



Energy & Store
Development
Conference

E+SD 2011

LEED as a Tool for Greener Store Development

evolveEA & Giant Eagle

Presenters

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Agenda

Introduction to LEED

Giant Eagle's Experience with LEED

LEED New Construction vs. Retail

Giant Eagle

- Regional Supermarket Brand with 5 formats
 - 220 Giant Eagles, 4 Market Districts, 6 Valu Kings, 162 Get Gos, 1 Giant Eagle Express
- Over 9 billion in annual sales
- One of the nation's largest privately owned and family operated grocers
- Locations in Pennsylvania, Ohio, West Virginia and Maryland

evolveEA



- Sustainability and Built Environment
- People * Process * Place
- Founded in 2004
- Managed over 30 LEED projects

Introduction to LEED

USGBC and LEED



USGBC... is a 501 c3 non-profit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings.



LEED... promotes sustainable building and development practices through a suite of rating systems that recognize projects that implement strategies for better environmental and health performance. It works throughout the building lifecycle – design and construction, operations and maintenance, tenant build-out, and significant retrofit.

Rating Systems

GREEN BUILDING DESIGN & CONSTRUCTION

LEED FOR NEW CONSTRUCTION

LEED FOR CORE & SHELL

LEED FOR SCHOOLS

LEED FOR HEALTHCARE

LEED FOR RETAIL

GREEN INTERIOR DESIGN & CONSTRUCTION

LEED FOR COMMERCIAL INTERIORS

LEED FOR RETAIL INTERIORS

GREEN BUILDING OPERATIONS & MAINTENANCE

LEED FOR EXISTING BUILDINGS

LEED FOR EXISTING SCHOOLS

Point Achievement Thresholds



40-49



50-59








60-79



80+



Paths of LEED Certification

LEED for New Construction






Total Possible Points**		110*
	Sustainable Sites	26
	Water Efficiency	10
	Energy & Atmosphere	35
	Materials & Resources	14
	Indoor Environmental Quality	15

*Out of a possible 100 points + 10 bonus points

** Certified 40+ points, Silver 50+ points
Gold 60+ points, Platinum 80+ points



	Innovation in Design	6
	Regional Priority	4

LEED for Retail

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	Regional Priority	4

Paths of LEED Certification

The number of credits in each LEED category do not significantly differ...but how those credits are achieved in NC vs. Retail do have some notable differences. Which we will discuss shortly.

Sustainability at Giant Eagle: Experiences with LEED

Giant Eagle's Commitment to Sustainability

SUSTAINABILITY AND WASTE REDUCTION STATEMENT

We strive to understand the environmental implications of all we do, this responsibility is reflected in our individual behaviors and how we conduct our business...We include smart sustainability strategies in our business planning, including:

- *Reducing and removing the use of non-renewable resources and waste*
- *Recycling the waste we create*
- *Seeking out energy-saving alternatives*

LEED as Innovation & Measurement Tool



**WE PROUDLY
OPERATE LEED
CERTIFIED
BUILDINGS**

- We opened the first LEED Certified Supermarket in the U.S.
- We currently operate 5 LEED Certified Supermarkets and 2 LEED Certified GetGo locations

GiantEagle.com/live/green

SUSTAINABILITY... EVERYONE, EVERY DAY. 

- LEED is used as a design improvement mechanism for store development
- The appropriate LEED rating system is examined and evaluated for each project
- New initiatives are tested in LEED store development
- Standards are adopted long-term if they meet sustainability and business criteria
- LEED has served as a catalyst for organizational greening

Potential LEED Incremental Costs

Green Building Feature:



Low-cost measures to achieve gold are constrained by site conditions

Incremental Cost:



Brunswick, Giant Eagle

- Cleveland, Ohio
- LEED NC 1.0
- First ever LEED Certified Supermarket



Initiatives Adopted as Standards:

Initiatives Tested:

- Energy Modeling
- Skylights
- Commissioning
- Education Plans
- Water Sub-metering
- Pulping

2003

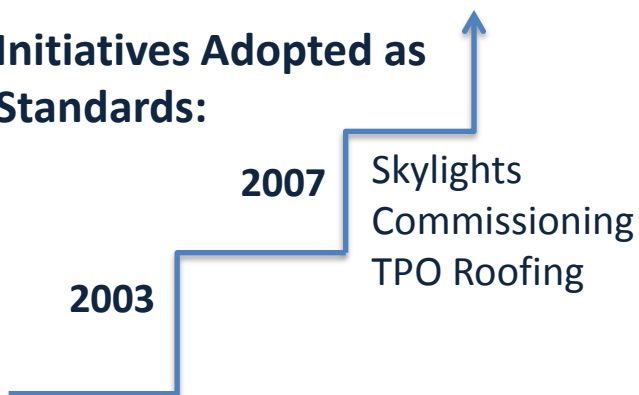
RAISING THE DESIGN AND CONSTRUCTION FLOOR

Shadyside Market District

- Pittsburgh, PA
- LEED CI 2.0
- First ever LEED CI Certified Supermarket



Initiatives Adopted as Standards:



Initiatives Tested:

- Green-roof installation
- Daylight Modeling
- Materials Adoption: Recycled Content, Regional Materials, Low VOCs

RAISING THE DESIGN AND CONSTRUCTION FLOOR

New Albany, Giant Eagle

- Columbus, OH
- LEED NC 2.1 GOLD
- First ever LEED Gold Supermarket



Initiatives Adopted as Standards:

2008

White TPO Roof
Exposed Ceiling

2007

Skylights
Commissioning

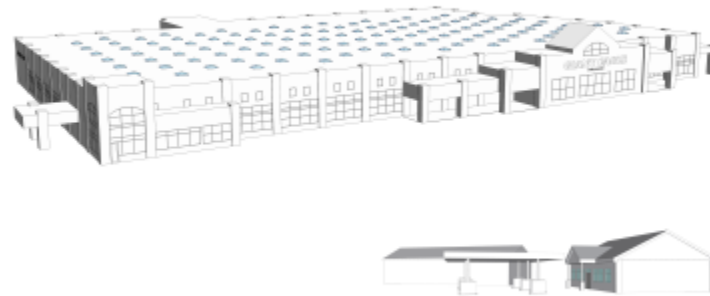
Initiatives Tested:

White TPO Roof
Exposed Ceiling

RAISING THE DESIGN AND CONSTRUCTION FLOOR

Pine Township Giant Eagle & Robinson Market District

- Pittsburgh, PA
- LEED NC-Retail, PILOT
- Testing of Retail Model



Initiatives Adopted as Standards:

2007-08

White TPO Roof
Exposed Ceiling

2003

Skylights
Commissioning

2009

Materials Standards Adoption
New Daylighting Pattern

Initiatives Tested:

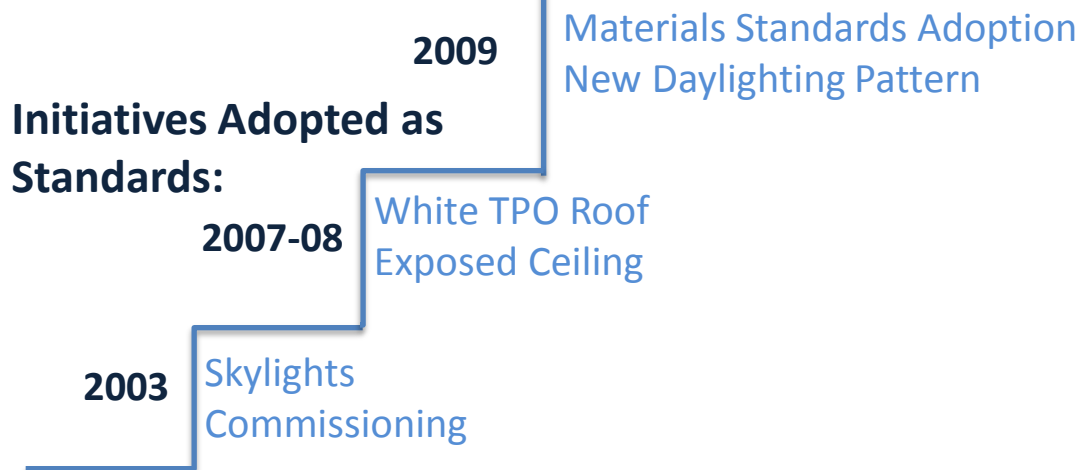
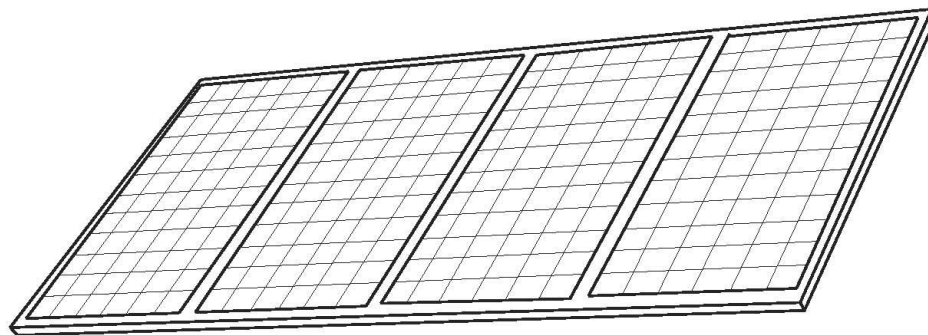
Materials Standards Adoption
New Daylighting Pattern
LEED for Retail

RAISING THE DESIGN AND CONSTRUCTION FLOOR



Broadview Heights, Giant Eagle

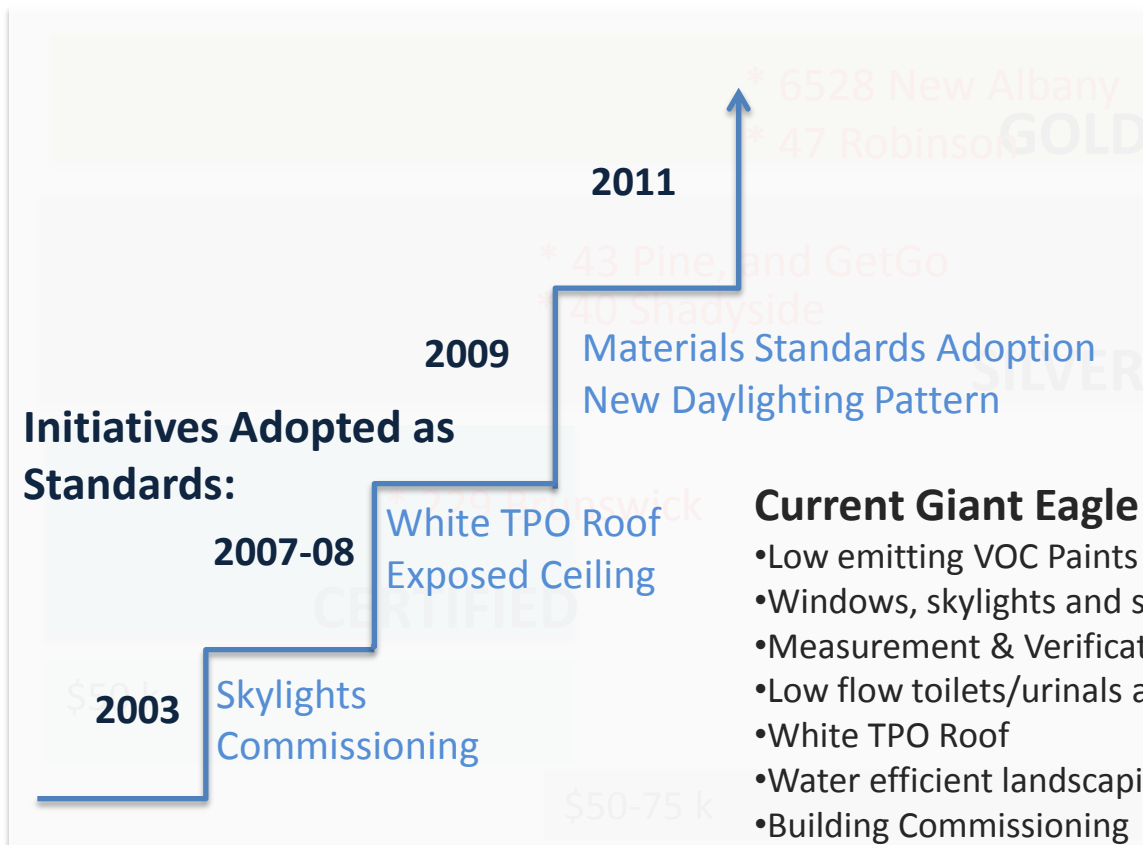
- Cleveland, OH
- LEED NC-V3
- NC, not Retail
- 135 Kw PV array
- Efficient Commodes



Initiatives Tested:
Solar Array
1.28 gpf Water Closets

RAISING THE DESIGN AND CONSTRUCTION FLOOR

Reducing Costs by Raising the Standard



LEED NC

and

LEED for Retail

Rating Systems

GREEN BUILDING DESIGN & CONSTRUCTION

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GREEN BUILDING OPERATIONS & MAINTENANCE

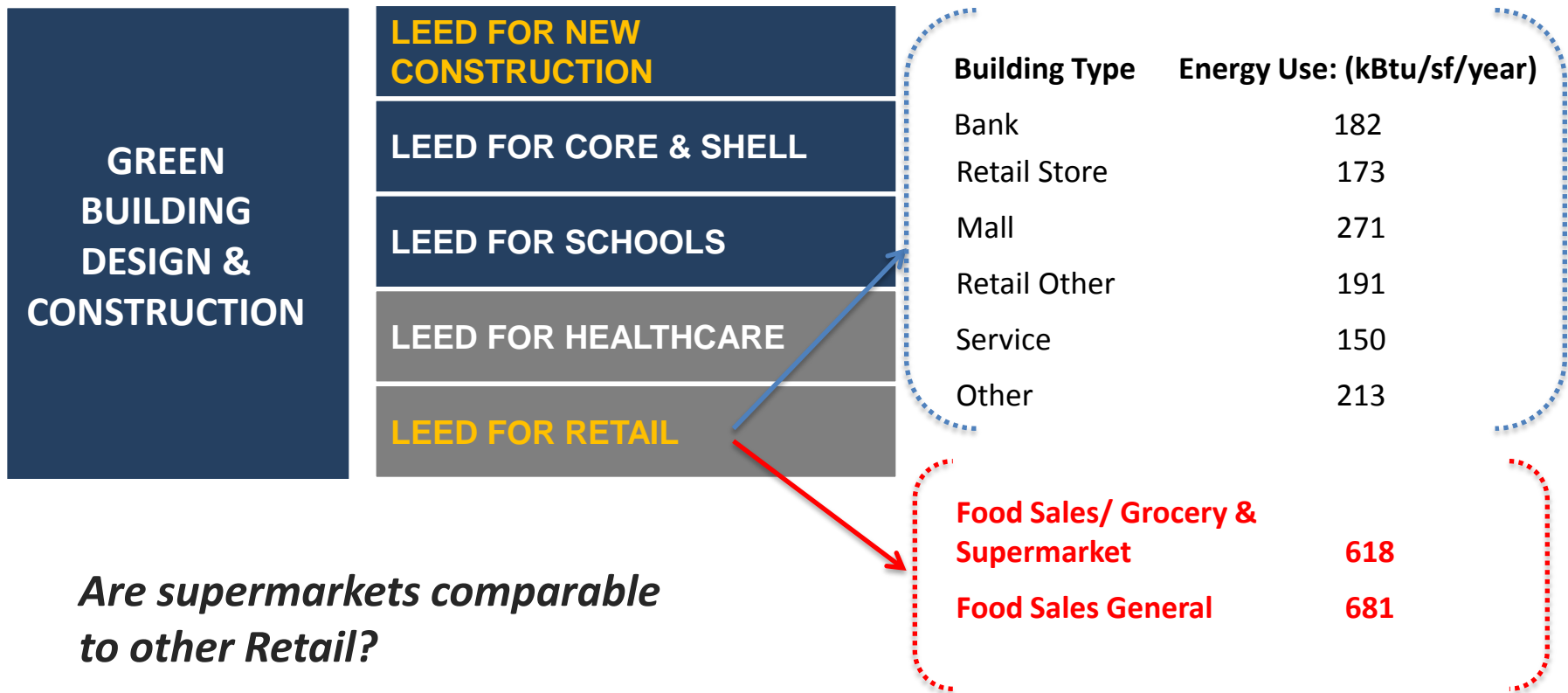
LEED FOR EXISTING BUILDINGS

LEED FOR EXISTING SCHOOLS

Why LEED for Retail?

- All commercial related to consumer
- Variety of types and sizes
- Occupancy and operational characteristics
- Process energy and water
- Parking and transportation
- Prototypes
- Lighting and display
- Pilot process
- Fit into the LEED 2009 structure

Rating Systems & Energy Use



Paths of LEED Certification

The number of credits in each LEED category do not significantly differ...but how those credits are achieved in NC vs. Retail do have some notable differences.

LEED for Retail: The major differences

New options to include employees in alternative **transportation** site credits

Retail projects can benefit from moving into or becoming part of larger green development master site and can earn credits based on the **master plan** (ex. Stormwater capture, mitigation)

Retail projects are required to account for unregulated **water and energy uses** related to Retail processes

Retail projects can include **furniture** in all materials calculations

Indoor Air Quality calculations must include furniture as part of the scope and IAQ issues focus more on **employees**

Sustainable Sites

PREREQUISITE Construction Activity

CREDITS: NEW or ADJUSTED

Alternative Transportation –
Bicycling / Changing

Alternative Transportation –
Low Emitting

Alternative Transportation –
Delivery Service

Alternative Transportation –
Incentives

Alternative Transportation –
Education

New alternative transportation options promoting employee engagement

Site Development –
Open Space

Stormwater - Quantity

Stormwater - Quality

Light Pollution

New options if store is part of green master plan development

PREREQUISITE

None

CREDITS: NO CHANGE

Site Selection

Development Density

Brownfield Redevelopment

Alternative Transportation – Public
Transit Access

Alternative Transportation –
Parking Capacity

Site Development – Habitat

Heat Island – Non Roof

Heat Island – Roof

Water Efficiency

PREREQUISITE **Water Use Reduction**

CREDITS: NEW or ADJUSTED

Use Reduction – Process

Process water included and required as prerequisite, credit calculations (dishwashers, kitchen equipment)

Water Efficient Landscaping

Innovative Wastewater Technologies

New options for compliance if store is part of green master plan development

PREREQUISITE

None

CREDITS: NO CHANGE

Energy & Atmosphere

PREREQUISITE

Minimum Energy Performance

CREDITS: NEW or ADJUSTED

Optimize Energy Performance

All building energy uses must be included in the energy simulation model.
Baselines for standard commercial kitchen equipment, refrigeration, walk in coolers and ventilation must be included.

**This prerequisite and credit:*

- may benefit a project if energy star appliances or efficient alternatives are used compared to baseline process loads*
- or if the project team has never modeled process loads*

However it is likely to cost more and may penalize projects with significant process loads (each case will vary)

PREREQUISITE

Fundamental Commissioning
Refrigerant Management

CREDITS: NO CHANGE

On Site Renewable Energy
Enhanced Commissioning
Enhanced Refrigerant Mgmt
Measurement & Verification
Green Power

Materials & Resources

PREREQUISITE [Recyclables Collection & Storage](#)

CREDITS: NEW or ADJUSTED

[Materials Reuse](#)

[Recycled Content](#)

[Regional Materials](#)

[Rapidly Renewable Materials](#)

[Certified Wood](#)



Definition of retail furniture provided. Furniture may be included in material calculations, but must be included consistently.

PREREQUISITE

None

CREDITS: NO CHANGE

Building Reuse - Structural

C&D Waste Management

Indoor Environmental Quality

PREREQUISITE Environmental Tobacco and Smoke Control

CREDITS: NEW or ADJUSTED

IAQ Mgmt Plan - Occupancy



Air testing may occur after construction ends and within 14 days following occupancy

Low Emitting Materials-Composite Wood and Agrifiber

Low Emitting Materials- Furniture

Low Emitting Materials-Ceiling and Wall Systems



New options added to address retail furniture and ceiling and wall systems

Controllability - Lighting

Controllability - Thermal

Thermal Comfort- Verification



Controllability and surveying only applies to retail administration spaces and employees

Daylighting

Views



Retail definition for non-regularly and regularly occupied spaces

PREREQUISITE

Minimum Outdoor Air Quality Performance

CREDITS: NO CHANGE

Outdoor Air Monitoring

Increased Ventilation

IAQ Mgmt Plan - Construction

Low Emitting Materials-Adhesives and Sealants

Low Emitting Materials-Paints and Coating

Low Emitting Materials- Flooring

Indoor Chemical and Source Pollutant Control

Thermal Comfort Design

Conclusion

- LEED can be
 - A tool for measuring green standards testing and development
 - A catalyst for organizational greening
 - A mechanism for understanding first cost and payback period for a green initiative
- Evaluate all LEED options prior to the start of any project
- Utilize experts with experience then develop internal capacity

Thank You for Your Time

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