

**Facilities Sub-Committee Meeting  
Griswold Board of Education  
Griswold Middle School  
Library Media Center—2<sup>nd</sup> Floor  
211 Slater Avenue  
Griswold, Connecticut 06351**

**THURSDAY,  
November 30<sup>th</sup>, 2023  
5:00 PM**

## **AGENDA**

1. Call to Order
2. Approval of Facilities Subcommittee Minutes—September 28<sup>th</sup>, 2023
3. Update on the Alternative School Relocation
4. Next Steps with the 201 Property
5. Review, Discussion, and Possible Action on Proposed Jewett City Electric, DPU, GHS LED Lighting Retrofit Project
6. Other Business that May Properly Come Before the Committee
7. Adjourn

**FACILITIES SUB-COMMITTEE MEETING  
GRISWOLD BOARD OF EDUCATION**

**THURSDAY,  
September 28<sup>th</sup>, 2023**

**DRAFT**

1. A regular meeting of the Facilities subcommittee took place on Thursday, September 28<sup>th</sup>, 2023, at Griswold Middle School in the Library Media Center, located on the second floor, 211 Slater Avenue, Griswold, Connecticut. The meeting was called to order at 5:15 PM by Martin Osga, Chair of the Facilities Subcommittee.

**PRESENT** Martin Osga, Facilities Subcommittee Chair; Stuart Norman, Jr., Facilities Subcommittee Member (entered at 5:21 PM); and Mary Beth Malin, Griswold BOE Chair.

**ALSO PRESENT** Sean McKenna, GPS Superintendent of Schools; Glenn LaBossiere, GPS Director of Teaching, Learning, and Innovation; and Marc Cote, GPS Custodian.

**ABSENT** Scott Freyer, Facilities Subcommittee Member.

2. Approval of the Facilities Subcommittee Minutes - August 31, 2023

**MOTION** By Mary Beth Malin  
Seconded by Martin Osga  
To approve the August 31<sup>st</sup>, 2023, Facilities subcommittee minutes, as presented.  
Ayes – Mary Beth Malin and Martin Osga  
Nays –  
Abstain -  
Motion carried.

3. Review, Discussion, and Possible Action on Capital Committee Proposals for the 2024-2025 School Year – The Facilities subcommittee reviewed the priority list of items that were created for this year's Capital Committee proposals. After review and discussion, the Facilities subcommittee voted to move the list to the full Griswold Board of Education for review, discussion and possible action to approve.

**MOTION** By Stuart Norman, Jr.  
Seconded by Mary Beth Malin  
To move the priority list of items to the full Griswold Board of Education for review, discussion, and action.  
Motion unanimously carried.

4. Other Business That May Properly Come Before the Committee – The Superintendent mentioned that DCF has approached the district to have an office at Griswold High School.

5. Adjourn

**MOTION** By Stuart Norman, Jr.  
Seconded by Mary Beth Malin  
To adjourn the Facilities subcommittee meeting at 5:38 PM.  
Motion unanimously carried.

Minutes prepared by: Sean McKenna/Robin Drobiak

# Griswold Public Schools

211 Slater Avenue  
Griswold, Connecticut 06351

Tel: (860) 376-7600 Fax: (860) 376-7607

Sean P. McKenna, Superintendent  
Deborah Martin, Director, Fiscal & Personnel Services

Glenn LaBossiere, Director, Teaching, Learning & Innovation  
Christopher C. Champlin, Director, Student Services

## MEMO

**To: Griswold Board of Education**

**From: Sean P. McKenna/Superintendent**

**Subject: Proposed Jewett City Electric, DPU, GHS LED Lighting  
Retrofit Project**

**Date: November 27th, 2023**

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Please see attached proposal paperwork. This LED Light Retrofit Project mirrors similar projects that the Jewett City DPU has undertaken in partnership with Griswold Public Schools.

The Jewett City DPU can put forward \$ 108,400 in gifted incentives and we can provide financing for Griswold High School in the amount of \$ 201,400 at 3.5 % APY for 84 months which produces a monthly payment of \$ 2706.79 which can be paid out of your expected monthly savings.



# Griswold High School LED Retrofit

10/13/2023

**For**

Ciro Parente

**Company**

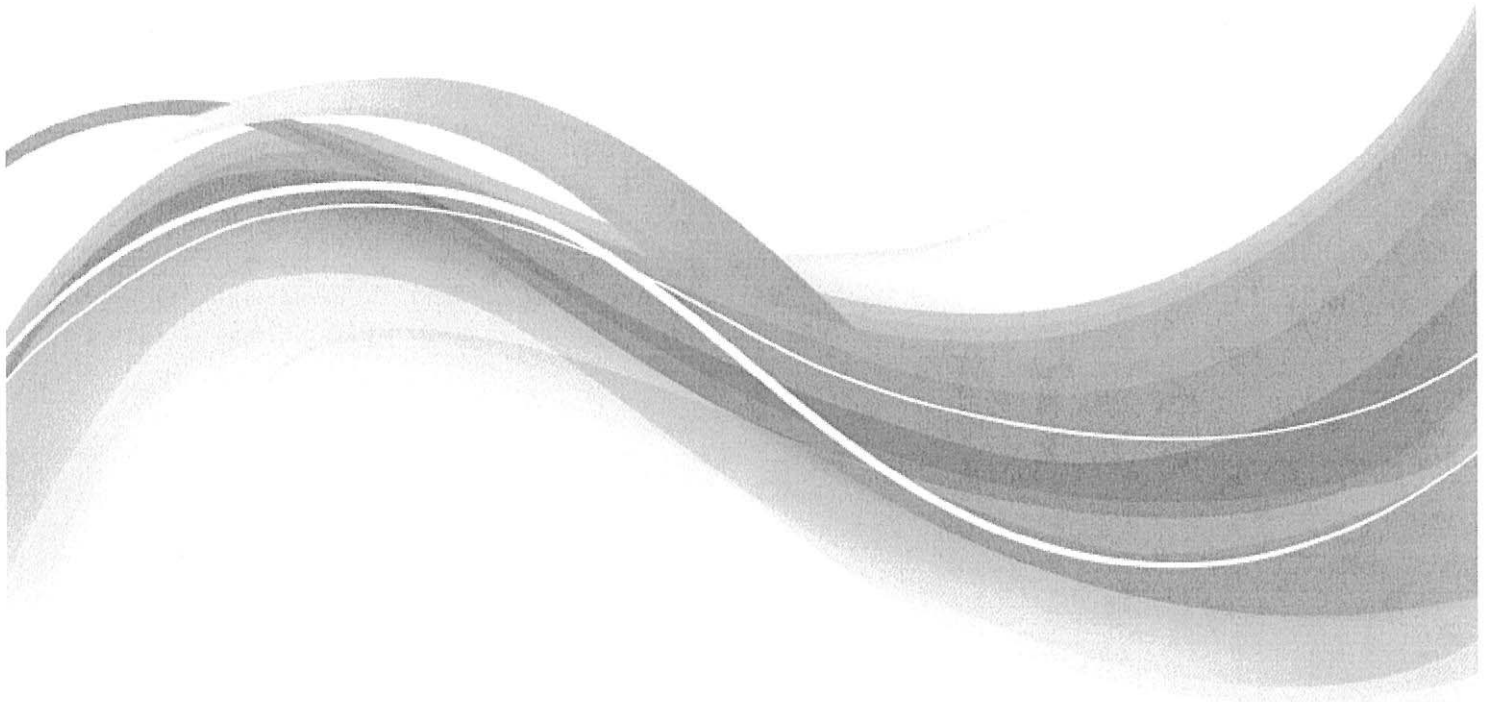
T&T Electric

**Prepared By**  
**Company**

Carly Martin  
All Phase

**Phone**  
**Email**

carly@all-phaset.com



# Executive Summary

Griswold High School LED Retrofit

## Initial Costs

	Baseline	Design #2
Combined Materials & Labor	\$113,504	\$309,800
<b>Total</b>	<b>\$113,504</b>	<b>\$309,800</b>

## Average Year Operation Cost

Electricity Use	694,227 kWh	352,843 kWh
Electricity	\$104,134	\$52,926
Maintenance	\$24,896	\$2,114
Total	\$129,030	\$55,041
<b>Savings</b>	--	(57 %) <b>\$73,990</b>

## 10 Year Operating Cost (Present Value)

Electricity Use	6,942,275 kWh	3,528,428 kWh
Electricity	\$1,041,341	\$529,264
Maintenance	\$248,963	\$21,142
Total	\$1,290,304	\$550,406
<b>Savings</b>	--	(57 %) <b>\$739,898</b>

## Comparison Metrics

Life Cycle Cost	\$1,403,809	\$860,206
Net Present Value	--	\$543,603
Simple Payback	--	2.65 Years
Discounted Payback	--	2.65 Years
Internal Rate of Return	--	35.94 %
Modified Internal Rate of Return	--	14.19 %
Cost of Waiting	--	\$6,166/Month

## Assumptions

Discount Rate	0.00 %
Electricity Rate	\$0.15/KWh
Electricity Escalation Rate	0.00 %
Reinvestment Rate	0.00 %
Sales Tax	0.00 %





**Discount Rate** sometimes called the 'Owner's Cost of Money' is used to determine the 'Time value of Money'. This is the discount rate used to determine the value today of a future sum.

The IES recommends using a rate that reflects the business owner's average cost of using other peoples money, or the owners cost of capital (borrowing). If you have enough information about the owners finances you could calculate the 'weighted average cost of capital'. However, since this information is generally not available, the IES also allows you to use more commonly available information like the 'prime rate' currently charged by major lenders. Typical values for Opportunity rate range between 3-12%. If you enter an Opportunity rate of 0% future cash flows will not be discounted (not recommended).

**Depreciation** reduces the owners income tax liability by depreciating the value of lighting equipment linearly over time. Depreciation is only calculated if the owners income tax rate (0 %) and depreciation years (0) are greater than zero.

**Life Cycle Cost** is the total present value of initial costs (eg new luminaires, new controls, installation labor) as well as recurring annual costs ( eg electricity, maintenance).

**Net Present Value (NPV)** is a value in today's dollar of making a decision of one system over another. NPV sums the discounted annual cash flows over the life cycle of the system. This is the difference between life cycle costs. The design option with the highest NPV should be preferred, although any option with a positive NPV should be considered.

**Simple Payback** refers to the period of time required to recoup the funds expended in an investment, or to reach the break-even point. The time value of money is not taken into account. Payback period measures how long something takes to 'pay for itself'. All else being equal, shorter payback periods are preferable to longer payback periods. Simple payback does not answer the question 'is a certain investment profitable?' Simple payback doesn't consider what happens after the investment is repaid.

**Discounted Payback** takes into account the discount rate and uses the present value cash flows instead of the future value cash flows used in Simple Payback.

**Internal Rate of Return** is an indicator of the efficiency, quality, or yield of an investment. This is in contrast with the Net Present Value, which is an indicator of the value or magnitude of an investment. IRR cannot be calculated for some cash flows.

**Modified Internal Rate of Return** is an improved version of the internal rate of return (IRR) approach to capital budgeting decisions. It does not require the assumption that the project cash flows are reinvested at the IRR; rather, it factors in a discrete reinvestment rate (0.00 %) into the model. The design option with a higher MIRR should be preferred.

**Cost of Waiting** is the average annual operational savings divided by 12. If a new lower cost system was installed this is how much it would reduce monthly operating costs.

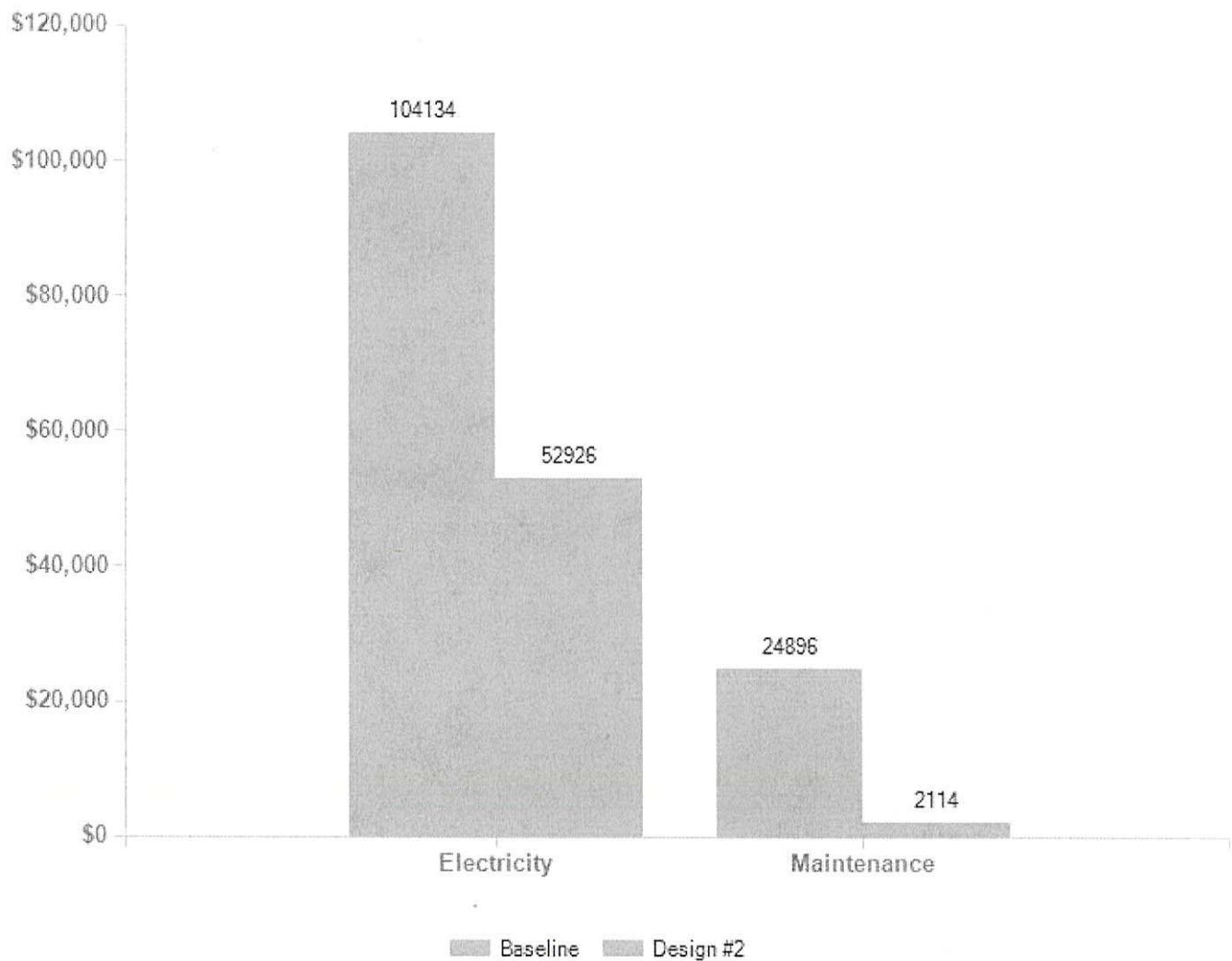
**HVAC Cooling** costs are the cost of cooling to offset the heat added to a building by lighting equipment. New cooling systems may or may not have additional savings due to reduced initial sizing of the air conditioning system. Operational costs are determined using the cooling hours, tons of cooling needed to offset lighting wattage, AC kwh/ton efficacy, and the electricity rate. AC maintenance cost are based on the tons of cooling figure and a per ton maintenance cost.

**HVAC Heating** savings are the savings in heating cost due to the heat from lighting equipment. The heating supplied by lighting is calculated using the space heating hours and lighting wattage. New systems may or may not be reduced in size based on the heat from lighting. This savings is calculated from lighting wattage and the efficacy of the heating unit \$/therm. Heating use savings are dependent on the wattage of the lighting system and the heating unit efficacy. Heating maintenance savings are based on therm from lighting and a heating maintenance rate \$/therm.

**HVAC** The reported HVAC value is the combination of cooling cost reduced by any heating savings.



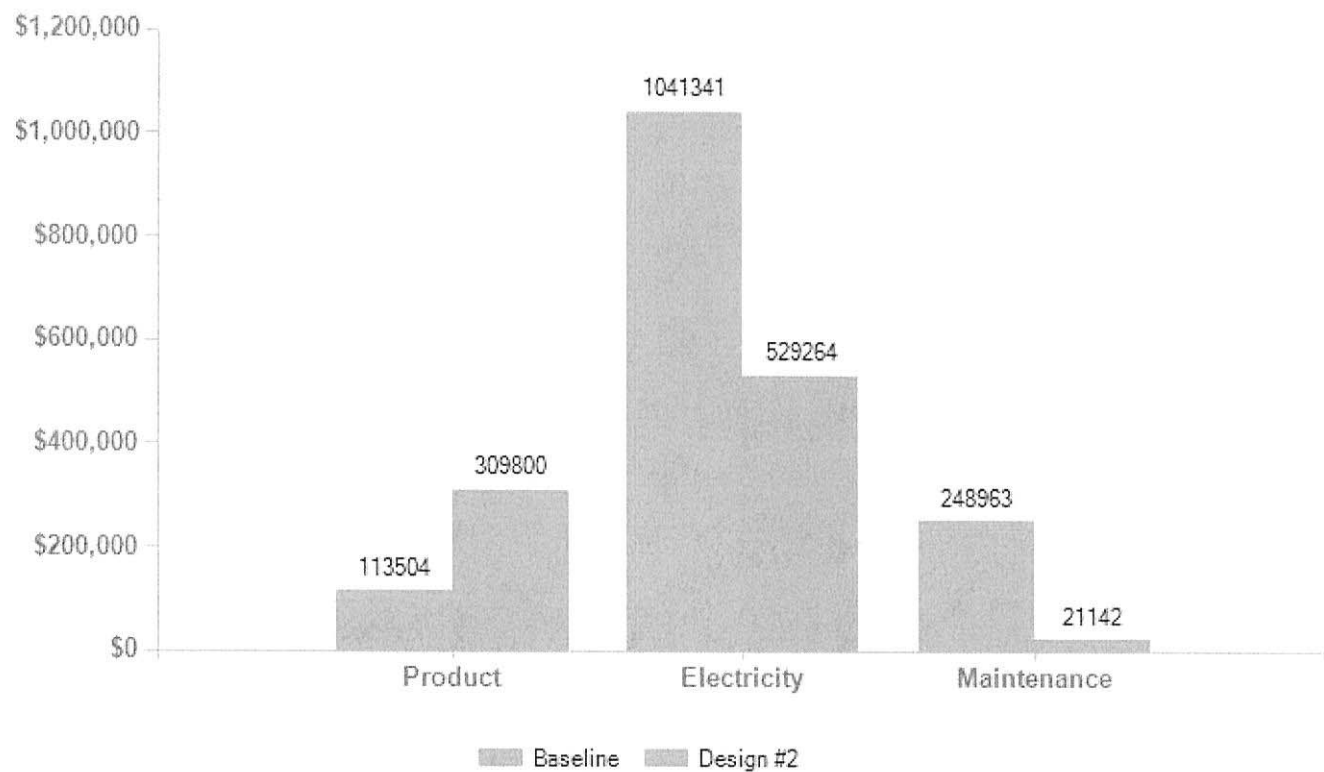
Average Year Cost (Future Value)



Average Year Cost Details

	Baseline	Design #2
Electricity Use	694,227 kWh	352,843 kWh
Electricity	\$104,134	\$52,926
Maintenance	\$24,896	\$2,114
Total	\$129,030	\$55,041
Savings	--	(57 %) \$73,990

Lifecycle Comparison (Present Value)

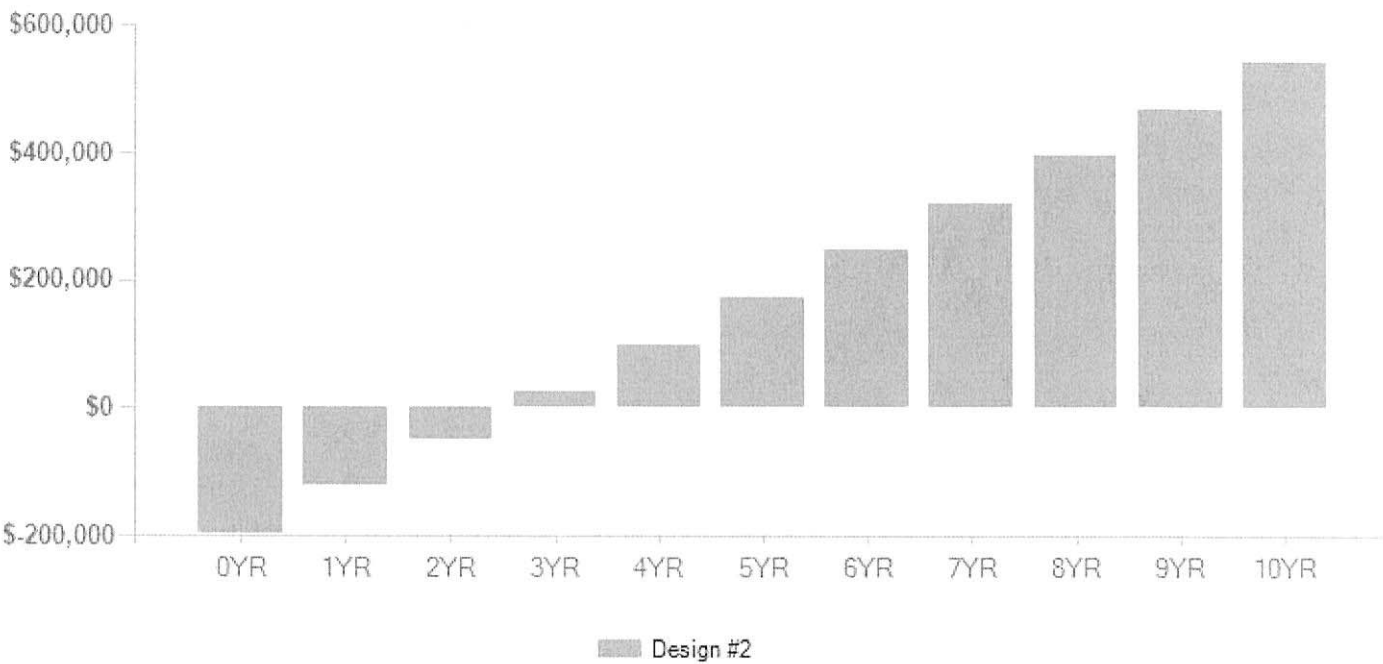


Lifecycle Comparison Details

	Baseline	Design #2
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Maintenance	\$248,963	\$21,142
Total	\$1,403,809	\$860,206
Savings	--	(39 %) \$543,603



Accumulated Cash Flow



Cash Flow Details

Years of Analysis	Baseline Cost	Design #2 Cost	Design #2 Net Cash Flow
Initial	\$113,504	\$309,800	(\$196,296)
Year 1	\$129,030	\$55,041	(\$122,306)
Year 2	\$129,030	\$55,041	(\$48,316)
Year 3	\$129,030	\$55,041	\$25,674
Year 4	\$129,030	\$55,041	\$99,664
Year 5	\$129,030	\$55,041	\$173,654
Year 6	\$129,030	\$55,041	\$247,643
Year 7	\$129,030	\$55,041	\$321,633
Year 8	\$129,030	\$55,041	\$395,623
Year 9	\$129,030	\$55,041	\$469,613
Year 10	\$129,030	\$55,041	\$543,603

This tool is aimed at assisting users in decision making by providing analysis based on various assumptions and a variety of factors. While an effort has been made to use accurate assumptions and factors in developing this tool, results are based on user provided data and data provided from publicly available sources, and all costs, savings and monetary returns shown in the calculations performed using this tool are estimated results only. ACUITY BRANDS LIGHTING, INC. (ABL) MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS, SAFETY OR APPROPRIATENESS OF ANY DESIGN INCORPORATING ABL MATERIALS, PRODUCTS, USES, RECOMMENDATIONS OR ADVICE. IN NO EVENT SHALL ABL BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF THESE TOOLS.

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