

Wells County Public Library Air Leakage Inspection Report



Building: Wells County Public Library

Customer: Wells County Public Library
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Bluffton, IN 46714
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Submittal Date: February 2, 2021 - REV.

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#4552-CM



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PROJECT DESCRIPTION

CANAM BUILDING
ENVELOPE SPECIALISTS,
A DIVISION OF
WEATHERPROOFING
TECHNOLOGIES, INC.
(WTI), TOGETHER WITH
ITS AFFILIATES, TREMCO
CONSTRUCTION PRODUCTS
GROUP, IS PLEASED
TO PRESENT THIS AIR
LEAKAGE INSPECTION
AND RECOMMENDATIONS
REPORT TO THE CITY OF
WELLS COUNTY PUBLIC
LIBRARY.

On October 8, 2020, Canam conducted an on-site building envelope inspection which included a visual inspection and a smoke pencil air leakage test to evaluate energy loss and moisture issues for the following buildings located in Bluffton, IN.

- Wells County Public Library

In addition to the on-site inspection, Canam reviewed building construction and building performance issues with facility management to understand current conditions and priority needs.

An analysis of historical energy costs was also completed to determine how the condition of the building envelope currently affects energy consumption. Potential financial saving projections associated with air sealing to assess the project's potential economic benefit were also undertaken.

INSPECTION FINDINGS

On-site testing and the analysis of historical energy consumption indicate there is an opportunity to improve Wells County Public Library's indoor air quality, occupant comfort and energy use by upgrading existing air barrier systems.

Our inspection of Wells County Public Library's 1 building, totaling **32,000** square feet, revealed gaps, cracks and holes in the building envelope. When converted to their square feet equivalency, these holes total over **10.00 sf**.

RECOMMENDATIONS

Building envelope air sealing, weather-stripping, and interior compartmentalization is recommended to eliminate the infiltration and exfiltration of air to reduce energy loss while improving occupant safety and comfort.

RECOMMENDATIONS

The scope of work for Wells County Public Library includes weather-stripping and sealing the following building components, which have failed to varying degrees.
(See Appendix A for photos and details)

- Interior Doors / Exterior Doors
 - Roof/Wall Intersection
 - Overhead Doors
- Roof Top Exhausts
 - Windows
- Roof Top HVAC Equipment
 - Book Drop

Canam’s turnkey air barrier solution includes material specification, material procurement and installation services. Also included is on-site project management to ensure quality control. The cost to implement Canam’s air barrier solution is reflected in the following table.

BUILDING NAME	SQ. FT. LEAKAGE AREA	PRICE*
Wells County Public Library	10.00	\$ 51,750
GRAND TOTAL:	10.00	\$ 51,710

**Price excludes applicable tax, permits and bonds.*



ENERGY SAVINGS AND PAYBACK

Canam's analyses confirmed there is an opportunity for the Wells County Public Library to reduce their energy consumption by reducing or eliminating building envelope air leaks.

Calculated by a Certified Energy Manager (CEM), our analysis of the Wells County Public Library's buildings and utility rates, determined that the reduction of energy consumption from the Canam solution can produce significant savings. Based upon your current cost of energy within your climate zone and current energy usage rates, we estimate that air sealing measures as defined in this report will result in an annual energy savings of **\$6,200** the equivalent of **\$0.19** per square foot. These air sealing measures will reduce the amount of energy needed to heat and cool the facility at typical historical levels and will lower your Energy Utilization Index (EUI)* by **19.30** kBtu per square foot.

**EUI converts both gas and electric consumption into Btu's, enabling the comparison of a building's energy intensity.*

FINANCIAL IMPACT

The projected financial impact of Canam's recommended air barrier solution is reflected below:

TOTAL PROJECT: WELLS COUNTY PUBLIC LIBRARY

Total Investment Requirement	\$ 51,750
Annual Savings*	\$ 6,200
Payback Years	8.3

**Annual Savings are estimated based upon factors such as current energy usage patterns and building usage and occupancy.*

NOTE: Energy forecasts are based on original scope of work. Inclusions of 1st Floor office sealing has not been factored into the forecasted savings, however, will only increase the energy savings annually.

This offer remains valid for 120 days after submittal date.

Please see the Appendix for the cash flow statements.

As requested, the project has been separated into two phases. Each will have positive impacts on occupancy comfort as well as reducing the overall energy consumption of the building.

Phase 1 will directly impact the occupancy related comfort issues being experienced in the 1st Floor offices at the south side of the building. This includes replacing weather-stripping in full or partial on all exterior doors. This will improve the occupancy comfort within the Library as well as reduce energy losses.

Phase 2 includes all other identified and recommended air sealing measures. These will reduce energy losses, improve overall comfort levels and provide a more maintainable IAQ level within the conditioned spaces.

PHASE 1: \$12,100

PHASE 2: \$40,150

**Price excludes applicable tax, permits and bonds. And costs are based on two separate projects and mobilizations.*



WELLS COUNTY PUBLIC LIBRARY

GENERAL CONDITIONS

On October 8, 2020, Canam Building Envelope Specialists conducted an on-site survey of the existing air barrier continuity at Wells County Public Library. During the on-site inspection, the entire facility was inspected for an effective air barrier at the building envelope. Visual inspections and smoke pencil testing were used to determine areas of uncontrolled air leakage into and out of the building.

A building envelope that possesses a sealed air barrier will exhibit low uncontrolled air movement between the interior of the building and the outside environment. The building will have better thermal and moisture comfort, reduced heating and cooling costs and generally better performance qualities. Conversely a building, where the connections between the various building envelope features are poor, i.e., walls, windows, doors, roof, etc., will exhibit adverse air movement increasing interior thermal discomfort, increased HVAC costs and a reduction in overall building performance.

The purpose of Canam's building envelope assessment was to identify those areas where the air barrier continuity has failed. Various inspection methods, including air leakage detector testing, visual inspection and exterior IR imaging, were used to determine areas of uncontrolled air leakage movement across the building envelope.

This building had additions and renovations since the original construction. Although newer building materials such as windows and doors, and building practices have been used, there are still areas at the air barrier that are allowing for uncontrolled air leakage to occur.

The roof/wall transitions around most buildings are typically an area where considerable air leakage occurs. The roof/wall intersections were inspected and tested throughout this building and found to have uncontrolled in/ex-filtration of air. The higher roof line at the second level gable ends (east and west sides) have accessibility issues where installing a retrofit air barrier product is not feasible.

The costs to remove the suspended ceiling to provide access, erecting scaffolding in each room/office and installing the material in accordance with safety regulations, results in increased costs that make it a very poor return on investment. If significant renovations are made in this area (west side upper level), it would be practical to perform the air sealing measures to the roof/wall transition during the time of renovations.

CRITICAL AIR LEAKAGE

This building had uncontrolled air leakage at the exterior doors, the overhead doors and at the roof/wall intersection around the perimeter of the building. The total effective leakage area for this facility was over **10 square feet**. This results in considerable energy losses and can impact occupancy comfort levels within the building.

The largest source of uncontrolled air leakage at this building inspected were identified at the roof/wall intersection around several areas of the building. The large gap between the metal roof deck and the exterior walls had visible signs of air leakage. Cobwebs, openings for trusses and IR imaging showed signs typical of heat loss. These transitions (where accessible) should be sealed using a two-component spray applied polyurethane sealant. This would eliminate the air leakage occurring as well as increase the effective R-value at this critical junction.



WELLS COUNTY PUBLIC LIBRARY (CON'T)

CRITICAL AIR LEAKAGE (CONT'D)

Accessing the roof/wall intersection around the Penthouse Mechanical Room will require a platform ladder which will need to be brought in through the access way. If the required ladder cannot be brought into the Penthouse, this area may have to be removed from the scope of work. Weather-stripping the door leading into the mechanical space will be installed to lessen stack effect and help reduce energy loss at the roof/wall intersection.

The 1st Floor offices on the south side of the building were experiencing colder temperatures in the winter months. After review of the ceiling space, areas of uncontrolled air leakage were identified. The adjoining building on the east side had a soffited area that was not decoupled from the ceiling space of the 1st Floor office areas. Areas with missing drywall, fallen batt insulation and unsealed joints at the exterior wall were allowing air to enter into the ceiling space.

The exterior doors were inspected. The existing weather-seals were either missing or had worn to a point where daylight was visible around and between doors. Typical door weather seals will wear over time, especially at the door bottoms. It is recommended to install new vinyl clad compression gaskets to the sides and tops of steel doors and install vinyl inset pile type products to commercial doors and all door bottom sweeps. This would provide a longer lasting effective weather-seal at the exterior doors.

Installing new leaf seals to the single overhead door would also be beneficial at stopping uncontrolled air leakage into and out of the building.

The fixed window systems in this building were found to have failed perimeter seals where the systems meet the walls. It was also noted that the air leakage detector showed air leakage at the metal mitre joints at the corners of the window systems.

Air leakage was also detected in the corners where the glazing gaskets had failed. Smoke was drawn into the mullions where it can escape through the framing and drainage of the frames.

Installing new quality caulking products around the systems as well as at the corners would reduce the uncontrolled air leakage and improve energy efficiency. This can also improve occupancy comfort in areas where occupants are located closer to windows.

The HVAC equipment on the roof had been installed on curbs, with metal covering the opening in the roof. The air leakage detector showed air escaping from the building under the metal covering around the perimeters of these units. Sealing the covers to the curbs will eliminate air leakage around the units.

The two powered roof top exhausts were also inspected visually. These types of units are often found to have louvers that are stuck open under the units. In addition, the ducts are normally not effectively sealed to the curbs, another area where uncontrolled air leakage will occur if left unsealed. The method to improve this area of air leakage is to remove the units from the curbs, visually inspect the belts and check for free motor movement, clean and lubricate the louvers and seal the duct to the curbs. General condition reports are provided to the facility management.

The Book Return Drop chute was another area where significant air leakage was occurring. The thru-wall return chute showed considerable daylight through the unit and the closet had no ceiling installed. This allowed for the free exchange of air not only from the closet, but areas around the closet through the ceiling plenum. Retrofitting the Book Drop with new gaskets is recommended to reduce the uncontrolled air leakage.

WELLS COUNTY PUBLIC LIBRARY (CON'T)

CONCLUSION

Areas of uncontrolled air leakage are identified and described within this report. Energy losses converted to dollars have been calculated to demonstrate potential energy/dollars saved by acting on the remedial recommendations in this report.

The air barrier deficiencies are calculated to determine an effective hole area at the building envelope. The effective combined hole area for the building was over **10 square feet**. Converting the estimated accumulated breaches (effective hole area) in the air barrier into CFM of air exchanges provides our CEM (Certified Energy Manager) information to run energy models that forecast the energy losses annually. With the cost to implement the required remedial measures, the energy savings are compared with the costs to provide a simple payback term and return on investment.

The implementation of the recommended measures would greatly benefit the energy efficiency of the facility, improve the comfort levels of the occupants, and can reduce premature building component failures of the structure.

ANALYSIS OF INSPECTION

WELLS COUNTY PUBLIC LIBRARY - PHASE ONE

Component	Existing Condition	Recommendation
Roof/Wall Intersection	The south wall of the 1st Floor showed visible signs of uncontrolled air leakage. The joint above and below the beam requires sealing, as the ceiling space was used as a return air plenum creating a negative air pressure at the exterior walls.	Seal the roof/wall at the south wall above the offices with polyurethane foam. Sealing above and below the beam.
Roof/Wall Intersection	The east wall between the two story side and the older single story side of the Library had insulation installed with drywall. The original building had a soffit at the west side of the building. This was connected to the south soffit, allowing outside air to freely enter into the ceiling space of the 1st Floor offices. The negative pressure, due to the return air plenum, will draw more outside air into the conditioned space.	Reinstall the existing batt insulation to create a flat clean area. Install rigid insulation boards to block any openings and seal with 2 part polyurethane foam to create an effective air barrier.
Windows	The window systems in the two offices on the 1st Floor south side of the building also had a gap between the window frame and the wall. This will allow air to enter into the conditioned space and can impact occupancy comfort.	Seal the perimeters of the window systems in the two offices with high quality siliconized latex caulking.
Exterior Doors	Both the steel doors and the commercial doors had varying levels of uncontrolled air leakage around the doors. Damaged, worn and missing seals were allowing air to flow uncontrollably, increasing energy costs and usage.	Install new high quality vinyl clad compression gaskets and vinyl inset pile type sweep products in part or in full as required at each exterior door.

ANALYSIS OF INSPECTION (CONT'D)

WELLS COUNTY PUBLIC LIBRARY - PHASE TWO

Component	Existing Condition	Recommendation
Roof Top Exhausts	The two powered roof top exhausts were the suspected source of the uncontrolled air leakage that was occurring. Stack effect will increase this leakage, as the roof exhausts are typically at the highest points of the building.	Inspect and seal all roof top exhausts, Seal between curb and duct, clean and lubricate all louvers and report general conditions on the units to the facility staff.
Roof Top HVAC Equipment	There were several pieces of HVAC equipment on the roof. These were installed on curbs and the joint between the curb and the units (flashing) is not sealed. This was allowing uncontrolled air leakage to occur. Conditioned air was escaping around the units.	Sealing the curbs to the flashing details with either a single component polyurethane foam or high quality urethane caulking will seal this joint. This will reduce the amount of exfiltration of air around each of the units and increase energy efficiency.
Roof/Wall Intersection	There were two different construction details at the roof/wall transition of the exterior walls. One was the sloped insulated roof deck that had wood boards along the top of the exterior walls and steel trusses that run out over the wall. The other was typical construction with a metal roof deck and block walls. Construction details showed visible signs of air leakage between the deck and walls. The higher gable end also showed signs of air leakage with the IR camera. The existing vapor barrier was not sealed to the deck. Access to this high area may be restricted due to safe access requirements.	Seal both types of construction details at the exterior roof/wall intersections with 2 part polyurethane foam. This will eliminate the air leakage and increase the thermal values at this critical transition.
Windows	The large number of fixed window panes and systems showed visible air leakage paths between the walls and the windows. Air leakage was also detected at the mitre joints and corners of the fixed panes of glass.	Seal the perimeters of the systems and the mitre joints and corners of each window with high quality silicone caulking materials.
Interior Doors	Doors leading to the Mechanical Room from the building were not weather-stripped. Excessive negative pressures within the rooms will draw the conditioned air which is inefficient.	Install fire-rated vinyl clad compression door weather seal kits to the Mechanical Rooms.
Overhead Doors	The single overhead door had worn weather-seals installed. Air leakage was occurring between the door and frame which allowed for exchanges of air between the exterior and conditioned space.	Install new rubber leaf seals to the top and sides of the single overhead door.
Book Drop	The book drop was ineffectively weather-stripped. This allowed outside air to enter into the building. The ceiling of the closet was incomplete which will allow the air to migrate into more of the conditioned space.	It is recommended to install neoprene tape or other weather-strip products to create an effective weather-seal around the book drop door. This will reduce the uncontrolled air leakage through the book return.

NOTE: Although CANAM will make every effort to air seal all areas listed in our Assessment Report, please be advised there may be locations with limited or prohibited access. In rare instances where accessibility or safety issues arise, they will be identified during the implementation stage of the contract. Additional costs will be incurred for work completed that has been identified as not reasonably accessible. Areas that cannot be completed due to access and/or safety concerns, and are identified in the Close-Out Manual as being inaccessible, will be reduced and contract costs will be adjusted accordingly.

Customer acknowledges that once the CANAM recommendations have been agreed upon, they are responsible for full payment of the job. If the Customer or Building Owner should reduce the project's scope after contract is signed, it is understood that the contract cost will still apply.



WELLS COUNTY PUBLIC LIBRARY

ROOF

- A. Typical roof equipment curb that allowed for uncontrolled air leakage to occur from the conditioned space. Sealing the curb flashing to curb is required.
- B. Typical powered roof top exhaust. These are often very leaky and can have stuck dampers that allow for continuous venting. Inspecting and sealing the units is recommended.



A.



B.

ROOF/WALL INTERSECTION

- C. Fiberglass insulation at the roof/wall intersection was not an effective air barrier. Cobwebs are good indicators of air leakage at these joints.
- D. More fiberglass insulation at the roof/wall intersection. This does not stop the exchange of air between interior and the exterior resulting in higher energy consumption



C.



D.

- E. The truss penetrations through the roof/wall intersection showed visible signs of air leakage via the cobwebs. Sealing this along with the leaky joints in the wood blocking materials is recommended.
- F. Having a leaf on the interior at this transition was a good indicator that there was a joint where outside air can freely enter into the building. Sealing this joint is recommended.



E.



F.

- G. The drywall joints had been sealed, however, the vapor barrier was not connected. Air leakage was still occurring at the roof/wall intersection. The height at this location may restrict safe access and prohibit sealing this transition.

WINDOWS

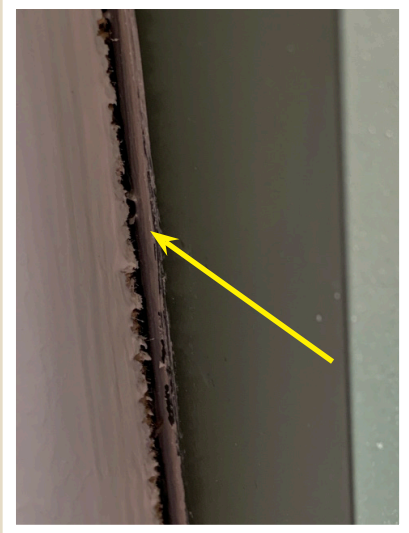
- H. Air leakage detector shows smoke drawn into the window frame. This was an indicator of uncontrolled air leakage and energy losses. Sealing the mullion joints will reduce energy losses.
- I. The joint between the wall and the windows was also an area that required new sealant, as conditioned air was escaping and outside air could enter the building.



G.



H.



I.

- J. Cleaning and sealing the mitre joints as well as the corners of the windows will further reduce the uncontrolled air leakage at the Library.

DOORS

- K. Daylight was visible between the double commercial doors. Replacing the existing seals is recommended to reduce uncontrolled air leakage and energy losses.
- L. Existing brush seals at exterior doors were in poor condition and allowed for air leakage to occur. Installing vinyl clad compression seals to the steel exterior doors is recommended.



J.



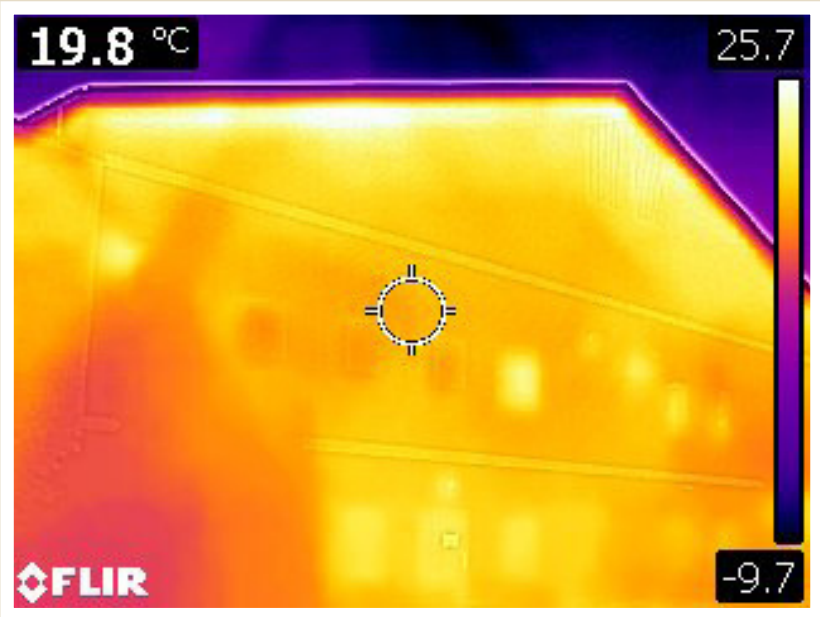
K.



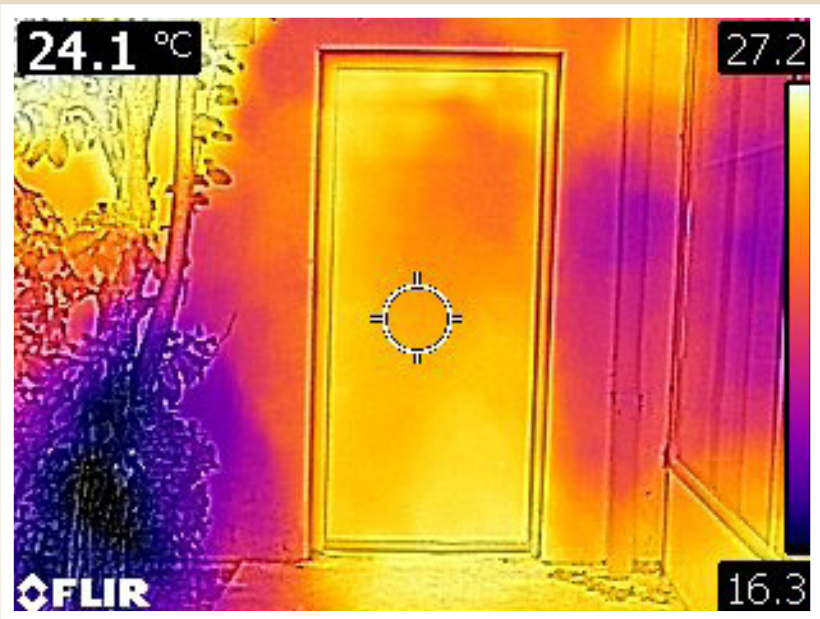
L.

THERMOGRAPHY REPORT

- IR-A. The brighter color at the soffit of the gable end indicates heat escaping the building at the roof/wall intersestion. The lack of continuous air barrier at the top of the wall will result in heat losses.
- IR-B. The brighter yellow at the door perimeter indicates some heat loss was occurring between the operable door and frame. New weather-seals would reduce the air leakage.



IR-A.



IR-B.

IR-C. Heat loss was occurring in two ways at these doors; the larger being thermal bridging. Air leakage could also be contributing to the warmer metal door, as the conditioned air passes around the operable door.



IR-C.

SUMMARY FINANCIAL OVERVIEW

Please see energy calculation summary on the following pages.

**AIR LEAKAGE SURVEY RESULTS**

Date of Survey: 11/23/2020
Project Name: Wells County Public Library

Canam Technician: Ken MacDowell
Building: Project

Project Survey Results:

Air Flow (CFM) 1,773 (ft³/min)
Air Changes per Hour 0.12 /hr
CFM per Floor Area 0.0554 (cfm/ft²)
CFM per Surface Area (cfm/ft²)

Leakage Area Totals: 10.0 (ft²)

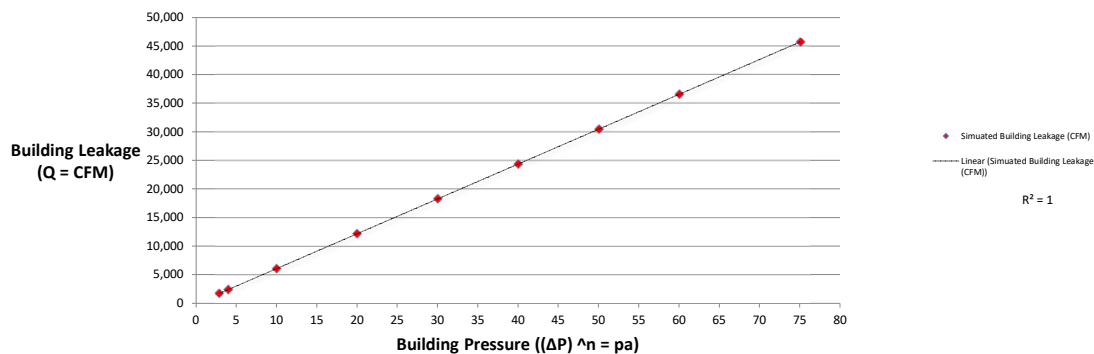
Building Leakage Curve:

Flow Coefficient (C) = 60.94 (ft/min*pa^{2/3})
Exponent (n) = 0.67
Pressure Differential (ΔP)ⁿ = 2.91 (pa)

Survey Methods:
Calculation Methods:

BPI Certification, Level 1 Thermographer
"Power Law Formulation" 2009 ASHRAE Handbook Fundamentals, Chapter 16 -
Ventilation and Infiltration, LBNL-41447

$$Q \text{ (CFM)} = C \text{ (Flow Coefficient)} \times (\Delta P)^n \text{ (Pressure Difference)} \times A \text{ (Area of Leakage)}$$

**Financial Calculations:****Project Costs**

Cost to Rectify Air Leakage: \$ 49,750 (\$)
Simple Payback 8.0 Years
Savings/sf \$ 0.19 \$/sf

Total Annual Energy Savings

Total Energy Savings \$ 6,200 \$/yr
Heating Savings \$ 4,068 \$/yr
Cooling Savings \$ 850 \$/yr
HVAC (Fan) Savings \$ 1,283 \$/yr
Total Demand Savings \$ - \$/yr For Information Only

Weather Data

City Fort Wayne
State IN
Heating Degree Days 6205 HDD (Reference)
Cooling Degree Days 830 CDD (Reference)

MB/CFM (Heating) 244.04
Ton-Hr/CFM (Cooling) 4.02
Hr/Year (Cooling) 1,489
Ton/CFM (Peak Cooling) 0.00571
MB/CFM (Cooling) 48.2
Average Annual Wind Speed 10.00 mph

U.S. & Canadian Weather Data - Based on "Bin-Hour" weather data for assumed interior building dry-bulb temperature of 70-deg F, with 50% and 30% relative humidity for summer and winter respectively, unless otherwise requested.

Building Information

Year of Construction:
Total Floor Area 32,000 (ft²)
Height 27.0 (ft)

Building Volume (ft³)
Building Surface Area (ft²)

Equipment Information

Heating System Standard Boiler (Standard Flue)
Heating System Efficiency 80% Percent

Cooling System Air Cooled w/ Condenser
Cooling System Efficiency 1.256 KW/ton
2.80 (COP) 9.55 EER

Energy Savings Calculations (Annual)

Heating Energy Savings 540,925 Kbtu/yr 15,319 m³/yr
Project EUI Improvement 19.30 Kbtu/sf

Cooling Capacity Reduction 10.1 tons
Cooling Energy Savings 8,949 kWh/yr
Peak Cooling Demand Savings 12.7 kW/month
HVAC (Fan) Energy Savings 3,962 kWh/yr

Energy Unit Cost Data

Natural Gas Cost \$ 7.52 \$/MMBtu

Electric Demand Cost \$ - \$/kWD
Electric Usage Cost \$ 0.09 \$/kWh

Greenhouse Gas Emissions

Heating Reduction Equivalency 27.05 MT of "CO₂"/yr
Electric Reduction Equivalency 6.17 MT of "CO₂"/yr
Combined Total 33.22 MT of "CO₂"/yr

(*based on US EPA conversions)
MT = Metric Tons

Note: All savings and payback references are projected estimates and are not guaranteed. Neither Canam nor any affiliated entities shall have any responsibility or liability in the event savings amounts or paybacks are not achieved.

High Performance Building Solution

Wells County Public Library

Preliminary Financial Summary - Assuming No Energy Cost or Usage Escalation

Project



Key Inputs and Costs

Contract term (Months)	0	Cost of Energy Projects	\$	49,750
Economic Life (Years)	20	Index Fee	\$	-
Discount Rate	5.0%	Rate Lock Fee	\$	-
Interest Rate	0.0%	Legal and Other Closing Costs	\$	-
Savings % to Operating Expenses	100%	Construction Financing	\$	-
Savings & Cost Allocations %	100%	Monitoring & Verification Fee	\$	-
Long Term Equity Contribution		Performance Guarantee	\$	-
Tremco Savings & Cost Allocations %		Management, Engineering, Commissioning	\$	-
		Investment / Project Value	\$	49,750

Impact of Delay

Delay in Months	Cost of Delay	Opportunity Cost
3	\$ (1,550)	\$ (1,550)
6	\$ (3,100)	\$ (3,100)
9	\$ (4,650)	\$ (4,650)
12	\$ (6,200)	\$ (6,200)
15	\$ (7,751)	\$ (7,751)
18	\$ (9,301)	\$ (9,301)
21	\$ (10,851)	\$ (10,851)
24	\$ (12,401)	\$ (12,401)

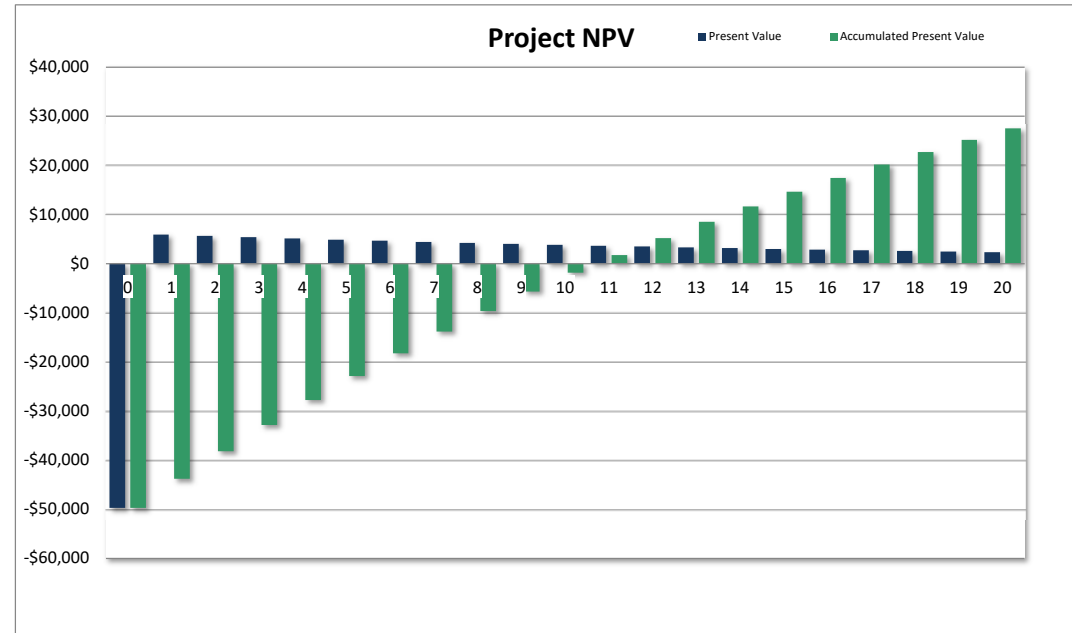
Total Project Financial Summary

Project Value	Annual Energy Savings	Annual Operational Savings	Other Savings	Total Annual Savings	Simple Payback
\$ 49,750	\$6,200	\$ -	\$ -	\$ 6,200	8.02

Contribution to Net Cash Analysis

Annual Contribution to Net Cash	\$	6,200
Non-Discounted Contribution to Net Cash	\$	74,259
Discounted Contribution to Net Cash	\$	27,521

Year	Net Customer Savings	Present Value	Accumulated Present Value
0	-\$49,750	-\$49,750	-\$49,750
1	\$6,200	\$5,905	-\$43,845
2	\$6,200	\$5,624	-\$38,221
3	\$6,200	\$5,356	-\$32,865
4	\$6,200	\$5,101	-\$27,763
5	\$6,200	\$4,858	-\$22,905
6	\$6,200	\$4,627	-\$18,278
7	\$6,200	\$4,407	-\$13,872
8	\$6,200	\$4,197	-\$9,675
9	\$6,200	\$3,997	-\$5,678
10	\$6,200	\$3,807	-\$1,872
11	\$6,200	\$3,625	\$1,754
12	\$6,200	\$3,453	\$5,206
13	\$6,200	\$3,288	\$8,494
14	\$6,200	\$3,132	\$11,626
15	\$6,200	\$2,983	\$14,609
16	\$6,200	\$2,841	\$17,449
17	\$6,200	\$2,705	\$20,154
18	\$6,200	\$2,576	\$22,731
19	\$6,200	\$2,454	\$25,185
20	\$6,200	\$2,337	\$27,521
TOTAL	\$74,259	\$27,521	
Customer Net Present Value			\$27,521



Note: All savings and payback references are projected estimates and are not guaranteed. Neither WTI nor any of its affiliated entities shall have any responsibility or liability in the event savings amounts or paybacks are not achieved.

TERMS AND CONDITIONS:

This Proposal is an offer by WTI to provide the Scope of Work set forth above to the Customer on the terms and conditions set forth herein and in WTI's standard terms and conditions (a copy of which may be obtained at <http://www.tremcoroofing.com/files/share/terms/TandCWTI.pdf>), which are hereby incorporated by reference (together, the "Terms and Conditions"). The Terms and Conditions will govern the Work to the exclusion of any other or different terms, including in any customer purchase order, unless otherwise expressly agreed in writing pursuant to a Master Agreement or similar contract with Customer signed by an authorized representative of WTI. Please confirm your acceptance either by return e-mail to the representative identified below or by having an authorized representative of Customer sign in the space provided below. Upon receipt of acceptance, WTI will process your order and promptly begin the Scope of Work. We appreciate your business and look forward to working with you at your facility.

WEATHERPROOFING TECHNOLOGIES, INC.

By:
 Title:
 Phone:
 E-mail:

AUTHORIZATION AND ACCEPTANCE:

Authorization is hereby given to WTI to proceed with the Work.

WELLS COUNTY PUBLIC LIBRARY

By:
 P.O. Number (if required):
 Print Name:
 Title:
 Date:

Customer acknowledges that once the CANAM recommendations have been agreed upon, they are responsible for full payment of the job. If the Customer or Building Owner should reduce the project's scope after contract is signed, it is understood that the contract cost will still apply.

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