



Purchasing Department
140 Stonewall Avenue West, Ste 204
Fayetteville, GA 30214
Phone: 770-305-5420
www.fayettecountyga.gov

January 21, 2025

**Subject: ITB 2515-B: Roof Repairs - Fayette County Community Health Building
Addendum 1**

Gentlemen/Ladies:

Below, please find responses to questions, clarification, or additional information for the above referenced **ITB**. You will need to consider this information when preparing your bid.

Will contractors be allowed to perform test cuts?

No destructive testing is allowed on the roof.

What is the existing thickness of the roof?

The thickness of the roof is unknown.

Can we suggest alternative materials to use?

Yes, alternative materials can be proposed – please include all technical specification information for the alternative material.

Is weekend work allowed?

Yes, weekend work can take place with prior approval by the Project Manager.

Can we come back and access the roof?

Yes – during business hours.

Are we removing the downspouts and gutters?

Yes.

If there is wet insulation, how will we price it out?

Please see attached moisture scan of the building. Allow for replacing 3,500sqft of wet insulation with an approved 4" insulation product. **See Attachment 1.**

Per the scope and specification document, can you clarify if the coping on the rear building (4021) is to remain?

The coping to the rear of Building 4021 should be replaced per the specification.

All contractors and subcontractors must successfully pass a background check and must schedule work through the authorized Sheriff's Office personnel.

Received by (Name): _____ Company _____

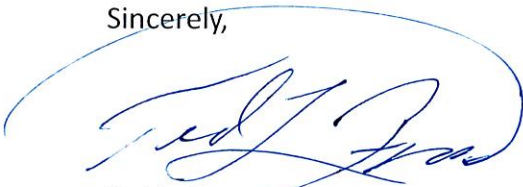
Note: If this addendum is not returned to the Fayette County Purchasing Department or if it is returned not signed, responding individuals, companies or other organizations will still be responsible for the requirements of this addendum and the specifications or changes herein.

The opening date for this ITB has not changed. **The opening time and date are 3:00p.m., Tuesday, January 28, 2024.** Bids must be received by the Purchasing Department at the address above, Suite 204, at or before the opening date and time.

The deadline for inquiries has passed, so the Purchasing Department will not be able to accept any additional questions after this time.

If you have questions, please contact Colette Cobb, Contract Administrator at (770) 305-5115, fax (770) 719-5544 or email at ccobb@fayettecountyga.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ted L. Burgess", enclosed within a blue oval.

Ted L. Burgess

Chief Procurement Officer

TLB/cc



AERIAL INFRARED MOISTURE SURVEY
FAYETVILLE COMMUNITY CENTER
245 BOOKER AVENUE
FAYETTEVILLE, GEORGIA 30215



Dylan Johnson, RRO, RRC, CIT II

Rolando Vargas, RRO, CIT II

Shea Ogilvie, Remote Pilot, REWO

TABLE OF CONTENTS

Cover Letter	Page 3
Procedure	Page 4
Anomalies Chart	Page 5
Definitions	Page 6
References	Page 7
Fayetteville Community Center May Kep Image	Page 8
Fayetteville Community Center Orthomosaic Infrared Image	Page 8
Fayetteville Community Center Orthomosaic IR Image with Anomalies	Page 9
Limitations	Page 10

Tim Symonds
Morgan Mill Consulting
140 Stonewall Ave.
Fayetteville, GA 30214
P: 404.392.5791
tims@morganmillconstruction.com

Reference: Fayetteville Community Center IR Scan
Project Number: 1001.209

Dear Mr. Symonds,

Thank you for your consideration in selecting Raymond Global to provide an Aerial Infrared Moisture Survey of the Fayetteville Community Center located at 245 Booker Avenue Fayetteville, GA 30214. The drone aerial imagery was collected on January 9th, 2025 by Shea Ogilvie. The assessment consisted of a daytime flight over the facilities to provide reference images of conditions on the roof and a nighttime flight to gather the infrared images. Moisture confirmations were performed with a Delmhost moisture meter on Monday, January 13th by Erich Iverson.

We trust this report will assist you and your staff in determining the best course of action in addressing potential wet insulation in the roof system of the facility. If you should have any questions regarding our report or would like to discuss our findings in further detail, please do not hesitate to contact us directly. Additional infrared and normal light images are on file and available upon request.

Respectfully submitted,

RAYMOND



Dylan Johnson, RRO, RRC, CIT II
Building Envelope Consultant
dylan.johnson@Raymondllc.com

Shea Ogilvie, REWO
Building Envelope Consultant
shea.ogilvie@Raymondllc.com

DATA ANALYSIS PROCEDURE AND DISCUSSION:

Individual thermograms were thermally tuned and examined, suspicious anomalies identified qualitatively. Thermograms having suspicious anomalies were compared with the corresponding color photographs, and false positive signatures such as cast-iron drains, patches and coatings, sediment and stains, fan exhausts, etc. were ruled out. Anomalies which we suspect to be wet insulation were flagged and outlined in the below DroneDeploy roof plan. Areas were calculated and tabulated.

Equipment Used:

Drone – DJI Mavic 2 Enterprise (Infrared Flight) & Mavic Pro 2 Zoom (Daytime Flight)

Color Camera – Mavic Pro 2 Zoom

Infrared Sensor – FLIR Zenmuse XT 640x512 Performance

Moisture Meter – Delmhorst BD-2100

*Delmhorst Moisture Meter Scale is set to

FAA Certified Remote Pilot – Shea Ogilvie, REWO, sUAS # 4640396

Certified Infrared Thermographer – Dylan Johnson, RRO, RRC, CIT II # 247052

Certified Infrared Thermographer – Rolando Vargas, RRO, CIT II # 278979

Exclusions:

Suspected wet insulation at roof areas was verified through destructive testing, however not all anomalies were available for testing due to ice and moisture present on the roof at the time of the testing.

INFRARED ANOMALIES CHART					
Anomaly	Test #	Roof Area	Confirmation	Square Footage	Wet/ Dry
#01	1	A	77.0	352 SF	Dry
#02	2	A	86.2	426 SF	Wet
#03	3	A	91.1	133 SF	Wet
#04	4	A	89.3	113 SF	Wet
#05	5	C	99.9	1,248 SF	Wet
#06	6	C	99.9	186 SF	Wet
#07	7	C	99.9	83 SF	Wet
#08	8	C	X	571 SF	Unknown
#09	9	D	99.9	75 SF	Wet
#10	10	E	90.7	74 SF	Wet
#11	11	E	89.7	186 SF	Wet
#12	12	E	82.5	33 SF	Dry
#13	13	E	99.2	195 SF	Wet
#14	14	F	72.6	40 SF	Dry
#15	15	F	72.6	28 SF	Dry
#16	16	O	X	42 SF	Unknown
#17	17	O	X	63 SF	Unknown
#18	18	O	91.5	64 SF	Wet
#19	19	P	X	31 SF	Unknown
#20	20	P	X	9 SF	Unknown

Blue: Wet

Yellow: Dry

Pink: Unknown (Not Tested)

DEFINITIONS

Anomalies – A deviation from normal expectations, an area which differs from the surroundings.

ASTM – American Society for Testing and Materials, an organization to establish test standards for materials, products, systems, and services for a wide range of industries.

Blackbody – Is an idealized physical body that absorbs all incident electromagnetic radiation, regardless of frequency or angle of incidence.

CIT – Certified Infrared Thermographer

Electric Capacitance – The ability of a material to hold or pass an electric charge. Values are used to correlate the amount of moisture entrained within a material.

Emissivity – The ratio of electromagnetic radiation emitted by an object compared to the electromagnetic radiation emitted by an object compared to the electromagnet radiation emitted by a blackbody of the same temperature.

Infrared – The portion of invisible electromagnetic spectrum consisting of radiation with wavelengths in the range of 750 nm to 1 mm, between light and radio waves.

Moisture meter – A special electronic test meter typically used to obtain an electric capacitance value for materials.

Nondestructive Testing – A wide group of analysis techniques used in science and industry to evaluate the properties of a material, component, or system without causing damage. Infrared Thermography is one of these techniques. Confirmation of nondestructive testing results can only be obtained by destructive testing.

Orthomosaic – Numerous photographs stitched together to form a larger image at scale.

Qualitative – Indicative only of relative magnitude, rather than their numerical values. A qualitative comparison would say weather one thing is hotter, cooler, or the same temperature to another, without specifying the magnitude of the difference. See quantitative

Quantitative – A quantitative property can be measured using numbers; properties which aren't quantitative are called qualitative. In thermographic inspection this refers to obtaining accurate temperature readings.

Reflectivity – The portion of incident radiation reflected by a surface, expressed as a fraction or a percentage.

Span – The portion of the measurement range that is applied to a thermographic image.

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Thermal Mass – The ability of an object to collect and store heat energy.

Thermal Tuning – Adjusting the span of a thermographic image to eliminate readings of extreme temperatures, highlight the area of the image's focus, and optimize contrast in the thermographic image.

Thermographic Image – An image taken in the infrared spectrum.

REFERENCES

ASTM E1933–14 (2018) Standard Test Methods for Measuring and Compensating for Emissivity Using Infrared Imaging Radiometers

ASTM E1862-14 (2018) Standard Test Methods for Measuring and Compensation for Reflected Temperature Using Infrared Imaging Radiometers

ASTM E1213-14 (2018) Standard Test Method for Minimum Resolvable Temperature Difference for Thermal Imaging Systems

ASTM C1153-10 (2015) Standard Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging

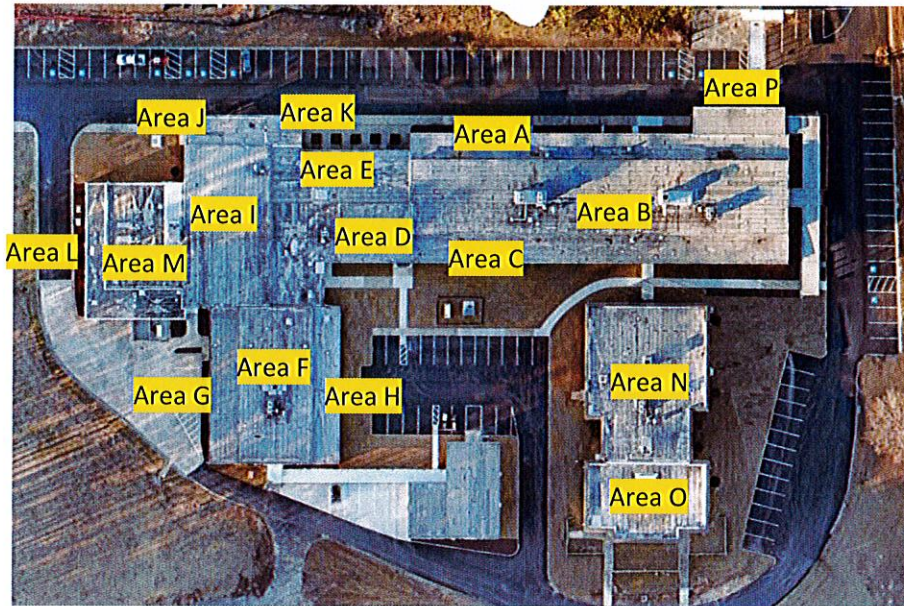
ASTM C1060-11a Standard Practice for Thermographic inspection of Insulation Installations in Envelope Cavities of Frame Areas

ASTM E1316-20 Standard Terminology for Nondestructive Examinations

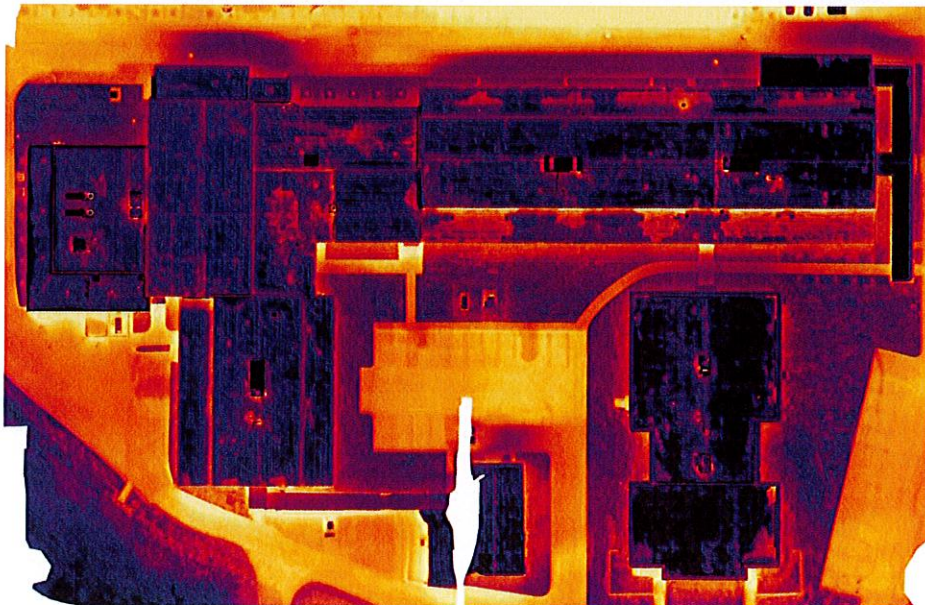
ASTM E1311-14 (2018) Standard Test Method for Minimum Detectable Temperature Difference for Thermal Imaging Systems

ASMT C1155-95 (2013) Standard Practice for Determining Thermal Resistance of Area Envelope Components from the In-Situ Data

Orthomosaic Drone Image, Fayetteville Community Center

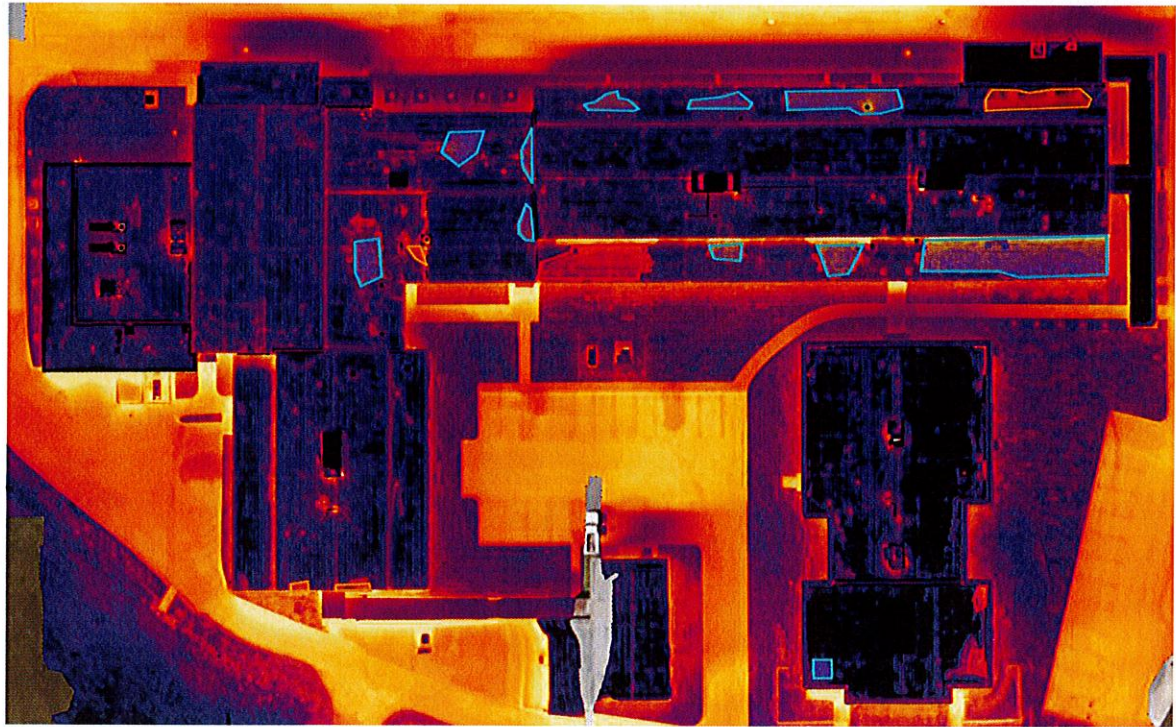


Radiometric Thermal Image, Fayetteville Community Center



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Radiometric Thermal Infrared Image with Anomalies, Fayetteville Community Center



Confirmed Wet ■ Confirmed Dry ■
Not Tested ■

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LIMITATIONS

This report does not eliminate the possibility that hidden conditions were present at the time of our survey and were not identifiable by the limited observations, nor does it identify issues that may develop in the future at the subject property. No warranties, expressed or implied, are intended or made by Raymond.

If the information provided in this report is contrary to facts known by other readers, Raymond should be notified so that an assessment of this information can be made in the context of this report. Our services have been performed under mutually agreed upon terms and conditions. If other parties wish to rely on this report, please have them contact Raymond so that a mutual understanding and agreement of the terms and conditions for our services can be established prior to their use of this information.

We appreciate the opportunity to provide these services to Innovative Roofing Group in assistance with this project, please do not hesitate to contact the undersigned directly. Please address any specific comments or questions regarding the contents of this report to the undersigned in writing.

END OF REPORT