

OCTOBER 2, 2010



LEED THE PROCESS: MANAGING THE DESIGN TEAM



BRAILSFORD & DUNLAVEY

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B&D INTRODUCTION

Established in **1993**

70+ Employees

Seven locations

327 Higher Education Clients

More than **100** Union-related Projects

Member of USGBC & ACUI



B&D INTRODUCTION

SERVICES

Master Planning
Strategic Planning & Development
Financial Analysis & Budget Development
Economic Impact Analysis
Referendum Planning & Support Services
Program Development
Architecture / Engineering Selection
Construction Oversight
Business Planning
Market Analysis
Design Management
Feasibility & Market Study
Project Budget & Schedule Management
Project / Consultant Team Coordination



B&D INTRODUCTION

CHET ROACH

Currently serving as Owner's Representative for over \$200M in college and university projects.



BART HALL

Two decades of experience working as a senior campus services / student affairs practitioner in higher education.



STUDENT UNION EXPERIENCE

- Arizona State University
- Ball State University
- Baltimore City Community College
- Bowie State University
- Brooklyn College
- Buena Vista University
- California Polytechnic State U.
- California State U.-Channel Islands
- California State U.-San Marcos
- California State U.-Northridge
- California State U.-Stanislaus
- Case Western Reserve University
- Central State University
- Central Washington University
- Christopher Newport University
- Clayton State University
- Cleveland State University
- Columbia University
- Dartmouth College
- DePaul University
- Duke University
- East Carolina University
- Fairmount State University
- Fayetteville State University
- George Mason University
- Georgia Gwinnett College
- Georgia State University
- Immaculata University
- Indiana University
- Jackson State University
- Loyola University Chicago
- Louisiana State University
- Miami University
- Michigan State University
- Middle Tennessee State University
- Morehouse College
- New Mexico State University
- North Carolina State University
- North Georgia College & State U.
- Northeastern Illinois University
- Northern Kentucky University
- Northwestern University
- Oakland University
- Ohio Dominion University
- Ohio State U. at Mansfield
- The Ohio State University
- Oklahoma State University
- Oregon State University
- Queen's University
- The Richard Stockton College of NJ
- Roosevelt University
- St. Ambrose University
- San Diego State University
- San Jose` State University
- Savannah State University
- Southern Illinois U.-Edwardsville
- Springfield College
- University of Alabama
- University of Alaska-Fairbanks
- University of Arkansas
- University of Baltimore
- University of California-Riverside
- University of California-San Diego
- University of California-San Cruz
- University of Cincinnati
- University of Connecticut
- University of Houston
- University of Idaho
- University of Iowa
- University of Kentucky
- University of Mary Washington
- University of Maryland
- University of Memphis
- University of Miami
- University of Michigan
- University of Missouri-Kansas City
- University of Missouri-St. Louis
- University of Nevada-Las Vegas
- University of Nevada-Reno
- University of New Orleans
- University of North Texas
- University of Oregon
- University of San Diego
- University of Southern California
- University of South Florida-St. Pete
- University of Texas-Austin
- University of Utah
- University of Vermont
- University of Virginia
- University of West Florida
- University of Wisconsin-Eau Claire
- University of Wisconsin-Madison
- University of Wisconsin-Stout
- Washington State University
- Wayne State University
- Western Kentucky University
- Western Michigan University
- Young Harris College

WHY THIS TOPIC?

- ❖ B&D's "SAV" approach to planning & implementation
- ❖ Identified LEED process could often be more of a frustration than opportunity
- ❖ To strengthen "OWNER'S" position in sustainability decision
- ❖ Enhance clarity & consensus within the Project Team making



TWO QUESTIONS

Why are we pursuing a particular LEED status on our project?

- ❖ To minimize the environmental impact
 - ❖ To reduce the long-term costs of operating the facility
- ❖ To create a highly visible publicity tool
 - ❖ To meet a mandate or requirement



TWO QUESTIONS

How much money are we willing to invest to achieve LEED status on our project?

❖ *Failing to budget for the cost of implementing a LEED project will result in two outcomes:*

1. A facility that **does not meet** the institutional goals
2. A project that is **over budget** as a result of meeting its institutional goals



Hold an Initial LEED Discussion

- » Answer Questions One and Two

Preliminary Filtering Workshop

- » Review all possible LEED credits



PROCESS

SUSTAINABLE SITES

26 Possible Points

Construction Activity Pollution Prevention
Site Selection
Development Density & Community Connectivity
Brownfield Redevelopment
Alternative Transportation, Public Transportation Access
Alternative Transportation, Bicycle Storage & Changing Rooms
Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles
Alternative Transportation, Parking Capacity
Site Development, Protect or Restore Habitat
Site Development, Maximize Open Space
Stormwater Design, Quantity Control
Stormwater Design, Quality Control
Heat Island Effect, Non-Roof
Heat Island Effect, Roof
Light Pollution Reduction

WATER EFFICIENCY

10 Possible Points

Water Use Reduction
Water Efficient Landscaping
Innovative Wastewater Technologies
Water Use Reduction

PROCESS

ENERGY & ATMOSPHERE

35 Possible Points

Fundamental Commissioning of the Building Energy Systems
Minimum Energy Performance
Fundamental Refrigerant Management
Optimize Energy Performance
On-Site Renewable Energy
Enhanced Commissioning
Enhanced Refrigerant Management
Measurement & Verification
Green Power

MATERIALS & RESOURCES

10 Possible Points

Storage & Collection of Recyclables
Building Reuse, Maintain 75% of Existing Walls, Floors & Roof
Building Reuse, Maintain 50% of Interior Non-Structural Elements
Construction Waste Management
Materials Reuse
Regional Materials
Recycled Content
Rapidly Renewable Materials
Certified Wood

PROCESS

INDOOR ENVIRONMENTAL QUALITY

15 Possible Points

- Minimum IAQ Performance
- Environmental Tobacco Smoke (ETS) Control
- Outdoor Air Delivery Monitoring
- Increased Ventilation
- Construction IAQ Management Plan, During Construction
- Construction IAQ Management Plan, Before Occupancy
- Low-Emitting Materials, Adhesives & Sealants
- Low-Emitting Materials, Paints & Coatings
- Low-Emitting Materials, Carpet Systems
- Low-Emitting Materials, Composite Wood & Agrifiber Products
- Indoor Chemical & Pollutant Source Control
- Controllability of Systems, Lighting
- Controllability of Systems, Thermal Comfort
- Thermal Comfort, Design
- Thermal Comfort, Verification
- Daylight & Views, Daylight 75% of Spaces
- Daylight & Views, Views for 90% of Spaces

PROCESS

INNOVATION & DESIGN

Innovation in Design: Provide Specific Title

6 Possible Points

REGIONAL PRIORITY

Regional Priority: Provide Specific Title

4 Possible Points

Project Totals

100 Points

Certified: 40-49 Points

Silver: 50-59 Points

Gold: 60-79 Points

Platinum: 80+ Points

Approaches to LEED for your project:

- ❖ Most Cost-Effective Method
- ❖ Completely Purpose/Goal Driven Method
- ❖ The Hybrid Approach



Selection of Credits to Pursue:

- ❖ The functionality of each credit
 - What am I getting if I pursue this credit?
- ❖ The implementation method for each credit
 - How am I going to achieve this credit?
- ❖ The initial investment cost for each credit
 - How much am I going to spend to pursue this credit?
- ❖ The payback calculation for credits
 - How long will I have to use the building before I recover the cost of my investment?



TRENDS

- ❖ Renovations
- ❖ Dashboard Monitoring
 - ❖ Dining
 - Local Food and Products
 - Recycling & Composting
 - Biofuel Use
 - Trayless
 - Re-Usable Containers
 - ❖ Community Partnerships
 - ❖ Virtual Classrooms
 - ❖ Alternate Transportation



CASE STUDIES

Young Harris College Campus Center

Level:	Silver (in progress)
Opens:	TBD
Architect:	VMDO Architects
Total SF:	120,000
Enrollment:	820
Sf per Student:	48.7 SF
Total Cost:	\$ 46.5million

Key Features:

- ❖ Certified Wood
- ❖ Geothermal Cooling
- ❖ Sustainable Living Education

<http://www.yhc.edu>



CASE STUDIES

University of Vermont Davis Student Center

Level:	Gold (39pts)
Opened:	2007
Architect:	WTW Architects
Total SF:	186,000
Enrollment:	10,940
Sf per Student:	17 SF
Total Cost:	\$ 61 million
Cost per SF:	\$ 328

Key Features:

- ❖ Advanced monitoring system
- ❖ 63% regional materials
- ❖ Smart Windows



<http://buildingdashboard.com/clients/uvm/davis/>

CASE STUDIES

University of Missouri-Kansas City Student Union

Level:	Silver (maybe Gold!)
Opened:	2010
Architect:	Gould Evans
Total SF:	110,000
Enrollment:	13,500
Sf per Student:	8.1 SF
Total Cost:	\$ 38 million
Cost per SF:	\$347

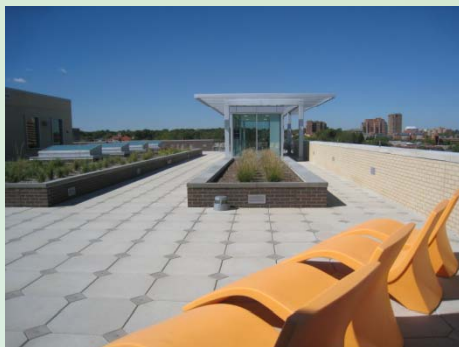
Key Features:

- ❖ Green Roof
- ❖ Natural Daylighting
- ❖ Advanced Stormwater Management

<http://www.umkc.edu/union/index.asp>



CASE STUDIES



DID YOU KNOW?

RECYCLED CONTENT
The choice of building materials, including structural steel, decking, and aluminum windows, casework, doors, floor finishes, ceiling systems, and tile, has reduced the impact of natural resources.

DID YOU KNOW?

LOW EMITTING MATERIALS
This building contains low emitting materials, including floor finishes, ceiling systems, adhesives, sealants, paints and coatings.

DID YOU KNOW?

DAYLIGHTING
The building's windows and skylights provide daylighting, which reduces energy usage and provides a connection between the indoor and outdoor spaces.

DID YOU KNOW?

CONTROLLABILITY OF SYSTEMS
Indoor environmental control is an important factor associated with occupant comfort and productivity. This building's lighting system allows occupants to adjustably control lighting levels.

BACK TO OUR TWO QUESTIONS

Why are we pursuing a particular
LEED status on our project?

How much money are we willing to invest to
achieve LEED status on our project?

B&D brought only two questions...
How many do you have?

DISCUSSION



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