

Home Loan Investment Bank Case Study

Warwick, Rhode Island

High Performance Building Design

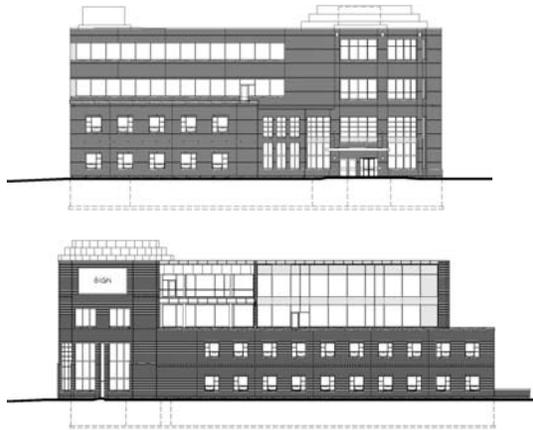
Advanced Building Features

- High Efficient Lighting Upgrade
- Lighting Controls
- High Performance Rooftop Units
- High Performance Windows
- HVAC Controls Upgrade
- Cool Roof



Project Description

The new four-story Home Loan Investment Bank office building under construction in Warwick, Rhode Island is a 60,000 SF building housing offices with a small tenant space on the first floor. By embracing the Advanced Buildings Protocol, the design team reduced the facilities projected annual energy use by 21%+ compared to Rhode Island State Code, while providing high quality lighting and mechanical systems. The payback for these upgrades was less than one year after utility incentives provided by National Grid. The dedicated owner and design team focused on applying an integrated approach, contributing to streamline the decision process and integrate energy efficiency measures up front.



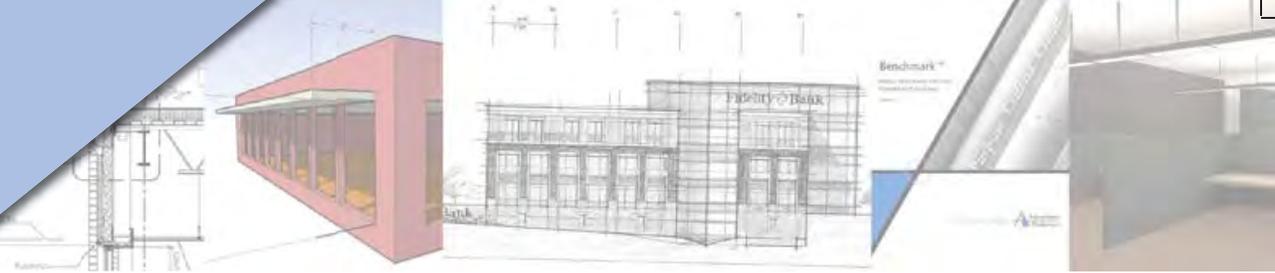
Building Envelope

Envelope improvements incorporated into the building design are a cool roof, high performance exterior glazing systems and additional wall insulation. The windows have improved Low E-coating with a U-value of 0.44 (assembly unit), and a highly efficient shading coefficient of 0.28 to reduce air conditioning loads. These products were readily available and added less than \$40,680 to the project cost, with a return of over \$10,155 a year in annual savings.



Project Team

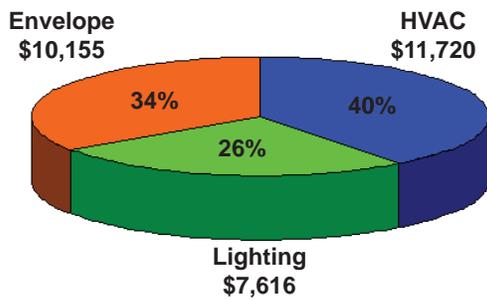
Owner: **Home Loan Investment Bank**
 Architect: **Saccocio & Associates**
 Engineer: **Cataudella Engineering**
 Energy Efficiency Incentives and Support: **National Grid**



High Performance Building Design Uses 21%+ Less Energy

Savings Projections

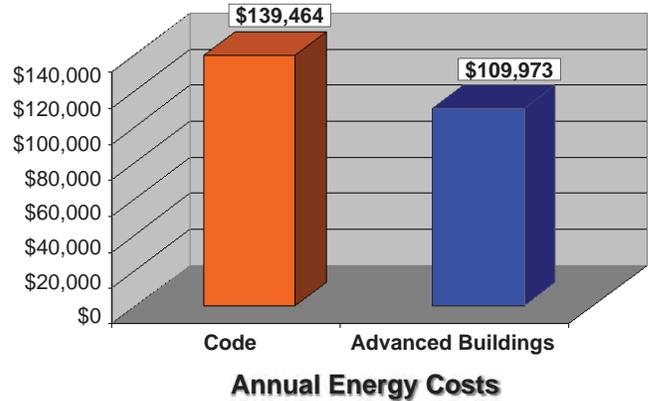
Annual Energy Savings:	\$29,491
Additional Cost for Upgrades:	\$91,025
<u>Utility Incentives:</u>	<u>\$63,143</u>
Net Owner Cost:	\$27,882



Savings Components
(\$29,491 Annual Savings)

Payback with Incentives: 11 month ROI 105%

21% Improvement Over RI Code



Lighting Savings Summary

A cost effective, energy-efficient, high quality lighting system is provided.

T-5 pendant fixtures are used in open office areas which benefits from their broad distribution. The latest T-5 recessed style fixtures with tuned lamp/ballasts combinations are used in private offices to limit the total lighting wattage. Beyond efficiency, these fixtures are far more attractive and offer better quality lighting than parabolics. The use of efficient lighting controls such as occupancy and daylight sensors also contribute to the \$7,616 annual lighting savings.



Source: Attune

Mechanical Systems

High-efficient condensing boilers for the space heating and Variable Speed Drivers on the VAV fans are the primary sources of the \$11,720 HVAC savings. High efficiency roof top air conditioners with premium enthalpy economizer controls also contribute. Condensing boilers exceed the minimum efficiency requirements for Advanced Buildings, boosting energy savings by over \$3,000 while earning \$9,000 in direct incentives.



Source: Finelite

***Note: The preliminary estimated figures shown above are based on information available at this time and pending final review and approval by National Grid.