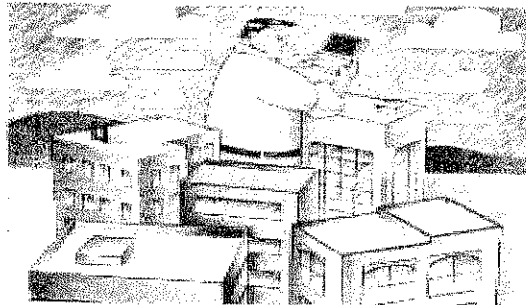


# TREMCO Roof Audit Report

*Prepared For* **Bayless School District**



## **TREMCO**

933 Natchez Drive  
St. Charles, MO 63303  
314/393-4489  
rsmith@tremcoinc.com

June 23, 2010

Mr. Jeff Timeus  
Director Buildings & Grounds  
Bayless School District  
4530 Weber Road  
St. Louis, MO 63123

Re: Roof Analysis Report  
Intermediate School

Dear Mr. Timeus:

The following report contains information concerning the condition of this roof. The information contained in this report was obtained from the roofing system examination conducted June 2010. The inspection was requested in an attempt to gain a working knowledge of the type of roof systems installed and their general condition.

The report is based on the findings of our examination that included:

### **INFRA-RED ANALYSIS**

A complete inspection of the entire roof was made using a sensitive infrared scanner to detect temperature differentials across your entire roof area. This quickly identifies areas of wet insulation, which are marked for further analysis.

### **CORE ANALYSIS**

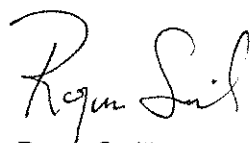
Core cuts were made in strategic locations to verify both construction and condition of all roof components, which compromise the roofing systems.

This report is divided into the following sections for clarification and ease of review.

GENERAL CONDITIONS  
RECOMMENDATIONS  
BUDGET ESTIMATES  
INFRARED CADD DRAWINGS

I trust you will find this report helpful in meeting your immediate needs. Should you have any questions regarding any aspect of this report, please call for clarification at 314-393-4489. Thank you for allowing me the opportunity to be of service to you.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Roger Smith".

Roger Smith  
Senior Field Advisor, CTRC  
Tremco, Inc.

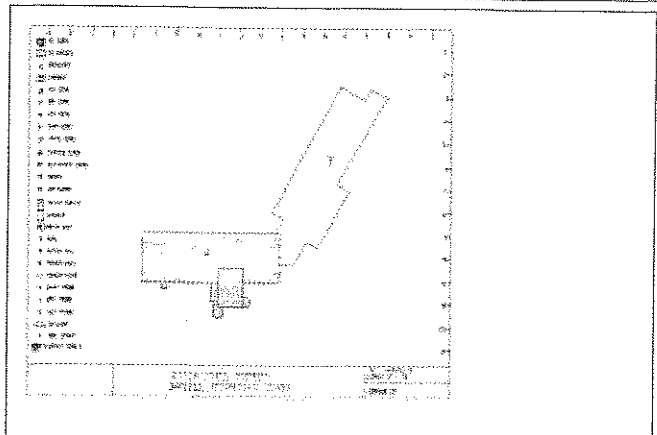


# General Roof Condition Report

Bayless School District, Intermediate School

Roof Area A

Roof Name	Roof Area A
Square Feet	20,250
Asset Value	
Year Installed	1997
Year to be Replaced	2015
Life Expectancy	5
Inspection Date	06/15/2010
Inspector	Roger Smith
Roof Rating	Fair
Leakage	<input checked="" type="checkbox"/>



## Roof Composition

Deck: Gypsum

Thermal Insulation: Tapered polyisocyanurate with 1/2 inch fiberboard overlay

Waterproofing System: Asphalt (BUR), cold applied, 3 ply fiberglass

Slope: 1/8"/ft.

Drainage: External Scuppers

Flashing: Outside edge consists of flat metal edge. Wall flashings are Hypalon sheeting with metal counterflashings.

Projections: HVAC equipment, powervents, and soils stacks

## Overall Roof Condition

This roof is in fair condition overall

## Visible Defects

Core samples and test cuts taken into the roof revealed the roofing plies are still laminated together with ample amounts of bitumen between the roofing plies, perimeter flashings are in good condition, surface aggregate is adhered, and the flood coat thickness appears to be sufficient.

Infra-red analysis revealed isolated areas of wet insulation having a net area of approximately 70 sq. ft.

## Recommendations

The areas of wet insulation must be removed. Water degrades the roof assembly from the structural deck to the membrane surface. It forms corrosive substances with organic elements in the roofing system that eat away at roof and structural components. Once inside a roof assembly, water can cause long-term deterioration and early roof failure.

Removal and replacement of the wet areas are recommended before wet areas spread and additional damage is done to the roof system.

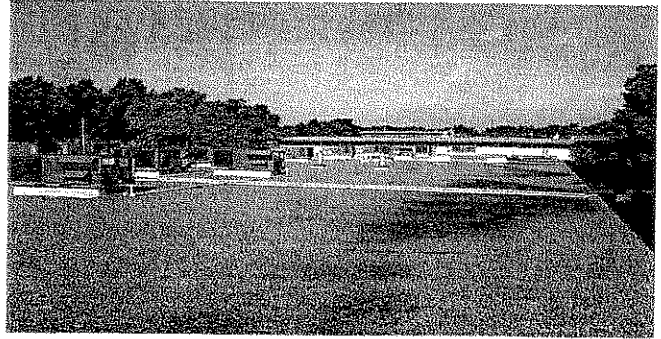
Budget Estimate: \$7,000.00

# General Roof Condition Report

Bayless School District, Intermediate School

Roof Area A

Overview photograph of the roof surface



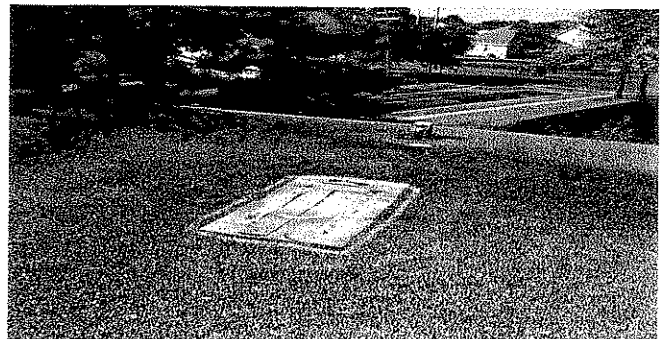
Overview photograph of the roof surface



Areas of wet insulation were identified using infra-red technology



Areas of wet insulation were verified with moisture probes and marked on the roof surface

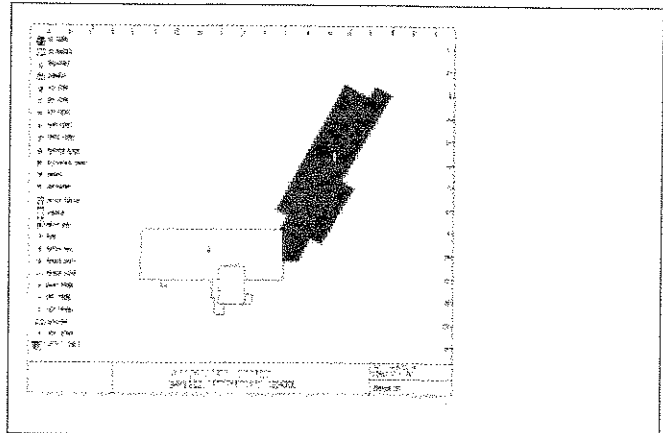


# General Roof Condition Report

Bayless School District, Intermediate School

Roof Area B

Roof Name	Roof Area B
Square Feet	21,700
Asset Value	
Year Installed	1997
Year to be Replaced	2010
Life Expectancy	0
Inspection Date	06/15/2010
Inspector	Roger Smith
Roof Rating	Failed
Leakage	<input checked="" type="checkbox"/>



## Roof Composition

Deck: Gypsum

Thermal Insulation: Tapered polyisocyanurate with 1/2 inch fiberboard overlay

Waterproofing System: Asphalt (BUR), cold applied, 3 ply fiberglass

Slope: 1/8"/ft.

Drainage: Internal Drains

Flashing: Outside edge consists of flat metal edge. Wall flashing is Hypalon Sheeting with metal counterflashings.

Projections: HVAC equipment, powervents, and soil stacks

## Overall Roof Condition

Overall this roof is in poor condition

## Visible Defects

The infra-red analysis revealed that approximately 70% of the roof contains wet insulation. Insulation is often placed between the roof membrane and the structural deck as part of the roof system construction. If moisture infiltrates the system it can cause the insulation to become wet. Wet insulation can: increase the weight load on the deck, cause rusting or deterioration of the system components, cause delamination of the roof system., and create environmental issues.

## Recommendations

Replacement is recommended before additional damage is done, larger expenditures are required, and environmental issues arise.

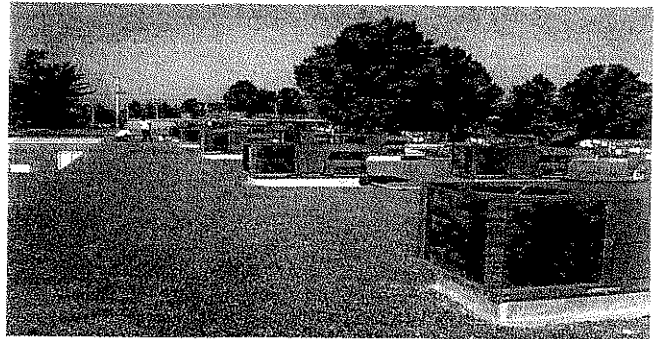
Budget Estimate: \$290,000.00

# General Roof Condition Report

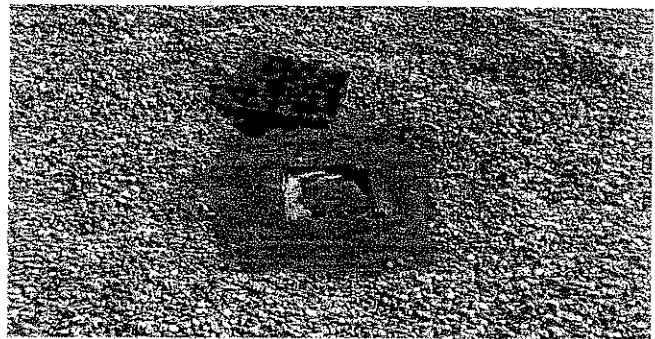
Bayless School District, Intermediate School

Roof Area B

Overview photograph of the roof surface



Core samples were taken to verify the areas of wet insulation

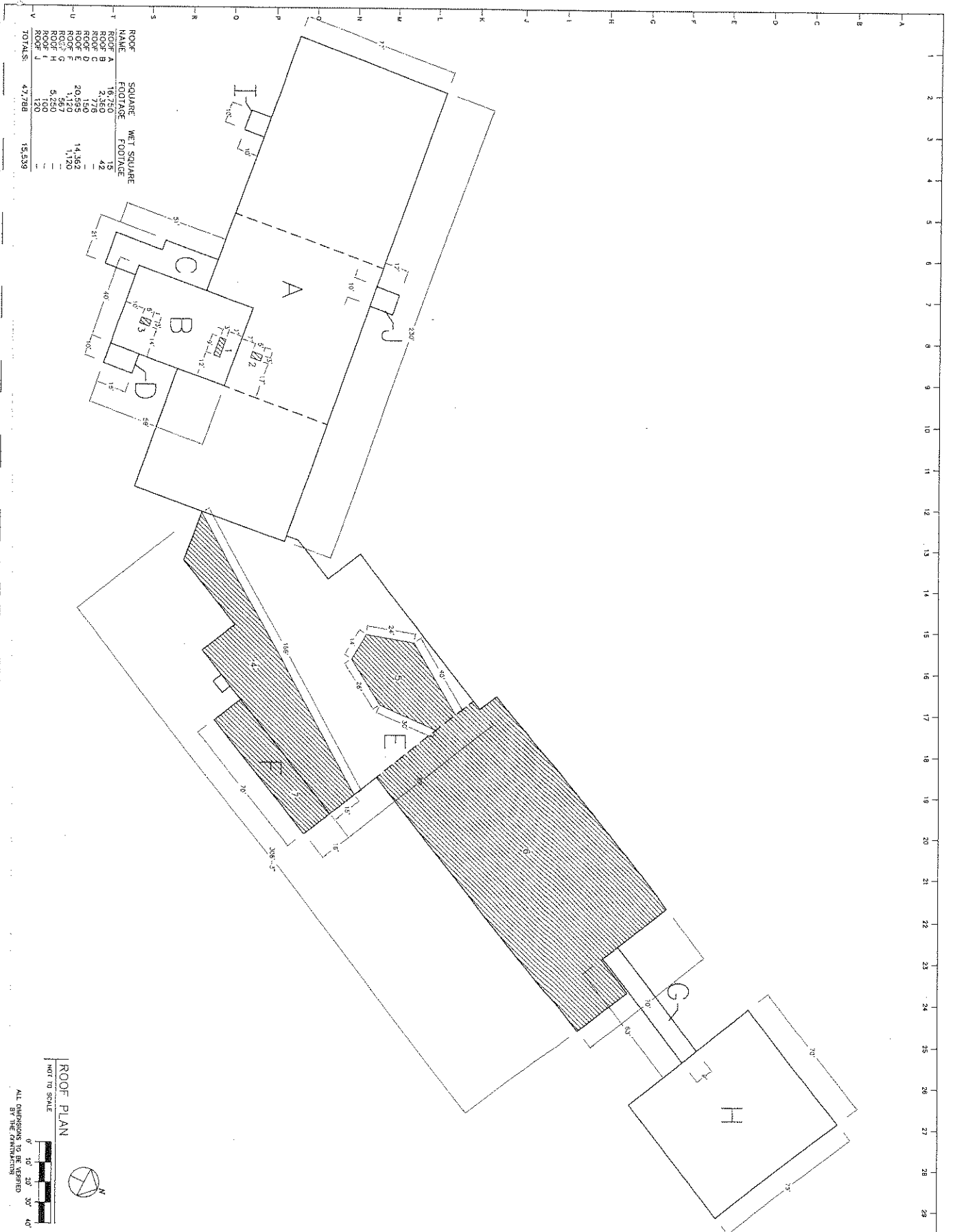


Areas of wet roof insulation were identified and marked on the roof surface



Core sample depicting saturated fiberboard roof insulation





ROOF NAME	SQUARE FOOTAGE	WET SQUARE FOOTAGE
ROOF A	16,750	15
ROOF B	2,350	42
ROOF C	150	—
ROOF D	20,595	14,362
ROOF E	1,120	1,120
ROOF F	5,250	—
ROOF G	100	—
ROOF H	120	—
ROOF I	120	—
ROOF J	120	—
TOTALS:	47,788	15,539

**ROOF PLAN**

NOT TO SCALE

ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR



**LEGEND:**  
 WET INSULATION



**OWNER:**  
 BAYLESS SCHOOL DISTRICT  
 INTERMEDIATE SCHOOL  
 LOCATION: ST LOUIS, MISSOURI

**DESIGNED BY:** DATE DRAWN: FILE NAME: 4/7/2003 WMS/SD/082724

**APPROVED:** SURVEY DATE: AGREEMENT: 24

**NOTES:**

REVISIONS	NO.	DATE	BY
WET AREAS	2	5/11/10	SD