

ADDENDUM #1

CR 466A Phase I (US Highway 27/441 to Sunny Court)
Project No. 2016-02
Bid No. 16-0017

This addendum is being issued to make the following changes, corrections, clarifications and additions to the bidding document. The information in this addendum modifies and changes the original bidding documents and takes precedence over the original documents. **Receipt of this addendum shall be acknowledged by the bidder by signing and dating the appropriate line on page W-4 of the bid proposal.** Failure to acknowledge this addendum may preclude consideration of the bid proposal for award.

A mandatory pre-bid meeting for the referenced project was held at 9:00 a.m. on January 14, 2016, in the Lake County Emergency Operations Center conference room. The following were in attendance:

Name	Company	Phone Number	Email Address
Chris Farley	Salser Construction	(352) 861-4563	cfarley@salserconstruction.com
Kathryn Barnes	D.A.B. Constructors	(352) 447-5488	kathrynb@dabcon.com
Herb Hawk	Gibbs & Register	(407) 654-6133	estimating@gibbsandregister.com
Jose Garcia	Florida Safety Contractors	(352) 255-8429	Estimating@floridasafetycontractors.com
Scott O'Neal	Ciraco Underground	(352) 347-2035	soneal@ciracounderground.com
Ricky Farring	Rainey Construction	(352) 748-0955	rfarring@raineyconstruction.com
Andy Walker	CW Roberts Contracting	(352) 330-2540	awalker@cwrcontracting.com
Laurie Henderson	J Malever Construction	(352) 429-9507	tomsmithjmc@embarqmail.com
Duane Booth	BESH	(352) 343-8481	duanebooth@besandHh.com
Roosevelt Civil	Atlantic Civil Const.	(407) 277-8400	rcivil@atlantic-civil.com
Dale Bogle	City of Fruitland Park	(352) 308-5571	dboglefruitlandpark@comcast.net
Charlie Rector	City of Fruitland Park	(352) 360-6727	crector@fruitlandpk.org
Mollie Bourke	CW Roberts Contracting	(352) 330-2540	mbourke@cwrcontracting.com
Robert Rudd	Tierra, Inc.	(407) 461-1564	r Rudd@tierraeng.com
Lori Koontz	Lake County Public Works	(352) 343-6439	lkoontz@lakecountyfl.gov
Alan Kirkland	Lake County Public Works	(352) 253-6043	akirkland@lakecountyfl.gov
Paul Erickson	Lake County Public Works	(352) 253-6021	perickson@lakecountyfl.gov
Terry Scott	Lake County Public Works	(352) 253-9024	jscott@lakecountyfl.gov
Jeff Johnson	Lake County Public Works	(352) 343-6439	jjohnson@lakecountyfl.gov
Heath McArdle	Lake County Public Works	(352) 253-9023	hmcardle@lakecountyfl.gov
Deb Marchese	Lake County Public Works	(353) 253-6007	dmarchese@lakecountyfl.gov

The County Road 466A Phase I project is located in Fruitland Park and shall consist of constructing and widening CR 466A to a four lane urban designed roadway with curb and gutter, 4' paved shoulders, and sidewalks. This project extends from US 27/441 to Sunny Court and is approximately 2,306 feet in length. Other work associated with this project shall include: storm pipe and structure installation, retention pond excavation,

swale and ditch construction, gravity wall installation, installing a traffic signal, thermoplastic striping, sodding, and other miscellaneous construction. Through a Joint Participation Agreement, a portion of the construction will be funded by the Florida Department of Transportation. The contractor shall be required to meet all state and federal guidelines. The engineer's estimate for this project is \$2,412,878.00.

As part of this project, Lake County has entered into an interlocal agreement with the City of Fruitland Park for the installation of City's water and sewer lines along the proposed CR 466A Phase I project. Bidders shall be required to provide an alternate bid for this work. Engineer's estimate for this alternate bid is \$328,660.20.

Upon receipt of the bids, the City of Fruitland Park shall then have ten (10) days to review the Utility Project bids. If the City elects to move forward with the Utility Project through the County Contract, the construction contract will be awarded to the responsive and responsible bidder who submits the lowest combined bid for both projects. If the City decides to abandon the Utility Project, the County has the right to award the Road Project to the lowest responsive and responsible bidder for the Road Project and the City will be responsible to bid and contract for the utility relocation under its own contracting procedures.

Duane Booth and Dale Bogle are the contacts responsible for approving the shop drawings for the City of Fruitland Park's water and sewer lines.

Work performed under this contract shall be based on a lump sum bid. Quantities, if shown in the construction plans, are estimated for bidding purposes only and shall be verified by the contractor.

Pay special attention to all notes shown in the construction plans.

Any fences to be relocated shall be moved to the right of way line. If there is an existing gate at a driveway, then match the width of the driveway to the width of the gate. Contractor shall coordinate any fence relocation with the property owner.

Contractor shall video the project limits prior to beginning construction. The video shall be in DVD format and provided to Lake County before construction begins. Detail should be given to all existing fence lines, driveways, hedge lines, etc., to document existing conditions prior to construction.

Bid to sod all disturbed areas matching all existing grass types. Contractor shall be responsible for watering all sod until there is established growth.

All utilities shown in the construction plans to be relocated shall be the responsibility of the utility provider to relocate, with the exception of the Fruitland Park water and sewer

lines previously discussed above. Contractor is responsible for the coordination of all utility relocation.

Contractor shall provide two sets of redline as-builts upon completion of the project that show all structure locations, invert elevations, and pipe locations. The as-builts must be signed and sealed by a professional engineer or surveyor, licensed to do business in the State of Florida.

All millings shall remain the property of Lake County. The Contractor shall haul the millings to the Leesburg Maintenance Barn, 2310 West Griffin Road, Leesburg, FL. Millings shall not be stockpiled on the project site.

No oral interpretations will be made to any bidder as to the meaning of the Specifications, or any other Contract Documents. Every request for such an interpretation must be in writing, and shall be received by the Office of Procurement Services not less than ten (10) calendar days prior to the date set for opening of bids. Every interpretation made to a bidder will be made by an addendum to the Contract Documents, which, when issued, will be sent as promptly as is practicable to all persons to whom the Specifications have been issued by the County. All such addenda shall become part of the Contract Documents. No substitution of any kind or riders of any nature to the bids will be considered except by the above described method. For purposes of this Contract the term "Interpretations" shall include the approval of product substitution. All requests for interpretation shall be submitted to Susan Dugan, Senior Contracting Officer, at sdugan@lakecountyfl.gov and copied to Deb Marchese, Construction Program Specialist, at dmarchese@lakecountyfl.gov.

Each Contractor shall visit the site of the proposed work and fully acquaint himself with conditions relating to construction and labor so that he may fully understand the facilities, difficulties and restrictions attending the execution of work under the contract.

Contractor shall include in their bid under MOT to supply a crossing guard, and traffic control officer as needed. Contractor shall keep in mind lane closure restrictions will be required between STA. 145+50 to 155+50 due to the elementary school along the project corridor.

Restrictions Regarding School Lane Closures:

On Monday, Tuesday, Thursday and Friday lane closures shall be allowed between 9:00 a.m. and 2:30 p.m. only. On Wednesday lane closures shall be allowed between 9:00 a.m. and 1:30 p.m. only.

Demolitions

Contractor shall bid to demolish two vacant residences and include the price to demolish in the bid tabulation sheet. A new Bid Tabulation sheet with line items for the demolitions is attached to this addendum. NESHP Asbestos surveys for the two

residences are attached to this addendum. Additionally, a third building has been discovered in the area of Pond #7. It appears to be a greenhouse with dimensions 112' x 24'. Bid to demolish building, and dispose of materials properly. The greenhouse is located at STA. 165+70 LT, approximately 55' off center line.

Right of Way Concessions

At STA. 154+10 to 155+90 LT, Contractor shall replace/relocate fence if needed. Should fence be replaced/relocated contractor shall coordinate relocation/replacement with property owner. Owners information will be provided to awarded contractor at the pre-construction meeting.

Driveways at Post Office shall be constructed at separate times in order to maintain traffic flow to the post office at all times.

Contractor shall bid to construct an additional concrete residential driveway on Iona Street at STA. 32+00 LT.

Questions asked at the Pre-Bid Meeting

Q1: If the City does not accept the utility bid, and they re-bid the utility relocation, would that contractor be working at the same time as the contractor awarded the road construction bid?

A1: It is Fruitland Park's intent to award the utility relocation to the same contractor awarded the road construction project; however, if the City does not award the utility relocation part of the project to the same contractor awarded the road construction project, their contractor will be required to relocate Fruitland Park's water and sewer lines out of the way of construction the same as any other utility provider.

Q2: With regard to the construction in the area of the school, is the construction contained within Lake County's right of way or is there going to be reason to enter onto school property? Will the Jessica Lunsford Act come into play?

A2: There are some perpetual easements that may be located on the school property. If the Contractor enters onto school property, they will have to meet the Jessica Lunsford Act requirements.

Q3: Can Lake County provide the CADD files for this project?

A3: The CADD files can be accessed at the following link:

ftp://ftp.co.lake.fl.us/Public_Works/Engineering/CR%20466A%20Phase%20I/01-Roadway%20Plans/Autocadd/

Q4: Who do we send requests for information to?

A4: All requests for interpretation shall be submitted to Susan Dugan, Senior Contracting Officer, at sdugan@lakecountyfl.gov and copied to Deb Marchese, Construction Program Specialist, at dmarchese@lakecountyfl.gov

Q5: What is the deadline for questions?

A5: Every request for such an interpretation must be in writing, and shall be received by the Office of Procurement Services not less than ten (10) calendar days prior to the date set for opening of bids, which will be by February 1, 2016.

Q6: Will certified payrolls be required? Will Davis Bacon Wages apply?

A6: No, certified payrolls and Davis Bacon Wages will not apply.

Q7: You indicated there are two dwellings to be demolished, have there been any environmental studies been done to see if there are any issues?

A7: NESHAP Surveys for both residential properties are attached to this addendum. Pictures of the greenhouse are also attached.



Heath McArdle, Construction Inspector II

01/15/16

Date

**BID FORM – TABULATION OF ESTIMATED QUANTITIES
 CR 466A PHASE I (US HIGHWAY 27/441 TO SUNNY COURT)
 PROJECT NO. 2016-02, BID NO. 16-0017
 SUMMARY OF BIDS**

	Amount of Bid	Calendar Days to Complete
CR 466A Phase I (US Highway 27/441 to Sunny Court) Roadway Construction (Figures):		
Alternate Bid – Water and Sewer Line Installation (Figures):		
Demolition of Structures (Figures):		
TOTAL LUMP SUM BID (Figures):		
TOTAL LUMP SUM BID (Words):		
TOTAL NUMBER OF CALENDAR DAYS TO COMPLETE:		

**BID FORM – TABULATION OF ESTIMATED QUANTITIES
 CR 466A PHASE I (US HIGHWAY 27/441 TO SUNNY COURT)
 PROJECT NO. 2016-02, BID NO. 16-0017**

Item No.	Description	Unit	Unit Price	Quantity	Amount
<u>WATER AND SEWER LINE INSTALLATION (CONT'D)</u>					
49	Construction Layout	LS			
50	Certified As-Builts	LS			
Water and Sewer Line Installation Subtotal Lump Sum Bid (Figures):					
Water and Sewer Line Installation Subtotal Lump Sum Bid (Words):					
Water and Sewer Line Installation Number of Calendar Days to Complete:					
<u>DEMOLITION OF STRUCTURES</u>					
1	Demolition of 404 East Miller Street	LS			
2	Demolition of 307 No. Iona Avenue	LS			
3	Demolition of Greenhouse type structure	LS			
Demolition of Structures Subtotal Lump Sum Bid (Figures):					
Demolition of Structures Subtotal Lump Sum Bid (Words):					
Demolition of Structures Number of Calendar Days to Complete:					



November 3, 2015

Brenda L. Press
Contracting Officer 1
Lake County DPW, Road Ops Division
12901 County Landfill Road
Tavares, Florida 32778

Phone: +1 (352) 742-3882
Fax: +1 (352) 742-3888
Email: bpress@lakecountyfl.gov

**Subject: Report of Pre-Demolition NESHAP Asbestos Survey
307 North Iona Avenue (Single Family Home)
Fruitland Park, Florida 34731
Alternate Key # 1818281, Parcel ID # 04-19-24-020000200500
Amec Foster Wheeler Project 6380-14-1274.16**

Dear Ms. Press,

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) has completed the Pre-Demolition NESHAP Asbestos Survey within the above referenced facility. The field survey was performed by Mr. Carver Gittens and Mr. Angel Vizcarrando, AHERA Accredited Inspectors from Amec Foster Wheeler, on October 14, 2015, in accordance with our Proposal 15PROP0010.6380.0167, dated September 17, 2015.

The attached report gives a brief background of the project, the procedures used in the field and in laboratory analysis. A summary of the laboratory analyses is included as an attachment.

Amec Foster Wheeler appreciates the opportunity to have been of assistance to you on this project and is looking forward to working with you as your consultant in the future. If you have any questions concerning this report or if we can be of further service, please contact us.

Respectfully,

Amec Foster Wheeler Environment & Infrastructure, Inc.
Asbestos Business License No. ZA-0000449

A handwritten signature in blue ink, appearing to read "Rachel Winsten".

Rachel Winsten
Engineering Technician III

A handwritten signature in blue ink, appearing to read "John M. Stump".

John M. Stump, PG
FL Asbestos Consultant
License No. AX0000042

P:\6380 IEQ\PROJECTS\2014-Projects\1274 Lake County 2014 - 2015\1274.16 307 N. Iona Avenue\ 1274.16 - 307 N. Iona Ave
NESHAP

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1.0 PROJECT INFORMATION

Information concerning this project was obtained in an email dated September 14, 2015 from Ms. Brenda Press with Lake County Department of Public Works, Road Ops Division. Additional information was obtained from the Lake County Property Appraiser's (LCPA's) website.

According to information provided by Ms. Press, there are plans to demolish the subject building. According to LCPA information, there is a single family home, constructed in 1962, located at the subject address. The home contains a total of 1,768 square feet (s.f.) of gross area. This includes a finished living area (1,238 s.f.), an open porch (80 s.f.), a garage (220 s.f.), a utility/storage area (77 s.f.), and an enclosed porch (153 s.f.). The asbestos survey included bulk sampling of suspect interior and exterior building materials, including roofing products and concrete slabs. The structure is scheduled for demolition.

The objective of Amec Foster Wheeler's survey was to identify accessible asbestos-containing materials which may be impacted by the planned demolition.

2.0 SURVEY PROCEDURES

2.1 General

The survey was performed by observing accessible exposed building materials and included bulk sampling of suspect interior and exterior building materials, prior to the planned demolition of the structure. We must emphasize that it is not possible to look within every location of a building. The visual survey documents only general locations of suspect materials but does not determine exact boundaries.

No attempt was made to disassemble equipment or demolish structural elements and finishes as this is beyond the scope of our authorized services. Visual observations were made at convenient locations (for example) for the presence of resilient floor coverings below existing floor finishes, etc. Due to these limitations, wall voids, building cavities and mechanical equipment, and other areas may contain unreported asbestos-containing materials.

2.2 Bulk Sampling

The bulk sampling procedures utilized for the collection of suspect materials first required the establishment of a homogeneous sampling area. A homogeneous sampling area is defined as an area of the same type and applied during the same general time period. The individual sampling areas were then examined and representative samples of the suspect materials were obtained. Bulk samples collected during the survey were delivered to EMSL Analytical, Inc., of Orlando, Florida, an NVLAP accredited laboratory (No. 10115-0). The bulk samples were analyzed by Polarized Light microscopy (PLM) coupled with dispersion staining in accordance with EPA Method 600/R-93/116.

Polarized Light Microscopy (PLM) is an analytical method for asbestos identification which depends on the unique optical properties of mineral forms in the samples, and specifically identifies the various asbestos types. This is the referenced method of analysis by EPA for asbestos identification in bulk samples. Materials found to contain greater than one percent asbestos by PLM are Asbestos-Containing Materials (ACM) as defined by EPA, OSHA and the State of Florida.

The EPA National Standard for Hazardous Air Pollutants (NESHAP) Final Rule (40 CFR 61, Subpart M) for asbestos includes an option for verification of friable materials, by point counting, if it is initially determined by PLM analysis that asbestos is present in amounts less than 10 percent. Point counts were not conducted as part of this survey.

The following suspect materials (thought to possibly contain asbestos) were sampled during the survey. Materials containing asbestos are in **bold**:

1. Terrazzo (Floor Tie-in to Property)
2. Concrete (Slab on Driveway and Porch)
3. Beige 6"x4" Bullnose Pattern Ceramic Tile, Grout and Thinset (Window Sills)
4. Drywall, Joint Compound, Tape and Plaster with Knockdown Texture Treatment (Walls and Ceilings)
5. Drywall and Joint Compound with Popcorn Texture Treatment (Bedroom 3 Ceiling)
6. Roofing Shingle and Felt (Roof)
7. CMU Block and Mortar (Exterior Walls)
8. 12"x12" Brown Slate Pattern Vinyl Floor Tile (VFT) with Adhesive (Kitchen and Bathroom Floor)
9. 4"x4" White Ceramic Tile, Grout, Mastic and Thinset (Partial Walls in Kitchen)

- 10. Black Weave Pattern Wire Wrap (Living Room Electrical Socket)
- 11. Brown Diamond Pattern Sheet Vinyl Flooring (SVF) with Adhesive and Leveller (Family Room Floor)
- 12. White **SVF** with Adhesive (Floor of Isolated Room 1)
- 13. 4"x4" Light Beige Ceramic Tile, Grout, Adhesive and Thinset (Bathroom Shower Walls)
- 14. 4"x4" Light Pink Ceramic Tile, Grout, Leveller and **Thinset** (Bathroom Walls)
- 15. White Caulk (Around Shower Tile and Windows)
- 16. **Pink Mastic** (Kitchen Sink Undercoat)

3.0 BULK SAMPLE RESULTS

Based upon our visual observations, bulk sampling of 16 suspect materials (34 samples, 75 layers) and subsequent PLM microscopic analysis, the following materials were determined to contain asbestos:

Sample No.	Material Sampled	Sample Location	Percent/ Type Asbestos	Condition/ Potential for Damage	Estimated Quantity
B-12A & B-12B	White SVF with Adhesive	Isolated Room 1 Floor	SVF- 15% Chrysotile Adhesive- ND	Good/Low	110 S.F.
B-14A & B-14B	4"x4" Light Pink Ceramic Tile, Grout, Leveller and Thinset	Bathroom Walls	Ceramic Tile- ND Grout- ND Leveller- ND Thinset- <1% Chrysotile	Good/Low	80 S.F.
B-16A	Pink Sink Undercoat	Kitchen Sink	5% Chrysotile	Good/Low	6 S.F.

Prepared By: RW Checked By: JMS

4.0 ASBESTOS CONCLUSIONS

4.1 General Recommendations

There are four recognized alternative courses of action to control asbestos-containing materials in buildings: (1) asbestos removal and disposal; (2) enclosure; (3) encapsulation; and, (4) special operations, maintenance and re-observation programs. The selection of a particular alternative should be based upon intended usage of the building, actual exposure rates and cost. Regarding removal and disposal, the EPA has Federal regulations regarding asbestos. The National Emissions Standard for Hazardous Air Pollutants (NESHAP) Final Rule Revision (EPA 40 CFR Part 61) dated November 30, 1990 includes several requirements for building Owners and

Contractors. The requirement that greatly affects abatement alternatives is the categorization of asbestos-containing materials (ACM).

These are categorized as follows:

- **Friable** means any material that can be reduced to powder by hand pressure when dry.
- **Category I Non-Friable ACM** means packing, gaskets, resilient floor coverings and roofing products that contain more than one- percent asbestos.
- **Category II Non-Friable ACM** means any material, excluding Category I Non-Friable ACM that contains more than one- percent asbestos, and is not friable.
- **Regulated ACM (RACM)** includes all friable ACM; Category I Non-Friable ACM that will be or has been subject to sanding, grinding, cutting or abrading; Category I Non-Friable ACM that has become friable; and Category II Non-Friable ACM that has a high probability of becoming, or has become crumbled, pulverized, or reduced to a powder by forces expected to act on the material in the course of remediation operations.

4.2 State Of Florida Asbestos Regulations

Chapter 469 of the Florida Statutes generally requires that a state licensed asbestos abatement contractor perform the removal, repair, or encapsulation of the types of ACM and materials identified as containing asbestos in this report. Since the structure will be demolished, ten working day written courtesy notification is suggested prior to the start of demolition activities under the EPA NESHAP regulation (40 CFR 61, Subpart M) and Florida Department of Environmental Protection (FDEP) rules. Since the project is located in **Lake County**, the notification, using FDEP form 62-257.900(1), should be made to FDEP's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767 (telephone 407-894-7555, Fax 407-897-2966) or at the FDEP's submit notice web link (www.fldepportal.com/go/submit-registration/).

4.3 Interim Measures

Regardless of the type of asbestos abatement action chosen, and the time frame involved, we strongly recommend that during the interim time period prior to abatement action, control

measures be established for the employees and occupants working in the building to minimize their exposure to asbestos.

This program should include, at a minimum, proper safety precautions and cleaning methods by personnel when work must be performed in and around asbestos-containing materials. Also, periodic reassessment of the condition of the asbestos-containing materials should be undertaken and precautions and procedures should be in writing and be thoroughly documented.

4.4 Legal and Medical Considerations

Due to the health hazards and legal ramifications involved in asbestos exposure in public buildings, an interdisciplinary approach between the engineering, medical and legal communities should be involved when determining an asbestos control program. There is presently a tremendous amount of litigation in the courts concerning present and past asbestos exposure in public and private facilities, as well as in the workplace environment.

One basis for much of the litigation stems from the lack of adequate notification by the building owner to building occupants/employees following the identification of asbestos in buildings. As a minimum, building owners should notify building employees, occupants, vendors, and others as required in the OSHA Asbestos Standards (29 CFR 1910.1001 and 29 CFR 1926.1101), and for public facilities, the EPA Worker Protection Rule (40CFR 763, Subpart G). We recommend that you involve appropriate legal counsel in your asbestos control program to address these very important issues.

4.5 Specific Asbestos Recommendations

The following materials were found to contain asbestos:

4.5.1 White SVF with Adhesive (B-12A and B-12B)

Asbestos-containing White SVF with Adhesive was identified in the Isolated Room 1 Floor. The SVF was found to contain **15% Chrysotile asbestos** with non-ACM adhesive, according to PLM analysis. The flooring material was generally observed to be in good condition with a low potential for damage.

The EPA NESHAP classifies the **ACM SVF backing** as friable asbestos-containing material. The OSHA Construction Standard (29 CFR 1926.1101) classifies disturbance, removal, or demolition of structures with **ACM SVF** as Class II asbestos work which requires specialized training, engineering controls, etc.

Therefore, we recommend that the 110 square feet of ACM SVF on the Isolated Room 1 floor be removed prior to demolition by a Florida Licensed Asbestos Contractor for proper disposal.

4.5.2 4"x4" Light Pink Ceramic Tile, Grout, Leveller and Thinset (B-14A and B-14B)

Asbestos containing ceramic floor tile thinset was identified in the Bathroom walls at the subject facility. These tile thinsets were found to contain <1% **Chrysotile asbestos**, according to PLM analysis. These building materials were generally observed to be in good condition with a low potential for damage.

Under EPA NESHAP definition, building materials with <1% asbestos content are not considered as ACM, however, OSHA has requirements for removal and disposal of materials containing asbestos in quantities less than one percent. The OSHA Construction Standard (29 CFR 1926.1101) classifies disturbance, removal, or demolition of structures with ceramic tile thinset containing <1% asbestos as "unclassified" operations, which requires the employer to follow the requirements in OSHA 29 CFR 1926.1101, paragraphs (g)(1) [*excepting section (g)(1)(i)*], paragraphs (g)(2) and paragraph (g)(3), which describe engineering and work practice controls operation. These tile thinsets need not be removed prior to demolition, provided that the contractor implements wet demolition methods, and abides by the aforementioned OSHA rule sections.

4.5.3 Pink Mastic Sink Undercoat (B-16A)

Pink undercoat on the Kitchen Sink was found to contain **5% Chrysotile asbestos**, according to PLM analysis. The undercoat mastic was generally observed to be in good condition with a low potential for damage.

The EPA NESHAP classifies the **ACM Sink Undercoat** as a Category I non-friable asbestos-containing material. The OSHA Construction Standard (29 CFR 1926.1101) classifies disturbance, removal, or demolition of structures with **ACM Sink Undercoat** as Class II asbestos work which requires specialized training, engineering controls, etc.

However, the Category I non-friable asbestos-containing **sink undercoat need not be removed prior to demolition**. Since the sink undercoat is attached to the sink fixture, which may be removed using wet methods, and disposed of intact as asbestos waste, Lake County may use a demolition contractor that is also qualified as an asbestos-abatement contractor to remove the sink and undercoat material. This would be appropriate if Lake County uses qualified asbestos workers; implements wet demolition methods; and does not cut, sand, grind or abrade the ACM Sink Undercoat, and properly disposes of asbestos-containing building rubble, and complies with 29 CFR 1926.1101.

5.0 LIMITATIONS

Amec Foster Wheeler has performed its services in accordance with generally accepted practices at the time of the field work. This report has been prepared on behalf of and exclusively for the use by **Lake County Department of Public Works**. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party without Amec Foster Wheeler's prior written consent. The findings are relative to the date of our site visit and should not be relied upon for substantially later dates. All material quantities are estimated based on visual observation and should be relied on for contractor bidding or regulatory notification purposes.

Please note that these test results relate only to those homogeneous materials tested. If conditions, or materials, other than those addressed in this report are encountered during the planned maintenance, renovation, or demolition activities, Amec Foster Wheeler should be contacted to assess the potential impact of these materials or conditions relative to the findings or recommendations included herein.

APPENDIX A
LABORATORY ANALYSIS



EMSL Analytical, Inc.

5125 Adanson Street, Suite 900, Orlando, FL 32804
Phone/Fax: (407) 599-5887 / (407) 599-9063
<http://www.EMSL.com> orlandolab@emsl.com

EMSL Order: 341510637
CustomerID: AMECH25
CustomerPO: C012307507
ProjectID:

Attn: **Angel Vizcarrondo**
AMEC Foster Wheeler E & I
75 E. Amelia Street Suite 200
Orlando, FL 32801

Phone: (407) 522-7570
Fax:
Received: 10/15/15 10:00 AM
Analysis Date: 10/20/2015
Collected: 1/15/2015

Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-1A 341510637-0001	Floor - Terrazo (Floor T/O Property)	Various Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-1B 341510637-0002	Floor - Terrazo (Floor T/O Property)	Various Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
B-2A 341510637-0003	Slab - Concrete	Gray/White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-2B 341510637-0004	Slab - Concrete	Gray/Tan/White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-3A-Ceramic Tile 341510637-0005	Window Sill - Beige6"x4" "Bullnose" Ceramic Tile, Grout, & Thinset	Brown/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-3A-Grout 341510637-0005A	Window Sill - Beige6"x4" "Bullnose" Ceramic Tile, Grout, & Thinset	Gray Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-3A-Thinset 341510637-0005B	Window Sill - Beige6"x4" "Bullnose" Ceramic Tile, Grout, & Thinset	Beige Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 10/20/2015 10:48:30

Test Report PLM(S)-7.25.0 Printed: 10/20/2015 10:48:30 AM



EMSL Analytical, Inc.

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EMSL Order: 341510637
 CustomerID: AMECH25
 CustomerPO: C012307507
 ProjectID:

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Phone: (407) 522-7570
 Fax:
 Received: 10/15/15 10:00 AM
 Analysis Date: 10/20/2015
 Collected: 1/15/2015

Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-3B-Ceramic Tile 341510637-0006	Window Sill - Beige6"x4" "Bullnose" Ceramic Tile, Grout, & Thinset	Tan/White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
B-3B-Grout 341510637-0006A	Window Sill - Beige6"x4" "Bullnose" Ceramic Tile, Grout, & Thinset	White Non-Fibrous Heterogeneous		35% Quartz 5% Ca Carbonate 60% Non-fibrous (other)	None Detected
B-3B-Thinset 341510637-0006B	Window Sill - Beige6"x4" "Bullnose" Ceramic Tile, Grout, & Thinset	Gray Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-4A-Drywall 341510637-0007	S. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Brown/Beige Fibrous Homogeneous	15% Cellulose <1% Glass	65% Gypsum 20% Non-fibrous (other)	None Detected
B-4A-Joint Compound 341510637-0007A	S. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	White/Beige Non-Fibrous Heterogeneous	Inseparable paint / coating layer included in analysis		20% Ca Carbonate 80% Non-fibrous (other) None Detected
B-4A-Texture 341510637-0007B	S. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (other)	None Detected
B-4B-Drywall 341510637-0008	N. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Brown/White Fibrous Homogeneous	35% Cellulose <1% Glass	45% Gypsum 20% Non-fibrous (other)	None Detected

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Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-4B-Joint Compound 341510637-0008A	N. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
B-4B-Texture 341510637-0008B	N. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Tan/White Non-Fibrous Heterogeneous		15% Ca Carbonate 25% Perlite 60% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-4B-Plaster 341510637-0008C	N. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Gray Non-Fibrous Heterogeneous		30% Quartz 10% Ca Carbonate 60% Non-fibrous (other)	None Detected
B-4C-Drywall 341510637-0009	W. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Brown/Beige Fibrous Heterogeneous	30% Cellulose <1% Glass	50% Gypsum 20% Non-fibrous (other)	None Detected
No joint compound present.					
B-4C-Texture 341510637-0009A	W. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Tan/Green Non-Fibrous Heterogeneous		10% Ca Carbonate 90% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-4C-Plaster 341510637-0009B	W. Wall - Drywall & Joint Compound w/Knock Down Texture Treatment	Gray Non-Fibrous Heterogeneous		30% Quartz 10% Ca Carbonate 60% Non-fibrous (other)	None Detected
B-4D-Drywall 341510637-0010	Ceiling - Drywall & Joint Compound w/Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (other)	None Detected

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Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-4D-Joint Compound 341510637-0010A	Ceiling - Drywall & Joint Compound w/Knock Down Texture Treatment	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
B-4D-Tape 341510637-0010B	Ceiling - Drywall & Joint Compound w/Knock Down Texture Treatment	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
B-4D-Texture 341510637-0010C	Ceiling - Drywall & Joint Compound w/Knock Down Texture Treatment	White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-4E-Drywall 341510637-0011	Ceiling - Drywall & Joint Compound w/Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	20% Cellulose	60% Gypsum 20% Non-fibrous (other)	None Detected
B-4E-Texture 341510637-0011A	Ceiling - Drywall & Joint Compound w/Knock Down Texture Treatment	White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-5A-Drywall 341510637-0012	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	Brown/Beige Fibrous Heterogeneous	5% Cellulose	75% Gypsum 20% Non-fibrous (other)	None Detected
B-5A-Joint Compound 341510637-0012A	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	White/Beige Non-Fibrous Heterogeneous		30% Quartz 10% Ca Carbonate 60% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					

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Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-5A-Texture 341510637-0012B	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	White Non-Fibrous Heterogeneous		10% Ca Carbonate 20% Perlite 70% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-5B-Drywall 341510637-0013	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	Brown/Beige Fibrous Heterogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (other)	None Detected
B-5B-Joint Compound 341510637-0013A	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	White/Beige Non-Fibrous Heterogeneous		30% Quartz 10% Ca Carbonate 60% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-5B-Texture 341510637-0013B	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	White Non-Fibrous Heterogeneous		10% Ca Carbonate 20% Perlite 70% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-5C-Drywall 341510637-0014	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	Brown/Gray Fibrous Homogeneous	25% Cellulose <1% Glass	55% Gypsum 20% Non-fibrous (other)	None Detected
B-5C-Joint Compound 341510637-0014A	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	White Non-Fibrous Homogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected

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AMEC Foster Wheeler E & I Fax:
75 E. Amelia Street Suite 200 Received: 10/15/15 10:00 AM
Orlando, FL 32801 Analysis Date: 10/20/2015
 Collected: 1/15/2015

Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-5C-Texture 341510637-0014B	Ceiling - Drywall & Joint Compound Plaster Skimcoat w/Popcorn Treatment	White Non-Fibrous Heterogeneous		15% Ca Carbonate 15% Perlite 70% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-6A-Shingle 341510637-0015	Roof - Roof Shingle & Felt	Brown/Black Fibrous Homogeneous	8% Glass	92% Non-fibrous (other)	None Detected
B-6A-Felt 341510637-0015A	Roof - Roof Shingle & Felt	Black Fibrous Homogeneous	45% Cellulose	55% Non-fibrous (other)	None Detected
B-6B-Shingle 341510637-0016	Roof - Roof Shingle & Felt	Brown/Black Fibrous Homogeneous	8% Glass	92% Non-fibrous (other)	None Detected
B-6B-Felt 341510637-0016A	Roof - Roof Shingle & Felt	Black Fibrous Homogeneous	45% Cellulose	55% Non-fibrous (other)	None Detected
B-7A 341510637-0017	South Wall - C.M.U. & Mortar	Various Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-7B 341510637-0018	North Wall - C.M.U. & Mortar	Gray/White/Green Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-8A-Floor Tile 341510637-0019	Floor - 12"x12" Brown "Slate" Pattern V.F.T. w/Adhesive	Brown/Black Non-Fibrous Homogeneous	5% Synthetic	95% Non-fibrous (other)	None Detected

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Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-8A-Adhesive 341510637-0019A	Floor - 12"x12" Brown "Slate" Pattern V.F.T. w/Adhesive	Clear Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-8B-Floor Tile 341510637-0020	Floor - 12"x12" Brown "Slate" Pattern V.F.T. w/Adhesive	Brown/Black Non-Fibrous Homogeneous	5% Synthetic	95% Non-fibrous (other)	None Detected
B-8B-Adhesive 341510637-0020A	Floor - 12"x12" Brown "Slate" Pattern V.F.T. w/Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-9A-Ceramic Tile 341510637-0021	Partial S. Wall - 4"x4" White Ceramic Tile, Grout & Thinset	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-9A-Composite 341510637-0021A	Partial S. Wall - 4"x4" White Ceramic Tile, Grout & Thinset	Various Fibrous Heterogeneous	3% Cellulose	35% Quartz 10% Ca Carbonate 52% Non-fibrous (other)	None Detected
Inseparable materials, composite analysis.					
B-9B-Ceramic Tile 341510637-0022	Partial W. Wall - 4"x4" White Ceramic Tile, Grout & Thinset	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
No thinset present					
B-9B-Grout 341510637-0022A	Partial W. Wall - 4"x4" White Ceramic Tile, Grout & Thinset	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected

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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		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-9B-Mastic 341510637-0022B	Partial W. Wall - 4"x4" White Ceramic Tile, Grout & Thinset	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-10A 341510637-0023	S. Wall-Electrical Socket - Black "Weave" Pattern Wire Wrap	Brown/Black Fibrous Heterogeneous	60% Synthetic	40% Non-fibrous (other)	None Detected
B-11A-Vinyl Sheet Flooring 341510637-0024	Floor - Brown "Diamond" Pattern Sheet Vinyl Floor w/Adhesive	Brown/Black/Beige Non-Fibrous Homogeneous	<1% Glass	100% Non-fibrous (other)	None Detected
			No adhesive present.		
B-11A-Leveler 341510637-0024A	Floor - Brown "Diamond" Pattern Sheet Vinyl Floor w/Adhesive	Brown/Gray/Green Non-Fibrous Heterogeneous		40% Quartz 60% Non-fibrous (other)	None Detected
B-11B-Vinyl Sheet Flooring 341510637-0025	Floor - Brown "Diamond" Pattern Sheet Vinyl Floor w/Adhesive	Brown/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
			No adhesive present		
B-11B-Leveler 341510637-0025A	Floor - Brown "Diamond" Pattern Sheet Vinyl Floor w/Adhesive	Various Fibrous Heterogeneous	5% Cellulose	50% Quartz 45% Non-fibrous (other)	None Detected
B-12A-Vinyl Sheet Flooring 341510637-0026	Floor - White S.V.F. w/Adhesive	Gray/Blue/Beige Fibrous Heterogeneous		85% Non-fibrous (other)	15% Chrysotile
			This is a composite result of both vinyl and backing layer		

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-12A-Adhesive 341510637-0026A	Floor - White S.V.F. w/Adhesive	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-12B-Vinyl Sheet Flooring 341510637-0027	Floor - White S.V.F. w/Adhesive	Tan/White Fibrous Heterogeneous		85% Non-fibrous (other)	15% Chrysotile
This is a composite result of both vinyl and backing layer					
B-12B-Adhesive 341510637-0027A	Floor - White S.V.F. w/Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-13A-Ceramic Tile 341510637-0028	W. Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-13A-Grout 341510637-0028A	W. Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
B-13A-Thinset 341510637-0028B	W. Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	Gray Non-Fibrous Heterogeneous		20% Quartz 10% Ca Carbonate 70% Non-fibrous (other)	None Detected
B-13B-Ceramic Tile 341510637-0029	E.Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-13B-Grout 341510637-0029A	E.Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (other)	None Detected

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 Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 10/20/2015 10:48:30

**EMSL Analytical, Inc.**

5125 Adanson Street, Suite 900, Orlando, FL 32804
 Phone/Fax: (407) 599-5887 / (407) 599-9063
<http://www.EMSL.com> orlandolab@emsl.com

EMSL Order: 341510637
 CustomerID: AMECH25
 CustomerPO: C012307507
 ProjectID:

Attn: **Angel Vizcarrondo**
AMEC Foster Wheeler E & I
75 E. Amelia Street Suite 200
Orlando, FL 32801

Phone: (407) 522-7570
 Fax:
 Received: 10/15/15 10:00 AM
 Analysis Date: 10/20/2015
 Collected: 1/15/2015

Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-13B-Thinset 341510637-0029B	E.Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	Gray Non-Fibrous Heterogeneous		15% Quartz 10% Ca Carbonate 75% Non-fibrous (other)	None Detected
B-13B-Adhesive 341510637-0029C	E.Wall-Shower - 4"x4" Lt. Beige Ceramic Tile, Grout, & Thinset	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-14A-Ceramic Tile 341510637-0030	E. Wall - 4"x4" Lt. Pink Ceramic Tile, Grout & Thinset	White/Pink Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-14A-Composite 341510637-0030A	E. Wall - 4"x4" Lt. Pink Ceramic Tile, Grout & Thinset	Gray/Tan/White Non-Fibrous Heterogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (other)	<1% Chrysotile
Inseparable materials, composite analysis.					
B-14B-Ceramic Tile 341510637-0031	W. Wall - 4"x4" Lt. Pink Ceramic Tile, Grout & Thinset	White/Pink Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-14B-Grout 341510637-0031A	W. Wall - 4"x4" Lt. Pink Ceramic Tile, Grout & Thinset	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
B-14B-Thinset 341510637-0031B	W. Wall - 4"x4" Lt. Pink Ceramic Tile, Grout & Thinset	Gray Non-Fibrous Heterogeneous		10% Ca Carbonate 90% Non-fibrous (other)	<1% Chrysotile
B-14B-Leveler 341510637-0031C	W. Wall - 4"x4" Lt. Pink Ceramic Tile, Grout & Thinset	White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected

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 Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 10/20/2015 10:48:30



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EMSL Order: 341510637
CustomerID: AMECH25
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Attn: **Angel Vizcarrondo**
AMEC Foster Wheeler E & I
75 E. Amelia Street Suite 200
Orlando, FL 32801

Phone: (407) 522-7570
Fax:
Received: 10/15/15 10:00 AM
Analysis Date: 10/20/2015
Collected: 1/15/2015

Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-15A 341510637-0032	Around Edges Of Shower Tile - White Caulk	White/Pink/Beige Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-15B 341510637-0033	Around Window - White Caulk	White/Beige Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-16A 341510637-0034	Sink Undercoat - Pink Mastic	Purple Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile

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Project: 6380-14-1274.16 307 North Iona Ave-Pre Demo NESHAP

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date: 10/15/2015 Sample Receipt Time: 10:00 AM
Analysis Completed Date: 10/20/2015 Analysis Completed Time: 10:28 AM

Analyst(s):

Lindsay Karashay PLM (40)

Manolo Hernandez PLM (35)

Samples reviewed and approved by:

Jonathan Teda, Asbestos Lab Manager
or other approved signatory

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Initial report from 10/20/2015 10:48:30

November 5, 2015



Brenda L. Press
Contracting Officer 1
Lake County DPW, Road Ops Division
12901 County Landfill Road
Tavares, Florida 32778

Phone: +1 (352) 742-3882
Fax: +1 (352) 742-3888
Email: bpres@lakecountyfl.gov

**Subject: Report of Pre-Demolition NESHAP Asbestos Survey
404 East Miller Street (Commercial Building and Vacant Land)
Fruitland Park, Florida 34731
Alternate Key # 2583649 & 3318871
Parcel ID # 04-19-24-060000000102 & 04-19-24-060000000101
Amec Foster Wheeler Project 6380-14-1274.17**

Dear Ms. Press,

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) has completed the Pre-Demolition NESHAP Asbestos Survey within the above referenced facility. The field survey was performed by Mr. Carver Gittens and Mr. Angel Vizcarrando, AHERA Accredited Inspectors from Amec Foster Wheeler, on October 14, 2015, in accordance with our Proposal 15PROP0010.6380.0171, dated September 29, 2015.

The attached report gives a brief background of the project, the procedures used in the field and in laboratory analysis. A summary of the laboratory analyses is included as an attachment.

Amec Foster Wheeler appreciates the opportunity to have been of assistance to you on this project and is looking forward to working with you as your consultant in the future. If you have any questions concerning this report or if we can be of further service, please contact us.

Respectfully,

Amec Foster Wheeler Environment & Infrastructure, Inc.
Asbestos Business License No. ZA-0000449

Rachel Winsten
Engineering Technician III

John M. Stump, PG
FL Asbestos Consultant
License No. AX0000042

P:\6380 IEQ\PROJECTS\2014-Projects\1274 Lake County 2014 - 2015\1274.17 404 E. Miller Street NESHAP

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1.0 PROJECT INFORMATION

Information concerning this project was obtained in an email dated September 28, 2015 from Ms. Brenda Press with Lake County Department of Public Works, Road Ops Division. Additional information was obtained from the Lake County Property Appraiser's (LCPA's) website.

According to information provided by Ms. Press, there are plans to demolish the subject building at 404 East Miller Street in Fruitland Park, Florida. According to LCPA information, there is a commercial building (Alternate Key # 2583649), which was constructed in 1982, located at the subject address. The commercial building contains a total of 1,920 square feet (s.f.) of gross area, which includes a finished living area (1,920 s.f.). Per Ms. Press' email, dated September 28, 2015, there is a piece of vacant land (Alternate Key # 3318871) adjoining the commercial building.

Ms. Press also noted in her email, dated September 28, 2015, that the commercial "structure is unsafe" and is "full of mold and the roof is caving in." Therefore, to ensure the safety of the Amec Foster Wheeler personnel, two inspectors conducted the survey and wore appropriate personal protective equipment.

The objective of Amec Foster Wheeler's survey was to identify accessible asbestos-containing materials which may be impacted by the planned demolition.

2.0 SURVEY PROCEDURES

2.1 General

The survey was performed by observing accessible exposed building materials and included bulk sampling of suspect interior and exterior building materials, prior to the planned demolition of the structure. We must emphasize that it is not possible to look within every location of a building. The visual survey documents only general locations of suspect materials but does not determine exact boundaries.

No attempt was made to disassemble equipment or demolish structural elements and finishes as this is beyond the scope of our authorized services. Visual observations were made at convenient locations (for example) for the presence of resilient floor coverings below existing floor finishes,

etc. Due to these limitations, wall voids, building cavities and mechanical equipment, and other areas may contain unreported asbestos-containing materials.

2.2 Bulk Sampling

The bulk sampling procedures utilized for the collection of suspect materials first required the establishment of a homogeneous sampling area. A homogeneous sampling area is defined as an area of the same type and applied during the same general time period. The individual sampling areas were then examined and representative samples of the suspect materials were obtained. Bulk samples collected during the survey were delivered to EMSL Analytical, Inc., of Orlando, Florida, an NVLAP accredited laboratory (No. 10115-0). The bulk samples were analyzed by Polarized Light microscopy (PLM) coupled with dispersion staining in accordance with EPA Method 600/R-93/116.

Polarized Light Microscopy (PLM) is an analytical method for asbestos identification which depends on the unique optical properties of mineral forms in the samples, and specifically identifies the various asbestos types. This is the referenced method of analysis by EPA for asbestos identification in bulk samples. Materials found to contain greater than one percent asbestos by PLM are Asbestos-Containing Materials (ACM) as defined by EPA, OSHA and the State of Florida.

The EPA National Standard for Hazardous Air Pollutants (NESHAP) Final Rule (40 CFR 61, Subpart M) for asbestos includes an option for verification of friable materials, by point counting, if it is initially determined by PLM analysis that asbestos is present in amounts less than 10 percent. Point counts were not conducted as part of this survey.

The following suspect materials (thought to possibly contain asbestos) were sampled during the survey. Materials containing asbestos are in **bold**:

1. Drywall and Joint Compound with Light Knockdown Texture Treatment (Unit A and B - Interior Walls)
2. Drywall and Joint Compound (Unit A and B - Interior Walls)
3. Off-White with Blue Box pattern Vinyl Floor Tile (VFT) with Adhesive (Unit A – Restroom 2 Floor)
4. **Brown and Beige Brick Pattern Sheet Vinyl Floor (SVF) with Adhesive** (Unit A – Restroom 1 Floor)

5. 12"x12" White with Light Gray Streaks Ceramic Tile, Grout and Thinset (Unit B – North Center Section Floor)
6. 12"x12" Dark Green Ceramic Tile, Grout and Thinset (Unit B – West Center Section Floor)
7. **Beige Sink Undercoat** (Unit A - Kitchen Sink)
8. Off-White with Beige Box Pattern SVF with Adhesive (Unit B – Northwest Corner Floor)
9. Floral Pattern Wallpaper with Adhesive (Unit B – North Wall)
10. Concrete (Unit A and B - Entry Floor and Front Porch)
11. **Black Mastic** (Unit A and B - Fiberglass Ducts in Attic)
12. White Mastic and Insulation (Unit A – Fiberglass Ducts at Tie-In to AC)
13. White Caulk (Unit A and B - Around Interior Windows)
14. Drywall and Joint Compound with Tape and Popcorn Texture Treatment (Unit A and B - Ceilings)
15. CMU Block and Mortar (Unit A and B - Exterior Walls)
16. Exterior Stucco with Skim Coat and Base Coat (Unit A and B - Exterior Walls)
17. Shingle and Felt Paper (Unit A and B - Roofs)

3.0 BULK SAMPLE RESULTS

Based upon our visual observations, bulk sampling of 17 suspect materials (41 samples, 83 layers) and subsequent PLM microscopic analysis, the following materials were determined to contain asbestos:

Sample No.	Material Sampled	Sample Location	Percent/ Type Asbestos	Condition/ Potential for Damage	Estimated Quantity
B-4A & B-4B	Brown and Beige Brick Pattern SVF with Adhesive	Unit A – Restroom 1 Floor	15% Chrysotile	Good/Low	80 S.F.
B-7A	Beige Sink Undercoat	Unit A - Kitchen Sink	3% Chrysotile	Good/Low	6 S.F.
B-11A & B-11B	Black Mastic	Unit A and B - Fiberglass Ducts in Attic	3% Chrysotile	Good/Low	60 L.F.

Prepared By: RW Checked By: JMS

4.0 ASBESTOS CONCLUSIONS

4.1 General Recommendations

There are four recognized alternative courses of action to control asbestos-containing materials in buildings: (1) asbestos removal and disposal; (2) enclosure; (3) encapsulation; and, (4) special operations, maintenance and re-observation programs. The selection of a particular alternative should be based upon intended usage of the building, actual exposure rates and cost. Regarding removal and disposal, the EPA has Federal regulations regarding asbestos. The National Emissions Standard for Hazardous Air Pollutants (NESHAP) Final Rule Revision (EPA 40 CFR Part 61) dated November 20, 1990 includes several requirements for building Owners and Contractors. The requirement that greatly affects abatement alternatives is the categorization of asbestos-containing materials (ACM).

These are categorized as follows:

- **Friable** means any material that can be reduced to powder by hand pressure when dry.
- **Category I Non-Friable ACM** means packing, gaskets, resilient floor coverings and roofing products that contain more than one- percent asbestos.
- **Category II Non-Friable ACM** means any material, excluding Category I Non-Friable ACM that contains more than one- percent asbestos, and is not friable.
- **Regulated ACM (RACM)** includes all friable ACM; Category I Non-Friable ACM that will be or has been subject to sanding, grinding, cutting or abrading; Category I Non-Friable ACM that has become friable; and Category II Non-Friable ACM that has a high probability of becoming, or has become crumbled, pulverized, or reduced to a powder by forces expected to act on the material in the course of remediation operations.

4.2 State Of Florida Asbestos Regulations

Chapter 469 of the Florida Statutes generally requires that a state licensed asbestos abatement contractor perform the removal, repair, or encapsulation of the types of ACM and materials identified as containing asbestos in this report. Since the structure will be demolished, ten working day written courtesy notification is suggested prior to the start of demolition activities under the EPA NESHAP regulation (40 CFR 61, Subpart M) and Florida Department of

Environmental Protection (FDEP) rules. Since the project is located in **Lake County**, the notification, using FDEP form 62-257.900(1), should be made to FDEP's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767 (telephone 407-894-7555, Fax 407-897-2966) or at the FDEP's submit notice web link (www.fldeportal.com/go/submit-registration/).

4.3 Interim Measures

Regardless of the type of asbestos abatement action chosen, and the time frame involved, we strongly recommend that during the interim time period prior to abatement action, control measures be established for the employees and occupants working in the building to minimize their exposure to asbestos.

This program should include, at a minimum, proper safety precautions and cleaning methods by personnel when work must be performed in and around asbestos-containing materials. Also, periodic reassessment of the condition of the asbestos-containing materials should be undertaken and precautions and procedures should be in writing and be thoroughly documented.

4.4 Legal and Medical Considerations

Due to the health hazards and legal ramifications involved in asbestos exposure in public buildings, an interdisciplinary approach between the engineering, medical and legal communities should be involved when determining an asbestos control program. There is presently a tremendous amount of litigation in the courts concerning present and past asbestos exposure in public and private facilities, as well as in the workplace environment.

One basis for much of the litigation stems from the lack of adequate notification by the building owner to building occupants/employees following the identification of asbestos in buildings. As a minimum, building owners should notify building employees, occupants, vendors, and others as required in the OSHA Asbestos Standards (29 CFR 1910.1001 and 29 CFR 1926.1101), and for public facilities, the EPA Worker Protection Rule (40CFR 763, Subpart G). We recommend that you involve appropriate legal counsel in your asbestos control program to address these very important issues.

4.5 Specific Asbestos Recommendations

The following materials were found to contain asbestos:

4.5.1 Brown and Beige Brick Pattern SVF with Adhesive (B-4A and B-4B)

Asbestos-containing Brown and Beige Brick Pattern SVF with Adhesive was identified in Unit A, Restroom 1 Floor. The SVF with Adhesive was found to contain **15% Chrysotile asbestos**, according to PLM analysis. The flooring material was generally observed to be in good condition with a low potential for damage.

The EPA NESHAP classifies the **ACM SVF backing** as friable asbestos-containing material. The OSHA Construction Standard (29 CFR 1926.1101) classifies disturbance, removal, or demolition of structures with **ACM SVF** as Class II asbestos work which requires specialized training, engineering controls, etc.

Therefore, we recommend that the 80 square feet of ACM SVF in Unit A, Restroom 1 be removed prior to demolition by a Florida Licensed Asbestos Contractor for proper disposal.

4.5.2 Beige Sink Undercoat (B-7A)

Beige undercoat on the Kitchen Sink in Unit A was found to contain **3% Chrysotile asbestos**, according to PLM analysis. The undercoat material was generally observed to be in good condition with a low potential for damage.

The EPA NESHAP classifies the **ACM Sink Undercoat** as a Category I non-friable asbestos-containing material. The OSHA Construction Standard (29 CFR 1926.1101) classifies disturbance, removal, or demolition of structures with **ACM Sink Undercoat** as Class II asbestos work which requires specialized training, engineering controls, etc.

However, the Category I non-friable asbestos-containing **sink undercoat need not be removed prior to demolition**. Since the sink undercoat is attached to the sink fixture, which may be removed using wet methods, and disposed of intact as asbestos waste, Lake County may use a demolition contractor that is also qualified as an asbestos-abatement contractor to remove the sink and undercoat material. This would be appropriate if Lake County uses qualified asbestos

workers; implements wet demolition methods; and does not cut, sand, grind or abrade the ACM Sink Undercoat, and properly disposes of asbestos-containing building rubble, and complies with 29 CFR 1926.1101.

4.5.3 Black Mastic (B-11A and B-11B)

Asbestos-containing Black Mastic on the Fiberglass Ducts in the Attics of Unit A and B was found to contain **3% Chrysotile asbestos**, according to PLM analysis. The ductwork mastic was generally observed to be in good condition with a low potential for damage.

The EPA NESHAP classifies the **ACM mastic** as a Category I non-friable asbestos-containing material. The OSHA Construction Standard (29 CFR 1926.1101) classifies disturbance, removal, or demolition of structures with **ACM mastic** as Class II asbestos work which requires specialized training, engineering controls, etc.

However, the Category I non-friable asbestos-containing **mastic need not be removed prior to demolition** if Lake County uses a demolition contractor that is also qualified as an asbestos-abatement contractor; uses qualified asbestos workers; implements wet demolition methods; does not cut, sand, grind or abrade the ACM mastic, and properly disposes of asbestos-containing building rubble, and complies with 29 CFR 1926.1101.

5.0 LIMITATIONS

Amec Foster Wheeler has performed its services in accordance with generally accepted practices at the time of the field work. This report has been prepared on behalf of and exclusively for the use by **Lake County Department of Public Works**. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party without Amec Foster Wheeler's prior written consent. The findings are relative to the date of our site visit and should not be relied upon for substantially later dates. All material quantities are estimated based on visual observation and should be relied on for contractor bidding or regulatory notification purposes.

Please note that these test results relate only to those homogeneous materials tested. If conditions, or materials, other than those addressed in this report are encountered during the planned maintenance, renovation, or demolition activities, Amec Foster Wheeler should be contacted to assess the potential impact of these materials or conditions relative to the findings or recommendations included herein.

APPENDIX A
LABORATORY ANALYSIS



EMSL Analytical, Inc.

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<http://www.EMSL.com> orlandolab@emsl.com

EMSL Order: 341510598
CustomerID: AMECH25
CustomerPO: C012307507
ProjectID:

Attn: **Ron Trapan** Phone: (407) 522-7570
AMEC Foster Wheeler E & I Fax:
75 E. Amelia Street Suite 200 Received: 10/15/15 10:00 AM
Orlando, FL 32801 Analysis Date: 10/17/2015
Collected: 10/14/2015
Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-1A-Drywall 341510598-0001	Office 3 - W. Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	20% Cellulose	60% Gypsum 20% Non-fibrous (other)	None Detected
B-1A-Joint Compound 341510598-0001A	Office 3 - W. Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	White/Peach Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-1B-Drywall 341510598-0002	Kitchen - N. Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	20% Cellulose	60% Gypsum 20% Non-fibrous (other)	None Detected
B-1B-Joint Compound 341510598-0002A	Kitchen - N. Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	White/Red/Peach Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-1C-Drywall 341510598-0003	Hall Between R/R 1 & AC Closet - N. Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (other)	None Detected
B-1C-Joint Compound 341510598-0003A	Hall Between R/R 1 & AC Closet - N. Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	White/Peach Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 10/20/2015 08:17:25



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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-1D-Drywall 341510598-0004	East Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	10% Cellulose	80% Gypsum 10% Non-fibrous (other)	None Detected
No texture present					
B-1D-Joint Compound 341510598-0004A	East Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	White/Blue/Pink Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-1E-Drywall 341510598-0005	SW Sect - West Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	Brown/Gray Fibrous Homogeneous	10% Cellulose	80% Gypsum 10% Non-fibrous (other)	None Detected
No texture present					
B-1E-Joint Compound 341510598-0005A	SW Sect - West Wall - Drywall & Joint Compound W/LT Knock Down Texture Treatment	White/Beige Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-2A-Drywall 341510598-0006	Entry Closet Walls - Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose	80% Gypsum 10% Non-fibrous (other)	None Detected
B-2A-Joint Compound 341510598-0006A	Entry Closet Walls - Drywall & Joint Compound	White/Pink Non-Fibrous Heterogeneous		25% Ca Carbonate 75% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-2B-Drywall 341510598-0007	R/R 1 - Drywall & Joint Compound	Gray Fibrous Homogeneous	3% Cellulose	85% Gypsum 12% Non-fibrous (other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 10/20/2015 08:17:25

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 Analysis Date: 10/17/2015
 Collected: 10/14/2015

Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-2B-Joint Compound 341510598-0007A	R/R 1 - Drywall & Joint Compound	Tan/White Non-Fibrous Heterogeneous		25% Ca Carbonate 75% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-2B-Tape 341510598-0007B	R/R 1 - Drywall & Joint Compound	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
B-2C-Drywall 341510598-0008	Office 3 - Closet - Drywall & Joint Compound	Brown/Gray Fibrous Heterogeneous	20% Cellulose	70% Gypsum 10% Non-fibrous (other)	None Detected
B-2C-Joint Compound 341510598-0008A	Office 3 - Closet - Drywall & Joint Compound	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (other)	None Detected
B-3A-Flooring 341510598-0009	R/R 2 - Floor - Off White W/Blue "Box" Pattern Sheet Vinyl Flooring W/Adhesive	Tan/White Fibrous Heterogeneous	10% Cellulose <1% Glass	90% Non-fibrous (other)	None Detected
This is a composite result of both vinyl and backing layer					
B-3A-Adhesive 341510598-0009A	R/R 2 - Floor - Off White W/Blue "Box" Pattern Sheet Vinyl Flooring W/Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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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		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-3B-Flooring 341510598-0010	R/R 2 - Floor - Off White W/Blue "Box" Pattern Sheet Vinyl Flooring W/Adhesive	Gray/White Fibrous Heterogeneous	10% Cellulose <1% Glass	90% Non-fibrous (other)	None Detected
This is a composite result of both vinyl and backing layer					
B-3B-Adhesive 341510598-0010A	R/R 2 - Floor - Off White W/Blue "Box" Pattern Sheet Vinyl Flooring W/Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-4A 341510598-0011	R/R 1 - Floor - Brown & Beige "Brick" Pattern S. V. F. W/Adhesive	White/Yellow Fibrous Heterogeneous	5% Cellulose	80% Non-fibrous (other)	15% Chrysotile
This is a composite result of both vinyl and backing layer Inseparable adhesive layer included in analysis					
B-4B 341510598-0012	R/R 1 - Floor - Brown & Beige "Brick" Pattern S. V. F. W/Adhesive	Various Fibrous Heterogeneous	5% Cellulose	80% Non-fibrous (other)	15% Chrysotile
This is a composite result of both vinyl and backing layer Inseparable adhesive layer included in analysis					
B-5A-Ceramic Tile 341510598-0013	North - Center Sect. - 12"x12" White W/Lt Gray Streaks Ceramic Tile, Grout & Thinset	White/Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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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		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-5A-Grout 341510598-0013A	North - Center Sect. - 12"x12" White W/Lt Gray Streaks Ceramic Tile, Grout & Thinset	Green Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
B-5A-Thinset 341510598-0013B	North - Center Sect. - 12"x12" White W/Lt Gray Streaks Ceramic Tile, Grout & Thinset	White Non-Fibrous Homogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-5B-Ceramic Tile 341510598-0014	North - Center Sect. - 12"x12" White W/Lt Gray Streaks Ceramic Tile, Grout & Thinset	Brown/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-5B-Grout 341510598-0014A	North - Center Sect. - 12"x12" White W/Lt Gray Streaks Ceramic Tile, Grout & Thinset	Blue Non-Fibrous Heterogeneous		40% Quartz 10% Ca Carbonate 50% Non-fibrous (other)	None Detected
B-5B-Thinset 341510598-0014B	North - Center Sect. - 12"x12" White W/Lt Gray Streaks Ceramic Tile, Grout & Thinset	White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-6A-Ceramic Tile 341510598-0015	West - Center Sect. - 12"x12" Dk Green Ceramic Tile, Grout & Thinset	Red/Green Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-6A-Grout 341510598-0015A	West - Center Sect. - 12"x12" Dk Green Ceramic Tile, Grout & Thinset	Gray Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
B-6A-Thinset 341510598-0015B	West - Center Sect. - 12"x12" Dk Green Ceramic Tile, Grout & Thinset	Gray Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
B-6B-Ceramic Tile 341510598-0016	S. W. Sect - 12"x12" Dk Green Ceramic Tile, Grout & Thinset	Brown/Green Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-6B-Grout 341510598-0016A	S. W. Sect - 12"x12" Dk Green Ceramic Tile, Grout & Thinset	Gray Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
B-6B-Thinset 341510598-0016B	S. W. Sect - 12"x12" Dk Green Ceramic Tile, Grout & Thinset	Gray Non-Fibrous Heterogeneous		55% Quartz 10% Ca Carbonate 35% Non-fibrous (other)	None Detected
B-7A 341510598-0017	Kitchen Sink - Beige Sink Under Coat	White Non-Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
B-8A-Flooring 341510598-0018	N. W. Corner - Off White W/Beige "Box" Pattern S. V. F. W/Adhesive	Tan/White Fibrous Heterogeneous	12% Cellulose <1% Glass	88% Non-fibrous (other)	None Detected

This is a composite result of both vinyl and backing layer

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 Collected: 10/14/2015

Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-8A-Adhesive 341510598-0018A	N. W. Corner - Off White W/Beige "Box" Pattern S. V. F. W/Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-8B-Flooring 341510598-0019	N. W. Corner - Off White W/Beige "Box" Pattern S. V. F. W/Adhesive	Gray/Beige Fibrous Heterogeneous	12% Cellulose <1% Glass	88% Non-fibrous (other)	None Detected
This is a composite result of both vinyl and backing layer					
B-8B-Adhesive 341510598-0019A	N. W. Corner - Off White W/Beige "Box" Pattern S. V. F. W/Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-9A-Wallpaper 341510598-0020	North Wall - Floral Pattern Wallpaper W/Adhesive	Brown/White/Green Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
B-9A-Adhesive 341510598-0020A	North Wall - Floral Pattern Wallpaper W/Adhesive	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
B-9B 341510598-0021	North Wall - Floral Pattern Wallpaper W/Adhesive	Various Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (other)	None Detected
No adhesive present					
B-10A 341510598-0022	Entry (Floor) - Concrete	Gray/White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected

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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		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-10B 341510598-0023	Front Porch - Concrete	Gray/Tan/White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-11A-Mastic 341510598-0024	Fiberglass Ducts In Attic - Black Mastic	Brown/Black/Silver Fibrous Heterogeneous	10% Cellulose 15% Glass	72% Non-fibrous (other)	3% Chrysotile
Inseparable wrap layer included in analysis					
B-11A-Insulation 341510598-0024A	Fiberglass Ducts In Attic - Black Mastic	Yellow Fibrous Homogeneous	98% Glass	2% Non-fibrous (other)	None Detected
B-11B-Mastic 341510598-0025	Fiberglass Ducts In Attic - Black Mastic	Various Fibrous Heterogeneous	15% Cellulose 15% Glass	67% Non-fibrous (other)	3% Chrysotile
Inseparable wrap layer included in analysis					
B-11B-Insulation 341510598-0025A	Fiberglass Ducts In Attic - Black Mastic	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (other)	None Detected
B-12A-Mastic 341510598-0026	Fiberglass Duct @ Tie-In To AC - White Mastic	Brown/White/Silver Fibrous Heterogeneous	10% Cellulose 15% Glass	75% Non-fibrous (other)	None Detected
Inseparable wrap layer included in analysis					
B-12A-Insulation 341510598-0026A	Fiberglass Duct @ Tie-In To AC - White Mastic	Yellow Fibrous Homogeneous	98% Glass	2% Non-fibrous (other)	None Detected
B-12B-Mastic 341510598-0027	Fiberglass Duct @ Tie-In To AC - White Mastic	Various Fibrous Heterogeneous	10% Cellulose 15% Glass	75% Non-fibrous (other)	None Detected
Inseparable wrap layer included in analysis					

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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		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-12B-Insulation 341510598-0027A	Fiberglass Duct @ Tie-In To AC - White Mastic	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (other)	None Detected
B-13A 341510598-0028	R/R 1 - Counter Top - White Caulk (Interior) Around Windows	White/Beige Non-Fibrous Heterogeneous	100% Non-fibrous (other)		None Detected
Inseparable paint / coating layer included in analysis					
B-13B 341510598-0029	R/R 1 - Counter Top - White Caulk (Interior) Around Windows	White Non-Fibrous Homogeneous	100% Non-fibrous (other)		None Detected
B-14A-Drywall 341510598-0030	Office 3 - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	Brown/Gray Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (other)	None Detected
B-14A-Joint Compound 341510598-0030A	Office 3 - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	Tan/White Non-Fibrous Heterogeneous	20% Ca Carbonate 80% Non-fibrous (other)		None Detected
Inseparable paint / coating layer included in analysis					
B-14B-Drywall 341510598-0031	Office 2 - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	Gray Fibrous Homogeneous	3% Cellulose	85% Gypsum 12% Non-fibrous (other)	None Detected
B-14B-Joint Compound 341510598-0031A	Office 2 - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	Tan/White Non-Fibrous Heterogeneous	25% Ca Carbonate 75% Non-fibrous (other)		None Detected
Inseparable paint / coating layer included in analysis					

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-14B-Tape 341510598-0031B	Office 2 - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
B-14B-Texture 341510598-0031C	Office 2 - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-14C-Drywall 341510598-0032	Hall Between R/R 1 & AC Closet - Drywall & Joint Compound W/Popcorn Treatment	Brown/Gray Fibrous Homogeneous	15% Cellulose <1% Hair	65% Gypsum 20% Non-fibrous (other)	None Detected
B-14C-Joint Compound 341510598-0032A	Hall Between R/R 1 & AC Closet - Drywall & Joint Compound W/Popcorn Treatment	White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-14D-Drywall 341510598-0033	Main Entry Room - S. Sect Of Ceiling - Drywall & Joint Compound W/Popcorn Treatment	Brown/Gray Fibrous Homogeneous	20% Cellulose	70% Gypsum 10% Non-fibrous (other)	None Detected
B-14D-Joint Compound 341510598-0033A	Main Entry Room - S. Sect Of Ceiling - Drywall & Joint Compound W/Popcorn Treatment	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (other)	None Detected

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 Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 10/20/2015 08:17:25

**EMSL Analytical, Inc.**

5125 Adanson Street, Suite 900, Orlando, FL 32804

Phone/Fax: (407) 599-5887 / (407) 599-9063

<http://www.EMSL.com>orlandolab@emsl.com

EMSL Order:	341510598
CustomerID:	AMECH25
CustomerPO:	C012307507
ProjectID:	

Attn: **Ron Trapane**
AMEC Foster Wheeler E & I
75 E. Amelia Street Suite 200
Orlando, FL 32801

Phone: (407) 522-7570
 Fax:
 Received: 10/15/15 10:00 AM
 Analysis Date: 10/17/2015
 Collected: 10/14/2015

Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-14D-Texture 341510598-0033B	Main Entry Room - S. Sect Of Ceiling - Drywall & Joint Compound W/Popcorn Treatment	White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-14E-Drywall 341510598-0034	N. Sect - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	Brown/Gray Fibrous Heterogeneous	20% Cellulose	70% Gypsum 10% Non-fibrous (other)	None Detected
B-14E-Joint Compound 341510598-0034A	N. Sect - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (other)	None Detected
B-14E-Texture 341510598-0034B	N. Sect - Ceiling - Drywall & Joint Compound W/Popcorn Treatment	White Non-Fibrous Heterogeneous		15% Mica 15% Ca Carbonate 70% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-15A-Block 341510598-0035	West Sect - C. M. V. & Mortar (Exterior Walls)	Gray/White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-15A-Mortar 341510598-0035A	West Sect - C. M. V. & Mortar (Exterior Walls)	Gray Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected

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Attn: **Ron Trapano**
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Orlando, FL 32801

Phone: (407) 522-7570
 Fax:
 Received: 10/15/15 10:00 AM
 Analysis Date: 10/17/2015
 Collected: 10/14/2015

Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-15B-Block 341510598-0036	West Sect - C. M. V. & Mortar (Exterior Walls)	Gray/White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-15B-Mortar 341510598-0036A	West Sect - C. M. V. & Mortar (Exterior Walls)	Gray Non-Fibrous Heterogeneous		55% Quartz 10% Ca Carbonate 35% Non-fibrous (other)	None Detected
B-16A-Skim Coat 341510598-0037	South Wall - Exterior Stucco	White Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-16A-Base Coat 341510598-0037A	South Wall - Exterior Stucco	Gray Non-Fibrous Heterogeneous		50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
B-16B-Skim Coat 341510598-0038	E. Wall - Exterior Stucco	Tan Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					
B-16B-Base Coat 341510598-0038A	E. Wall - Exterior Stucco	Gray Non-Fibrous Heterogeneous		45% Quartz 10% Ca Carbonate 45% Non-fibrous (other)	None Detected
B-16C-Skim Coat 341510598-0039	W. Wall - Exterior Stucco	Beige Non-Fibrous Heterogeneous	<1% Glass	50% Quartz 10% Ca Carbonate 40% Non-fibrous (other)	None Detected
Inseparable paint / coating layer included in analysis					

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EMSL Order: 341510598
CustomerID: AMECH25
CustomerPO: C012307507
ProjectID:

Attn: **Ron Trapane**
AMEC Foster Wheeler E & I
75 E. Amelia Street Suite 200
Orlando, FL 32801

Phone: (407) 522-7570
Fax:
Received: 10/15/15 10:00 AM
Analysis Date: 10/17/2015
Collected: 10/14/2015

Project: 6380-14-1274.17

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-16C-Base Coat 341510598-0039A	W. Wall - Exterior Stucco	Gray Non-Fibrous Heterogeneous		60% Quartz 10% Ca Carbonate 30% Non-fibrous (other)	None Detected
B-17A-Shingle 341510598-0040	N. Sect - Roof Shingle & Felt Paper	Brown/Black Fibrous Homogeneous	8% Glass	92% Non-fibrous (other)	None Detected
B-17A-Felt 341510598-0040A	N. Sect - Roof Shingle & Felt Paper	Black Fibrous Homogeneous	45% Cellulose	55% Non-fibrous (other)	None Detected
B-17B-Shingle 341510598-0041	S. Sect - Roof Shingle & Felt Paper	Various Fibrous Homogeneous	8% Glass	92% Non-fibrous (other)	None Detected
B-17B-Felt 341510598-0041A	S. Sect - Roof Shingle & Felt Paper	Black Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (other)	None Detected

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EMSL Order: 341510598
CustomerID: AMECH25
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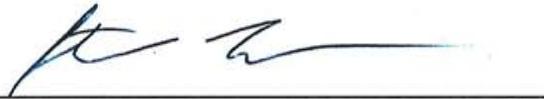
Attn: **Ron Trapane** Phone: (407) 522-7570
AMEC Foster Wheeler E & I Fax:
75 E. Amelia Street Suite 200 Received: 10/15/15 10:00 AM
Orlando, FL 32801 Analysis Date: 10/17/2015
Collected: 10/14/2015
Project: 6380-14-1274.17

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

Sample Receipt Date:: 10/15/2015 Sample Receipt Time: 10:00 AM
Analysis Completed Date: 10/17/2015 Analysis Completed Time: 10:11 AM

Analyst(s):


Jonathan Teda PLM (36)


Manolo Hernandez PLM (47)

Samples reviewed and approved by:


Jonathan Teda, Asbestos Lab Manager
or other approved signatory

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**Mandatory Pre-Bid Meeting
CR 466A Phase I (US 27 to Sunny Court)
Project No. 2016-02, Bid Number 16-0017**

January 14, 2016 @ 9:00 a.m., Emergency Operations Center, 425 West Alfred Street, Tavares

Name (Please Print)	Representing	Street Address	City/State/Zip	Phone Number	Email Address
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KATHRYN BARNES	DAB Constructors	PO BOX 1589 Inglis FL	Inglis FL	352 447 5488	katryn.b@dabcon.com
HERB HAWK	GIBBS & REGISTER	232 S. MILLARD WINTER GARDEN	WINTER GARDEN 34787	407-654-6133	ESTIMATING@GIBBSANDREGISTER.COM
JOSE GARCIA	FLORIDA SAFETY CONTRACTORS	11825 JACKSON RD THONOTOSASSA FL 33592	THONOTOSASSA FL 33592	352 255 8429	ESTIMATING@FLORIDA SAFETY CONTRACTORS.COM
Scott O'Neal	Ciraco Underground	8670 E Hwy 25 Belleme FL 34423	Belleme, FL 34423	352-347-2035	soncal@ciraco-underground.com
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Laurie Henderson	J. Mabree Construction	301 Sampson Graveland FL	Graveland	352-429-9501	TomSmithjmc@earthlink.com
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