS





0 30' 60'

1" = 60'
SCALE IN FEET

Project Mngr	PJK
Drawn By	VMG
Checked By	PJK
Approved By	WSA

Project No.	ES177225
Scale	1" = 60'
File Name	ES177225 Asbestos.dwg
Date	August 17, 2017

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

ASBESTOS SAMPLE LOCATIONS

Memorial Stadium LSI
101 John J Scott Drive
Savannah, Chatham County, Georgia

Figure 1

APPENDIX B

Tables

TABLE 1 : ASBESTOS SAMPLE SUMMARY

Memorial Stadium

Savannah, Chatham County, Georgia

Terracon Project No. ES177225

42 Samples (Include Layers) - 73 Individual Laboratory Analyses						
Sample ID	**HA**	**Type**	**Material Sampled**	**Description**	**Room/Area**	**Asbestos Results**
M-WB1-1	1	F	Wallboard, Tape, JC, Texture	White/Gray	Ref Room Ceiling	ND
M-WB1-2	1	F	Wallboard, Tape, JC, Texture	White/Gray	Ref Room Ceiling	ND
M-WB1-3	1	F	Wallboard, Tape, JC, Texture	White/Gray	Ref Room Ceiling	ND
M-MG7-1	2	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Lower Press Box Floor	ND
M-MG7-2	2	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Lower Press Box Floor	ND
M-MG7-3	3	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Ref Room Floor	ND
M-MG7-4	3	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Ref Room Floor	ND
M-SC3-1	4	NF	Exterior Paint	Green	Press Box Exterior	ND
M-SC3-2	4	NF	Exterior Paint	Green	Press Box Steps	ND
M-FC2-1	5	NF	Floor Covering	Beige	SW Mens Room	ND
M-FC2-2	5	NF	Floor Covering	Beige	NE Mens Room	ND
M-CA1-1	6	NF	Expansion Joint Caulk	Gray	West Bleachers	ND
M-CA1-2	6	NF	Expansion Joint Caulk	Gray	West Bleachers	ND
M-CA1-3	7	NF	Window Frame Caulk	White, Flexible	Maintenance Room	ND
M-CA1-4	7	NF	Window Frame Caulk	White, Flexible	NW Bathrooms	ND

HA = Homogenous Area
F = Friable (When dry, may be crumbled, pulverized, or reduced to powder by hand pressure.)
ND = None Detected
NF = Non-Friable
JC = Joint Compound

TABLE 1 : ASBESTOS SAMPLE SUMMARY

Memorial Stadium

Savannah, Chatham County, Georgia

Terracon Project No. ES177225

42 Samples (Include Layers) - 73 Individual Laboratory Analyses						
Sample ID	**HA**	**Type**	**Material Sampled**	**Description**	**Room/Area**	**Asbestos Results**
M-CA1-5	8	NF	Window Frame Caulk	White, Brittle	South Locker Room	**5% Chrysotile**
M-CA1-6	8	NF	Window Frame Caulk	White, Brittle	North Locker Room	**3% Chrysotile**
M-CA1-7	9	NF	Column Flashing Caulk	Brown	NW Bathroom Roof	ND
M-CA1-8	9	NF	Column Flashing Caulk	Brown	NE Bathroom Roof	ND
M-SC1-1	10	NF	Window Glazing	Gray	South Locker Room	ND
M-SC1-2	10	NF	Window Glazing	Gray	North Locker Room	ND
M-RF1-1	11	NF	Roof Flashing Tar	Black	NE Bathrooms	ND
M-RF1-2	11	NF	Roof Flashing Tar	Black	NE Bathrooms	ND
M-RF1-3	11	NF	Roof Flashing Tar	Black	NW Bathrooms	ND
M-RF3-1	12	NF	Roof Shingle, Felt Underlayment	Black	NW Shed Roof	ND
M-RF3-2	12	NF	Roof Shingle, Felt Underlayment	Black	NW Shed Roof	ND
M-RF3-3	13	NF	Roof Shingle, Felt Underlayment	Black, Green	Maintenance Porch	ND
M-RF3-4	13	NF	Roof Shingle, Felt Underlayment	Black, Green	Maintenance Porch	ND
M-RF3-5	14	NF	Rolled Roof	Black, Gray	West Concession Stand	ND
M-RF3-6	14	NF	Rolled Roof	Black, Gray	East Concession Stand	ND
M-RF3-7	14	NF	Rolled Roof	Black, Gray	West Concession Stand	ND

HA = Homogenous Area
ND = None Detected
F = Friable (When dry, may be crumbled, pulverized, or reduced to powder by hand pressure.)
NF = Non-Friable

TABLE 1 : ASBESTOS SAMPLE SUMMARY

Memorial Stadium

Savannah, Chatham County, Georgia

Terracon Project No. ES177225

42 Samples (Include Layers) - 73 Individual Laboratory Analyses						
Sample ID	**HA**	**Type**	**Material Sampled**	**Description**	**Room/Area**	**Asbestos Results**
M-RF5-1	15	NF	Felt Layers, Roof Tar, Rock	Black	West Store Room Roof	ND
M-RF5-2	15	NF	Felt Layers, Roof Tar, Rock	Black	West Store Room Roof	ND
M-RF5-3	15	NF	Felt Layers, Roof Tar, Rock	Black	East Store Room Roof	ND
M-RF5-4	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	SW Bathrooms	ND
M-RF5-5	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	SE Bathrooms	ND
M-RF5-6	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	NE Bathrooms	ND
M-RF5-7	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	NW Bathrooms	ND
M-RF5-8	17	NF	Roof Sealant	Black, Gray	East Ticket Booth	ND
M-RF5-9	17	NF	Roof Sealant	Black, Gray	West Ticket Booth	ND
M-RF2-1	18	NF	Roof Felt	Black	NE Temp Walk Roof	ND
M-RF2-2	18	NF	Roof Felt	Black	NW Temp Walk Roof	ND

HA = Homogencus Area

ND = None Detected

F = Friable (When dry, may be crumbled, pulverized, or reduced to powder by hand pressure.)

NF = Non-Friable

APPENDIX C

Laboratory Analytical Results

EMSL Analytical, Inc.
706 Gralin Street Kernersville, NC 27284
Tel/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021705023
Customer ID: WPCE93
Customer PO: ES177225
Project ID:

Attention: Philip Kucera
WPC - A Terracon Company
2201 Rowland Ave.
Savannah, GA 31404

Project: Memorial Stadium / ES177225

Phone: (912) 220-0985
Fax: (912) 629-4001
Received Date: 08/14/2017 9:00 AM
Analysis Date: 08/16/2017 - 08/17/2017
Collected Date: 08/11/2017

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
M-WB1-1-Wallboard *021705023-0001*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	Brown/Gray Fibrous Homogeneous	20% Cellulose HA: 1	80% Non-fibrous (Other)	None Detected
M-WB1-1-Joint Compound *021705023-0001A*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	White Non-Fibrous Homogeneous	HA: 1	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
M-WB1-1-Tape *021705023-0001B*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	Beige Fibrous Homogeneous	100% Cellulose HA: 1		None Detected
M-WB1-1-Texture *021705023-0001C*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	White Non-Fibrous Homogeneous	HA: 1	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
M-WB1-2-Wallboard *021705023-0002*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	Brown/Gray Fibrous Homogeneous	15% Cellulose HA: 1	85% Non-fibrous (Other)	None Detected
M-WB1-2-Joint Compound *021705023-0002A*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	White Non-Fibrous Homogeneous	HA: 1	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
M-WB1-2-Tape *021705023-0002B*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	Beige Fibrous Homogeneous	100% Cellulose HA: 1		None Detected
M-WB1-2-Texture *021705023-0002C*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	White Non-Fibrous Homogeneous	HA: 1	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
M-WB1-3-Wallboard *021705023-0003*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	Brown/Gray Fibrous Heterogeneous	30% Cellulose HA: 1	70% Non-fibrous (Other)	None Detected
M-WB1-3-Joint Compound *021705023-0003A*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	White Non-Fibrous Homogeneous	1% Cellulose HA: 1	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
M-WB1-3-Tape *021705023-0003B*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	Beige Fibrous Homogeneous	100% Cellulose HA: 1		None Detected
M-WB1-3-Texture *021705023-0003C*	Ref Room Ceiling - Wallboard, Tape, JC, Texture	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected

Report amended: 08/17/2017 13:03:13 Replaces initial report from: 08/16/2017 15:41:25 Reason Code: Client-Additional Analysis

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http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021705023
Customer ID: WPCE93
Customer PO: ES177225
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
			HA: 1		
M-MG7-1-Mastic *021705023-0004*	Lower Press Box Floor - Carpet Glue, Floor Paint	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 2		
M-MG7-1-Paint *021705023-0004A*	Lower Press Box Floor - Carpet Glue, Floor Paint	Gray/Green Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 2		
M-MG7-2-Mastic *021705023-0005*	Lower Press Box Floor - Carpet Glue, Floor Paint	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 2		
M-MG7-2-Paint *021705023-0005A*	Lower Press Box Floor - Carpet Glue, Floor Paint	Gray/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 2		
M-MG7-3-Mastic *021705023-0006*	Ref Room Floor - Carpet Glue, Floor Paint	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 3		
M-MG7-3-Paint *021705023-0006A*	Ref Room Floor - Carpet Glue, Floor Paint	Gray Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 3		
M-MG7-4-Mastic *021705023-0007*	Ref Room Floor - Carpet Glue, Floor Paint	Tan/Orange Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 3		
M-MG7-4-Paint *021705023-0007A*	Ref Room Floor - Carpet Glue, Floor Paint	Gray/Blue Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 3		
M-SC3-1 *021705023-0008*	Press Box Exterior - Exterior Paint	Brown/Green Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 4		
M-SC3-2 *021705023-0009*	Press Box Steps - Exterior Paint	Brown/Green/Rust Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 4		
M-FC2-1 *021705023-0010*	SW Mens Room - Floor Covering	Black/Green/Beige Non-Fibrous Homogeneous		65% Quartz 35% Non-fibrous (Other)	None Detected
			HA: 5		
M-FC2-2 *021705023-0011*	NE Mens Room - Floor Covering	Gray/Green/Beige Non-Fibrous Heterogeneous	<1% Cellulose	70% Quartz 30% Non-fibrous (Other)	None Detected
			HA: 5		
M-CA1-1 *021705023-0012*	West Bleachers - Expansion Joint Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 6		
M-CA1-2 *021705023-0013*	West Bleachers - Expansion Joint Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 6		

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
M-CA1-3 *021705023-0014*	Maintenance Room - Window Frame Caulk	White/Beige Non-Fibrous Homogeneous	<1% Fibrous (Other) HA: 7	100% Non-fibrous (Other)	None Detected
M-CA1-4 *021705023-0015*	NW Bathrooms - Window Frame Caulk	Tan/White Non-Fibrous Heterogeneous	<1% Cellulose HA: 7	100% Non-fibrous (Other)	None Detected
M-CA1-5 *021705023-0016*	SW Bathrooms - Window Frame Caulk	Beige Fibrous Homogeneous	HA: 8	95% Non-fibrous (Other)	5% Chrysotile
M-CA1-6 *021705023-0017*	North Locker Room - Window Frame Caulk	Gray/Tan/Beige Non-Fibrous Homogeneous	<1% Cellulose HA: 8	10% Ca Carbonate 87% Non-fibrous (Other)	3% Chrysotile
M-CA1-7 *021705023-0018*	NW Bathroom Roof - Column Flashing Caulk	Gray Non-Fibrous Homogeneous	HA: 9	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
M-CA1-8 *021705023-0019*	NE Bathroom Roof - Column Flashing Caulk	Brown Non-Fibrous Homogeneous	<1% Cellulose HA: 9	100% Non-fibrous (Other)	None Detected
M-SC1-1 *021705023-0020*	South Locker Room - Window Glazing	Gray Non-Fibrous Homogeneous	<1% Fibrous (Other) HA: 10	100% Non-fibrous (Other)	None Detected
M-SC1-2 *021705023-0021*	North Locker Room - Window Glazing	Tan/Beige Non-Fibrous Homogeneous	<1% Cellulose <1% Fibrous (Other) HA: 10	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
M-RF1-1 *021705023-0022*	NE Bathrooms - Roof Flashing Tar	Black Fibrous Homogeneous	8% Cellulose HA: 11	92% Non-fibrous (Other)	None Detected
M-RF1-2 *021705023-0023*	NE Bathrooms - Roof Flashing Tar	Brown/Black Fibrous Homogeneous	10% Cellulose HA: 11	90% Non-fibrous (Other)	None Detected
M-RF1-3 *021705023-0024*	NW Bathrooms - Roof Flashing Tar	Brown/Gray/Black Fibrous Homogeneous	10% Cellulose HA: 11	90% Non-fibrous (Other)	None Detected
M-RF3-1-Shingle *021705023-0025*	NW Shed Roof - Roof Shingle, Felt Underlayment	Brown/Black/Beige Fibrous Homogeneous	5% Glass HA: 12	95% Non-fibrous (Other)	None Detected
M-RF3-1-Felt *021705023-0025A*	NW Shed Roof - Roof Shingle, Felt Underlayment	Black Fibrous Homogeneous	65% Cellulose HA: 12	35% Non-fibrous (Other)	None Detected
M-RF3-2-Shingle *021705023-0026*	NW Shed Roof - Roof Shingle, Felt Underlayment	Brown/Tan/Black Fibrous Heterogeneous	<1% Cellulose 5% Glass HA: 12	95% Non-fibrous (Other)	None Detected

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EMSL Order: 021705023
Customer ID: WPCE93
Customer PO: ES177225
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
M-RF3-2-Felt *021705023-0026A*	NW Shed Roof - Roof Shingle, Felt Underlayment	Black Fibrous Homogeneous	70% Cellulose HA: 12	30% Non-fibrous (Other)	None Detected
M-RF3-3-Shingle *021705023-0027*	Maintenance Porch - Roof Shingle, Felt Underlayment	Brown/Black Fibrous Homogeneous	5% Glass HA: 13	95% Non-fibrous (Other)	None Detected
M-RF3-3-Felt *021705023-0027A*	Maintenance Porch - Roof Shingle, Felt Underlayment	Black Fibrous Homogeneous	65% Cellulose HA: 13	35% Non-fibrous (Other)	None Detected
M-RF3-4-Shingle *021705023-0028*	Maintenance Porch - Roof Shingle, Felt Underlayment	Black/Green Fibrous Heterogeneous	<1% Cellulose 5% Glass HA: 13	95% Non-fibrous (Other)	None Detected
M-RF3-4-Felt *021705023-0028A*	Maintenance Porch - Roof Shingle, Felt Underlayment	Black Fibrous Homogeneous	70% Cellulose HA: 13	30% Non-fibrous (Other)	None Detected
M-RF3-5 *021705023-0029*	West Concession Stand - Rolled Roof	Gray/Black Fibrous Homogeneous	25% Cellulose HA: 14	75% Non-fibrous (Other)	None Detected
M-RF3-6 *021705023-0030*	East Concession Stand - Rolled Roof	Gray/Black Non-Fibrous Homogeneous	25% Cellulose HA: 14	75% Non-fibrous (Other)	None Detected
M-RF3-7 *021705023-0031*	West Concession Stand - Rolled Roof	Gray/White/Black Fibrous Heterogeneous	25% Cellulose HA: 14	75% Non-fibrous (Other)	None Detected
M-RF5-1-Tar/Rock Layer *021705023-0032*	West Store Room Roof - Felt Layers, Roof Tar, Rock	Gray/Black Non-Fibrous Homogeneous	<1% Cellulose HA: 15	100% Non-fibrous (Other)	None Detected
M-RF5-1-LayeredTar/Felt *021705023-0032A*	West Store Room Roof - Felt Layers, Roof Tar, Rock	Black Fibrous Homogeneous	40% Cellulose <1% Synthetic HA: 15	60% Non-fibrous (Other)	None Detected
M-RF5-1-Felt *021705023-0032B*	West Store Room Roof - Felt Layers, Roof Tar, Rock	Black Fibrous Homogeneous	65% Cellulose HA: 15	35% Non-fibrous (Other)	None Detected
M-RF5-2-Tar/Rock Layer *021705023-0033*	West Store Room Roof - Felt Layers, Roof Tar, Rock	Gray/Black Fibrous Homogeneous	HA: 15	100% Non-fibrous (Other)	None Detected
M-RF5-2-LayeredTar/Felt *021705023-0033A*	West Store Room Roof - Felt Layers, Roof Tar, Rock	Black Fibrous Homogeneous	40% Cellulose HA: 15	60% Non-fibrous (Other)	None Detected
M-RF5-2-Felt *021705023-0033B*	West Store Room Roof - Felt Layers, Roof Tar, Rock	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected

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EMSL Order: 021705023
Customer ID: WPCE93
Customer PO: ES177225
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
			HA: 15		
M-RF5-3-Tar/Rock Layer *021705023-0034*	East Store Room Roof - Felt Layers, Roof Tar, Rock	Gray/Black Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
			HA: 15		
M-RF5-3-Layered Tar/Felt *021705023-0034A*	East Store Room Roof - Felt Layers, Roof Tar, Rock	Black Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
			HA: 15		
M-RF5-3-Felt *021705023-0034B*	East Store Room Roof - Felt Layers, Roof Tar, Rock	Black Fibrous Homogeneous	70% Cellulose <1% Synthetic	30% Non-fibrous (Other)	None Detected
			HA: 15		
M-RF5-4-Roofing *021705023-0035*	SW Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Black Fibrous Homogeneous	8% Synthetic 1% Glass	91% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-4-Tar *021705023-0035A*	SW Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Black Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-4-Insulation *021705023-0035B*	SW Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Brown Fibrous Homogeneous	97% Cellulose	2% Perlite 1% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-5-Roofing *021705023-0036*	SE Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Black Fibrous Homogeneous	8% Synthetic 2% Glass	90% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-5-Tar *021705023-0036A*	SE Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Black Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-5-Insulation *021705023-0036B*	SE Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Brown Fibrous Homogeneous	97% Cellulose	2% Perlite 1% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-6-Roofing *021705023-0037*	NE Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Black Fibrous Homogeneous	5% Synthetic 1% Glass	94% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-6-Tar *021705023-0037A*	NE Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Black Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-6-Insulation *021705023-0037B*	NE Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Brown Fibrous Homogeneous	97% Cellulose	2% Perlite 1% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-7-Roofing *021705023-0038*	NW Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	White/Black Fibrous Heterogeneous	1% Cellulose 5% Synthetic	94% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-7-Tar *021705023-0038A*	NW Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Brown/Black Non-Fibrous Homogeneous	1% Cellulose 1% Synthetic	98% Non-fibrous (Other)	None Detected

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EMSL Order: 021705023
Customer ID: WPCE93
Customer PO: ES177225
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
			HA: 16		
M-RF5-7-Insulation *021705023-0038B*	NW Bathrooms - Rolled Roof, Seam Tar, Fiber Fill	Gray/Tan/White Fibrous Homogeneous	95% Cellulose	4% Perlite 1% Non-fibrous (Other)	None Detected
			HA: 16		
M-RF5-8 *021705023-0039*	East Ticket Booth - Roof Sealant	Black/Silver Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
			HA: 17		
M-RF5-9 *021705023-0040*	West Ticket Booth - Roof Sealant	Black/Silver Non-Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
			HA: 17		
M-RF2-1 *021705023-0041*	NE Temp Walk Roof - Roof Felt	Brown/Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
			HA: 18		
M-RF2-2 *021705023-0042*	NW Temp Walk Roof - Roof Felt	Brown/Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
			HA: 18		

Analyst(s)
Kristie Elliott (46)
Scott Combs (27)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

Report amended: 08/17/2017 13:03:13 Replaces initial report from: 08/16/2017 15:41:25 Reason Code: Client-Additional Analysis

OrderID: 021705023

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only): 5023

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

PHONE:
FAX:

Company Name: Terracon		EMSL Customer ID: WPCE93	
Street: 2201 Rowland Ave		City: Savannah	State/Province: GA
Zip/Postal Code: 31404	Country: US	Telephone #: 912-629-4000	Fax #: 912-629-4001
Report To (Name): Philip Kucera		Please Provide Results: ☐ Fax ☒ Email	
Email Address: PJ.Kucera@Terracon.com		Purchase Order: ES177225	
Project Name/Number: Memorial Stadium/ES177225		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: GA		CT Samples: ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☒ Same ☐ Different - If Bill to is Different note Instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☑ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite*
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

*Can not accept New York State Loose Fill Vermiculite Samples

Other: ☐

☑ Check For Positive Stop – Clearly Identify Homogenous Group → for results > 4%

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Phil Kucera Samplers Signature: Phil Kucera

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/~~Time~~ Sampled
	See Attached Table 1		8-11-17

Client Sample # (s): Total # of Samples: 42

Relinquished (Client): P Kucera Date: 8-11-17 Time: 1600

Received (Lab): Date: 8/14/17 Time: 9AM

Comments/Special Instructions:

OEFX 795286826208

5023

TABLE 1 : ASBESTOS SAMPLE SUMMARY

Memorial Stadium

Savannah, Chatham County, Georgia

Terracon Project No. ES177225

42 Samples (Include Layers) - __ Individual Laboratory Analyses						
Sample ID	**HA**	**Type**	**Material Sampled**	**Description**	**Room/Area**	**Asbestos Results**
M-WB1-1	1	F	Wallboard, Tape, JC, Texture	White/Gray	Ref Room Ceiling	
M-WB1-2	1	F	Wallboard, Tape, JC, Texture	White/Gray	Ref Room Ceiling	
M-WB1-3	1	F	Wallboard, Tape, JC, Texture	White/Gray	Ref Room Ceiling	
M-MG7-1	2	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Lower Press Box Floor	
M-MG7-2	2	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Lower Press Box Floor	
M-MG7-3	3	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Ref Room Floor	
M-MG7-4	3	NF	Carpet Glue, Floor Paint	Tan Glue, Gray Paint	Ref Room Floor	
M-SC3-1	4	NF	Exterior Paint	Green	Press Box Exterior	
M-SC3-2	4	NF	Exterior Paint	Green	Press Box Steps	
M-FC2-1	5	NF	Floor Covering	Beige	SW Mens Room	
M-FC2-2	5	NF	Floor Covering	Beige	NE Mens Room	
M-CA1-1	6	NF	Expansion Joint Caulk	Gray	West Bleachers	
M-CA1-2	6	NF	Expansion Joint Caulk	Gray	West Bleachers	
M-CA1-3	7	NF	Window Frame Caulk	White, Flexible	Maintenance Room	
M-CA1-4	7	NF	Window Frame Caulk	White, Flexible	NW Bathrooms	

HA = Homogenous Area
F = Friable (When dry, may be crumbled, pulverized, or reduced to powder by hand pressure.)
ND = None Detected
NF = Non-Friable
JC = Joint Compound

5023

TABLE 1 : ASBESTOS SAMPLE SUMMARY

Memorial Stadium

Savannah, Chatham County, Georgia

Terracon Project No. ES177225

42 Samples (Include Layers) - __ Individual Laboratory Analyses						
Sample ID	**HA**	**Type**	**Material Sampled**	**Description**	**Room/Area**	**Asbestos Results**
M-CA1-5	8	NF	Window Frame Caulk	White, Brittle	SW Bathrooms	
M-CA1-6	8	NF	Window Frame Caulk	White, Brittle	North Locker Room	
M-CA1-7	9	NF	Column Flashing Caulk	Brown	NW Bathroom Roof	
M-CA1-8	9	NF	Column Flashing Caulk	Brown	NE Bathroom Roof	
M-SC1-1	10	NF	Window Glazing	Gray	South Locker Room	
M-SC1-2	10	NF	Window Glazing	Gray	North Locker Room	
M-RF1-1	11	NF	Roof Flashing Tar	Black	NE Bathrooms	
M-RF1-2	11	NF	Roof Flashing Tar	Black	NE Bathrooms	
M-RF1-3	11	NF	Roof Flashing Tar	Black	NW Bathrooms	
M-RF3-1	12	NF	Roof Shingle, Felt Underlayment	Black	NW Shed Roof	
M-RF3-2	12	NF	Roof Shingle, Felt Underlayment	Black	NW Shed Roof	
M-RF3-3	13	NF	Roof Shingle, Felt Underlayment	Black, Green	Maintenance Porch	
M-RF3-4	13	NF	Roof Shingle, Felt Underlayment	Black, Green	Maintenance Porch	
M-RF3-5	14	NF	Rolled Roof	Black, Gray	West Concession Stand	
M-RF3-6	14	NF	Rolled Roof	Black, Gray	East Concession Stand	
M-RF3-7	14	NF	Rolled Roof	Black, Gray	West Concession Stand	

HA = Homogenous Area
ND = None Detected
F = Friable (When dry, may be crumbled, pulverized, or reduced to powder by hand pressure.)
NF = Non-Friable

5023

TABLE 1 : ASBESTOS SAMPLE SUMMARY

Memorial Stadium

Savannah, Chatham County, Georgia

Terracon Project No. ES177225

42 Samples (Include Layers) - __ Individual Laboratory Analyses

Sample ID	HA	Type	Material Sampled	Description	Room/Area	Asbestos Results
M-RF5-1	15	NF	Felt Layers, Roof Tar, Rock	Black	West Store Room Roof	
M-RF5-2	15	NF	Felt Layers, Roof Tar, Rock	Black	West Store Room Roof	
M-RF5-3	15	NF	Felt Layers, Roof Tar, Rock	Black	East Store Room Roof	
M-RF5-4	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	SW Bathrooms	
M-RF5-5	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	SE Bathrooms	
M-RF5-6	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	NE Bathrooms	
M-RF5-7	16	NF	Rolled Roof, Seam Tar, Fiber Fill	Black Roof, Brown Fiber	NW Bathrooms	
M-RF5-8	17	NF	Roof Sealant	Black, Gray	East Ticket Booth	
M-RF5-9	17	NF	Roof Sealant	Black, Gray	West Ticket Booth	
M-RF2-1	18	NF	Roof Felt	Black	NE Temp Walk Roof	
M-RF2-2	18	NF	Roof Felt	Black	NW Temp Walk Roof	

HA = Homogenous Area

ND = None Detected

F = Friable (When dry, may be crumbled, pulverized, or reduced to powder by hand pressure.)

NF = Non-Friable

APPENDIX D

Asbestos Inspector Certification

Terracon

1450 Fifth Street, West
North Charleston, South Carolina 29405
843-277-8405

Philip Kucera

SSN xxx-xx-1233

This is to certify that the above named student has completed the requisite training for asbestos accreditation under Title II of Section 206 of the Toxic Substances Control Act (15 U.S.C.A. Section 2646) and has met the requirements of and passed the examination for:

AHERA Asbestos Inspector Refresher

Course Location:	**North Charleston, SC**	**Certificate Number:**	**20170712.301-15**
Start Date:	July 12, 2017	End Date:	July 12, 2017
Exam Date:	July 12, 2017	Expiration Date:	July 11, 2018

07/12/2017

T.A. Rowland III, CIH - Principal Instructor/Training Administrator — *Date*

LIMITED SITE INVESTIGATION

Memorial Stadium
101 John J. Scott Drive
Savannah, Chatham County, Georgia

August 24, 2017
Terracon Project No. ES177225

Prepared for:

Chatham County Department of Engineering
Savannah, Georgia

Prepared by:

Terracon Consultants, Inc.
Savannah, Georgia

Terracon

August 24, 2017

Chatham County Department of Engineering
P.O. Box 8161
Savannah, Georgia 31412

Attn: Ms. Parveez Yousuf, Senior Construction Project Manager
E: pyousuf@chathamcounty.org

Re: Limited Site Investigation
Memorial Stadium
101 John J. Scott Drive
Savannah, Chatham County, Georgia
Terracon Project No. ES177225

Dear Ms. Yousuf:

Terracon Consultants, Inc. (Terracon) has completed a Limited Site Investigation (LSI) for the above-referenced property. The purpose of the LSI was to assess soil and shallow groundwater conditions in the vicinity of two (2) former aboveground storage tanks (ASTs) used for the storage and distribution of petroleum products. This LSI was completed in accordance with Terracon Proposal No. PES177225, dated July 21, 2017.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please do not hesitate to contact us at your earliest convenience.

Sincerely,
Terracon Consultants, Inc.

Courtney Hudson
Field Scientist

Justin J. Johnson, PG
Senior Geologist

William S. Anderson, III, P.E.
Senior Principal / Office Manager

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EXECUTIVE SUMMARY

This Limited Site Investigation (LSI) Report was completed to document recent subsurface investigation activities completed at the Memorial Stadium located at 101 John J. Scott Drive in Savannah, Chatham County, Georgia. The purpose of the LSI was to assess soil and shallow groundwater conditions in the vicinity of two (2) former aboveground storage tanks (ASTs) used for the storage and distribution of petroleum products. A brief summary of our activities and findings is provided below.

It should be recognized that details are not included or fully developed in this section, and **the report must be read in its entirety** for a comprehensive understanding of the items contained herein.

Soil Sampling

Terracon advanced four (4) soil borings (TW-1 through TW-4) in the vicinity of the former aboveground storage tanks (ASTs). Soil samples were collected from the ground surface to eight (8) feet below ground surface (bgs) and field-screened for volatile organic vapors with a Photo-Ionization Detector (PID). One (1) soil sample was selected from each boring for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs). No BTEXs or PAHs constituents were detected above laboratory reporting limits in the four (4) soil samples submitted for analysis. However, the surface soil sample (0 – 1 ft bgs) collected from TW-3 exhibited an elevated PID reading and conspicuous odor.

Groundwater Sampling

Groundwater samples were collected from the four (4) borings using a stainless-steel Geoprobe® screen point sampler and analyzed for BTEX and PAHs. No BTEXs or PAHs constituents were detected at concentrations above the laboratory reporting limits in the four (4) groundwater samples submitted for analysis.

Conclusions and Recommendations

Terracon recommends the excavation and removal of impacted surface soil for off-site disposal as non-hazardous waste at a Subtitle D Landfill (e.g., Republic Services – Savannah Regional Industrial Landfill). The soil excavation should extend both horizontally and vertically until the odor is no longer present and PID readings are consistently below 10 ppm. Therefore, Terracon recommends that we oversee the excavation and monitor soil conditions with a PID. Based on the LSI findings, we estimate the extent of the excavation will be approximately 100 square feet around TW-3 to an approximate depth of 2 feet bgs. This would result in the disposal of approximately 10 tons of impacted soil. Prior to disposal, the laboratory results should be submitted to the selected landfill for the purpose of establishing a waste profile.

LIMITED SITE INVESTIGATION

Memorial Stadium
101 John J. Scott Drive
Savannah, Chatham County, Georgia

Terracon Project No. ES177225
August 24, 2017

1.0 INTRODUCTION

1.1 Site Description

This Limited Site Investigation (LSI) Report was completed to document recent subsurface investigation activities completed at Memorial Stadium located at 101 John J. Scott Drive in Savannah, Chatham County, Georgia (Parcel ID No. 2-0429-01-062). The site location is depicted on Figure 1 in Appendix A.

The purpose of the LSI was to assess soil and shallow groundwater conditions in the vicinity of two (2) former aboveground storage tanks (ASTs) used for the storage and distribution of petroleum products. The site configuration and former AST area are shown on Figure 2 in Appendix A. A brief summary of our activities and findings is provided below.

1.2 Scope of Work

The LSI included the completion of four (4) direct push borings (denoted as TW-1 through TW-4) in the vicinity of the ASTs. One (1) soil sample was collected from each boring for the purpose of laboratory analysis. Following the completion of soil sampling activities, one (1) groundwater sample was collected from each borehole for the purpose of laboratory analysis. The soil boring locations are shown on Figure 3 in Appendix A.

2.0 FIELD ACTIVITIES

2.1 Underground Utility Clearance

Prior to conducting the soil boring activities on-site, Terracon requested a utility locate through Georgia Utility Protection Center (Georgia 811) as required by the Georgia Utility Facility Protection Act (GUFPA). On July 31, 2017 Georgia 811 issued utility ticket #07317-220-088 to cover the LSI boring locations. Terracon verified that all affected members had responded to the locate request before initiating any subsurface activities.

2.2 Soil Boring Advancement

Terracon personnel mobilized to the subject site on August 7, 2017 and advanced four (4) soil borings (denoted as TW-1 through TW-4) in the vicinity of the former ASTs. The boring locations were selected based on the subject site and surrounding area's topography, proximity to the former AST locations, and site conditions encountered during the field work.

Each boring location was initially advanced with a stainless steel hand auger to approximately 5 feet below ground surface (bgs) in order to verify underground utility clearance. Once cleared, the borings were advanced to an approximate depth of 8 feet bgs using a truck-mounted GeoProbe® 5411DT direct push rig.

Downhole equipment and sampling utensils were decontaminated in general accordance to ASTM D 5088 - 15 *"Decontamination of Field Equipment Used at Waste Sites"*. The downhole sampling equipment was cleaned using Alconox soap and water before arrival at the site, before introduction into the subsurface, between each sampling, between each borehole location, and before leaving the site. New disposable gloves were also utilized between each sample to minimize the possibility of cross contamination.

2.3 Soil Sampling

While hand auguring to verify utility clearance, soil samples from ground surface to 5 feet bgs were generally collected from 1 to 2 foot intervals. From 5 feet to the total boring depth at each location, soils were retrieved by advancing a stainless steel sampling sleeve equipped with an inner 4-foot long, disposable sampling tube. Soil samples were generally collected at 2-foot intervals for screening purposes and further classification based on lithologic and/or saturated zone changes.

Soil samples were placed in a sealed container upon removal from the boring. The soils were visually classified in general accordance with ASTM D-2488 - 09a *"Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)"* and field-screened for volatile organic vapors with a MiniRae™ 3000 Photo-Ionization Detector (PID) with a 10.6 eV lamp source. The soil sample exhibiting the highest PID reading above the saturated zone was selected from each soil boring and submitted for laboratory analysis.

The surface soil sample (0 – 1 ft bgs) collected from TW-3 exhibited an elevated PID reading and conspicuous odor. No other indications of impacts were observed during the field screening of the soil samples collected from the four (4) borings. Soil boring logs including PID readings are attached in Appendix B.

Following collection, the soil samples were logged on the chain of custody and placed in an insulated cooler with ice. The cooler was sealed and hand delivered to Avery Laboratories and Environmental Services, LLC (NELAC No. E87941) in Savannah, Georgia. The four (4) soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEXs) by United States Environmental Protection Agency (USEPA) Method 8260B and polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270.

2.4 Hydrogeology

The lithology of the subsurface soils encountered at the site generally consisted of 0 to 8 feet of silty sand. Saturated soil conditions were generally noted at approximately 5 feet bgs. Soil boring logs are provided in Appendix B.

2.5 Groundwater Sampling

Upon completion of the soil sampling activities, groundwater samples were collected from the four (4) soil borings using a stainless-steel Geoprobe® screen point sampler in general accordance with procedures described in the US EPA Region 4, Science and Ecosystem Support Division guidance document titled *Design and Installation of Monitoring Wells* (SESDGUID-101-R1, effective date January 29, 2013).

The screen points were developed with a GeoTech® peristaltic pump and new disposable Teflon tubing to restore the natural hydraulic conductivity of the surficial aquifer. Following the completion of development activities, the screen points were purged and sampled in general accordance with the low-flow sampling protocol *EPA Region 4, SESD Groundwater Sampling Operating Procedure (SESDPROC-301-R3), March 2013*. The pump intake (Teflon tubing) was maintained within the mid-point of the submerged screened interval during the purging and sampling of the wells. Field water quality parameters, including pH, specific conductance, temperature, oxidation reduction potential (ORP), and dissolved oxygen were monitored during the purging of the wells.

Following the stabilization of field parameters, laboratory-supplied containers were filled with groundwater. The groundwater samples were logged on the chain of custody and placed in an insulated cooler with ice. The cooler was sealed and hand delivered to Avery Laboratories and Environmental Services, LLC (NELAC No. E87941) in Savannah, Georgia. The four (4) groundwater samples were analyzed for BTEX by USEPA Method 8260B and PAHs by EPA Method 8270.

2.6 Bore Hole Abandonment

Following the completion of soil and groundwater sampling activities, each bore hole was abandoned in general accordance with the procedures described in the US EPA Region 4, Science and

Ecosystem Support Division guidance document titled *Design and Installation of Monitoring Wells (SESDGUID-101-R1, dated January 29, 2013).* The four (4) bore holes were backfilled from total depth to surface with bentonite.

3.0 DATA EVALUATION

3.1 Soil Analytical Results

No BTEX or PAHs were detected above laboratory reporting limits in the four (4) soil samples submitted for analysis. Copies of the laboratory data sheets are included in Appendix C.

3.2 Groundwater Analytical Results

No BTEX or PAHs were detected above laboratory reporting limits in the four (4) groundwater samples submitted for analysis. Copies of the laboratory data sheets are included in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The historical operation of the ASTs did not result in detectable levels of BTEX or PAHs in the soil or shallow groundwater at the subject site. However, indications of surface soil impacts were noted in the vicinity of TW-3, including an elevated PID reading and conspicuous odor.

4.2 Recommendations

Terracon recommends the excavation and removal of impacted surface soil for off-site disposal as non-hazardous waste at a Subtitle D Landfill (e.g., Republic Services – Savannah Regional Industrial Landfill). The soil excavation should extend both horizontally and vertically until the odor is no longer present and PID readings are consistently below 10 ppm. Therefore, Terracon recommends that we oversee the excavation and monitor soil conditions with a PID. Based on the LSI findings, we estimate the extent of the excavation will be approximately 100 square feet around TW-3 to an approximate depth of 2 feet bgs. This would result in the disposal of approximately 10 tons of impacted soil. Prior to disposal, the laboratory results should be submitted to the selected landfill for the purpose of establishing a waste profile.

5.0 LIMITATIONS

5.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations.

Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These environmental services were performed in accordance with the scope of work agreed with you, our client, and were not bound by ASTM E1903-97.

5.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information may be subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this investigation.

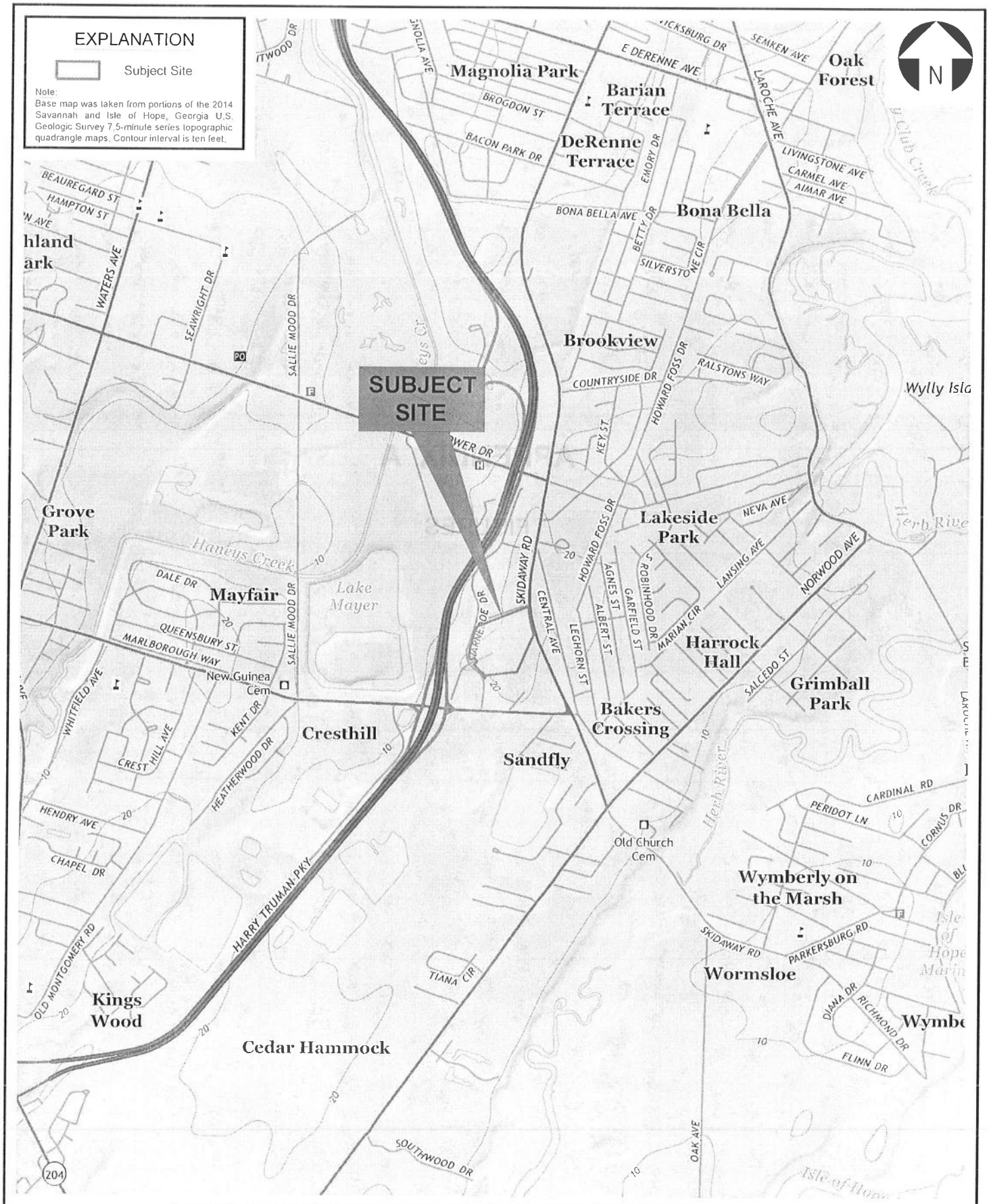
Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services. Sample locations and analytical test methods were limited. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the agreed upon scope of services. Neither a vapor encroachment assessment nor a methane gas assessment was proposed or conducted as part of this limited subsurface investigation.

5.3 Reliance

This report has been prepared for the exclusive use of Chatham County Department of Engineering (the Client). Any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Chatham County Department of Engineering and Terracon Consultants, Inc. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, this report, and the Agreement for Services between Terracon and Chatham County Department of Engineering.

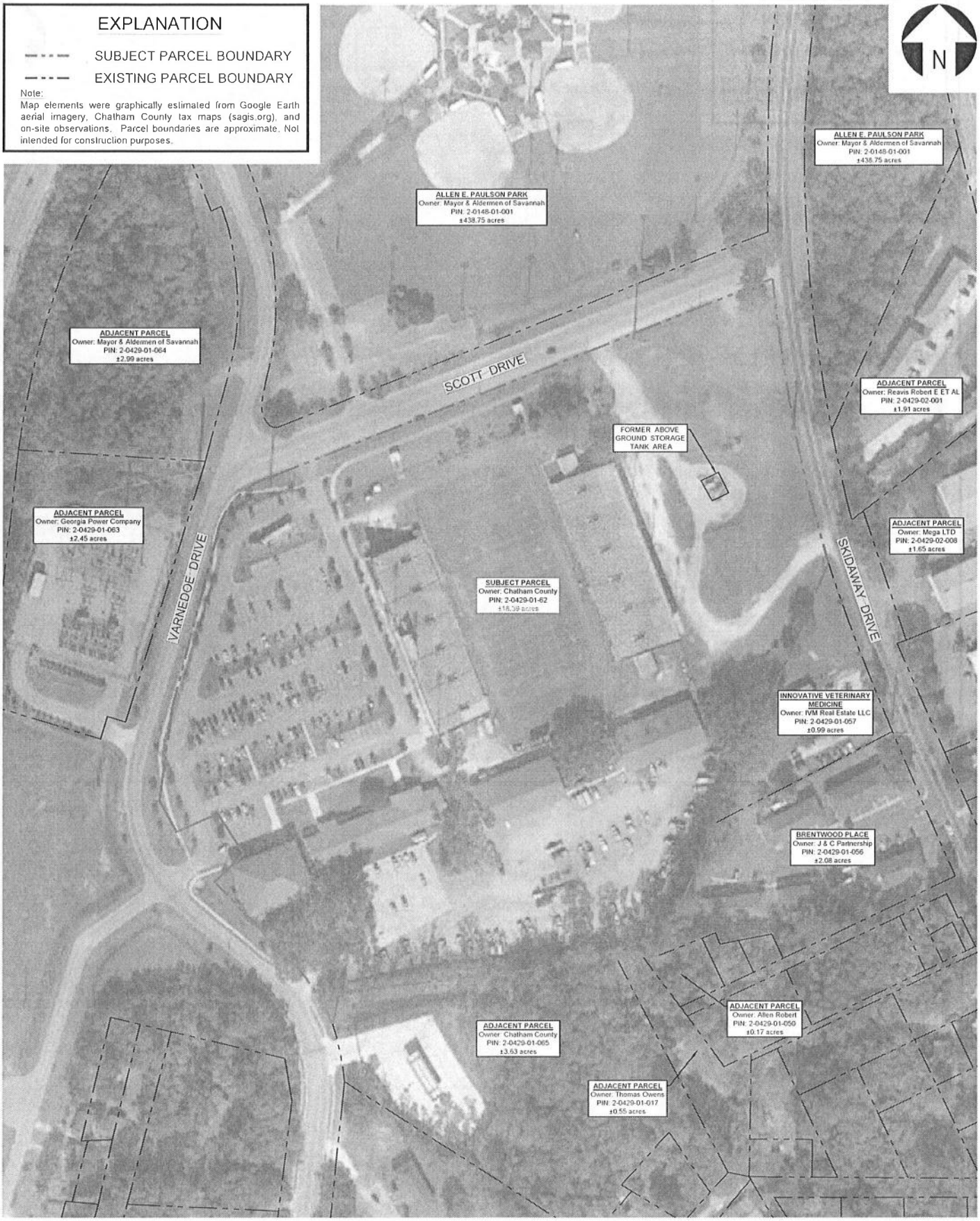
APPENDIX A

FIGURES



Project Mngr: JJJ	Project No: ES177225	Terracon Consulting Engineers & Scientists	SITE LOCATION MAP
Drawn By: VMG	Scale: 1" = 2,000'	2201 Rowland Avenue, Savannah, Georgia 31404	Memorial Stadium LSI
Checked By: CEH	File Name: ES177225.dwg	Phone (912) 629 4060, Fax (912) 629 4061	101 John J Scott Drive
Approved By: SAD	Date: August 16, 2017		Savannah, Chatham County, Georgia

Figure 1



0 100' 200'
1" = 200'
SCALE IN FEET

Project Mngr	JJJ
Drawn By	VMG
Checked By	CEH
Approved By	SAD

Project No	ES177225
Scale	1" = 200'
File Name	ES177225.dwg
Date	August 16, 2017

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

SITE DIAGRAM

Memorial Stadium LSI
101 John J Scott Drive
Savannah, Chatham County, Georgia

Figure
2

EXPLANATION

SAMPLE LOCATION

Note:
Map elements were graphically estimated from Google Earth aerial imagery and on-site observations. Not intended for construction purposes.

0 15' 30'
1" = 30'
SCALE IN FEET

Project Mngr	JJJ
Drawn By	VMG
Checked By	CEH
Approved By	SAD

Project No	ES177225
Scale	1" = 30'
File Name	ES177225.dwg
Date	August 16, 2017

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

SAMPLE LOCATION MAP

Memorial Stadium LSI
101 John J Scott Drive
Savannah, Chatham County, Georgia

Figure 3

APPENDIX B

Soil Boring Logs

Memorial Stadium

101 John J. Scott Drive
Savananh, Chatham County, Georgia
Georgia USTMP Facility ID No.: N/A

TABLE 1: SUMMARY OF SOIL ANALYTICAL RESULTS

Sample ID	Depth (ft)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total PAHs (mg/kg)
TW-1-5	5 - 6	8/7/2017	BRL	BRL	BRL	BRL	BRL
TW-2-4	4 - 5	8/7/2017	BRL	BRL	BRL	BRL	BRL
TW-3-1	1 - 2	8/7/2017	BRL	BRL	BRL	BRL	BRL
TW-4-4	4 - 5	8/7/2017	BRL	BRL	BRL	BRL	BRL
Applicable Standard *			0.005	0.400	0.370	20.00	N/A

Prepared By: Justin Johnson, PG Date: 8/22/2017
Reviewed By: Stewart Dixon, PG Date: 8/23/2017

NOTES:

mg/kg = milligrams per kilogram, or parts per million (ppm)
* = Georgia UST Soil Thresholds for Average or Higher Groundwater Pollution Susceptibility Area (based on the most stringent scenario of less than 500 ft to withdrawal point)
BRL = Below Reporing Limit
PAHs = Polycyclic aromatic hyrdorcarbons
N/A = No Applicable Standard

Memorial Stadium

101 John J. Scott Drive
Savannah, Chatham County, Georgia
Georgia USTMP Facility ID No.: N/A

TABLE 2: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total PAHs (µg/L)
TW-1	8/7/2017	BRL	BRL	BRL	BRL	BRL
TW-2	8/7/2017	BRL	BRL	BRL	BRL	BRL
TW-3	8/7/2017	BRL	BRL	BRL	BRL	BRL
TW-4	8/7/2017	BRL	BRL	BRL	BRL	BRL
Applicable Standard *		5	1,000	700	10,000	N/A

Prepared By: Justin Johnson, PG Date: 8/22/2017
Reviewed By: Stewart Dixon, PG Date: 8/24/2017

NOTES:

µg/L = micrograms per liter, or parts per billion (ppb)
* = USEPA Maximum Contaminant Levels (MCLs) for Drinking Water
BRL = Below Reporting Limit
N/A = No Applicable Standard
PAHs = Polycyclic aromatic hyrdorcarbons

Terracon

Soil Boring Log

Project: Memorial Stadium LSI		Project Number: ES177225	Boring/Well: TW-1
		Well Construction Data	
Date Started: 8/7/17	Latitude: 31.9937		
Logged By: CEH	Longitude: -81.078807	***NOTES:***	
Drilling Co.: Verco	Driller: Jason Chiorazzi	****Soil sample submitted for analysis.***	
Method: Direct Push	Equipment: Geoprobe 5411	***No well was constructed at this boring location.***	
Boring Depth (ft.): 8.0	Saturated Zone: ▽ 5.00 Date: 8/7/2017	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.50 Date: 8/7/2017	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample ID	PID (ppm)	Lithology	Description	Depth
		1	0.7		**SILTY SAND (SM)**, dark brown, fine grained	
		2	0.3		As above, light brown	
2		3	0.0		As above, dark brown	2
		4	0.3		As above, light brown	
4		*5*	*0.5*			4 ▼
					As above, dark brown, saturated ▽	
6		6	0.3			6
8					Borehole terminated at 8 feet	8

Terracon
2201 Rowland Avenue, Savannah, Georgia 31404
Phone: 912-629-4000, Fax: 912-629-4001

Terracon

Soil Boring Log

Project: Memorial Stadium LSI		Project Number: ES177225	Boring/Well: TW-2
		Well Construction Data	
Date Started: 8/7/17	Latitude: 31.993747		
Logged By: CEH	Longitude: -81.078781	***NOTES:***	
Drilling Co.: Verco	Driller: Jason Chiorazzi	****Soil sample submitted for analysis.***	
Method: Direct Push	Equipment: Geoprobe 5411	***No well was constructed at this boring location.***	
Boring Depth (ft.): 8.0	Saturated Zone: ▽ 5.00 Date: 8/7/2017	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 5.00 Date: 8/7/2017	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample ID	PID (ppm)	Lithology	Description	Depth
		1	0.0		**SILTY SAND (SM)**, dark brown, fine grained	
		2	0.3		As above, light brown	
2		3	0.3			2
		4	*0.2*			
4		5	0.0		As above, light brown to dark brown, damp	4
					As above, dark brown, saturated ▽ ▼	
6		6	0.3			6
8					Borehole terminated at 8 feet	8

STANDARD ENVIRONMENTAL BORING LOG GINT BORING LOGS.GPJ GAGE_GRP.GDT 8/8/17

Terracon
2201 Rowland Avenue, Savannah, Georgia 31404
Phone: 912-629-4000, Fax: 912-629-4001

Terracon

Soil Boring Log

Project: Memorial Stadium LSI		Project Number: ES177225	Boring/Well: TW-3
			Well Construction Data
Date Started: 8/7/17	Latitude: 31.993713		
Logged By: CEH	Longitude: -81.078735	***NOTES:***	
Drilling Co.: Verco	Driller: Jason Chiorazzi	****Soil sample submitted for analysis.***	
Method: Direct Push	Equipment: Geoprobe 5411	***No well was constructed at this boring location.***	
Boring Depth (ft.): 5.0	Saturated Zone: ▽ 5.00 Date: 8/7/2017	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.50 Date: 8/7/2017	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample ID	PID (ppm)	Lithology	Description	Depth
		1	*214*		**SILTY SAND (SM)**, light brown, fine grained, odor	
		2	75.8		As above, dark brown	
2		3	4.8		As above, light brown	2
		4	5.2		As above, damp	
4		5	7.5		As above, dark brown, saturated	4
					Borehole terminated at 5 feet	

Terracon
2201 Rowland Avenue, Savannah, Georgia 31404
Phone: 912-629-4000, Fax: 912-629-4001

Soil Boring Log

Project: Memorial Stadium LSI		Project Number: ES177225	Boring/Well: TW-4
		Well Construction Data	
Date Started: 8/7/17	Latitude: 31.993671		
Logged By: CEH	Longitude: -81.078748	***NOTES:***	
Drilling Co.: Verco	Driller: Jason Chiorazzi	****Soil sample submitted for analysis.***	
Method: Direct Push	Equipment: Geoprobe 5411	***No well was constructed at this boring location.***	
Boring Depth (ft.): 5.0	Saturated Zone: ▽ 5.00 Date: 8/7/2017	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.00 Date: 8/7/2017	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample ID	PID (ppm)	Lithology	Description	Depth
		1	0.0		**SILTY SAND (SM)**, light brown, fine grained	
		2	0.0		As above, light brown to dark brown	
2		3	0.2			2
		4	*0.3*		As above, light brown, damp	
4		5	0.1		As above, dark brown, saturated	4 ▼
					▽	

Terracon
2201 Rowland Avenue, Savannah, Georgia 31404
Phone: 912-629-4000. Fax: 912-629-4001

APPENDIX C

Laboratory Analytical Data

Avery Laboratories & Environmental Services, LLC

Ship To: 2720 Gregory St. , Unit 200 Savannah, Ga. 31404
T 912 944-3748 F 912 234-9294
email: pgrimm@averylab.com

Serial Number: 76913
LAB NUMBER: 17080802

Client Information		Page 1 of 1	Project Name: Memorial Stadium	Subcontract Laboratory
Customer:	Terracon Consultants	Sampler: CH	Project Number: FS177225	State where work originated:
Address:	2201 Rowland Ave	Turn Around Time (Place X below)		Name / Address/ Phone
City/State/Zip:	Savannah, GA 31410	24 Hours		N
Contact:	Justin Johnson	48 Hours		A
Phone:	912-629-4000	72 Hours		
Email:	@terracon.com	5 Working Days		P
Purchase Order #:	FS177225	7 Working Days	X	
Project Manager:	Justin Johnson	Other:		

Sample Identification	Date	Time	Matrix	# of Containers	BTEX	PAH	Preservative	Remarks
TW-1-5	8/7/17	11:00	S	5	X	X		
TW-1	8/7/17	11:10	W	5	X	X		
TW-2-4	8/7/17	11:50	S	5	X	X		
TW-2	8/7/17	12:15	W	5	X	X		
TW-3-1	8/7/17	13:00	S	5	X	X		
TW-3	8/7/17	13:10	W	5	X	X		
TW-4-4	8/7/17	13:50	S	5	X	X		
TW-4	8/7/17	14:40	W	5	X	X		

Matrix Type: A = Air W = Water S= Solid N = Nonaqueous (solvent, acid, etc.)

Preservative: 1= None 2 = H2SO4 3 = HN03 4 = HCL 5 = MeOH 6 = NAHSO4 7 = Water 8 = Sodium Bisulfate 9 = Other

Instructions or Special Requirements:

Temperature: 15.1°C Cooler Custody Seals: Yes No Custody Seals Intact: Yes No

Relinquished by:	Date/Time:		Received by:	Date/Time:
Courtney Ashton	8/7/17 15:20			8/7/17 1520
Relinquished by:	Date/Time:		Received by:	Date/Time:
Relinquished by:	Date/Time:		Received by:	Date/Time:

RP17082102

RP17082102

LABORATORY ANALYSIS REPORT

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Project ID :
Memorial Stadium

Report To : Client Name: Terracon Attn: Justin Johnson
Client Address: 2201 Rowland Ave. P.O.#.:
City, State, Zip: Savannah, GA, 31404

Dear Justin Johnson

The following test results meet all NELAC requirements for analytes for which certification is available. Any deviations from these quality systems will be noted in this case narrative. All analyses performed by Avery Laboratories & Environmental Services, LLC unless noted. Parameters not performed by Avery Laboratories will be listed in the case narrative section of this report.

This report shall not be reproduced, except in its entirety, without the written approval of Avery Laboratories. The test results in this report relate only to the samples analyzed.
For questions regarding this report, contact Robert Paul Grimm at (912)944-3748.

Sincerely,

Robert Paul Grimm

Robert Paul Grimm, Technical Director
pgrimm@averylab.com

This Laboratory is NELAP accredited.
I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/anomalies observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

Date: 08/21/2017 15:47

Primary Accreditation State and Number: Florida E87941

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-1-5	Date Collected:	08/07/2017
Job Sample ID:	17080802.01	Time Collected:	11:00
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SM2540b	**% Moisture**							
	% Moisture	15.3	%	1			08/10/2017 12:00	EB
SW-846 8260B	**Volatile Organic Compounds-Soil**							
	Benzene	BRL	mg/kg dw	1.81	0.0110		08/14/2017 18:37	RPG
	Ethylbenzene	BRL	mg/kg dw	1.81	0.0110		08/14/2017 18:37	RPG
	Toluene	BRL	mg/kg dw	1.81	0.0110		08/14/2017 18:37	RPG
	xylene-o	BRL	mg/kg dw	1.81	0.0110		08/14/2017 18:37	RPG
	xylenes (m&P)	BRL	mg/kg dw	1.81	0.0210		08/14/2017 18:37	RPG
	Dibromofluoromethane(surr)	86.2	%	1.81	61.2-143		08/14/2017 18:37	RPG
	p-Bromofluorobenzene(surr)	123.0	%	1.81	69.4-143		08/14/2017 18:37	RPG
	Toluene-d8(surr)	98.3	%	1.81	62.3-146		08/14/2017 18:37	RPG
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	1-Methylnaphthalene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	2-Methylnaphthalene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Acenaphthene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Acenaphthylene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Anthracene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Benzo(a)anthracene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Benzo(a)pyrene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Benzo(b)fluoranthene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Benzo(g,h,i)perylene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Benzo(k)fluoranthene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Chrysene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Dibenzo(a,h)anthracene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Fluoranthene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Fluorene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Indeno(1,2,3-cd)pyrene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Naphthalene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG

Date: 08/21/2017 15:47

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-1-5	Date Collected:	08/07/2017
Job Sample ID:	17080802.01	Time Collected:	11:00
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	Phenanthrene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	Pyrene	BRL	mg/kg dw	0.990	0.389		08/20/2017 16:51	RPG
	2,4,6-Tribromophenol(surr)	83.3	%	0.990	49.3-138		08/20/2017 16:51	RPG
	2-Fluorobiphenyl(surr)	68.8	%	0.990	41.4-111		08/20/2017 16:51	RPG
	2-Fluorophenol(surr)	63.6	%	0.990	37.1-101		08/20/2017 16:51	RPG
	Nitrobenzene-d5(surr)	77.4	%	0.990	35.2-104		08/20/2017 16:51	RPG
	Phenol-d5(surr)	58.1	%	0.990	36.1-96.7		08/20/2017 16:51	RPG
	p-Terphenyl-d14(surr)	106	%	0.990	54.9-118		08/20/2017 16:51	RPG

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-1	Date Collected:	08/07/2017
Job Sample ID:	17080802.02	Time Collected:	11:10
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8260B	**Volatile Organic Compounds-Aqueous**							
	Benzene	BRL	ug/L	1	1		08/15/2017 17:40	RPG
	Ethylbenzene	BRL	ug/L	1	1		08/15/2017 17:40	RPG
	Toluene	BRL	ug/L	1	1		08/15/2017 17:40	RPG
	xylene-o	BRL	ug/L	1	1		08/15/2017 17:40	RPG
	xylenes (m&P)	BRL	ug/L	1	2.00		08/15/2017 17:40	RPG
	Dibromofluoromethane(surr)	93.0	%	1	56.9-151		08/15/2017 17:40	RPG
	p-Bromofluorobenzene(surr)	129.0	%	1	84.4-152		08/15/2017 17:40	RPG
	Toluene-d8(surr)	105.0	%	1	77.8-140		08/15/2017 17:40	RPG
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	1-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	2-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Acenaphthene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Acenaphthylene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Anthracene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Benzo(a)anthracene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Benzo(a)pyrene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Benzo(b)fluoranthene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Benzo(g,h,i)perylene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Benzo(k)fluoranthene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Chrysene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Dibenzo(a,h)anthracene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Fluoranthene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Fluorene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Indeno(1,2,3-cd)pyrene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Naphthalene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Phenanthrene	BRL	ug/L	1	10		08/15/2017 14:04	RPG
	Pyrene	BRL	ug/L	1	10		08/15/2017 14:04	RPG

Date: 08/21/2017 15:47

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

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Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-1	Date Collected:	08/07/2017
Job Sample ID:	17080802.02	Time Collected:	11:10
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	2,4,6-Tribromophenol(surr)	54.8	%	1	45.2-132		08/15/2017 14:04	RPG
	2-Fluorobiphenyl(surr)	40.1	%	1	42.8-106	S	08/15/2017 14:04	RPG
	2-Fluorophenol(surr)	31.3	%	1	14.1-74.7		08/15/2017 14:04	RPG
	Nitrobenzene-d5(surr)	39.9	%	1	38.3-101		08/15/2017 14:04	RPG
	Phenol-d5(surr)	26.7	%	1	7.07-52.7		08/15/2017 14:04	RPG
	p-Terphenyl-d14(surr)	49.5	%	1	28.6-126		08/15/2017 14:04	RPG

Date: 08/21/2017 15:47

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Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-2-4	Date Collected:	08/07/2017
Job Sample ID:	17080802.03	Time Collected:	11:50
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SM2540b	**% Moisture**							
	% Moisture	19.7	%	1			08/10/2017 12:00	EB
SW-846 8260B	**Volatile Organic Compounds-Soil**							
	Benzene	BRL	mg/kg dw	0.945	0.00600		08/14/2017 19:02	RPG
	Ethylbenzene	BRL	mg/kg dw	0.945	0.00600		08/14/2017 19:02	RPG
	Toluene	BRL	mg/kg dw	0.945	0.00600		08/14/2017 19:02	RPG
	xylene-o	BRL	mg/kg dw	0.945	0.00600		08/14/2017 19:02	RPG
	xylenes (m&P)	BRL	mg/kg dw	0.945	0.0120		08/14/2017 19:02	RPG
	Dibromofluoromethane(surr)	86.8	%	0.945	61.2-143		08/14/2017 19:02	RPG
	p-Bromofluorobenzene(surr)	127.0	%	0.945	69.4-143		08/14/2017 19:02	RPG
	Toluene-d8(surr)	99.5	%	0.945	62.3-146		08/14/2017 19:02	RPG
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	1-Methylnaphthalene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	2-Methylnaphthalene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Acenaphthene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Acenaphthylene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Anthracene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Benzo(a)anthracene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Benzo(a)pyrene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Benzo(b)fluoranthene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Benzo(g,h,i)perylene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Benzo(k)fluoranthene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Chrysene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Dibenzo(a,h)anthracene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Fluoranthene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Fluorene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Indeno(1,2,3-cd)pyrene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Naphthalene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG

Date: 08/21/2017 15:47

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-2-4	Date Collected:	08/07/2017
Job Sample ID:	17080802.03	Time Collected:	11:50
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	Phenanthrene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	Pyrene	BRL	mg/kg dw	0.982	0.407		08/20/2017 17:17	RPG
	2,4,6-Tribromophenol(surr)	94.4	%	0.982	49.3-138		08/20/2017 17:17	RPG
	2-Fluorobiphenyl(surr)	76	%	0.982	41.4-111		08/20/2017 17:17	RPG
	2-Fluorophenol(surr)	76.5	%	0.982	37.1-101		08/20/2017 17:17	RPG
	Nitrobenzene-d5(surr)	84.7	%	0.982	35.2-104		08/20/2017 17:17	RPG
	Phenol-d5(surr)	81.6	%	0.982	36.1-96.7		08/20/2017 17:17	RPG
	p-Terphenyl-d14(surr)	97.7	%	0.982	54.9-118		08/20/2017 17:17	RPG

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-2	Date Collected:	08/07/2017
Job Sample ID:	17080802.04	Time Collected:	12:15
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8260B	**Volatile Organic Compounds-Aqueous**							
	Benzene	BRL	ug/L	1	1		08/15/2017 18:04	RPG
	Ethylbenzene	BRL	ug/L	1	1		08/15/2017 18:04	RPG
	Toluene	BRL	ug/L	1	1		08/15/2017 18:04	RPG
	xylene-o	BRL	ug/L	1	1		08/15/2017 18:04	RPG
	xylenes (m&P)	BRL	ug/L	1	2.00		08/15/2017 18:04	RPG
	Dibromofluoromethane(surr)	91.6	%	1	56.9-151		08/15/2017 18:04	RPG
	p-Bromofluorobenzene(surr)	131.0	%	1	84.4-152		08/15/2017 18:04	RPG
	Toluene-d8(surr)	105.0	%	1	77.8-140		08/15/2017 18:04	RPG
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	1-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	2-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Acenaphthene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Acenaphthylene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Anthracene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Benzo(a)anthracene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Benzo(a)pyrene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Benzo(b)fluoranthene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Benzo(g,h,i)perylene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Benzo(k)fluoranthene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Chrysene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Dibenzo(a,h)anthracene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Fluoranthene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Fluorene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Indeno(1,2,3-cd)pyrene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Naphthalene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Phenanthrene	BRL	ug/L	1	10		08/15/2017 14:57	RPG
	Pyrene	BRL	ug/L	1	10		08/15/2017 14:57	RPG

Date: 08/21/2017 15:47

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

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Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-2	Date Collected:	08/07/2017
Job Sample ID:	17080802.04	Time Collected:	12:15
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	2,4,6-Tribromophenol(surr)	76.4	%	1	45.2-132		08/15/2017 14:57	RPG
	2-Fluorobiphenyl(surr)	54.1	%	1	42.8-106		08/15/2017 14:57	RPG
	2-Fluorophenol(surr)	48.7	%	1	14.1-74.7		08/15/2017 14:57	RPG
	Nitrobenzene-d5(surr)	60.3	%	1	38.3-101		08/15/2017 14:57	RPG
	Phenol-d5(surr)	40.3	%	1	7.07-52.7		08/15/2017 14:57	RPG
	p-Terphenyl-d14(surr)	62.5	%	1	28.6-126		08/15/2017 14:57	RPG

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Job ID : 17080802

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Client Name: Terracon Attn: Justin Johnson

Project ID: Memorial Stadium Date: 08/21/2017

Job ID : 17080802
Client Sample ID: TW-3-1
Job Sample ID: 17080802.05
Other Information:

Sample Matrix: Soil
Date Collected: 08/07/2017
Time Collected: 13:00

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SM2540b	**% Moisture**							
	% Moisture	7.37	%	1			08/10/2017 12:00	EB
SW-846 8260B	**Volatile Organic Compounds-Soil**							
	Benzene	BRL	mg/kg dw	1.08	0.00600		08/14/2017 15:53	RPG
	Ethylbenzene	BRL	mg/kg dw	1.08	0.00600		08/14/2017 15:53	RPG
	Toluene	BRL	mg/kg dw	1.08	0.00600		08/14/2017 15:53	RPG
	xylene-o	BRL	mg/kg dw	1.08	0.00600		08/14/2017 15:53	RPG
	xylenes (m&P)	BRL	mg/kg dw	1.08	0.0120		08/14/2017 15:53	RPG
	Dibromofluoromethane(surr)	96.3	%	1.08	61.2-143		08/14/2017 15:53	RPG
	p-Bromofluorobenzene(surr)	183.0	%	1.08	69.4-143	S	08/14/2017 15:53	RPG
	Toluene-d8(surr)	83.3	%	1.08	62.3-146		08/14/2017 15:53	RPG
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	1-Methylnaphthalene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	2-Methylnaphthalene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Acenaphthene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Acenaphthylene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Anthracene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Benzo(a)anthracene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Benzo(a)pyrene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Benzo(b)fluoranthene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Benzo(g,h,i)perylene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Benzo(k)fluoranthene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Chrysene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Dibenzo(a,h)anthracene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Fluoranthene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Fluorene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Indeno(1,2,3-cd)pyrene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Naphthalene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG

Date: 08/21/2017 15:47

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-3-1	Date Collected:	08/07/2017
Job Sample ID:	17080802.05	Time Collected:	13:00
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	Phenanthrene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	Pyrene	BRL	mg/kg dw	0.987	0.355		08/20/2017 17:43	RPG
	2,4,6-Tribromophenol(surr)	65	%	0.987	49.3-138		08/20/2017 17:43	RPG
	2-Fluorobiphenyl(surr)	152	%	0.987	41.4-111	S	08/20/2017 17:43	RPG
	2-Fluorophenol(surr)	70.1	%	0.987	37.1-101		08/20/2017 17:43	RPG
	Nitrobenzene-d5(surr)	101	%	0.987	35.2-104		08/20/2017 17:43	RPG
	Phenol-d5(surr)	82.7	%	0.987	36.1-96.7		08/20/2017 17:43	RPG
	p-Terphenyl-d14(surr)	79.7	%	0.987	54.9-118		08/20/2017 17:43	RPG

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name: Terracon
Attn: Justin Johnson
Project ID: Memorial Stadium
Date: 08/21/2017

Job ID : 17080802
Client Sample ID: TW-3
Job Sample ID: 17080802.06
Other Information:

Sample Matrix: Aqueous
Date Collected: 08/07/2017
Time Collected: 13:10

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8260B	**Volatile Organic Compounds-Aqueous**							
	Benzene	BRL	ug/L	1	1		08/15/2017 18:29	RPG
	Ethylbenzene	BRL	ug/L	1	1		08/15/2017 18:29	RPG
	Toluene	BRL	ug/L	1	1		08/15/2017 18:29	RPG
	xylene-o	BRL	ug/L	1	1		08/15/2017 18:29	RPG
	xylenes (m&P)	BRL	ug/L	1	2.00		08/15/2017 18:29	RPG
	Dibromofluoromethane(surr)	93.2	%	1	56.9-151		08/15/2017 18:29	RPG
	p-Bromofluorobenzene(surr)	132.0	%	1	84.4-152		08/15/2017 18:29	RPG
	Toluene-d8(surr)	106.0	%	1	77.8-140		08/15/2017 18:29	RPG
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	1-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	2-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Acenaphthene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Acenaphthylene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Anthracene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Benzo(a)anthracene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Benzo(a)pyrene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Benzo(b)fluoranthene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Benzo(g,h,i)perylene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Benzo(k)fluoranthene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Chrysene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Dibenzo(a,h)anthracene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Fluoranthene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Fluorene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Indeno(1,2,3-cd)pyrene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Naphthalene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Phenanthrene	BRL	ug/L	1	10		08/15/2017 15:24	RPG
	Pyrene	BRL	ug/L	1	10		08/15/2017 15:24	RPG

Date: 08/21/2017 15:47

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-3	Date Collected:	08/07/2017
Job Sample ID:	17080802.06	Time Collected:	13:10
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	2,4,6-Tribromophenol(surr)	67.8	%	1	45.2-132		08/15/2017 15:24	RPG
	2-Fluorobiphenyl(surr)	50.0	%	1	42.8-106		08/15/2017 15:24	RPG
	2-Fluorophenol(surr)	37.3	%	1	14.1-74.7		08/15/2017 15:24	RPG
	Nitrobenzene-d5(surr)	54.8	%	1	38.3-101		08/15/2017 15:24	RPG
	Phenol-d5(surr)	31.6	%	1	7.07-52.7		08/15/2017 15:24	RPG
	p-Terphenyl-d14(surr)	55.4	%	1	28.6-126		08/15/2017 15:24	RPG

Date: 08/21/2017 15:47

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-4-4	Date Collected:	08/07/2017
Job Sample ID:	17080802.07	Time Collected:	13:50
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SM2540b	**% Moisture**							
	% Moisture	17.4	%	1			08/10/2017 12:00	EB
SW-846 8260B	**Volatile Organic Compounds-Soil**							
	Benzene	BRL	mg/kg dw	1.19	0.00700		08/14/2017 16:34	RPG
	Ethylbenzene	BRL	mg/kg dw	1.19	0.00700		08/14/2017 16:34	RPG
	Toluene	BRL	mg/kg dw	1.19	0.00700		08/14/2017 16:34	RPG
	xylene-o	BRL	mg/kg dw	1.19	0.00700		08/14/2017 16:34	RPG
	xylenes (m&P)	BRL	mg/kg dw	1.19	0.0140		08/14/2017 16:34	RPG
	Dibromofluoromethane(surr)	84.0	%	1.19	61.2-143		08/14/2017 16:34	RPG
	p-Bromofluorobenzene(surr)	126.0	%	1.19	69.4-143		08/14/2017 16:34	RPG
	Toluene-d8(surr)	99.2	%	1.19	62.3-146		08/14/2017 16:34	RPG
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	1-Methylnaphthalene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	2-Methylnaphthalene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Acenaphthene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Acenaphthylene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Anthracene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Benzo(a)anthracene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Benzo(a)pyrene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Benzo(b)fluoranthene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Benzo(g,h,i)perylene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Benzo(k)fluoranthene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Chrysene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Dibenzo(a,h)anthracene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Fluoranthene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Fluorene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Indeno(1,2,3-cd)pyrene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Naphthalene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG

Date: 08/21/2017 15:47

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Soil
Client Sample ID:	TW-4-4	Date Collected:	08/07/2017
Job Sample ID:	17080802.07	Time Collected:	13:50
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds - Soils**							
	Phenanthrene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	Pyrene	BRL	mg/kg dw	0.986	0.397		08/20/2017 18:09	RPG
	2,4,6-Tribromophenol(surr)	87.3	%	0.986	49.3-138		08/20/2017 18:09	RPG
	2-Fluorobiphenyl(surr)	69.8	%	0.986	41.4-111		08/20/2017 18:09	RPG
	2-Fluorophenol(surr)	70.6	%	0.986	37.1-101		08/20/2017 18:09	RPG
	Nitrobenzene-d5(surr)	78.9	%	0.986	35.2-104		08/20/2017 18:09	RPG
	Phenol-d5(surr)	75.6	%	0.986	36.1-96.7		08/20/2017 18:09	RPG
	p-Terphenyl-d14(surr)	91.4	%	0.986	54.9-118		08/20/2017 18:09	RPG

Date: 08/21/2017 15:47

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-4	Date Collected:	08/07/2017
Job Sample ID:	17080802.08	Time Collected:	14:40
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8260B	**Volatile Organic Compounds-Aqueous**							
	Benzene	BRL	ug/L	1	1		08/15/2017 18:53	RPG
	Ethylbenzene	BRL	ug/L	1	1		08/15/2017 18:53	RPG
	Toluene	BRL	ug/L	1	1		08/15/2017 18:53	RPG
	xylene-o	BRL	ug/L	1	1		08/15/2017 18:53	RPG
	xylenes (m&P)	BRL	ug/L	1	2.00		08/15/2017 18:53	RPG
	Dibromofluoromethane(surr)	96.0	%	1	56.9-151		08/15/2017 18:53	RPG
	p-Bromofluorobenzene(surr)	135.0	%	1	84.4-152		08/15/2017 18:53	RPG
	Toluene-d8(surr)	106.0	%	1	77.8-140		08/15/2017 18:53	RPG
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	1-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	2-Methylnaphthalene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Acenaphthene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Acenaphthylene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Anthracene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Benzo(a)anthracene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Benzo(a)pyrene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Benzo(b)fluoranthene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Benzo(g,h,i)perylene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Benzo(k)fluoranthene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Chrysene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Dibenzo(a,h)anthracene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Fluoranthene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Fluorene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Indeno(1,2,3-cd)pyrene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Naphthalene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Phenanthrene	BRL	ug/L	1	10		08/15/2017 16:17	RPG
	Pyrene	BRL	ug/L	1	10		08/15/2017 16:17	RPG

Date: 08/21/2017 15:47

RP17082102

CLIENT SAMPLE RESULTS

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project ID:	Memorial Stadium	Date:	08/21/2017

Job ID :	17080802	Sample Matrix:	Aqueous
Client Sample ID:	TW-4	Date Collected:	08/07/2017
Job Sample ID:	17080802.08	Time Collected:	14:40
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW-846 8270D	**Semivolatile Organic Compounds-Aqueous**							
	2,4,6-Tribromophenol(surr)	58.5	%	1	45.2-132		08/15/2017 16:17	RPG
	2-Fluorobiphenyl(surr)	39.6	%	1	42.8-106	S	08/15/2017 16:17	RPG
	2-Fluorophenol(surr)	30.5	%	1	14.1-74.7		08/15/2017 16:17	RPG
	Nitrobenzene-d5(surr)	40.5	%	1	38.3-101		08/15/2017 16:17	RPG
	Phenol-d5(surr)	28.0	%	1	7.07-52.7		08/15/2017 16:17	RPG
	p-Terphenyl-d14(surr)	50.0	%	1	28.6-126		08/15/2017 16:17	RPG

Date: 08/21/2017 15:47

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Semivolatile Organic Compounds - Soils **Method:** SW-846 8270D **Reporting Units:** mg/kg dw

QC Batch ID: Qb17081703 **Created Date:** 08/17/2017 15:12 **Created By:** PGrimm

Samples in this QC Batch: 17080802,01,03,05,07

Extraction	PB17081704	SW3550c	PGrimm

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	1-Methylnaphthalene	90-12-0	BRL	mg/kg dw	1	.333		
Method Blank	2-Methylnaphthalene	91-57-6	BRL	mg/kg dw	1	.333		
Method Blank	Acenaphthene	83-32-9	BRL	mg/kg dw	1	.333		
Method Blank	Acenaphthylene	208-96-8	BRL	mg/kg dw	1	.333		
Method Blank	Anthracene	120-12-7	BRL	mg/kg dw	1	.333		
Method Blank	Benzo(a)anthracene	56-55-3	BRL	mg/kg dw	1	.333		
Method Blank	Benzo(a)pyrene	50-32-8	BRL	mg/kg dw	1	.333		
Method Blank	Benzo(b)fluoranthene	205-99-2	BRL	mg/kg dw	1	.333		
Method Blank	Benzo(g,h,i)perylene	191-24-2	BRL	mg/kg dw	1	.333		
Method Blank	Benzo(k)fluoranthene	207-08-9	BRL	mg/kg dw	1	.333		
Method Blank	Chrysene	218-01-9	BRL	mg/kg dw	1	.333		
Method Blank	Dibenzo(a,h)anthracene	53-70-3	BRL	mg/kg dw	1	.333		
Method Blank	Fluoranthene	206-44-0	BRL	mg/kg dw	1	.333		
Method Blank	Fluorene	86-73-7	BRL	mg/kg dw	1	.333		
Method Blank	Indeno(1,2,3-cd)pyrene	193-39-5	BRL	mg/kg dw	1	.333		
Method Blank	Naphthalene	91-20-3	BRL	mg/kg dw	1	.333		
Method Blank	Phenanthrene	85-01-8	BRL	mg/kg dw	1	.333		
Method Blank	Pyrene	129-00-0	BRL	mg/kg dw	1	.333		
Method Blank	2,4,6-Tribromophenol (Surr)	118-79-6	85		1			
Method Blank	2-Fluorobiphenyl (Surr)	132-60-8	65		1			
Method Blank	2-Fluorophenol (Surr)	367-12-4	65.5		1			
Method Blank	Nitrobenzene-d5 (Surr)	4165-60-0	73.5		1			
Method Blank	Phenol-d5 (Surr)		78.5		1			
Method Blank	p-Terphenyl-d14 (Surr)	1718-51-0	79.2		1			

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
1-Methylnaphthalene	1.67	1.36	81.4	1.67	1.31	78.4	3.80	40	41.8-129	
2-Methylnaphthalene	1.67	1.51	90.4	1.67	1.42	85.0	6.10	40	52.9-114	
Acenaphthene	1.67	1.31	78.4	1.67	1.29	77.2	1.50	40	50.1-117	
Acenaphthylene	1.67	1.37	82.0	1.67	1.32	79.0	3.70	40	42.9-117	
Anthracene	1.67	1.57	94.0	1.67	1.46	87.4	7.30	40	60.4-122	
Benzo(a)anthracene	1.67	1.52	91.0	1.67	1.42	85.0	6.80	40	64.7-124	
Benzo(a)pyrene	1.67	1.49	89.2	1.67	1.43	85.6	4.10	40	56-118	
Benzo(b)fluoranthene	1.67	1.61	96.4	1.67	1.49	89.2	7.70	40	56.9-122	
Benzo(g,h,i)perylene	1.67	1.58	94.6	1.67	1.48	88.6	6.50	40	32.9-150	

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Semivolatile Organic Compounds - Soils **Method:** SW-846 8270D **Reporting Units:** mg/kg dw

QC Batch ID: Qb17081703 **Created Date:** 08/17/2017 15:12 **Created By:** PGrimm

Samples in this QC Batch: 17080802,01,03,05,07

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Benzo(k)fluoranthene	1.67	1.59	95.2	1.67	1.49	89.2	6.50	40	47.8-122	
Chrysene	1.67	1.41	84.4	1.67	1.33	79.6	5.80	40	58-128	
Dibenzo(a,h)anthracene	1.67	1.34	80.2	1.67	1.33	79.6	0.80	40	25.9-174	
Fluoranthene	1.67	1.67	100.0	1.67	1.54	92.2	8.10	40	46.8-137	
Fluorene	1.67	1.38	82.6	1.67	1.36	81.4	1.50	40	48.1-123	
Indeno(1,2,3-cd)pyrene	1.67	1.50	89.8	1.67	1.44	86.2	4.10	40	30-158	
Naphthalene	1.67	1.29	77.2	1.67	1.20	71.9	7.20	40	52.8-108	
Phenanthrene	1.67	1.52	91.0	1.67	1.40	83.8	8.20	40	59.3-122	
Pyrene	1.67	1.50	89.8	1.67	1.39	83.2	7.60	40	58.8-117	
2,4,6-Tribromophenol (Surr)	2.0	1.70	85.0	2.0	1.60	80.0			49.3-138	
2-Fluorobiphenyl (Surr)	1.3	0.851	65.5	1.3	0.845	65.0			41.4-111	
2-Fluorophenol (Surr)	2.0	1.38	69.0	2.0	1.32	66.0			37.1-101	
Nitrobenzene-d5 (Surr)	1.3	0.907	69.8	1.3	0.915	70.4			35.2-104	
Phenol-d5 (Surr)	2.0	1.50	75.0	2.0	1.49	74.5			36.1-96.7	
p-Terphenyl-d14 (Surr)	1.3	1.18	90.8	1.3	1.18	90.8			54.9-118	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	17080802.01	1-Methylnaphthalene	BRL	1.64	1.38	84.1	1.66	1.31	78.9	5.20	40	41.8-129	
MS	17080802.01	2-Methylnaphthalene	BRL	1.64	1.50	91.2	1.66	1.37	82.3	9.10	40	52.9-114	
MS	17080802.01	Acenaphthene	BRL	1.64	1.35	82.3	1.66	1.25	75.3	7.70	40	50.1-117	
MS	17080802.01	Acenaphthylene	BRL	1.64	1.37	83.5	1.66	1.30	78.3	5.20	40	42.9-117	
MS	17080802.01	Anthracene	BRL	1.64	1.51	91.8	1.66	1.42	85.3	6.10	40	60.4-122	
MS	17080802.01	Benzo(a)anthracene	BRL	1.64	1.49	90.4	1.66	1.36	81.5	9.10	40	64.7-124	
MS	17080802.01	Benzo(a)pyrene	BRL	1.64	1.45	88.0	1.66	1.34	80.3	7.90	40	56-118	
MS	17080802.01	Benzo(b)fluoranthene	BRL	1.64	1.62	98.3	1.66	1.55	92.9	4.40	40	56.9-122	
MS	17080802.01	Benzo(g,h,i)perylene	BRL	1.64	1.44	87.6	1.66	1.40	84.1	2.80	40	32.9-150	
MS	17080802.01	Benzo(k)fluoranthene	BRL	1.64	1.48	89.9	1.66	1.32	79.2	11.40	40	47.8-122	
MS	17080802.01	Chrysene	BRL	1.64	1.34	81.5	1.66	1.28	76.9	4.60	40	58-128	
MS	17080802.01	Dibenzo(a,h)anthracene	BRL	1.64	1.32	80.2	1.66	1.39	83.5	5.20	40	25.9-174	
MS	17080802.01	Fluoranthene	BRL	1.64	1.59	96.7	1.66	1.50	90.1	5.80	40	46.8-137	
MS	17080802.01	Fluorene	BRL	1.64	1.32	80.5	1.66	1.26	75.9	4.70	40	48.1-123	
MS	17080802.01	Indeno(1,2,3-cd)pyrene	BRL	1.64	1.38	83.9	1.66	1.34	80.5	2.90	40	30-158	
MS	17080802.01	Naphthalene	BRL	1.64	1.37	82.9	1.66	1.22	72.9	11.60	40	52.8-108	
MS	17080802.01	Phenanthrene	BRL	1.64	1.47	89.3	1.66	1.33	79.8	10.00	40	59.3-122	
MS	17080802.01	Pyrene	BRL	1.64	1.44	87.6	1.66	1.30	78.1	10.20	40	58.8-117	
MS	17080802.01	2,4,6-Tribromophenol (Surr)		1.97	1.70	85	1.99	1.54	77			49.3-138	
MS	17080802.01	2-Fluorobiphenyl (Surr)		1.31	0.909	68.3	1.32	0.857	64.6			41.4-111	

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Semivolatile Organic Compounds - Soils **Method:** SW-846 8270D **Reporting Units:** mg/kg dw

QC Batch ID: Qb17081703 **Created Date:** 08/17/2017 15:12 **Created By:** PGrimm

Samples in this QC Batch: 17080802,01,03,05,07

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	17080802.01	2-Fluorophenol (Surr)		1.97	1.42	71	1.99	1.37	68.5			37.1-101	
MS	17080802.01	Nitrobenzene-d5 (Surr)		1.31	0.975	73.3	1.32	0.910	68.6			35.2-104	
MS	17080802.01	Phenol-d5 (Surr)		1.97	1.56	78	1.99	1.49	74.5			36.1-96.7	
MS	17080802.01	p-Terphenyl-d14 (Surr)		1.31	1.22	91.7	1.32	1.13	85.2			54.9-118	

Refer to the Definition page for terms.

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Volatile Organic Compounds-Soil **Method:** SW-846 8260B **Reporting Units:** mg/kg dw

QC Batch ID: Qb17081705 **Created Date:** 08/17/2017 16:31 **Created By:** PGrimm

Samples in this QC Batch: 17080802,01,03,05,07

Sample Preparation PB17081706 SW5035 PGrimm

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	Benzene	71-43-2	BRL	mg/kg dw	1	0.0050		
Method Blank	Ethylbenzene	100-41-4	BRL	mg/kg dw	1	0.0050		
Method Blank	Naphthalene	91-20-3	BRL	mg/kg dw	1	0.0050		
Method Blank	Toluene	108-88-3	BRL	mg/kg dw	1	0.0050		
Method Blank	xylene-o	95-47-6	BRL	mg/kg dw	1	0.0050		
Method Blank	xylenes (m&P)	108-38-3&106-42-3	BRL	mg/kg dw	1	0.010		
Method Blank	Dibromofluoromethane (Surr)	1868-53-7	88.0		1			
Method Blank	p-Bromofluorobenzene (Surr)	460-00-4	124.0		1			
Method Blank	Toluene-d8 (Surr)	2037-26-5	100.0		1			

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Benzene	0.05	0.0390	78.0	0.05	0.0410	82.0	5.00	30	57.3-122	
Ethylbenzene	0.05	0.0540	108.0	0.05	0.0570	114.0	5.40	30	56.3-139	
Toluene	0.05	0.0430	86.0	0.05	0.0470	94.0	8.90	30	67.3-133	
xylene-o	0.05	0.0540	108.0	0.05	0.0580	116.0	7.10	30	51.4-144	
xylenes (m&P)	0.1	0.111	111.0	0.1	0.117	117.0	5.30	30	53.7-146	
Dibromofluoromethane (Surr)	0.05	0.0440	88.0	0.05	0.0450	90.0			61.2-143	
p-Bromofluorobenzene (Surr)	0.05	0.0640	128.0	0.05	0.0630	126.0			69.4-143	
Toluene-d8 (Surr)	0.05	0.0500	100.0	0.05	0.0510	102.0			62.3-146	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	17080306.01	Benzene	BRL	0.05	0.0400	77.6		0.0400				57.3-122	
MS	17080306.01	Ethylbenzene	0.00810	0.05	0.0580	99.8		0.0580				56.3-139	
MS	17080306.01	Toluene	BRL	0.05	0.0410	77.6		0.0410				67.3-133	
MS	17080306.01	xylene-o	BRL	0.05	0.0640	120.0		0.0640				51.4-144	
MS	17080306.01	xylenes (m&P)	BRL	0.1	0.125	119.0		0.125				53.7-146	
MS	17080306.01	Dibromofluoromethane (Surr)		0.05	0.0440	88.0						61.2-143	
MS	17080306.01	p-Bromofluorobenzene (Surr)		0.05	0.0600	120.0						69.4-143	
MS	17080306.01	Toluene-d8 (Surr)		0.05	0.0460	92.0						62.3-146	

Refer to the Definition page for terms.

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis:	**Volatile Organic Compounds-Soil**	**Method:**	**SW-846 8260B**	**Reporting Units:**	**mg/kg dw**
QC Batch ID:	Qb17081705	**Created Date:**	08/17/2017 16:31	**Created By:**	PGrimm
Samples in this QC Batch:	17080802,01,03,05,07				

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Volatile Organic Compounds-Aqueous **Method:** SW-846 8260B **Reporting Units:** ug/L

QC Batch ID: Qb17082101 **Created Date:** 08/21/2017 10:38 **Created By:** PGrimm

Samples in this QC Batch: 17080802,02,04,06,08

Sample Preparation	PB17082101	SW5030b	PGrimm

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	Benzene	71-43-2	BRL	ug/L	1	1.0		
Method Blank	Ethylbenzene	100-41-4	BRL	ug/L	1	1.0		
Method Blank	Toluene	108-88-3	BRL	ug/L	1	1.0		
Method Blank	xylene-o	95-47-6	BRL	ug/L	1	1.0		
Method Blank	xylenes (m&P)	108-38-3&106-42-3	BRL	ug/L	1	2.0		
Method Blank	Dibromofluoromethane (Surr)	1868-53-7	94.2		1			
Method Blank	Toluene-d8 (Surr)	2037-26-5	106.0		1			
Method Blank	p-Bromofluorobenzene (Surr)	460-00-4	135.0		1			

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Benzene	50	41.2	82.4	50	50.3	101.0	19.90	30	69.4-137	
Ethylbenzene	50	39.3	78.6	50	49.5	99.0	23.00	30	54.9-155	
Toluene	50	39.7	79.4	50	49.3	98.6	21.60	30	79.6-130	
xylene-o	50	46.4	92.8	50	59.6	119.0	24.90	30	74-134	
xylenes (m&P)	100	77.8	77.8	100	98.5	98.5	23.50	30	77.7-132	
Dibromofluoromethane (Surr)	50	46.3	92.6	50	46.6	93.2			56.9-151	
Toluene-d8 (Surr)	50	52.9	106.0	50	53	106.0			77.8-140	
p-Bromofluorobenzene (Surr)	50	69.7	139.0	50	68.8	138.0			84.4-152	

Refer to the Definition page for terms.

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Semivolatile Organic Compounds-Aqueous **Method:** SW-846 8270D **Reporting Units:** ug/L

QC Batch ID: Qb17082102 **Created Date:** 08/21/2017 11:09 **Created By:** PGrimm

Samples in this QC Batch: 17080802,02,04,06,08

Extraction	PB17082102	SW3510c	PGrimm

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	1-Methylnaphthalene	90-12-0	BRL	ug/L	1	10		
Method Blank	2-Methylnaphthalene	91-57-6	BRL	ug/L	1	10		
Method Blank	Acenaphthene	83-32-9	BRL	ug/L	1	10		
Method Blank	Acenaphthylene	208-96-8	BRL	ug/L	1	10		
Method Blank	Anthracene	120-12-7	BRL	ug/L	1	10		
Method Blank	Benzo(a)anthracene	56-55-3	BRL	ug/L	1	10		
Method Blank	Benzo(a)pyrene	50-32-8	BRL	ug/L	1	10		
Method Blank	Benzo(b)fluoranthene	205-99-2	BRL	ug/L	1	10		
Method Blank	Benzo(g,h,i)perylene	191-24-2	BRL	ug/L	1	10		
Method Blank	Benzo(k)fluoranthene	207-08-9	BRL	ug/L	1	10		
Method Blank	Chrysene	218-01-9	BRL	ug/L	1	10		
Method Blank	Dibenzo(a,h)anthracene	53-70-3	BRL	ug/L	1	10		
Method Blank	Fluoranthene	206-44-0	BRL	ug/L	1	10		
Method Blank	Fluorene	86-73-7	BRL	ug/L	1	10		
Method Blank	Indeno(1,2,3-cd)pyrene	193-39-5	BRL	ug/L	1	10		
Method Blank	Naphthalene	91-20-3	BRL	ug/L	1	10		
Method Blank	Phenanthrene	85-01-8	BRL	ug/L	1	10		
Method Blank	Pyrene	129-00-0	BRL	ug/L	1	10		
Method Blank	2-Fluorophenol (Surr)	367-12-4	42.3		1			
Method Blank	Phenol-d5 (Surr)		36.3		1			
Method Blank	Nitrobenzene-d5 (Surr)	4165-60-0	60.5		1			
Method Blank	2-Fluorobiphenyl (Surr)	132-60-8	55.4		1			
Method Blank	2,4,6-Tribromophenol (Surr)	118-79-6	72.2		1			
Method Blank	p-Terphenyl-d14 (Surr)	1718-51-0	59.6		1			

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
1-Methylnaphthalene	100	67.3	67.3	100	63.3	63.3	6.10	40	42.9-101	
2-Methylnaphthalene	100	70.9	70.9	100	68.5	68.5	3.40	40	46.8-102	
Acenaphthene	100	66.5	66.5	100	63.4	63.4	4.80	40	44.5-109	
Acenaphthylene	100	69.5	69.5	100	66.8	66.8	4.00	40	42.3-104	
Anthracene	100	73.2	73.2	100	71.4	71.4	2.50	40	62.2-106	
Benzo(a)anthracene	100	70.7	70.7	100	64.4	64.4	9.30	40	62.2-110	
Benzo(a)pyrene	100	68.6	68.6	100	66.6	66.6	2.80	40	58.9-115	
Benzo(b)fluoranthene	100	75.6	75.6	100	66.8	66.8	12.40	40	51.9-111	
Benzo(g,h,i)perylene	100	67.3	67.3	100	66.8	66.8	0.70	40	35.8-132	

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: Semivolatile Organic Compounds-Aqueous **Method:** SW-846 8270D **Reporting Units:** ug/L

QC Batch ID: Qb17082102 **Created Date:** 08/21/2017 11:09 **Created By:** PGrimm

Samples in this QC Batch: 17080802,02,04,06,08

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Benzo(k)fluoranthene	100	74.8	74.8	100	71.3	71.3	4.80	40	44.4-134	
Chrysene	100	62.7	62.7	100	62.4	62.4	0.50	40	52.2-123	
Dibenzo(a,h)anthracene	100	52.6	52.6	100	54	54.0	2.60	40	17.2-161	
Fluoranthene	100	76.3	76.3	100	74.6	74.6	2.30	40	46.7-130	
Fluorene	100	67.3	67.3	100	64.8	64.8	3.80	40	44.2-113	
Indeno(1,2,3-cd)pyrene	100	64.1	64.1	100	62.3	62.3	2.80	40	47.5-126	
Naphthalene	100	63.2	63.2	100	58.6	58.6	7.60	40	45.7-96.1	
Phenanthrene	100	69.1	69.1	100	68.4	68.4	1.00	40	61.7-104	
Pyrene	100	70.3	70.3	100	65.7	65.7	6.80	40	48.4-100	
2-Fluorophenol (Surr)	120	55.8	46.5	120	48.1	40.1			14.1-74.7	
Phenol-d5 (Surr)	120	48.7	40.6	120	43.1	35.9			7.07-52.7	
Nitrobenzene-d5 (Surr)	80	51.4	64.3	80	42.6	53.3			38.3-101	
2-Fluorobiphenyl (Surr)	80	48.6	60.8	80	40.8	51.0			42.8-106	
2,4,6-Tribromophenol (Surr)	120	90.2	75.2	120	80.3	66.9			45.2-132	
p-Terphenyl-d14 (Surr)	80	52.9	66.1	80	46.2	57.8			28.6-126	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	17080802.08	1-Methylnaphthalene	BRL	100	59.8	59.8		59.8				42.9-101	
MS	17080802.08	2-Methylnaphthalene	BRL	100	64.1	63.9		64.1				46.8-102	
MS	17080802.08	Acenaphthene	BRL	100	59.1	59.1		59.1				44.5-109	
MS	17080802.08	Acenaphthylene	BRL	100	63.6	63.6		63.6				42.3-104	
MS	17080802.08	Anthracene	BRL	100	66.5	66.5		66.5				62.2-106	
MS	17080802.08	Benzo(a)anthracene	BRL	100	64.1	63.8		64.1				62.2-110	
MS	17080802.08	Benzo(a)pyrene	BRL	100	61	60.8		61				58.9-115	
MS	17080802.08	Benzo(b)fluoranthene	BRL	100	67.6	67.6		67.6				51.9-111	
MS	17080802.08	Benzo(g,h,i)perylene	BRL	100	61.7	61.7		61.7				35.8-132	
MS	17080802.08	Benzo(k)fluoranthene	BRL	100	61.1	61.1		61.1				44.4-134	
MS	17080802.08	Chrysene	BRL	100	59.6	59.3		59.6				52.2-123	
MS	17080802.08	Dibenzo(a,h)anthracene	BRL	100	48.9	48.9		48.9				17.2-161	
MS	17080802.08	Fluoranthene	BRL	100	72.8	72.8		72.8				46.7-130	
MS	17080802.08	Fluorene	BRL	100	61.2	61.2		61.2				44.2-113	
MS	17080802.08	Indeno(1,2,3-cd)pyrene	BRL	100	58.9	58.9		58.9				47.5-126	
MS	17080802.08	Naphthalene	BRL	100	56.2	55.6		56.2				45.7-96.1	
MS	17080802.08	Phenanthrene	BRL	100	61.5	61.3		61.5				61.7-104	M
MS	17080802.08	Pyrene	BRL	100	65.1	65.1		65.1				48.4-100	
MS	17080802.08	2-Fluorophenol (Surr)		120	43.5	36.3						14.1-74.7	
MS	17080802.08	Phenol-d5 (Surr)		120	40.1	33.4						7.07-52.7	

RP17082102

QUALITY CONTROL DATA

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: **Semivolatile Organic Compounds-Aqueous** **Method:** **SW-846 8270D** **Reporting Units:** **ug/L**

QC Batch ID: Qb17082102 **Created Date:** 08/21/2017 11:09 **Created By:** PGrimm

Samples in this QC Batch: 17080802,02,04,06,08

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	17080802.08	Nitrobenzene-d5 (Surr)		80	41.3	51.6						38.3-101	
MS	17080802.08	2-Fluorobiphenyl (Surr)		80	40.8	51.0						42.8-106	
MS	17080802.08	2,4,6-Tribromophenol (Surr)		120	75.3	62.8						45.2-132	
MS	17080802.08	p-Terphenyl-d14 (Surr)		80	41.8	52.3						28.6-126	

Refer to the Definition page for terms.

CASE NARRATIVE

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon
Project ID:	Memorial Stadium
Date Received:	08/07/2017
Collected By:	CEH

Matrix Spikes Liquid
Method SW8270d: The matrix spike/ matrix spike duplicate recoveries were outside the established laboratory control limits for several analytes. The lab spike recoveries were inside acceptable limits, so the data was reported. The matrix spikes have been qualified accordingly.

SW8270d: Several surrogates were outside the established laboratory control limits for "TW-1", "TW-3-1" , and "TW-4". The data has been qualified correctly.

SW8260b: Several surrogates were outside the established laboratory control limits for "TW-3-1". The data has been qualified correctly.

Released By: PGrimm

Title: Technical Director

RP17082102

TERM AND QUALIFIER DEFINITION

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

General Term Definition	
Conc.	Concentration
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
ND	Non Detect - Not Detected at or above adjusted reporting limit
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
RL	adjusted Reporting Limit (QL – Quantification Limit)
MDL	adjusted Method Detection Limit (LOD – Limit of Detection)
RegLimit	Regulatory Limit
mg/l	Milligrams per Liter
mg/kg	Milligrams per Kilogram
ppm	Parts per Million
µg/L	Micrograms per Liter
µg/g	Micrograms per Gram
ppb	Parts per Billion
gr/gal	Grains per Gallon
SU	Standard Units
CCU	Cobalt Color Units
NTU	Nephelometric Turbidity Units
µS/cm	Microsiemens per cm at 25C
P/A	Presence/Absence
CFU	Colony Forming Units
MPN	Most Probable Number
RB	Reagent Blank
MB	Method Blank
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LFM	Laboratory Fortified Matrix (MS – Matrix Spike)
LFMD	Laboratory Fortified Matrix Duplicate (MSD – Matrix Spike Duplicate)
DUP	Sample Duplicate
RPD	Relative Percent Difference
%Rec	Percent Recovery
TNTC	Too numerous to count
NC	Not Calculable
SG	Silica Gel - Clean-Up
BRL	Below Reporting Limit
BDL	Below Detection Limit

Qualifier Definition	
M	Estimated value-The reported value failed the established quality control criteria for accuracy and /or precision.
S	The surrogate recovery was outside the established laboratory recovery limit.

RP17082102

SAMPLE SUMMARY

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Project ID :
Memorial Stadium

Report To : Client Name: Terracon Attn: Justin Johnson
Client Address: 2201 Rowland Ave. P.O.#.:
City, State, Zip: Savannah, GA, 31404

The laboratory has analyzed the following samples:

Client Sample ID	Matrix	Sample ID	Date Received	Date Collected	Collected by
TW-1-5	Soil	17080802.01	8/7/2017 15:20	8/7/2017 11:00	CEH
TW-1	Aqueous	17080802.02	8/7/2017 15:20	8/7/2017 11:10	CEH
TW-2-4	Soil	17080802.03	8/7/2017 15:20	8/7/2017 11:50	CEH
TW-2	Aqueous	17080802.04	8/7/2017 15:20	8/7/2017 12:15	CEH
TW-3-1	Soil	17080802.05	8/7/2017 15:20	8/7/2017 13:00	CEH
TW-3	Aqueous	17080802.06	8/7/2017 15:20	8/7/2017 13:10	CEH
TW-4-4	Soil	17080802.07	8/7/2017 15:20	8/7/2017 13:50	CEH
TW-4	Aqueous	17080802.08	8/7/2017 15:20	8/7/2017 14:40	CEH

Date: 08/21/2017 15:47

RP17082102

SAMPLE PREPARATION INFORMATION

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Justin Johnson
Project Name:	Memorial Stadium	Date:	08/21/2017

Sample ID	Test	Prep Method	Date Prepared	Analyst	Prep Batch ID
17080802.01	% Moisture	SM2540b	08/09/2017 12:00	ebrunner	PB17081401
17080802.01	SVOA-Terracon Soil	SW3550c	08/17/2017 10:39	PGrimm	PB17081704
17080802.01	VOC-Terracon Soil	SW5035	08/14/2017 08:29	PGrimm	PB17081706
17080802.02	SVOC	SW3510c	08/14/2017 08:08	PGrimm	PB17082102
17080802.02	VOC	SW5030b	08/15/2017 08:38	PGrimm	PB17082101
17080802.03	% Moisture	SM2540b	08/09/2017 12:00	ebrunner	PB17081401
17080802.03	SVOA-Terracon Soil	SW3550c	08/17/2017 10:39	PGrimm	PB17081704
17080802.03	VOC-Terracon Soil	SW5035	08/14/2017 08:29	PGrimm	PB17081706
17080802.04	SVOC	SW3510c	08/14/2017 08:08	PGrimm	PB17082102
17080802.04	VOC	SW5030b	08/15/2017 08:38	PGrimm	PB17082101
17080802.05	% Moisture	SM2540b	08/09/2017 12:00	ebrunner	PB17081401
17080802.05	SVOA-Terracon Soil	SW3550c	08/17/2017 10:39	PGrimm	PB17081704
17080802.05	VOC-Terracon Soil	SW5035	08/14/2017 08:29	PGrimm	PB17081706
17080802.06	SVOC	SW3510c	08/14/2017 08:08	PGrimm	PB17082102
17080802.06	VOC	SW5030b	08/15/2017 08:38	PGrimm	PB17082101
17080802.07	% Moisture	SM2540b	08/09/2017 12:00	ebrunner	PB17081401
17080802.07	SVOA-Terracon Soil	SW3550c	08/17/2017 10:39	PGrimm	PB17081704
17080802.07	VOC-Terracon Soil	SW5035	08/14/2017 08:29	PGrimm	PB17081706
17080802.08	SVOC	SW3510c	08/14/2017 08:08	PGrimm	PB17082102
17080802.08	VOC	SW5030b	08/15/2017 08:38	PGrimm	PB17082101

RP17082102

SAMPLE CONDITION CHECKLIST

Job ID : 17080802

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name : Terracon		**Contact :**	Justin Johnson
Client Address : 2201 Rowland Ave.		**Contact Phone :**	912-662-8481
JobID : 17080802	**Date Received :** 08/07/2017	**Time Received :**	03:20 PM
Temperature : 15.8	**Sample pH :** OK		
ThermometerID : 170145743	**pHPaperID :** HC687572, HC573059		

Comments : Include actions taken to resolve discrepancies/problem:

On ice

	Check Points	Yes	No	N/A
1	All samples were logged or labeled.	✔		
2	Bottle count on C-O-C matches bottle found.	✔		
3	C-O-C signed and dated.	✔		
4	Cooler seal present and signed.	✔		
5	If requested, sample(s) received with signed sample custody seal			✔
6	Sample amount is sufficient for analyses requested	✔		
7	Sample containers arrived in tact. (if no, comment)	✔		
8	Sample ID lables Match C-O-C ID's	✔		
9	Sample received at 6°C or Less		✔	
10	Sample(s) in a cooler.	✔		
11	Sample(s) were received at the proper pH.	✔		
12	Sample(s) were received in appropriate contatiner. (If no, comment)	✔		
13	Samples accepted.	✔		
14	Samples received within holding time for analysis requested	✔		
15	Zero headspace in liquid VOA vials	✔		

CheckIn By : Elizabeth Grimm CheckIn Date : 08/08/2017

Date: 08/21/2017 15:47

RP17082102

COMMERCIAL LABORATORY STIPULATION

Georgia Rules for Commercial Environmental Laboratory Accreditation
Chapter 391-3-26

Job ID : 17080802

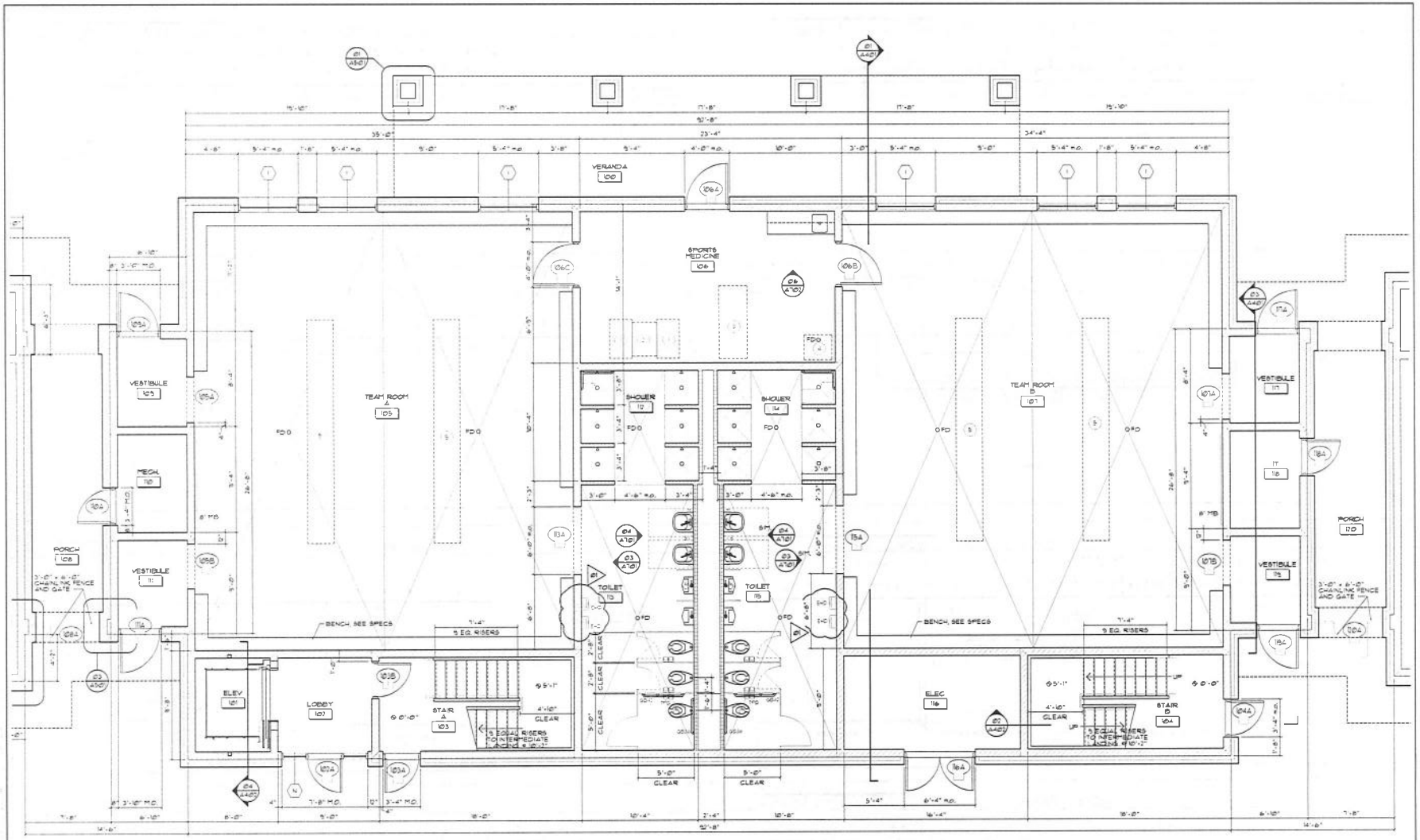
Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Laboratory:	Avery Laboratories and Environmental Services, LLC
Accreditor:	NELAC: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87941
Scope:	NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS
Effective Date:	July 1, 2016 **Expiration Date:** July 1, 2017

As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Avery Laboratories and Environmental Services - Savannah is accredited by the Florida Department of Health under the National Environmental Laboratory Approval Program (NELAP). If you have any further questions regarding accreditation status for Avery Laboratories and Environmental Services, please contact: Paul Grimm.

Avery Laboratories and Environmental Services, LLC
2720 Gregory St. Unit 200
Savannah, GA 31404
Phone: (912) 944-3748
Fax: (912) 234-9294



01 ENLARGED ENDZONE BUILDING PLAN - E2

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

PLAN NORTH

EQUIPMENT LIST			
1	TAPING TABLE	BY OWNER	
2	WORK TABLE	BY OWNER	
3	TRAINING TABLE	BY OWNER	
4	ICE MAKER	BY OWNER	NOTE 1
5	MOUNTED BENCH	BY OWNER	

NOTES:
1 CONTRACTOR TO PROVIDE: DRAIN, POWER AND WATER

HI FIELD VI

E1 E2 E3

KEYPLAN

CHA

Consultants:

HUSSEY GAY BELL

SGD

STATE OF GEORGIA
ERIC JOHNSON
REGISTERED ARCHITECT

CHATHAM COUNTY GEORGIA 1777

THE MEMORIAL STADIUM COMPLEX
CHATHAM COUNTY
SAVANNAH, GEORGIA

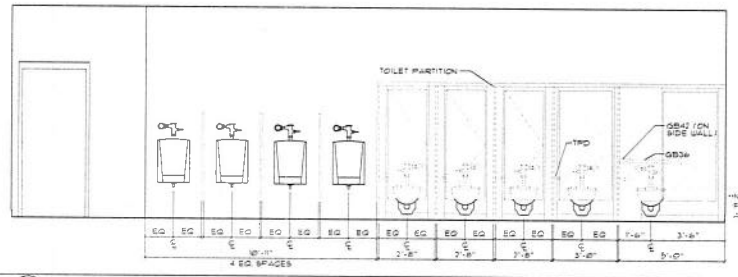
No.	Description/Remarks	Date
	BID SET	
01	Addendum #01	08/29/11

ENDZONE BUILDING ENLARGED PLANS

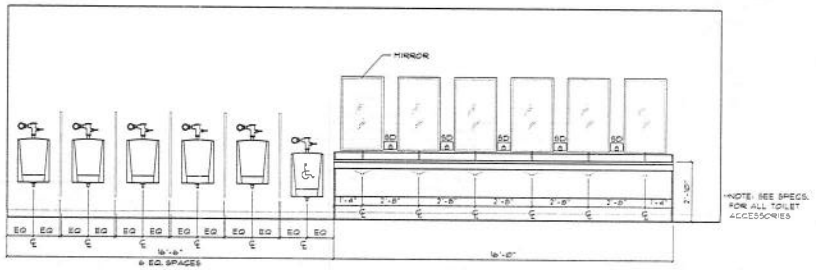
Designed By	Drawn By	Checked By
XXX	XXX	XXX
Issue Date:	Project No: 06218	Scale: AS SHOWN

Drawing No.:

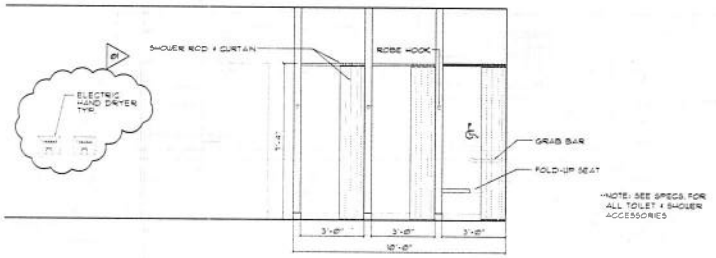
A-301



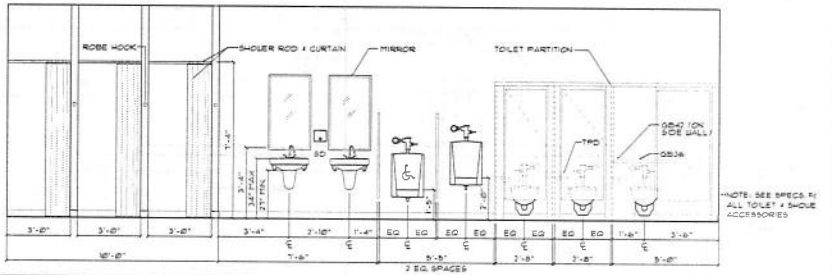
01 MEN'S TOILET, TYPICAL ROOM 127, ROOM 137 (OPP.)



02 MEN'S TOILET, TYPICAL ROOM 127, ROOM 137 (OPP.)



03 TOILET/SHOWER, TYPICAL ROOM 113, ROOM 114 (OPP.)



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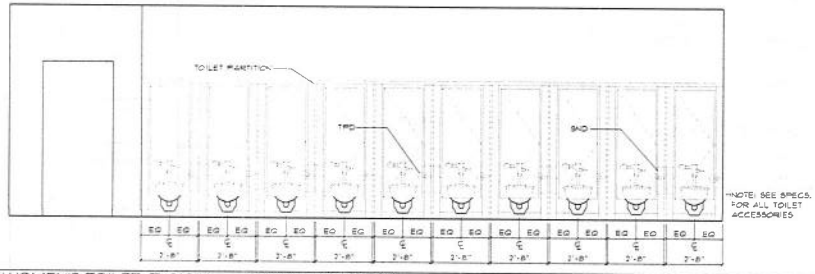
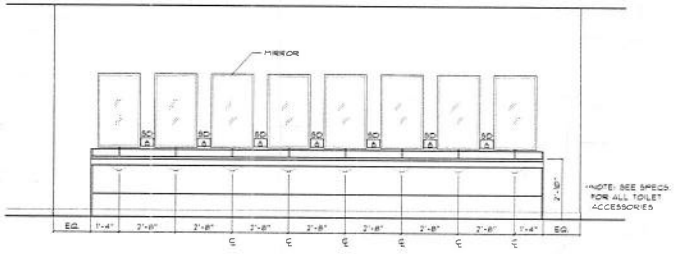
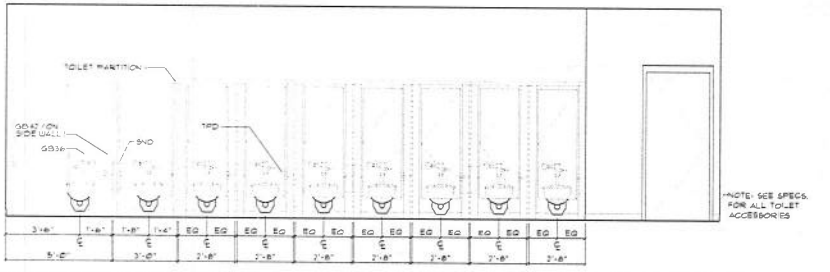


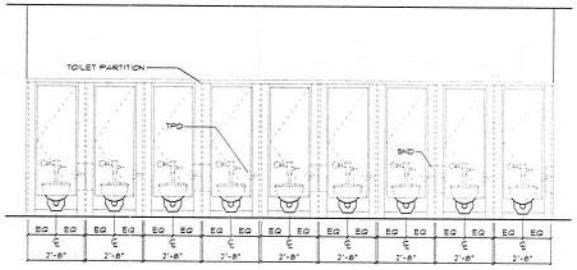
05 WOMEN'S TOILET, TYPICAL ROOM 129, ROOM 139 (OPP.)



06 WOMEN'S TOILET, TYPICAL ROOM 129, ROOM 139 (OPP.)



07 WOMEN'S TOILET, TYPICAL ROOM 129, ROOM 139 (OPP.)



08 WOMEN'S TOILET, TYPICAL ROOM 129, ROOM 139 (OPP.)

CHA

Consultants

HUSSEY GAY BELL

SCD

STATE OF GEORGIA
LOREN B. JOHNSON
REGISTERED ARCHITECT

THE MEMORIAL STADIUM COMPLEX
CHATHAM COUNTY
SAVANNAH, GEORGIA

BID SET

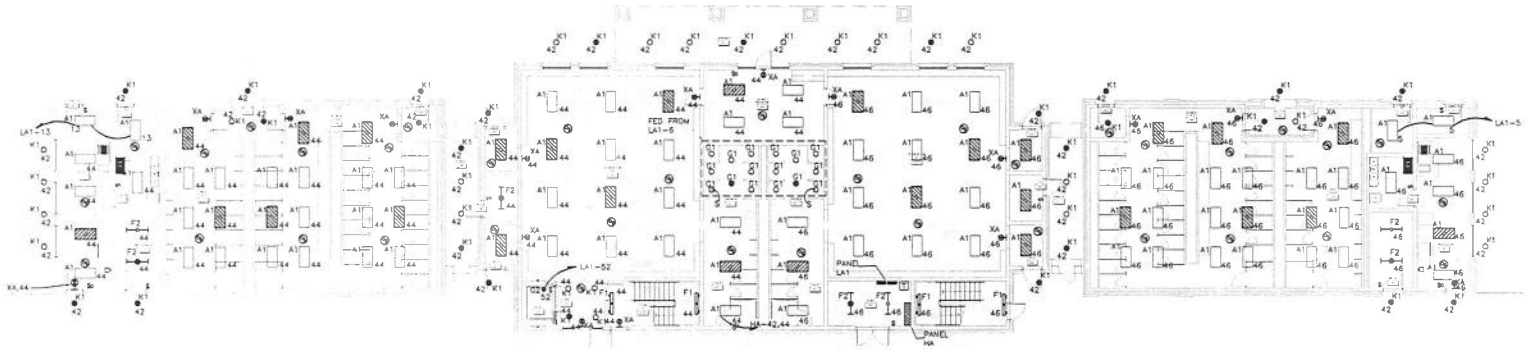
01	Addendum #01	06/29/17

INTERIOR ELEVATIONS

Designed By:	Drawn By:	Checked By:
XXX	XXX	XXX
Issue Date:	Project No.:	Scale:
	SC15	AS SHOWN

Drawing No.:

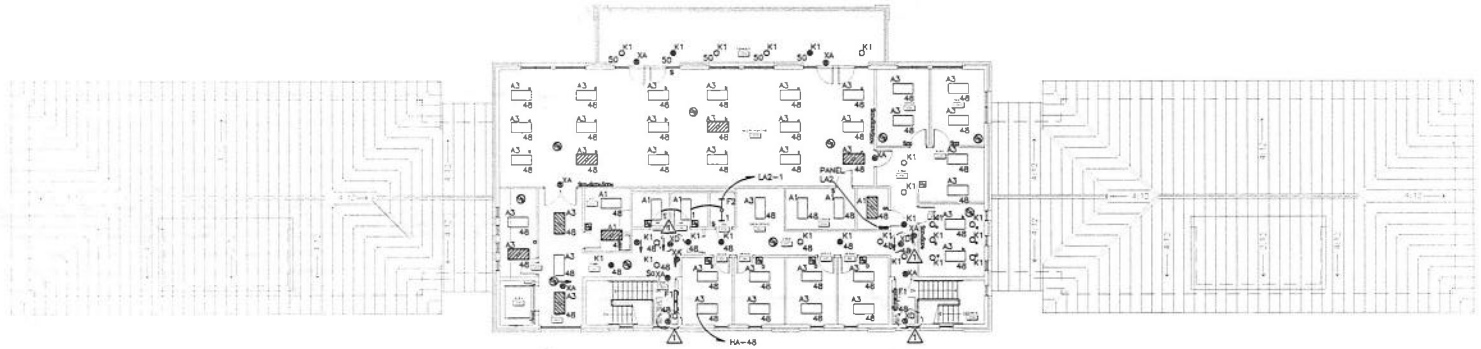
A-701



1 E1.1 ENDZONE BUILDING FIRST FLOOR LIGHTING PLAN
SCALE: 3/32" = 1' - 0"

NOTES:

1. SEE DETAIL 2/E3.1 FOR LIGHTING CONTROL SCHEMATIC AND SCHEDULE.



2 E1.1 ENDZONE BUILDING SECOND FLOOR LIGHTING PLAN
SCALE: 3/32" = 1' - 0"

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER/SERIES	REFLECTOR/DIFFUSER	FINISH	MOUNTING	LUMENS	NOTES
A1	2'X4' FLATPANEL	SIMKAR LDP SERIES OR PRIOR APPROVED EQUAL		WHITE	RECESSED CEILING	5000	
A3	2'X4' LED DECORATIVE TROFFER	SIMKAR ATA SERIES OR PRIOR APPROVED EQUAL	FROSTED ACRYLIC LENS	WHITE	RECESSED CEILING	5000	
EB	EMERGENCY LIGHTING UNIT	EVENLITE NKLED SERIES			WALL MOUNTED AT 10' AFF		
F1	4' LED STRIP LIGHT	CERTOLUX VRSE SERIES OR PRIOR APPROVED EQUAL	POLYCARBONATE CLEAR LENS	WHITE	WALL SURFACE	3400	W/ INTEGRAL BATTERY & OCCUPANCY SENSOR
F2	4' LED STRIP LIGHT	SIMKAR LCH SERIES OR PRIOR APPROVED EQUAL	FULL FROSTED LENS	WHITE	WALL SURFACE	2500	NOTE 1
G1	6"ø LED LENS DOWNLIGHT	SPECTRUM SGE6LED SERIES OR PRIOR APPROVED EQUAL		WHITE	RECESSED CEILING	1100	WET LOCATION RATED
G2	ELEVATOR PIT LIGHT	HUBBELL NV2 SERIES RIO-A-LITE CVPW SERIES STONCO VWKL SERIES EXCELINE RLW SERIES DAYBRITE VPSW SERIES LSI ABSOLITE EASTPORT SERIES	CLEAR GLASS GLOBE WITH DIE CAST ALUMINUM GUARD, THERMOPLASTIC GUARD OR WIRE GUARD.	EXPOSED PARTS - CORROSION RESISTANT	WALL	1-42W TYT	
H	LED LOW-BAY	SIMKAR LDB 22 SERIES OR PRIOR APPROVED EQUAL	22" ALUMINUM REFLECTOR	DIE CAST ALUMINUM	SUSPENDED	24000	PROVIDE COLD WEATHER DRIVER

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER/SERIES	REFLECTOR/DIFFUSER	FINISH	MOUNTING	LUMENS	NOTES
K1	6"ø LED LENS DOWNLIGHT	SPECTRUM SGE6LED SERIES OR PRIOR APPROVED EQUAL	SEMI-DIFFUSE ALZAK		RECESSED CEILING	2000	
K3	6"ø LED DOWNLIGHT	SPECTRUM SGE6LED SERIES OR PRIOR APPROVED EQUAL	PARABOLIC ALUMINUM	WHITE	RECESSED CEILING	4500	NARROW LIGHT DISTRIBUTION
N1	DECORATIVE WALL MOUNTED AREA LIGHT	SENTRY LIGHTING SBCA6-NG SERIES	GLASS REFRACTOR TYPE III DISTRIBUTION	DARK BRONZE	WALL SURFACE MOUNTING HEIGHT XXX	1-70W MH	
XA	SINGLE FACE EXIT	EVENLITE SENTRY SERIES	RED LETTERS "EXIT", NICKEL CADMIUM BATTERY.	STENCIL FACE BRUSHED ALUMINUM	UNIVERSAL	LED	
XB	DOUBLE FACE EXIT						
XC	WET LOCATION / VANDAL RESISTANT EXIT	EVENLITE CDW SERIES	RED LETTERS "EXIT", NICKEL CADMIUM BATTERY.	STENCIL FACE BRUSHED ALUMINUM	UNIVERSAL	LED	
XD	AREA OF REFUGE LIGHT	EVENLITE SENTRY SERIES	BLUE LETTERS "AREA OF REFUGE", NICKEL CADMIUM BATTERY.	STENCIL FACE BRUSHED ALUMINUM	UNIVERSAL	LED	
U1	INGRADE UP LIGHT	VISTAPRO 1185 SERIES OR PRIOR APPROVED EQUAL	15° TILT OPTICS	BRASS	FLUSH WITH GRADE	3000° - 5000° K	WET LOCATION
U2	INGRADE UP LIGHT	VISTAPRO 1188 SERIES OR PRIOR APPROVED EQUAL	NARROW SPOT DISTRIBUTION	BRASS	FLUSH WITH GRADE	3000° - 5000° K	WET LOCATION

NOTES:

1. PROVIDE CHAIN KIT WITH FIXTURES TO HANG BELOW DUCTWORK AS NECESSARY.

CHA

Consultants:

HUSSEY GAY BELL

SCD

GEORGIA REGISTERED No. 26308 PROFESSIONAL ENGINEER

CHATHAM COUNTY 1777 GEORGIA

THE MEMORIAL STADIUM COMPLEX
CHATHAM COUNTY
SAVANNAH, GEORGIA

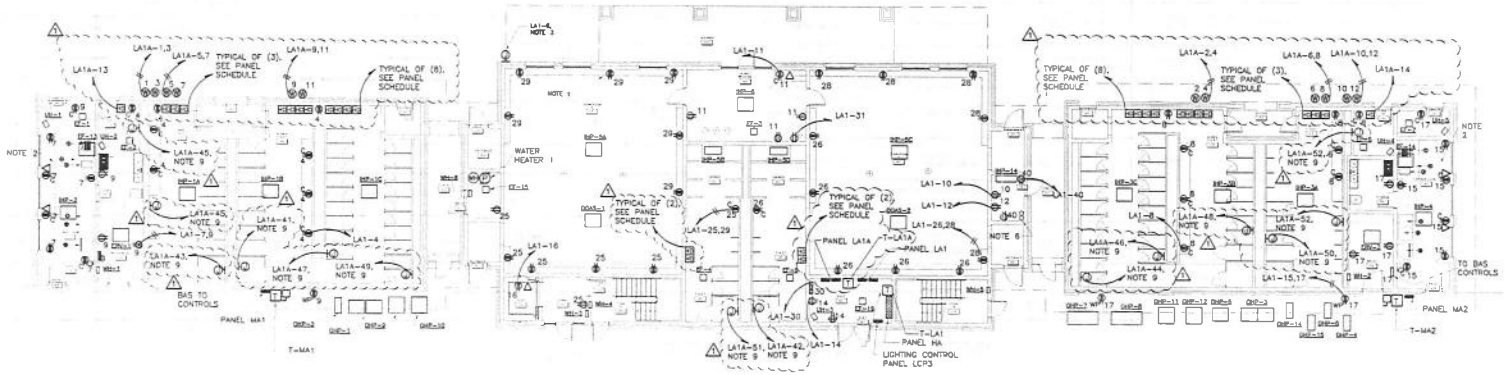
No.	Submittal/Revision	Appvd.	By	Date
	RIO SET			MM/DD/YY
1	ADDENDUM 1			MM/DD/YY

ENDZONE BUILDING LIGHTING PLAN

Designed By:	Drawn By:	Checked By:
WRL	WLS	WRL
Issue Date:	Project No:	Scale:
07/09/2017	16715	

Drawing No.:

E1.1

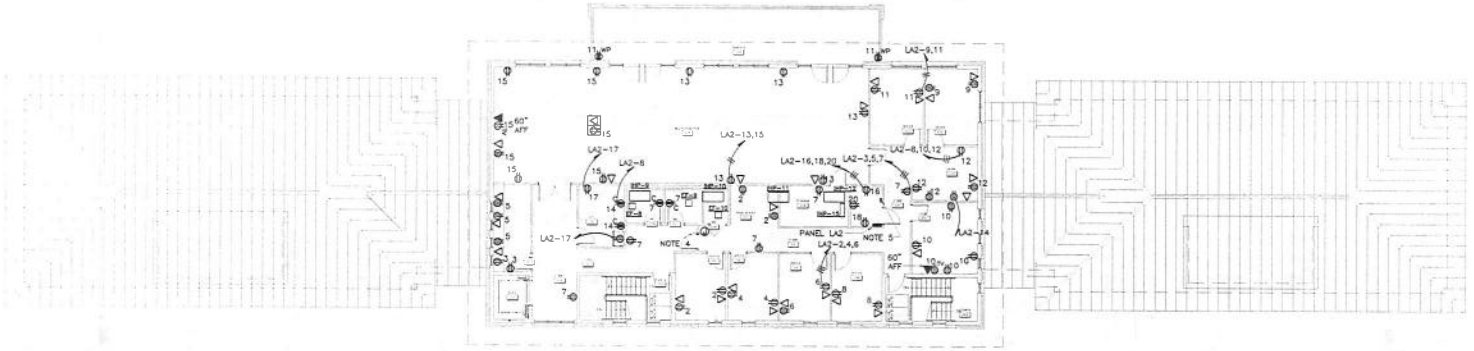


1 E2.1 ENDZONE BUILDING FIRST FLOOR POWER PLAN
SCALE: 3/32" = 1' - 0"

NOTES:

1. RECEPTACLE SHOWN IN TEAM ROOMS SHALL BE MOUNTED 6" ABOVE BENCHES.
2. SEE CONCESSION EQUIPMENT SCHEDULE ON E4.1 FOR CONNECTION REQUIREMENTS.
3. PROVIDE CONNECTION TO THE CLOCK. SEE SE DRAWINGS FOR EXACT LOCATION.
4. EXTEND 3/4"C & PULL STRING FROM BOX SHOWN TO IT ROOM FOR CONNECTION TO CARD READER IN DOOR 212A. MOUNT BOX ABOVE CEILING ON SECURE SIDE. PROVIDE 3/4" FROM BOX INTO DOOR FRAME. COORDINATE CONNECTION REQUIREMENTS AND EXACT LOCATIONS WITH CARD READER SYSTEM INSTALLER AND DOOR FRAME SHOP DRAWINGS PRIOR TO INSTALLATION. CONNECT POWER SUPPLY TO NEAREST 120V RECEPTACLE CIRCUIT.
5. PROVIDE 2-4" SLEEVES IN FLOOR FOR BACKBONE CABLING. STUB-UP 3" AFF.
6. STUB-UP TELECOMMUNICATIONS SERVICE BACKBONE CONDUITS 3" AFF. SEE SITE PLAN.
7. PROVIDE 1/2"C. W/(2) No. 12 AWG & (1) No. 12 AWG (G) BEING FED FROM PANEL LA1A. TYPICAL OF (12), SEE PANEL SCHEDULE.
8. PROVIDE 1/2"C. W/(2) No. 12 AWG & (1) No. 12 AWG (G) BEING FED FROM PANEL LA1A. TYPICAL OF (24), SEE PANEL SCHEDULE.

1 @ PROVIDE JUNCTION BOX AND CONNECTION TO EACH INFARED SENSOR/VALVE ALONG THIS WALL. CONNECT TO CIRCUIT SHOWN



2 E2.1 ENDZONE BUILDING SECOND FLOOR POWER PLAN
SCALE: 3/32" = 1' - 0"

CHA

Consultants:

HUSSEY GAY BELL

SCD

GEORGIA REGISTERED ARCHITECT No. 26,208 EXPIRATION DATE: DECEMBER 31

CHATHAM COUNTY GEORGIA 1777

No.	Description	Date
	DID SET	
1	ADDENDUM 1	

ENDZONE BUILDING POWER PLAN

Designed By:	Drawn By:	Checked By:
WBL	VPLS	GWL
Issue Date:	Project No:	Scale:
01/09/2017	30715	

Drawing No.:
E2.1

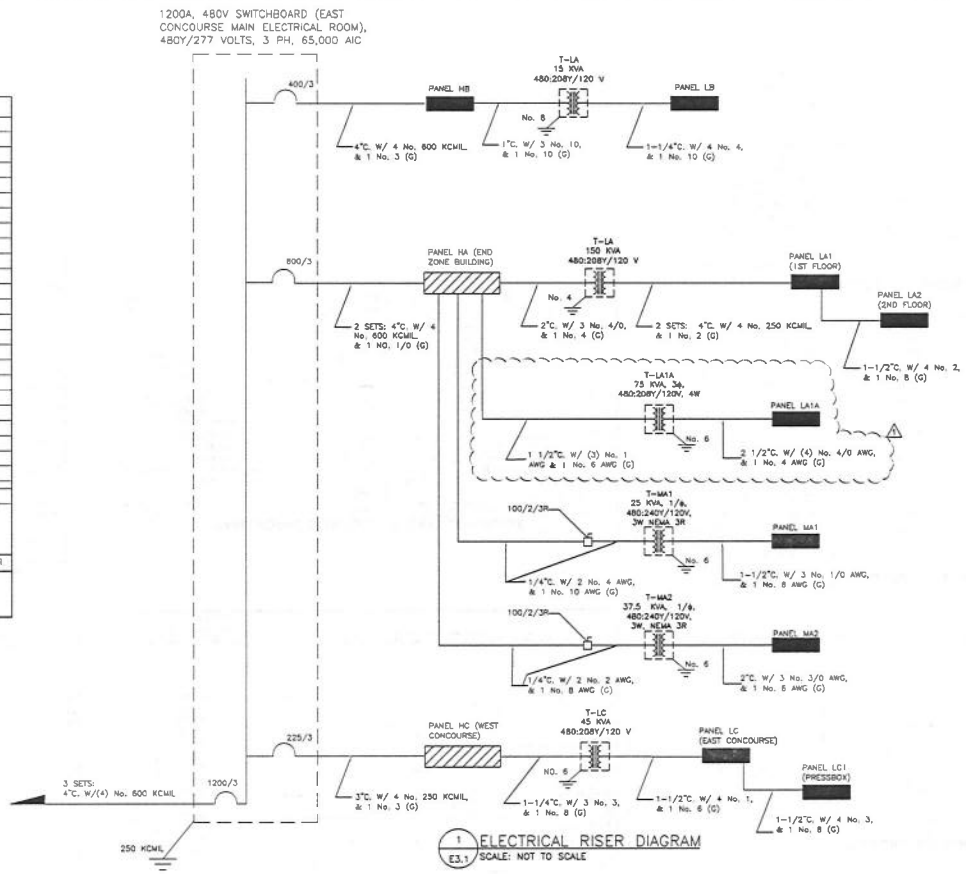
LIGHTING CONTROL SCHEDULE			
SYSTEM HEAD END - WEST CONCOURSE			
ZONE	AREA	RELAY	CIRCUIT(S)
A	CONCOURSE	1	HC - 7
A	CONCOURSE	2	HC - 9
A	CONCOURSE EMERGENCY	6	INVI-1
B	ENTRY	3	INVI-2
C	MEMORIAL PLAQUE	4	HC-17
D	FLAG POLE	5	HC-19
E	PLAYGROUND (FUTURE)	6	
REMOTE CONTROL PANEL - EAST CONCOURSE			
E	CONCOURSE	1	HB-2
E	CONCOURSE	2	HB-4
E	CONCOURSE EMERGENCY	4	INV2-1
F	ENTRY	3	INV2-2
REMOTE CONTROL PANEL - END ZONE BUILDING			
G	EXTERIOR LIGHTING	1	HA-42
H	TERRACE LIGHTING	2	HA-56

NOTES

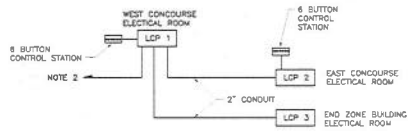
1 - ALL ZONES SHALL BE DIMMABLE AND SHALL BE PRE-SET DURING TRAINING SESSIONS AND CAPABLE OF MANUAL ADJUSTMENT FROM WALL CONTROLLER IN ELECTRICAL ROOM AND FROM MANAGER'S COMPUTER

2 - IN CONCOURSE RELAY PANELS, PROVIDE UL924 SHUNT RELAY FOR CIRCUITS FED BY INVERTER.

3 - PROVIDE SHOP DRAWING SUBMITTAL OF COMPLETE SYSTEM WITH WIRING DETAILS, COMPONENT LOCATIONS AND SIZES, AND INSTALLATION INSTRUCTIONS PRIOR TO ORDERING EQUIPMENT.



1 E3.1 ELECTRICAL RISER DIAGRAM
SCALE: NOT TO SCALE



NOTES:

1. LIGHTING CONTROL SYSTEM SHALL BE A NETWORK SOLUTION OF 3 PANELS SHOWN, CONNECTED VIA MULTI-MODE OPTICAL FIBER. THIS IS A PERFORMANCE SPECIFICATION. CONTRACTOR SHALL PROVIDE COMPLETE SOLUTION. FIBER BACKBONE SHALL BE INDEPENDENT OF LOCAL AREA NETWORK.
2. SYSTEM SHALL HAVE CAPABILITY TO BE LOCALLY CONTROLLED IN CONCOURSE ELECTRICAL ROOMS, OR BY COMPUTER STATION IN MANAGER'S OFFICE. PROVIDE ALL SOFTWARE REQUIRED.
3. PROVIDE 16 HOURS OF OWNER'S TRAINING.
4. PROVIDE COMMISSIONING OF COMPLETE LIGHTING CONTROL SYSTEM BY MANUFACTURER'S FACTORY REPRESENTATIVE. LOCAL MANUFACTURER'S REPRESENTATIVE IS NOT ACCEPTABLE.

2 E3.1 LIGHTING CONTROL SYSTEM RISER DIAGRAM
SCALE: NOT TO SCALE

CHA

Consultants:

HUSSEY GAY BELL

SCD

GEORGIA REGISTERED No. 28208 PROFESSIONAL ENGINEER

CHATHAM COUNTY GEORGIA 1777

THE MEMORIAL STADIUM COMPLEX
CHATHAM COUNTY
SAVANNAH, GEORGIA

No.	Submittal / Revision	Appr. By	Date
	BID SET		04/05/2017
1	ADDENDUM 1		04/20/2017

ELECTRICAL ONE-LINE & DETAILS

Designed By: WRL	Drawn By: WLS	Checked By: WRL
Issue Date: 11/04/2017	Project No: 16015	Scale:

Drawing No:
E3.1

PANELBOARD SCHEDULE LA1 - END ZONE BUILDING 1ST FLOOR

MAINS		600A MB						MTG	SURFACE						
VOLTAGE		120/208V	PHASE	3	WIRE	4		A I C	42,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO			
1	20	1	SUMP PUMP	120	520			500	EF-19	1	15	2			
3	15	1	CIRCULATION PUMP	1,250		2,640		1,440	BATH RECEPTACLES WEST	1	20	4			
5	20	1	LIGHT & EF-4,7	900			1,500	1,000	TIME CLOCK	1	20	6			
7	20	1	CONCESSION W. RECEPT	1,440	2,760			1,260	BATH RECEPTACLES EAST	1	20	8			
9	20	1	RECEPTACLES	1,080		2,880		1,800	IT ROOM RECEPTACLES	1	20	10			
11	20	1	SPORT MED RECEPT	900			1,500	1,000	IT ROOM RECEPTACLES	1	20	12			
13	20	1	LIGHTING & EF-1,2	500	1,900			990	ELECTRICAL RM RECEPT	1	20	14			
15	20	1	CONCESSION E. RECEPT	1,440		1,940		500	ELEVATOR PIT	1	20	16			
17	20	1	RECEPTACLES	1,080			4,080	3,000	PWT-13	2	40	18			
19	20	1	SPARE						SPARE	1	20	20			
21	20	1	SPARE						SPARE	1	20	22			
23	20	1	SPARE						SPARE	1	20	24			
25	20	1	TEAM CHANGE A RECEPT	1,080	2,160			1,080	TEAM CHANGE B RECEPT	1	20	26			
27	15	3	DOAS-1	432			1,350	900	TEAM CHANGE B RECEPT	1	20	28			
29	20	1	TEAM CHANGE A RECEPT	900			1,500	1,000	AADP	1	20*	30			
31	20	1	TRAINING ROOM ICE MAKER	1,500	1,500			1,500	FREEZER (CONCESSIONS)	1	20	32			
33	20	1	SUMP PUMP	120		570		450	DOAS-2	2	15	34			
35							1,500	1,500	FREEZER (CONCESSIONS)	1	20	36			
37	25	3	ERV-1	2,300	3,800			1,500	CONCESSIONS REFRIGERATOR	1	20	38			
39				2,300		3,300		1,000	IT ROOM RECEPTACLES	1	20	40			
41				2,300			2,300		SPARE	1	20	42			
43	15	2	HP-1A, 1B, 1C	600	2,800			2,200	ERV-2	3	25	44			
45				582		2,020		1,500	CONCESSIONS REFRIGERATOR	1	20	46			
47	15	2	HP-2A, 2B, 2C	600			600		SPARE	1	20	48			
49				500	1,500			1,000	CONCESSIONS - FRYER	2	15	50			
51	15	2	HP-3A, 3B, 3C, 3D	500		1,500		1,500				52			
53	15	2	CONCESSIONS - FRYER	1,000			1,000		W/ SHUNT TRIP			54			
55				1,000	1,500				SPARE	1	20	56			
57			W/ SHUNT TRIP			2,100		2,100	CHARBROILER	2	35	58			
59	100	3	PANEL LA2	9,420			12,120	2,700				60			
61				7,920	7,920				SPARE	1	20	62			
63				8,340		11,640		2,700	CHARBROILER	2	35	64			
65	100	2	FRYER	7,100			9,800	2,700				66			
67				7,100	7,100							68			
69			W/ SHUNT TRIP			7,100		7,100	FRYER	2	100	70			
71	25	2	EF-15	900			8,050	7,100				72			
73				950	950				W/ SHUNT TRIP			74			
75	20	2	EF-14	950		950			SPARE	1	20	76			
77				950			950		SPARE	1	20	78			
79	20	1	SPARE						SPARE	1	20	80			
81	20	1	SPARE						SPARE	1	20	82			
83	20	1	SPARE						SPARE	1	20	84			
			CONNECTED	34,590	37,178	43,000		TTL	117,320						
			DEMAND	31,095	33,453	41,845		TTL	106,548						

1 - PANEL SHALL BE 2-SECTION TYPE. DIVIDE CIRCUITS EVENLY BETWEEN THE TWO SECTIONS. BOTH SECTIONS SHALL BE THE SAME PHYSICAL SIZE.

* - PROVIDE BREAKER WITH RED TRIP-FREE LOCKING TAB.

PANELBOARD SCHEDULE LA2 - END ZONE BUILDING - 2ND FLOOR

MAINS		125A MLO						MTG	SURFACE						
VOLTAGE		120/208V	PHASE	3	WIRE	4		A I C	10,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO			
1	20	1	LIGHTING & EF-4,7,8	540	1,440			1,440	OFFICE RECEPTACLES	1	20	2			
3	20	1	COMPUTER RM RECEPT	1,080		1,980		900	OFFICE RECEPTACLES	1	20	4			
5	20	1	COMPUTER RM RECEPT	1,080			1,980	900	OFFICE RECEPTACLES	1	20	6			
7	20	1	RECEPTACLES	1,440	2,340			900	OFFICE RECEPTACLES	1	20	8			
9	20	1	OFFICE RECEPTACLES	900		1,800		900	OFFICE RECEPTACLES	1	20	10			
11	20	1	OFFICE RECEPTACLES	1,260			2,160	900	OFFICE RECEPTACLES	1	20	12			
13	20	1	MULTI PURPOSE RECEPT	1,440	2,940			1,500	PRINTER	1	15	14			
15	20	1	MULTI PURPOSE RECEPT	1,440		2,440		1,000	IT CLOSET RECEPTACLES	1	20	16			
17	20	1	FOOD WARMER	1,500			2,500	1,000	IT CLOSET RECEPTACLES	1	20	18			
19	20	1	SPARE		1,000			1,000	IT CLOSET RECEPTACLES	1	20	20			
21	20	1	SPARE						SPARE	1	20	22			
23	20	1	SPARE						SPARE	1	20	24			
25	20	1	SPARE						SPARE	1	20	26			
27	15	2	HP-9	600		600			SPARE	1	20	28			
29				600			600		SPARE	1	20	30			
31	15	2	HP-10	600	600				SPARE	1	20	32			
33				600		600			SPACE	3		34			
35	15	2	HP-11	600			600					36			
37				600	600							38			
39	15	2	HP-12	600		600			SPACE	2		40			
41				600			600					42			
			CONNECTED	9,420	7,920	6,340		TTL	23,680						
			DEMAND	7,536	6,336	5,072		TTL	18,944						

PANELBOARD SCHEDULE LA1A - END ZONE BUILDING - 1ST FLOOR

MAINS		225A MB						MTG	SURFACE						
VOLTAGE		120/208V	PHASE	3	WIRE	4		A I C	10,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO			
1	20*	1	WATER COOLER	900	1,800			900	WATER COOLER	1	20*	2			
3	20*	1	WATER COOLER	900		1,800		900	WATER COOLER	1	20*	4			
5	20*	1	WATER COOLER	900			1,800	900	WATER COOLER	1	20*	6			
7	20*	1	WATER COOLER	900	1,800			900	WATER COOLER	1	20*	8			
9	20*	1	WATER COOLER	900		1,800		900	WATER COOLER	1	20*	10			
11	20*	1	WATER COOLER	900			1,800	900	WATER COOLER	1	20*	12			
13	20	1	HAND DRYER	1,500	3,000			1,500	HAND DRYER	1	20	14			
15	20	1	HAND DRYER	1,500		3,000		1,500	HAND DRYER	1	20	16			
17	20	1	HAND DRYER	1,500			3,000	1,500	HAND DRYER	1	20	18			
19	20	1	HAND DRYER	1,500	3,000			1,500	HAND DRYER	1	20	20			
21	20	1	HAND DRYER	1,500		3,000		1,500	HAND DRYER	1	20	22			
23	20	1	HAND DRYER	1,500			3,000	1,500	HAND DRYER	1	20	24			
25	20	1	HAND DRYER	1,500	3,000			1,500	HAND DRYER	1	20	26			
27	20	1	HAND DRYER	1,500		3,000		1,500	HAND DRYER	1	20	28			
29	20	1	HAND DRYER	1,500			3,000	1,500	HAND DRYER	1	20	30			
31	20	1	HAND DRYER	1,500	3,000			1,500	HAND DRYER	1	20	32			
33	20	1	HAND DRYER	1,500		3,000		1,500	HAND DRYER	1	20	34			
35	20	1	HAND DRYER	1,500			3,000	1,500	HAND DRYER	1	20	36			
37	20	1	HAND DRYER	1,500	3,000			1,500	HAND DRYER	1	20	38			
39	20	1	HAND DRYER	1,500		3,000		1,500	HAND DRYER	1	20	40			
41	20	1	FLUSH/SINK VALVE	1,200			2,400	1,200	FLUSH/SINK VALVE	1	20	42			
43	20	1	FLUSH/SINK VALVE	1,200	2,400			1,200	FLUSH/SINK VALVE	1	20	44			
45	20	1	FLUSH/SINK VALVE	1,200		2,400		1,200	FLUSH/SINK VALVE	1	20	46			
47	20	1	FLUSH/SINK VALVE	1,200			2,400	1,200	FLUSH/SINK VALVE	1	20	48			
49	20	1	FLUSH/SINK VALVE	1,200	2,400			1,200	FLUSH/SINK VALVE	1	20	50			
51	20	1	FLUSH/SINK VALVE	1,200		2,400		1,200	FLUSH/SINK VALVE	1	20	52			
53	20	1	FLUSH/SINK VALVE	1,200			2,400	1,200	FLUSH/SINK VALVE	1	20	54			
55	20	1	SPARE						SPARE	1	20	56			
57	20	1	SPARE						SPARE	1	20	58			
59	20	1	SPARE						SPARE	1	20	60			
61	20	1	SPARE						SPARE	1	20	62			
63	20	1	SPARE						SPARE	1	20	64			
65	20	1	SPARE						SPARE	1	20	66			
67	20	1	SPARE						SPARE	1	20	68			
69	20	1	SPARE						SPARE	1	20	70			
71		1	SPACE						SPACE	1	20	72			
73		1	SPACE						SPACE	1	20	74			
75		1	SPACE						SPACE	1	20	76			
77		1	SPACE						SPACE	1	20	78			
79		1	SPACE						SPACE	1	20	80			
81		1	SPACE						SPACE	1	20	82			
83		1	SPACE						SPACE	1	20	84			
			CONNECTED	23,400	23,400	22,800		TTL	69,600						
			DEMAND	15,720	16,720	18,240		TTL	55,680						

1 - PANEL SHALL BE 3-SECTION TYPE. DIVIDE CIRCUITS EVENLY BETWEEN THE TWO SECTIONS. BOTH SECTIONS SHALL BE THE SAME PHYSICAL SIZE.

* - PROVIDE GFI TYPE BREAKER

PANELBOARD SCHEDULE LB - EAST CONCOURSE

MAINS		60A MB						MTG	SURFACE						
VOLTAGE		120/208V	PHASE	3	WIRE	4		A I C	10,000						
EVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO			
1	20	1	RECEPTACLES	1,080	2,080			1,000	SPORT LTG CONTRLS	1	20	2			
3	20	1	TICKET BOOTH RECEPT	900		2,400		1,500	PLAY CLOCK - SOUTH	1	20	4			
5	20	1	POLE CAMERA	300			800	500	EF-18	1	15	6			
7	20	1	POLE CAMERA	300	1,800			1,500	TW-4	2	20	8			
9	20	1	SPARE			0		0	SPACE	1	20	10			
11	20	1	SPARE						SPACE	1	20	12			
13	20	1	SPARE						SPACE	1	20	14			
15	20	1	SPARE						SPACE	1	20	16			
17		3	SPACE						SPACE	1	20	18			
19									SPACE	1	20	20			
21									SPACE	1	20	22			
23		1	SPACE						SPACE	1	20	24			
INECTED				3,880	2,405	800		TTL	7,085						
MAND				3,104	1,924	640		TTL	5,668						

PANELBOARD SCHEDULE LC - EAST CONCOURSE

MAINS		125A MB						MTG	SURFACE						
VOLTAGE		120/208V	PHASE	3	WIRE	4		A I C	10,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO			
1	80	3	PANEL LC1	7,800	8,030			230	OFFICE LIGHTS	1	20	2			
3				3,000		4,080		1,080	TICKET BOOTH RECEPT	1	20	4			
5				3,500			4,000	500	ELEVATOR PIT	1	20	6			
7	20	1	RECEPTACLES	720	1,260			540	RECEPTACLES	1	20	8			
9	20	1	COMMUNICATION RECEPT	500		1,000		500	BATH GFI	1	20	10			
11	20	1	RECEPTACLE	500			1,000	500	PUMP RECEPTACLE	1	20	12			
13	20	1	SPARE		1,500			1,500	PLAY CLOCK - NORTH	1	20	14			
15	20	1	SPARE						SPARE	1	20	16			
17		3	SPACE						SPACE	3		18			
19												20			
21												22			
23		3	SPACE						SPACE	3		24			
25												26			
27												28			
29		1	SPACE						SPACE	1		30			
31	20	1	SUMP PUMP	120	1,620			900	CIRCULATION PUMP	1	15	32			
33	15	1	EF-16 & 17	500		522		22				34			
35	20	2	IW-1	1,500			3,000	1,500	IW-2	2	20	36			
37				1,500	3,000			1,500				38			
39	40	2	CHP-12	2,000		4,500		1,500	TW-3	2	20	40			
41				2,000			4,500	1,500				42			
			CONNECTED	14,810	10,160	12,500		TTL	37,472						
			DEMAND	11,848	8,062	10,000		TTL	29,910						

PANELBOARD SCHEDULE MA1

MAINS		125 A M B						MTG	SURFACE - 3R ENCLOSURE						
VOLTAGE		208/120	PHASE	1	WIRE	3		A I C	10,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	PH 1		PH 2	V-A	DESIGNATION	POLE	TRIP	NO			
1	20	2	CHP-2/HP-2	1,500	4,500			3,000	CHP-8	2	40	2			
				1,500			4,500	3,000				4			
5		3	SPACE		3,000			3,000	CHP-10	2	40	6			
7							2,000	3,000				8			
9					0				SPACE	3		10			
11		3	SPACE				0					12			
12					0							14			
15							0		SPACE	1		16			
			CONNECTED		7,500		7,500	TTL	15,000						
			DEMAND		7,500		7,500	TTL	15,000						

1 - CONNECT PANEL TO THE TWO PHASES (ie A-B, B-C OR C-A), AS INDICATED IN THE PANEL FEEDING THIS PANEL

PANELBOARD SCHEDULE MA2

MAINS		175 A M.B						MTG	SURFACE - 3R ENCLOSURE						
VOLTAGE			PHASE	1	WIRE	3		A I C	10,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	PH 1		PH 2	V-A	DESIGNATION	POLE	TRIP	NO			
1	15	2	CHP-14/HP-14	1,500	4,800			3,000	CHP-11	2	40	2			
				1,800			4,800	3,000				4			
5	20	2	CHP-4/HP-4	1,500	4,500			3,000	CHP-12	2	40	6			
				1,500			4,500	3,000				8			
9		3	SPACE		1,800			1,600	CHP-15/HP-15	2	15	10			
11							1,800	1,600				12			
13					2,100			2,100	CHP-6/HP-6	2	25	14			
15		3	SPACE				2,100	2,100				16			
17					0				SPACE	3		18			
19							0					20			
21		2	SPACE		0							22			
23							0		SPACE	1		24			
			CONNECTED		12,800		12,900	TTL	25,800						
			DEMAND		12,800		12,900	TTL	25,800						

1 - CONNECT PANEL TO THE TWO PHASES (ie A-B, B-C OR C-A), AS INDICATED IN THE PANEL FEEDING THIS PANEL

PANELBOARD SCHEDULE LC1 - PRESSBOX

MAINS		125A MLO						MTG	SURFACE						
VOLTAGE		120/208V	PHASE	3	WIRE	4		A I C	10,000						
DEVICE		BRANCH CIRCUIT		PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE					
NO	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO			
1	20	1	HOME RECEPTACLE	1,400	2,800			1,400	PRESS RECEPTACLE	1	20	2			
3	20	1	RAISOBRD RECEPTACLE	1,400		2,800		1,400	PRESS RECEPTACLE	1	20	4			
5	20	1	RADIO	1,400			2,800	1,400	VISITOR RECEPTACLE	1	20	6			
7	20	1	EXTRA RECEPTACLE	1,400	2,900			1,500	LIGHTING	1	20	8			
9	20	1	SPARE						SPARE	1	20	10			
11		3	SPACE						SPACE	3		12			
13	20	1	PA CLOSET RECEPTACLE	1,400	1,400							14			
15												16			
17	15	2	INP13 - 1,2,3,4,5,6	700			700		SPACE	3		18			
19				700	700							20			
21	15	1	ERV-3	200		200						22			
23		1	SPACE						SPACE	1		24			
			CONNECTED		7,300	3,000	3,500	TTL	14,300						
			DEMAND		6,240	2,400	2,800	TTL	11,440						

CHA

Consultants:

HUSSEY GAY BELL

SCD

GEORGIA REGISTERED No. 26308 PROFESSIONAL ENGINEER

CHATHAM COUNTY GEORGIA 1777

THE MEMORIAL STADIUM COMPLEX

CHATHAM COUNTY

SAVANNAH, GEORGIA

No.	Revision/ Issue	Appr. By	Date
	BID SET		04/13/2007
1	ADDENDUM 1		04/20/2007

ELECTRICAL PANEL & EQUIPMENT SCHEDULES

Designed By	Drawn By	Checked By
WML	CVG	WML
Issue Date	Project No.	Scale
03/16/2007	30315	

Drawing No.:

E4.1

PANELBOARD SCHEDULE HA - END ZONE BUILDING

MAINS:	400A MB				MTG:	SURFACE						
VOLTAGE:	480/277V	PHASE:	3	WIRE:	4	A.I.C.	42,000					
DEVICE	BRANCH CIRCUIT	PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE				
NO.	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO.
1	300	3	PANEL LA1	34,650	36,800			4,250	OHP-1	3	30	2
3				37,170		41,420		4,250				4
5				45,420			49,850	4,250				6
7	10	3	EF-4	500	4,750			4,250	OHP-3	3	30	8
9				500		4,750		4,250				10
11				500			4,150	4,250				12
13	15	3	EF-5	500	3,000			2,500	OHP-5	3	15	14
15				500		3,000		2,500				16
17				500			3,000	2,500				18
19	15	3	EF-6	500	5,800			5,300	OHP-7	3	25	20
21				500		5,800		5,300				22
23				500			5,800	5,300				24
25	10	2	PANEL MA1	7,500	12,600			5,300	OHP-8	3	25	26
27				7,500		12,600		5,300				28
29	100	2	PANEL MA2	12,600			16,100	5,300				30
31				12,600	15,955			3,100	UH-1	1	15	32
33	15	1	WH-1 (WALL HEATER)	2,000		5,100		3,100	UH-2	1	15	34
35	15	1	WH-2 (WALL HEATER)	2,000			5,100	3,100	UH-3	1	15	36
37	15	1	WH-3 (WALL HEATER)	2,000	5,155			3,100	UH-4	1	15	38
39	15	1	WH-4 (WALL HEATER)	2,000		5,100		3,100	UH-5	1	15	40
41	15	1	WH-5 (WALL HEATER)	2,000			3,360	1,260	EXTERIOR LIGHTING	1	20	42
43	200	3	200 GAL WATER HEATER	40,000	42,533			2,533	LIGHTS (WEST SIDE)	1	20	44
45				40,000		42,317		2,317	LIGHTS (EAST SIDE)	1	20	46
47				40,000			42,542	2,542		1	20	48
49	60	3	ELEVATOR	11,100	11,225			125	EF-3	1	15	50
51				11,100		13,100		2,000	WH-6	1	15	52
53				11,100			11,100					54
55					23,400			23,400	PANEL LA1A	3	125	56
57						23,400		23,400				58
59							22,800	22,800				60
61									SPARE	1	20	62
63									SPARE	1	20	64
65									SPACE	3		66
67		1	SPACE									68
69												70
71									SPACE	3		72
73		3	SPACE									74
75												76
77									SPACE	3		78
79		3	SPACE									80
81												82
83									SPACE	1		84
			CONNECTED		143,708	150,787	166,402	TTL	466,497			
			DEMAND		130,646	135,430	133,127	TTL	389,158			

1. PANEL SHALL BE 2-SECTION TYPE. DIVIDE CIRCUITS EVENLY BETWEEN THE TWO SECTIONS. BOTH SECTIONS SHALL BE THE SAME PHYSICAL SIZE.

PANELBOARD SCHEDULE HB - EAST CONCOURSE

MAINS:	400A MLO				MTG:	SURFACE						
VOLTAGE:	480/277V	PHASE:	3	WIRE:	4	A.I.C.	42,000					
DEVICE	BRANCH CIRCUIT	PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE				
NO.	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO.
1	25	3	PANEL LB	3,880	5,782			1,802	CONCOURSE LIGHT NORTH	1	20	2
				2,405		5,024		2,619	CONCOURSE LIGHT SOUTH	1	20	4
5				803			1,803	1,000	ENTRY LIGHTS	1	20	6
7	20	1	INVERTER (INV-1)	2,200	2,200				SPARE	1	20	8
9	20	1	SPARE						SPARE	1	20	10
11	20	1	BALLFIELD LIGHT POLE 1	6,000			12,000	6,000	BALLFIELD LIGHT POLE 3	3	20	12
13	20	3		6,000	12,000			6,000			30	14
15				6,000		12,000		6,000				16
17	20	1	SPARE						SPARE	1	20	18
19	20	3	BALLFIELD LIGHT POLE 2	6,000	12,000			6,000	BALLFIELD LIGHT POLE 4	3	30	20
21				6,000		12,000		6,000				22
23				6,000			12,000	6,000				24
25	15	3	BALLFIELD LIGHT POLE 1	2,000	4,000			2,000	BALLFIELD LIGHT POLE 3	3	15	26
27				2,000		4,000		2,000				28
29				2,000			4,000	2,000				30
31	15	3	BALLFIELD LIGHT POLE 2	2,000	4,000			2,000	BALLFIELD LIGHT POLE 4	3	15	32
33				2,000		4,000		2,000				34
				2,000			4,000	2,000				36
37	20	1	SPARE						SPACE	3		38
	20	2	INVERTER	3,000		3,000						40
				3,000			3,000					42
			CONNECTED		39,962	40,024	36,800	TTL:	116,805			
			DEMAND		39,962	40,024	36,800	TTL:	116,805			

PANELBOARD SCHEDULE HC - WEST CONCOURSE

MAINS:	225A MB				MTG:	SURFACE						
VOLTAGE:	480/277V	PHASE:	3	WIRE:	4	A.I.C.	42,000					
DEVICE	BRANCH CIRCUIT	PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE				
NO.	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO.
1	70	3	PANEL LC	14,810	22,810			8,000	50 GAL WATER HEATER	3	40	2
3				16,102		16,102		8,000				4
5				12,500			20,500	8,000				6
7	20	1	CONCOURSE LIGHT SOUTH	2,817	2,817				SPARE	1	20	8
9	20	1	CONCOURSE LIGHT NORTH	2,233		20,333		18,100				10
11	15	3	PUMP	2,106			20,206	18,100				12
				2,106	20,206			18,100				14
				2,106		2,106			SPARE	1	20	16
17	20	1	FLAG POLE LIGHTS	500			500		SPARE	1	20	18
19	20	1	MONUMENT LIGHTING	1,000	1,000				SPARE	1	20	20
21	20	1	ENTRY LIGHTS	1,000		1,000			SPARE	1	20	22
23	20	1	FUTURE PLAYGROUND LIGHTS	1,000			1,000		SPARE	1	20	24
25		3	SPACE						SPACE	3		26
27												28
29												30
31		3	SPACE						SPACE	3		32
33												34
35												36
37		1	SPACE	1,700	1,700				SPACE	3		38
39	15	1	WH-6 (WALL HEATER)	2,000		2,000						40
41	15	1	WH-7 (WALL HEATER)	2,000			2,000					42
			CONNECTED	48,533	43,541	44,206	TTL:	136,280				
			DEMAND	38,826	34,833	35,365	TTL:	109,024				

MAIN SWITCHBOARD SCHEDULE

MAINS:	1200A MB				MTG:	SURFACE						
VOLTAGE:	480/277V	PHASE:	3	WIRE:	4	A.I.C.	65,000					
DEVICE	BRANCH CIRCUIT	PHASE LOAD (V-A)				BRANCH CIRCUIT		DEVICE				
NO.	TRIP	POLE	DESIGNATION	V-A	A	B	C	V-A	DESIGNATION	POLE	TRIP	NO.
1	400	3	PANEL HA	163,308	163,308							2
3				156,787		166,787						4
5				166,402			166,402					6
7	400	3	PANEL HB	39,962	39,962							8
9				40,024		40,024						10
11				36,800			36,800					12
13	225	3	PANEL HC	48,533	48,533							14
15				43,541		43,541						16
17				44,206			44,206					18
19												20
21												22
23												24
			CONNECTED		251,403	240,357	247,408	TTL	739,583			
			DEMAND		251,403	240,357	247,408	TTL	739,583			

CONCESSIONS EQUIPMENT RATINGS AND CONNECTIONS

ITEM	VOLT	PH	AMPS	HP	kW	TTL AMPS	MCA	MOCP	CONTROL / DISCONNECT BY DIV 23	CONTROL / DISCONNECT BY DIV 26	CIRCUIT REQUIREMENTS
1 - ELECTRIC CHARBROILER (2)	208	1	26			26.0	35.0	35		26/2/1	3/4"C, W/ 3 NO. 8, & 1 NO. 10 (G)
NOTE 1											
3 - FRYER (2)	208	1	69		14	98.0	100.0	100		105/2/1	1-1/4"C, W/ 2 NO. 3, & 1 NO. 6 (G)
NOTE 1											
8 - CONCESSIONS REF. (2)	120	1	12			12.0	11.0	20		REC	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
10 - CONCESSIONS FREEZER (2)	120	1	15			15.0	12.0	15		REC	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
5 - CONCESSIONS ICE MAKER (2)	120	1	15			15.0				REC	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)

NOTES:

1. PROVIDE SHUNT TRIP ON BREAKER FOR CONNECTION TO HOOD SUPPRESSIONS SYSTEM.
2. THE DESIGN IS BASED ON SINGLE POINT CONNECTIONS TO ALL EQUIPMENT, UNLESS NOTED OTHERWISE.

MECHANICAL EQUIPMENT RATINGS AND CONNECTIONS

ITEM	VOLT	PH	AMPS	HP	kW	TTL AMPS	MCA	MOCP	CONTROL / DISCONNECT BY DIV 23	CONTROL / DISCONNECT BY DIV 26	CIRCUIT REQUIREMENTS
OHP-1	480	3	15.2			15.2	19.0	30		30/3/3R	3/4" W/ 4 NO. 12, & 1 NO. 12 (G)
OHP-3	480	3	15.2			15.2	19.0	30		30/3/3R	3/4" W/ 4 NO. 12, & 1 NO. 12 (G)
OHP-5	480	3	8.8			8.8	11.0	15		30/3/3R	3/4" W/ 4 NO. 12, & 1 NO. 12 (G)
OHP-7	480	3	18.4			18.3	23.0	25		30/3/3R	3/4" W/ 4 NO. 10, & 1 NO. 10 (G)
OHP-8	480	3	18.4			18.3	23.0	25		30/3/3R	3/4" W/ 4 NO. 10, & 1 NO. 10 (G)
EF-4,5	480	3	1.6			3.0	4.0	15		NEMA 3R	1/2"C W/ 3 NO. 12, & 1 NO. 12 (G)
P-11 (WATER HEATER)	480	3			120	145.0	181.0	200		NA	2"C W/ 3 3/0, & 1 NO. 6 (G)
P-13 (WATER HEATER)	480	3			24	29.0	37.0	40		60/3/3R	1"C, W/ 3 NO. 8, & 1 NO. 10 (G)
ERV-1	208	3	18.8	(2) 3		18.8	21.1	25		20/2/1	3/4"W/ 4 NO. 10, & 1 NO. 10 (G)
ERV-2	208	3	18.8	(2) 3		18.8	21.1	25		30/2/1	3/4" W/ 4 NO. 10, & 1 NO. 10 (G)
ELEVATOR (END ZONE)	480	3		30		40.0	56.0	80		NOTE 8	1-1/4"C, W/ 4 NO. 4, & 1 NO. 8 (G)
PUMP (WEST CONC)	480	3	7.6	5		7.6	9.5	15		30/3/3R	3/4" C, W/ (4) - No. 12 AWG & (1) - No. 12 AWG (G)
EF-13, 14, NOTE 9	208	1	8.8	1		8.8	11.0	20		NEMA 3R	1/2"C, W/ 3 NO. 12, & 1 NO. 12 (G)
DOAS-1*	208	1	3.2			3.2	4.0	15		30/2/1	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
DOAS-2	208	1	3.2			3.2	4.0	15		30/2/1	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
OHP-2/HP-2, NOTE 4	208	1	14			14.0	15.0	20		30/2/3R	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
OHP-4/HP-4, NOTE 4	208	1	14			14.0	15.0	20		30/2/3R	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
OHP-6/HP-6, NOTE 4	208	1	19			19.0	20.0	25		30/2/3R	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
OHP-9	208	1	29			29.0	36.0	40		60/2/3R	1"C, W/ 3 NO. 8, & 1 NO. 10 (G)
OHP-10	208	1	25			25.0	31.0	40		60/2/3R	1"C, W/ 3 NO. 8, & 1 NO. 10 (G)
OHP-11	208	1	29			29.0	36.0	40		60/2/3R	1"C, W/ 3 NO. 8, & 1 NO. 10 (G)
OHP-12	208	1	25			25.0	31.0	40		60/2/3R	1"C, W/ 3 NO. 8, & 1 NO. 10 (G)
OHP-13	208	1	25			25.0	31.0	40		60/2/3R	1"C, W/ 3 NO. 8, & 1 NO. 10 (G)
OHP-14/HP-14, NOTE 4	208	1	14			14.0	15.0	15		30/2/3R	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
OHP-15/HP-15, NOTE 4	208	1	14			14.0	15.0	15		30/2/3R	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
IHP-1A, 1B, 1C, 2A, 3B, 3C	208	1	1			1.0	1.0	15		NOTE 6	1/2"C/ W/ 2 NO. 12, & 1 NO. 12 (G)
IHP-3A, 3C	208	1	1			1.0	1.0	15		NOTE 6	1/2"C/ W/ 2 NO. 12, & 1 NO. 12 (G)
IHP - 5B, 5D	208	1	1			1.0	1.0	15		NOTE 6	1/2"C/ W/ 2 NO. 12, & 1 NO. 12 (G)
IHP-1D-1,2,3,4,5,6	208	1	1			1.0	1.0	15		NOTE 6	1/2"C/ W/ 2 NO. 12, & 1 NO. 12 (G)
IHP-8	208	1	5			5.0	6.0	15		Sm	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
IHP-10	208	1	5			5.0	6.0	15		Sm	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
IHP-11	208	1	5			5.0	6.0	15		Sm	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
IHP-12	208	1	4			4.8	4.2	15		Sm	3/4"C, W/ 3 NO. 12, & 1 NO. 12 (G)
TW-1,2,3,4	208	1	14.1			14.1	20.0	20		6-20R	1/2"C/ W/ 2 NO. 12, & 1 NO. 12 (G)
UH-1,2,3,4,5	277	1			3	13.0	15.6	15		Sm	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
WALL HEATERS (WH-1,2,3,4,5,6,7,8)	277	1			2	7.2	9.1	15		Sm	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
EF-1,2,6,7,8,9,10,11,12 (NOTE 7)	120	1			0.03	1.0	1.0				1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
EF-3	277	1			0.075	1.0	1.0	15		Sm	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
ERV-3	120	1	1.5			1.5	2.0	15		NOTE 5	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
EF-16, 17, 18, 19	120	1	1			1.0	1.0	15		Sm	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
SUMP PUMP	120	1	8.5			8.5	11.0	20		Sm	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)
CIRCULATION PUMP(2)	120	1	7.2			7.2	10.0	15		Sm	1/2"C, W/ 2 NO. 12, & 1 NO. 12 (G)

NOTES:

1. REFER TO SECTION 260120 FOR THE COORDINATION AFFIDAVIT THAT MUST BE SUBMITTED AND APPROVED BEFORE MATERIALS MAY BE ORDERED
2. THE DESIGN IS BASED ON SINGLE POINT CONNECTIONS TO ALL EQUIPMENT, UNLESS NOTED OTHERWISE
3. WHERE STARTER IS REQUIRED BY DIV 26, IT IS SHOWN AS SIZE 1, ETC. ALL STARTERS SHALL BE COMBINATION TYPE UNLESS INDICATED OTHERWISE. DISCONNECTS ARE SHOWN AS 30/3/1, ETC.
4. THE INDOOR UNIT RECEIVES POWER FROM THE OUTDOOR UNIT. PROVIDE 30 AMP, 3 POLE TOGGLE SWITCH ON LINE SIDE OF INDOOR UNIT. REFER TO UNIT CUT-SHEETS FOR CONNECTION REQUIREMENTS. DIVISION 26 CONTRACTOR IS RESPONSIBLE FOR ALL WIRING COMPONENTS AND INSTALLATION.
5. BASIS OF DESIGN IS PLUG CONNECTED TO RECEPTACLE. LOCATE RECEPTACLE IN ACCESSIBLE AREA WITHIN REACH OF CORD.
6. CONNECT MULTIPLE IHP TO SAME BRANCH CIRCUIT AS LISTED ON PANEL SCHEDULE. PROVIDE 30 AMP, 3 POLE SWITCH AS DISCONNECTING FOR EACH IHP.
7. CONNECT EXHAUST FAN TO THE LIGHTING CIRCUIT IN SAME SPACE. TURNING ON OF LIGHT IN SPACE SHALL START FAN.
8. PROVIDE SAME SIZED ENCLOSED CIRCUIT BREAKER, WITH SHUNT TRIP MODULE, IN ELEVATOR MACHINE ROOM IN ADDITION TO BREAKER IN PANEL. CONFIRM ELEVATOR HORSEPOWER RATING WITH CUTSHEET IS PRIOR TO ELECTRICAL GEAR SHOP DRAWING SUBMITTAL.
9. CONNECT HOOD FAN SWITCH TO STARTER AS REQUIRED BY HOOD MANUFACTURE'S CUTSHEET.

CHA

CONSULTANTS:

HUSSEY GAY BELL

SCD

GEORGIA REGISTERED PROFESSIONAL No. 26308 ENGINEER

THE MEMORIAL STADIUM COMPLEX
CHATHAM COUNTY
SAVANNAH, GEORGIA

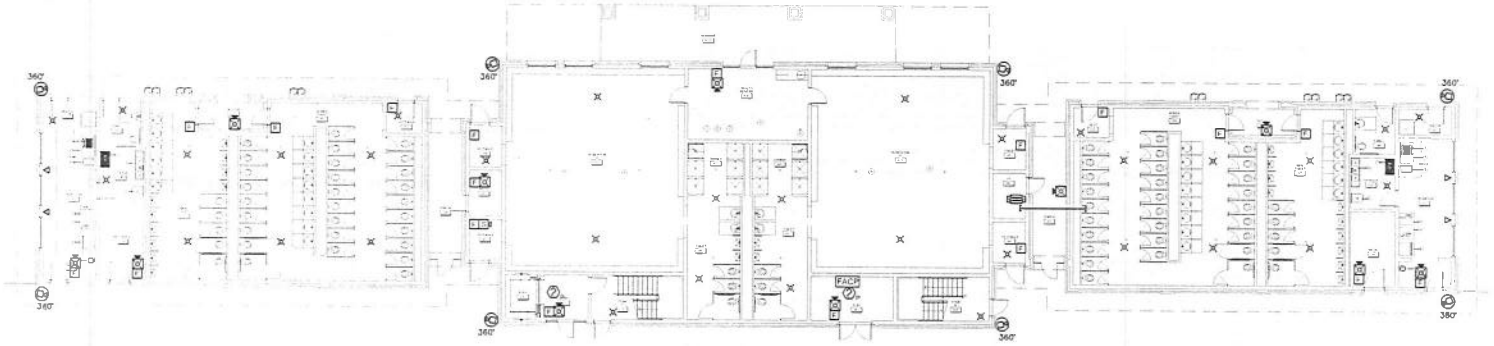
No.	Submittal / Revision	Author	By	Date
	DID SET			
1	ADDENDUM 1			

ELECTRICAL PANEL & EQUIPMENT SCHEDULES

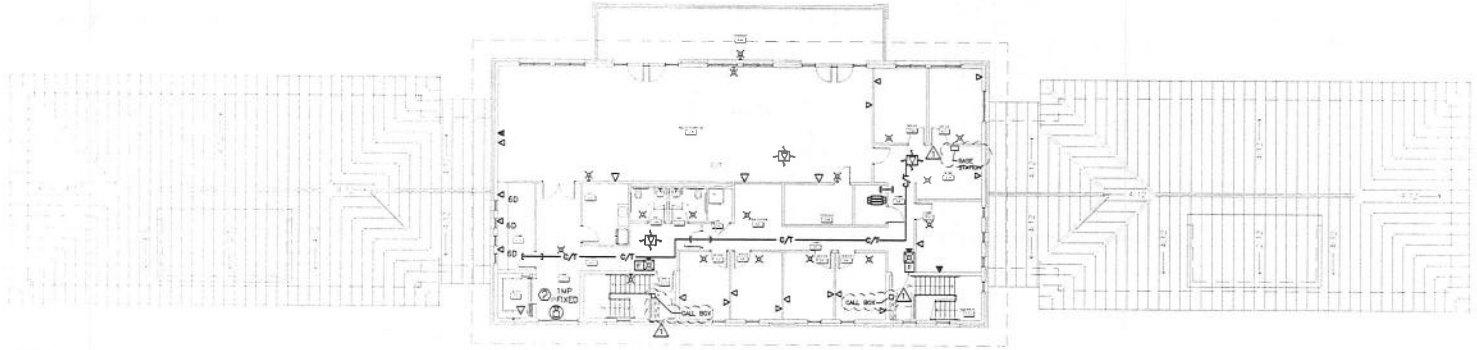
Designed By:	Drawn By:	Checked By:
WRE	WLG	WRE
Issue Date:	Project No.:	Scale:
07/09/2021	20-015	

Drawing No.:

E4.2



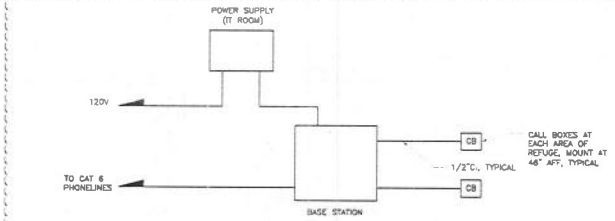
1 / T1.1 ENDZONE BUILDING FIRST FLOOR COMMUNICATIONS PLAN
SCALE: 3/32" = 1' - 0"



2 / T1.1 ENDZONE BUILDING SECOND FLOOR COMMUNICATIONS PLAN
SCALE: 3/32" = 1' - 0"

NOTES:

1. PROVIDE COMPLETE AREA OF REFUGE CALL SYSTEM WITH ALL EQUIPMENT AND CABLING FOR COMPLETE AND OPERATIONAL SYSTEM.
2. ONCE THE CALL BOX HAS BEEN PUSHED, THE CALL BOX SHALL CALL THE BASE STATION. IF NO ANSWER AT THE BASE STATION, IT WILL AUTOMATICALLY CALL PROGRAMMED EMERGENCY NUMBERS. CALL BOX SHALL HAVE LOCATION MESSAGING. CALL BOX SHALL HAVE A MINIMUM 18 SECOND RECORDABLE MESSAGE, PROGRAMMABLE TO PLAY 2 TIMES. CALL BOX SHALL NOTIFY CALLED PARTY OF THE LOCATION OF THE CALL UPON BEING RECEIVED AT THE EMERGENCY DISPATCH CENTER. CALL BOX SHALL BE CAPABLE OF ALLOWING THE CALLED PARTY TO REPLAY THE LOCATION MESSAGE IF NECESSARY TO ENSURE AN UNDERSTANDING OF THE CALLER LOCATION. IF SYSTEM IS NOT ATTENDED THE CALL BOX SHALL DIAL A SECONDARY LOCATION OUTSIDE THE BUILDING TO ACTIVATE TWO WAY OFF-SITE PERSON TO PERSON VOICE COMMUNICATIONS. ONCE A CALL HAS BEEN MADE (BUTTON PUSHED), THE CALL CAN ONLY BE TERMINATED BY THE CALLED PARTY. CALL BOX SHALL HAVE A BLUE LED THAT ILLUMINATE UPON ACTIVATION OF THE BUTTON. THE LIGHT SHALL BE A SOLID COLOR WHEN THE CALL BOX IS ACTIVATED, AND WILL FLASH WHEN CALL HAS BEEN ANSWERED.
3. THE SYSTEM SHALL BE CAPABLE OF BEING PROGRAMMED AND REPROGRAMMED ON-SITE AND REMOTELY.



3 / T1.1 AREA OF REFUGE ASSISTANCE- TWO-WAY COMMUNICATION SYSTEM
SCALE: NTS

CHA

Consultants:

HUSSEY GAY BELL

SCD

GEORGIA
No. 28708
REGISTERED
ARCHITECT

CHATHAM COUNTY
1777
GEORGIA

THE MEMORIAL
STADIUM COMPLEX
CHATHAM COUNTY
SAVANNAH, GEORGIA

No.	Issue or Revision	Date
	DID SET	
1	ADDENDUM 1	

ENDZONE
BUILDING
COMMUNICATIONS,
SECURITY &
ALARM PLAN

Designed By:	Drawn By:	Checked By:
WRL	JVLS	WRL
Issue Date:	Project No:	Scale:
11/19/2017	30705	

Drawing No:
T1.1