

Advanced Buildings Core Performance

A Clear Path to High Performance Buildings



Relationship to existing buildings

- Guidelines for building shell and interiors
- Easily apply the lighting, lighting controls and HVAC to interiors fit out
- Lower incentives but just as valuable

“existing buildings are the greenest buildings”

What is Advanced Buildings?

- Design Beyond Code Standard
- Impressive 20-30% Energy Savings
- **Improved Team Process**
- National program
- USGBC recognized



High Performance, Not High Tech

For 20-30% savings:

- Building envelope design
- Familiar HVAC equipment.
- Lighting equipment efficiency
- Lighting controls
- Integrated design team effort
- Proper testing/commissioning

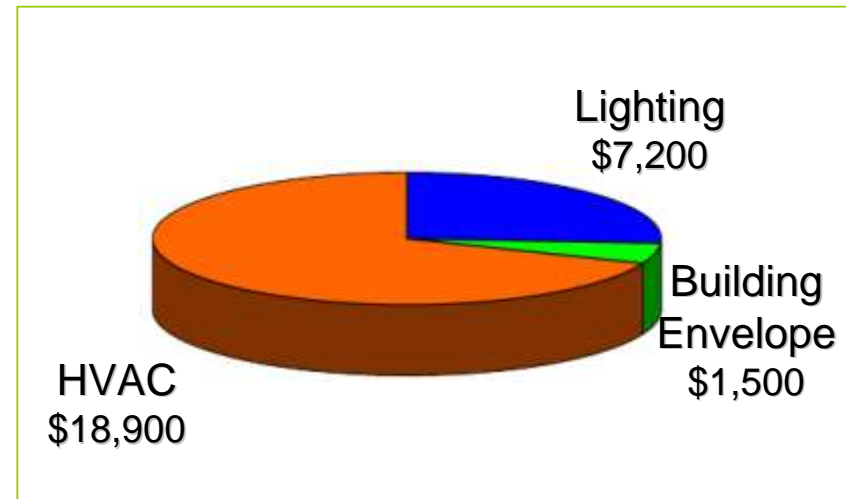


Fidelity Bank, Leominster MA

31% Improvement Over Code



Annual Energy Costs



Savings Components
(\$27,600 annual savings)

Savings Projection

- Projected Energy Savings: \$ 27,600
- Incremental Costs (Upgrades) \$100,622
- Utility Incentives: <\$ 66,587>
- Net Owner Costs: \$ 34,035
- **Payback with Incentives: 1.2 years**
ROI: 83%
- Payback without Incentives: 3.7 years
ROI: 27%

2.8 Case Study: Fidelity Bank

Lighting was a home run – better appearance led to fast lease-up

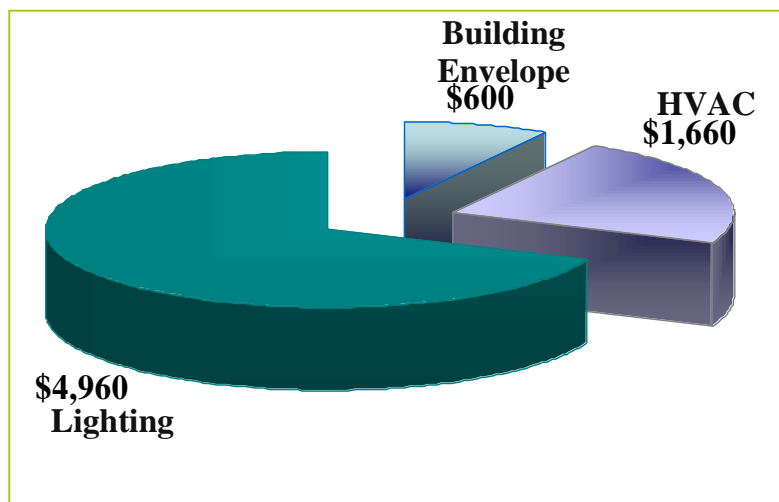
	Mass Energy Code	Advanced Buildings Criteria	Final Design	% Reduction
Lighting Power Density	1.34 w/SF	0.96 w/SF	0.86 w/SF	36%



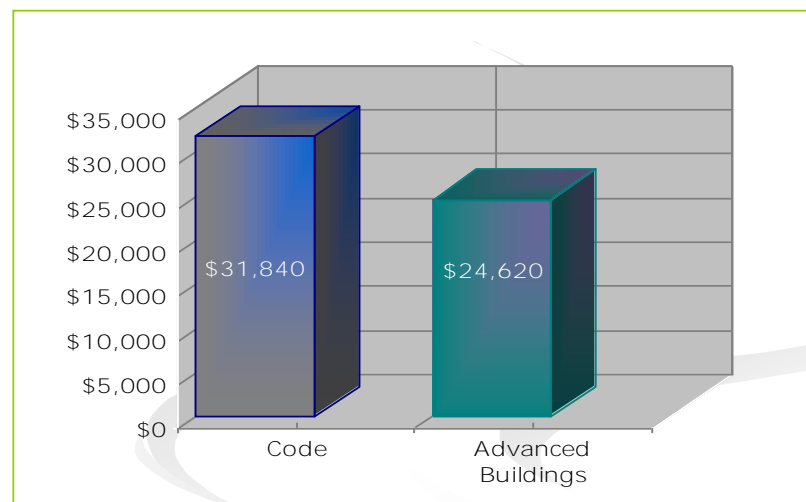
Project Lighting Savings: \$7,200

UMASS Memorial Health Center

23% Improvement Over Code



Energy Savings Components
(\$7,220 annual savings)



Annual Energy Costs

General Economics from Current Local Projects

Examples of added cost

\$0.35 to \$0.75 / Square foot

Examples of economics

Payback 1 to 2 years, ROI 50% to 100%

Examples of owners share of first

16% to 40% of the cost

% Energy Savings

20% to 30%

Additional Benefits

- Higher quality, more attractive lighting
- Better workplace climate control
- Quieter due to better wall cavity insulation
- Leased space - tenants attracted to attractive lighting and low utility cost
- Boost to employee relations
- Proven drop in absenteeism and increased productivity
- Trades and design team learned new practices

