Green Solution –
Jefferson Green Office Building

Presentation for IFMA New Mexico
March 13, 2007
• New Building - The Big Idea
• LEED
• Core and Shell Construction
• D/P/S Tenant Improvement
• Outcomes
“To deliver better product to the marketplace is fundamental to our industry. To deliver product that contributes to our planet is fundamental to our future. The LEED criteria is a tool by which we can measure how our product did both.”

Rick Davis, President
R. Davis Companies
LEED – What is it?

Leadership in Energy and Environmental Design

- Design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants.

  - Sustainable site planning
  - Safeguarding water and water efficiency
  - Conservation of materials and resources
  - Indoor environmental quality
6 Categories:
- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Innovation & Design Process

Categories contain credits and prerequisites
Categories are NOT equally weighed
Points are NOT equal in cost or impact
IEQ strategies may add load
LEED – What is it?

69 total points
7 prerequisites – MANDATORY
32 credits – choose from various topics

Levels of certification are as follows:
- Certified: 26-32 points
- Silver: 33-38 points
- Gold: 39-51 points
- Platinum: 52-69 points

*Buildings get Certified after construction

*People get Accredited
LEED – What is it?

Pilot Programs
LEED for Schools
Neighborhood Development
LEED Costs

Soft Costs:

• $0.50 to $.75/sf commissioning agent
• $450 USGBC registration
• $0.035/sf USGBC certification
• LEED consulting/documentation fees
• Possible additional fees for modeling, additional consultant work

Construction Costs:

• 0 to 8% premium, average 3-5%
• Operational savings
• Possible first cost savings
Jefferson Green – Core & Shell

- The first LEED-CS project in New Mexico
- The first building in New Mexico to be Pre-Certified under LEED-CS
- The core and shell has been Pre-Certified as Silver under LEED-CS and should receive final LEED-CS Silver or Gold certification later this year
- The DPS tenant space should receive LEED-CI Silver certification later this year
Jefferson Green – Core & Shell

- LEED-CS
- Silver or Gold
- 85,000 sf
- 45% Energy Savings
- 30% Water Use Reduction
- Underfloor Air
- Evaporative Cooling
- Operable Windows
- Daylighting and Shading
- Low-Flow Fixtures
- Xeriscape
Construction Process

• Over 80% of the construction waste was recycled (almost 4,000 tons recycled)

• Construction Indoor Air Quality Management Plan protected ductwork and porous materials from contamination during construction

• Rooms for collection and storage of recyclables are located on each floor and a recycling service has been contracted
• 45% less energy based on modeling
• Evaporative cooling system with refrigerated backup for humid days
• Can run on 100% outside air for free cooling
• Rooftop air heaters, gas boilers
• Underfloor air system for increased ventilation and individual control of temperature
• Power and data are run under the floor
• Floor air diffusers are in movable tiles and can be relocated as needed
• Energy Star appliances (computers, kitchen, etc.) reduce electrical use
• Commissioned to ensure proper operation of systems
Envelope

- Designed to daylight over 75% of the floorplate
- High efficiency, high transmittance glazing for daylight and solar performance
- Variation in glazing amount and shading to respond to solar orientation
- External horizontal shades on the SE, SW and NW facades
- Operable windows to allow individual control over ventilation and additional fresh air
- Energy Star, high-emissivity roof to reduce cooling load
Water

- Designed to use 30% less water inside the building
- Low-flow urinals and showerheads and faucet sensors reduce water use in restrooms
- Flow restrictors reduce water use at kitchen and coffee bar faucets
Site

- Building was sited to preserve existing mature pine and cottonwood trees
- Designed to direct run-off to planted areas (passive water harvesting)
- Xeric landscaping with irrigation provided by the city’s nonpotable line
- Cutoff light fixtures to minimize light pollution
- Bike racks and a designated smoking area located at the west side of the building
Materials

- Aluminum window/storefront/curtainwall frames contain at least 40% recycled content
- Structural steel has over 90% recycled content
- Concrete contains flyash (replacing 20% of the cement)
- Low-emitting paints, coating, adhesives, sealants, carpets, and composite wood are used to prevent the offgassing of harmful chemicals
D/P/STI

• LEED-CI
• Silver Level
• 34,000 sf
• Open Office Layout
• Low-VOC Materials and Furniture
• Recycled, Regional
• Daylight and Views
• Efficient Lighting
TI Materials

- Kitchen flooring and gray tackwall is natural linoleum, a renewable and natural product
- All carpet contains recycled content (varies by product)
- War room walls are xorel, a durable recycled fabric product
- New furniture is Green Guard Certified and contains recycled material
- Reused 67% of existing furniture, refurbished furniture is low-emitting
LEED added about 5% to the cost of construction.

Estimated payback is 5 years.

Largest additional investments were in the facades (high performance glass, shading, and operable windows) and the mechanical system (equipment and raised floor). These tie directly to energy performance and occupant comfort.

Utilities for this building have not exceeded those of our previous building, which was less than 1/3 the size.