

LEED EB (Existing Buildings) & House Bill 255

High Performance Sustainable Schools Workshop
Chris Tyler – Board Member & Green Schools Chairman
KY U.S. Green Building Council Chapter



KENTUCKY CHAPTER
Greening the Bluegrass

Agenda

- USGBC Introduction
- LEED EB
- KY House Bill 255
- Questions and Discussion



Who We Are?

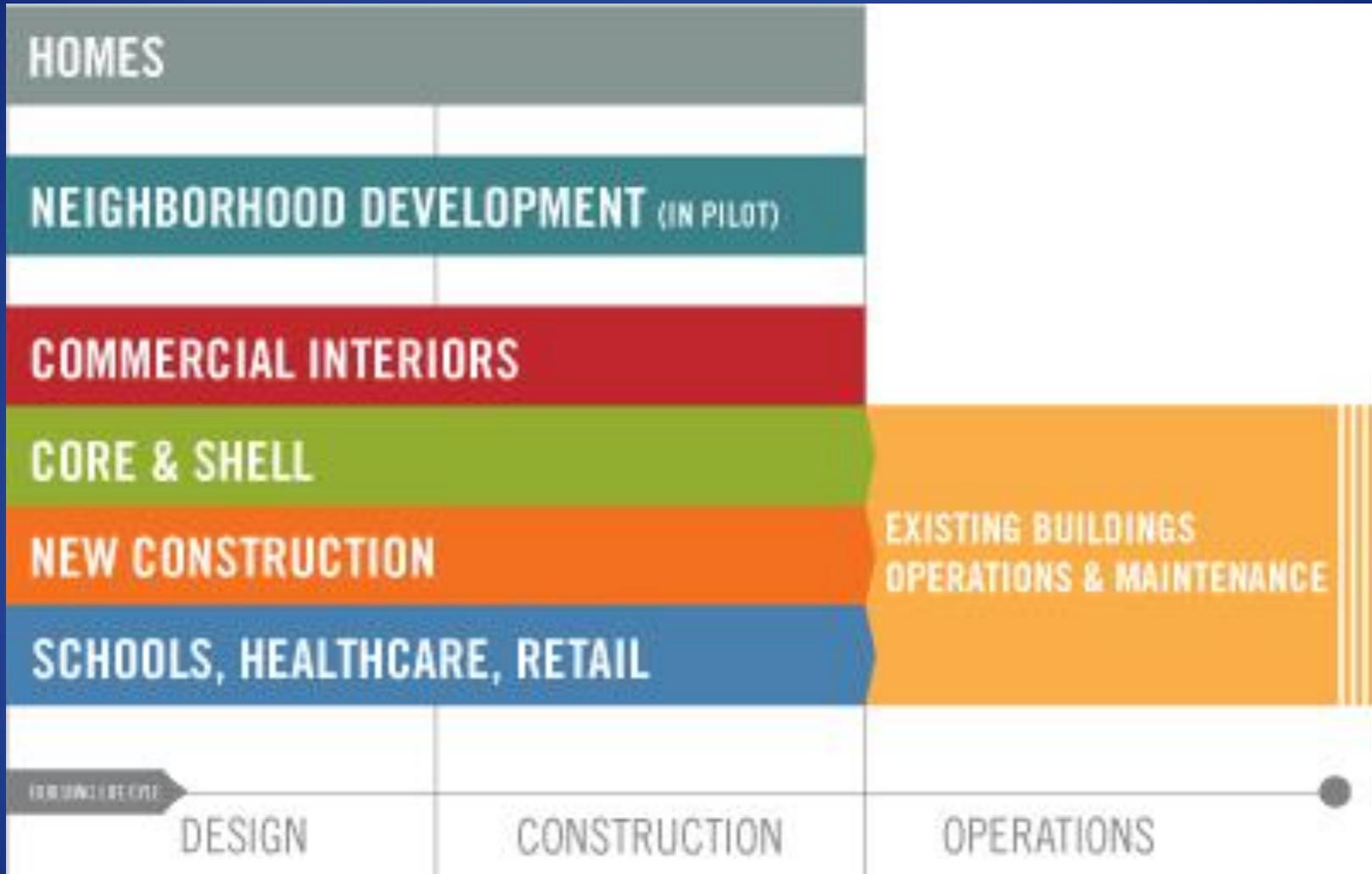
- Kentucky U.S. Green Building Council Chapter
- Statewide Chapter
- 501c3 Non-Profit Organization
- Education Focused



OUR MISSION: GREEN SCHOOLS WITHIN THIS GENERATION

Areas of LEED Focus

- **Sustainable Use and Protection of Natural Resources**
- **Land and Water Management**
- **Waste Reduction and Diversion**
- **Smart Energy Use**
- **Transportation**
- **Green Purchasing Products and Services**
- **Design, Construction and Management of the Built Environment**
- **Public Health**
- **Environmental Education**



47 KY LEED Certified Buildings

169 KY LEED Registered Projects



Ross Tarrant Architects Offices, Lexington
LEED Gold



Oldham County Library
LEED Gold



Big Ass Fans, Lexington
LEED Gold



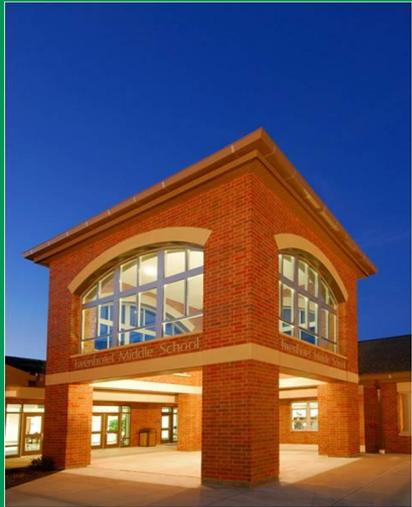
Boone Tavern, Berea
LEED Gold



KY LEED Registered and Certified Schools

March 15, 2012

Bristow Elementary	Bowling Green
Child Development Center	Fort Knox
Child Development Center	Ft. Campbell
Daycare	Fort Campbell
Thornwilde Elementary School	Hebron
Montessori Middle School of KY	Lexington
Glasgow Independent High School	Glasgow
Richardsville Elementary School	Bowling Green
Riverwoods Environmental Education Center	Corbin
St. Francis School - Athletic & Perform	Goshen
Montgomery Elementary School	Mount Sterling
WB Muncy Elementary School Renov Add	Wooton
Twenhofel/Kenton County Middle School	Independence



Twenhofel
Independence, KY
LEED Silver

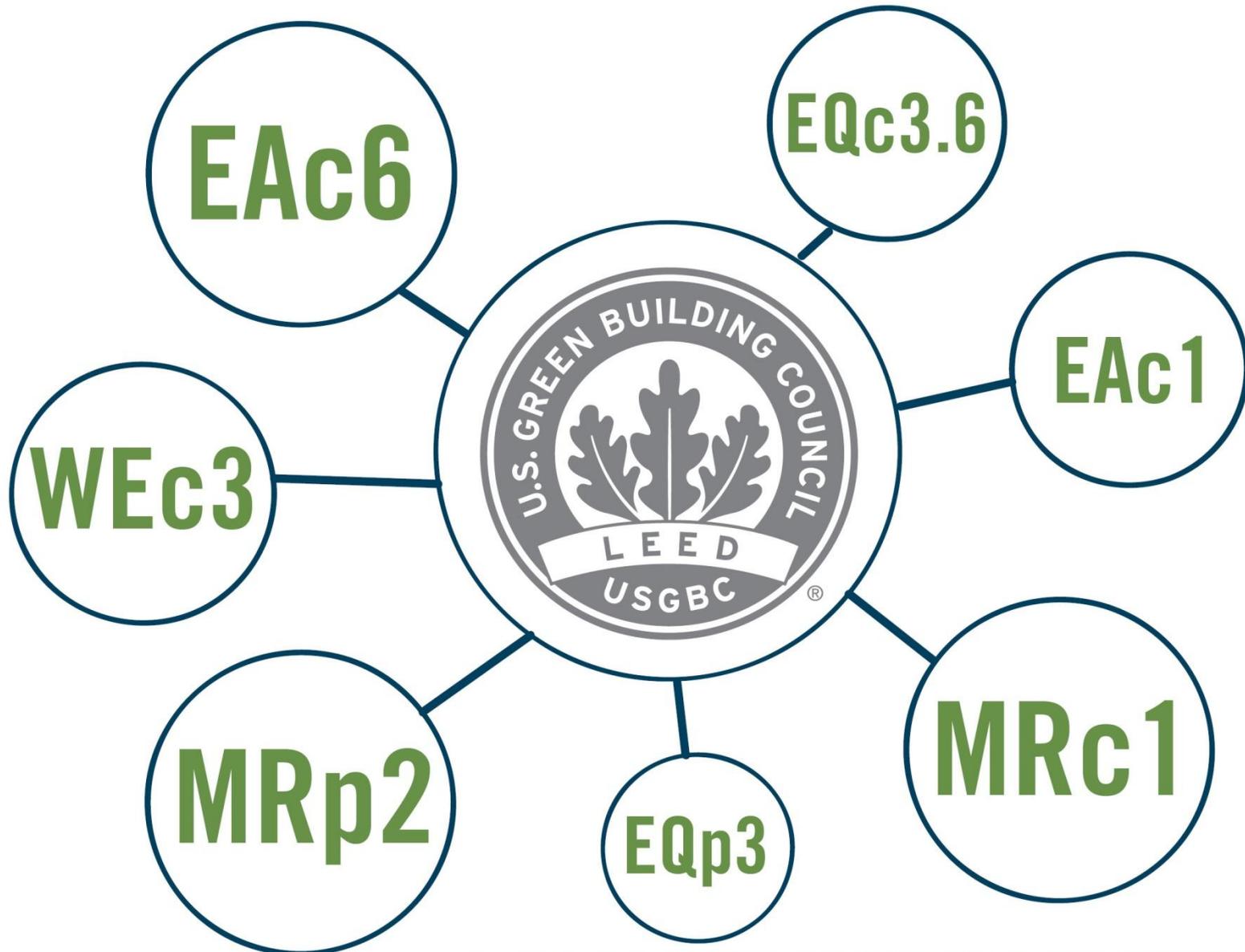
LEED for Existing Buildings: Operations & Maintenance

Ongoing certification of all projects

Aligning with Operational Priorities



Aligning with Operational Priorities



* credits based on the LEED 2009 for Existing Buildings: Operations and Maintenance rating system

Minimum Program Requirements

- **Full occupancy for at least 12 continuous months**
- **Applies to whole buildings**
- **Federal, state and local environmental law/regulation compliance**



Cross-Functional Team

ENGINEERS OPERATIONS AND MAINTENANCE TEAMS
STUDENTS PRINCIPALS OTHER FACULTY AND ADMIN
TEACHERS ENVIRONMENTAL HEALTH AND SAFETY STAFF
GROUNDSKEEPERS CAPITAL PLANNING STAFF GR
SECURITY/PARKING/TRANSPORTATION STAFF SECURITY T
CUSTODIAL TEAM BUILDING MANAGERS CUSTOD
SUPERINTENDENTS STUDENTS SUPERINTENDI
FACILITIES MANAGERS AND THEIR TEAMS FACILITIES MA
ENGINEERS OPERATIONS AND MAINTENANCE TEAMS
STUDENTS PRINCIPALS OTHER FACULTY AND ADMIN

The Basics

9 prerequisites

34 credits

3 - month performance period

Appendix E: LEED Certification Assessment

LEED CERTIFICATION ASSESSMENT SUMMARY

All prerequisites are met or can be met: Yes No

PREREQUISITE	Is met:	Can be met:
1. WEp1 – Minimum Indoor Plumbing Fixture and Fitting Efficiency	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. EAp1 – Energy Efficiency Best Management Practices – Planning, Documentation, and Opportunity Assessment	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. EAp2 – Minimum Energy Efficiency Performance	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. EAp3 – Fundamental Refrigerant Management	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. MRp1 – Sustainable Purchasing Policy	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. MRp2 – Solid Waste Management Policy	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. IEQp1 – Minimum Indoor Air Quality Performance	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
8. IEQp2 – Environmental Tobacco Smoke (ETS) Control	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
9. IEQp3 – Green Cleaning Policy	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Notes:

Appendix D: Project Tracking Tool

The project tracking tool helps the LEED Coordinator organize the many tasks that must be coordinated among the project team members and other school/school district staff. It tracks project team efforts, milestones, and basic project information needed for LEED project registration.

1. Project Management Team

A. LEED Coordinator

Name:	
Office Phone:	
Cell Phone:	
Email:	

B. Assistant LEED Coordinator

Name:	
Office Phone:	
Cell Phone:	
Email:	

C. School/School District

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HOST A CHARRETTE

Sunshine Middle School
125 Main Street
Anytown, USA 12345

LEED PROJECT CHARRETTE

Welcome and Introduction (15 - 30 minutes)
Acknowledge and welcome leadership, stakeholders, community supporters, and project team members. Leadership delivers opening remarks and expresses support for initiative to green ongoing operations and maintenance.

PART 1 - EDUCATION PRESENTATION

Green Schools Overview (45 - 90 minutes)
Present characteristics of green schools and high-performance operations and maintenance to the entire group.

LEED for Existing Buildings: O&M Certification Overview (20 - 90 minutes)
Provide orientation on USGBC and LEED for Existing Buildings: O&M rating system, including an overview of the LEED certification process.

Introduction of School Project(s) Selected to Pursue Certification (20 - 60 minutes)
Deliver presentation on schools pursuing certification and summary of project activities already accomplished.

PART 2 - TECHNICAL WORKSHOP (60 - 180 MINUTES)

Complete LEED Project Scorecard
Use scorecard to keep track of credits project team intends to pursue. Credits are categorized as "Yes," "No," and "Maybe." "Maybe" credits will require further investigation.

Assign Project Team Members Responsibilities Based on Project Scorecard
For each prerequisite and credit, designate lead team member who will oversee implementation.

ESTABLISH MILESTONES FOR CREDITS OUTLINED IN PROJECT SCORECARD

Establish milestones for each credit during the review and completion of the project scorecard.
Project team considers the overall time frame needed for completing each credit, as well as tasks that require immediate attention.

Closing Remarks and Next Steps (15 minutes)
Thank participants for their contributions. Set times and dates for future meetings, if appropriate.

Prerequisite/Credit		Performance Periods								LEED Certification Application	
		Pts	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 5	Qtr 6	Qtr 7	Qtr 8	
1 Green Grounds											
SSc2	Building Exterior and Hardscape Management Plan	1									
SSc3	Integrated Pest Management, Erosion Control, and Landscape Management Plan	1									
2 Alternative Commuting											
SSc4	Alternative Commuting Transportation	8						◆			
3 Water Efficiency											
WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency				◆	(Performance period N/A)					
WEc2	Additional Indoor Plumbing Fixture and Fitting Efficiency	3			◆	(Performance period N/A)					
4 Energy Efficiency Best Management Practices											
EAp1	Energy Efficiency Best Management Practices—Planning, Documentation, and Opportunity Assessment		◆								
EAc2.1	Existing Building Commissioning—Investigation and Analysis	2	◆								
EAc2.2	Existing Building Commissioning—Implementation	2		◆							
5 Energy Performance											
EAp2	Minimum Energy Efficiency Performance										
EAc1	Optimize Energy Efficiency Performance	9									
EAc6	Emissions Reduction Reporting	1							◆		

Implementation and continuing performance
◆ One-time activity or event
Remainder of Performance Period

DRAFT SCHEDULE

ASSIGN CREDIT

TASKS

Responsible Department	LEED Prerequisite	Tasks/Responsibilities
Facility Operations		
Energy Management	EAp1 Energy Efficiency Best Management Practices—Planning, Documentation, and Opportunity Assessment	Conduct the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Level I walk-through energy audit.
	EAp2 Minimum Energy Efficiency Performance	Establish ENERGY STAR Portfolio Manager Account and determine facility's energy rating (must be at least 69 at time of application).
HVAC Shop	EAp1 Energy Efficiency Best Management Practices—Planning, Documentation, and Opportunity Assessment	Report availability of system documentation (system narrative, sequence of operations, and PM program).
	EAp3 Fundamental Refrigerant Management	Report refrigerants in use in base building systems, potential for conversion to non-ozone-depleting refrigerants, and potential for system retrofit (if containing CFC-based refrigerants).
	IEQp1 Minimum Indoor Air Quality Performance	Measure outside air ventilation rates (must be capable of at least 10 CFM/person at time of application).
Electric Shop	MRp1 Sustainable Purchasing Policy	Assess and provide input to environmentally preferable purchasing (EPP) policy regarding mercury in lamps.
	EAp1 Energy Efficiency Best Management Practices—Planning, Documentation, Opportunity Assessment	Assist with measurement of energy use breakdown and conduct of ASHRAE Level I walk-through energy audit.
Plumbing Shop	WEp1 Minimum Indoor Plumbing Fixture and Fitting Efficiency	Determine age of fixtures. If prior to 1993, inventory existing fixture types and provide input to EPP policy regarding fixture types and additions.
Carpenter Shop	MRp1 Sustainable Purchasing Policy	Assess and provide input to EPP policy regarding facility alterations and additions.
	MRp2 Solid Waste Management Policy	Provide assessment of capability for recycling waste from facility alterations at the time of application.
Planning Section	MRp1 Sustainable Purchasing Policy	Assess and provide input to EPP policy regarding facility alterations and additions.
	MRp2 Solid Waste Management Policy	Provide assessment of capability for recycling waste from facility alterations at the time of application.
	MRp2 Solid Waste Management Policy	Provide assessment of capability for recycling ongoing consumables at the school.

BUILDING IMPROVEMENTS





EDUCATE AND IMPLEMENT

ONLINE TRAINING

AVAILABLE AUGUST 2011:

- HOW TO GREEN EXISTING SCHOOLS: OVERVIEW
- TRANSPORTATION
- WATER MANAGEMENT
- GROUNDSKEEPING
- ENERGY CONSERVATION
- GREEN CLEANING
- INDOOR ENVIRONMENTAL QUALITY
- WASTE MANAGEMENT
- PURCHASING
- TOOLS FOR GREEN SCHOOLS PLANNING

Credit Categories & Distribution

LEED® 2009

for Existing Buildings: Operations & Maintenance

Total Possible Points 110***

 Sustainable Sites	26
 Water Efficiency	14
 Energy & Atmosphere	35
 Materials & Resources	10
 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 Operations	6
 Regional Priority	4

House Bill 255



House Bill 255

- Partnership – KY USGBC & Department for Energy Development and Independence
- LEED EB Pilot Program
- Up to 4 Schools (different districts)
 - Free for Schools
- Upon Completion – publish reports
 - Efforts undertaken
 - Benefits of certification
- VOLUNTEERS?

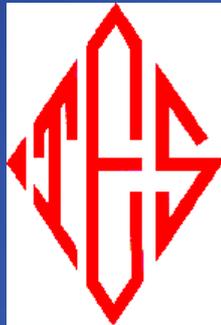
Questions and Discussion

Join KY USGBC Chapter

www.usgbckentucky.org

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\$50.00 per year (if you are an employee of a National Member Company), \$70.00 per year (as an individual member) or \$25 per year (as a full time student)



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