



Sugen
Building 3
LEED-CI Pilot Project

Winner

San Mateo County Sustainability Award 2006

SAMCEDA Award of Excellence, Environmental Action Category 2005



LEEDing Lab

Completed in 2003, Sugden's Building 3 was a leader in sustainable building, consisting of tenant improvements to a three story laboratory/office building used for research and development in pharmaceutical sciences. The building also includes a commercial kitchen, servery area, and cafeteria with capacity to serve up to 500 employees, including existing buildings 1 and 2. The cafeteria space also is multi-purpose allowing for easy conversion into one large, or three smaller seminar areas with extensive audio-visual capabilities. The third floor executive office space also includes a state-of-the-art boardroom and several outdoor deck areas.

Designer: DES Architects + Engineers



Energy

The building's cooling system is an energy efficient water-cooled chiller system. A direct-digital heating, ventilation, and air conditioning (HVAC) control system utilizes sensors, control sequences and variable frequency drives (VFD) to reduce energy consumption during off-peak weather conditions.



Energy

The lighting system layout and selected fixtures reduce lighting power use by more than 20%. Lighting controls such as day-light sensors and occupancy sensors automatically switch the lights off when they are not needed.



Indoor Air

During construction, an Indoor Air Quality (IAQ) construction plan was implemented. This plan incorporated items such as covering duct opening to protect from construction dust, providing moisture protection on exposed materials, and providing barriers to protect finished areas from construction work in adjacent unfinished areas. Paint, coating, adhesive, sealant, carpet, composite wood and furniture products were chosen to be low in volatile organic compounds (VOC).



Indoor Air

A two-week-long air flush out of the building at the end of construction occurred to further remove off-gassing VOC compounds from construction materials. Rooms utilizing chemicals (such as copier rooms) were designed to be completely enclosed and directly exhausted to the outdoors, preventing migration of chemical fumes to adjacent workspaces. Even access to outdoor views has been proven to increase the quality of the work environment, and this building provides outdoor views to 90% of the workstations.



Innovation

this building incorporates a LEED-CI display to promote education about sustainable building practices. Second, although the standard LEED credit does not include lab casework, this building has lab casework made from 100% FSC certified wood. As a third measure the building also has an HVAC system with an estimated energy savings of 46% above code requirements.

Scorecard

Sugen Building 3 LEED-CI Pilot Project



SUGEN, Inc. Building 3, LEED-CI® Pilot Project # 0036
LEED-CI Certification Level: GOLD
August 25, 2004

33 Points Achieved Possible Points: 57

Certified 21 to 26 points Silver 27 to 31 points Gold 32 to 41 points Platinum 42 or more points

1 Sustainable Sites Possible Points: 7

Code	Description	Points
Y	Yield	
Y	Yield	
Y	Yield	
1	Yield	1
1	Yield	1
1	Yield	1

2 Water Efficiency Possible Points: 2

Code	Description	Points
Y	Yield	
1	Yield	1
1	Yield	1

7 Energy & Atmosphere Possible Points: 14

Code	Description	Points
Y	Yield	
Y	Yield	
Y	Yield	
1	Yield	3
2	Yield	2
2	Yield	2
3	Yield	3
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1

8 Materials & Resources Possible Points: 14

Code	Description	Points
Y	Yield	
Y	Yield	
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1

18 Indoor Environmental Quality Possible Points: 15

Code	Description	Points
Y	Yield	
Y	Yield	
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1

4 Innovation & Design Process Possible Points: 5

Code	Description	Points
Y	Yield	
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1
1	Yield	1

Fast Facts

Project Type

Lab building for pharmaceutical company

Concept

Provide a state of the art facility for pharmaceutical research and development

Space

67,674 sq. ft total.

Certification

LEED-CI™ pilot project

Cost

\$11.2million (approx \$165.00/sq. ft.)

Owner

Sugen Inc. A Pfizer Company

Architect/Engineering

DES Architects + Engineers

General Contractor

XL Construction

HVAC Contractor

Western Allied

Electrical Contractor

Frank Electric

Plumbing Contractor

KDS Plumbing

Construction Manager

HiTech Construction Management and Design, Inc.

Sugen Building 3 LEED-CI Pilot Project

- 81% of construction debris recycled
- 36% total reduction in water usage or 100,000 gallons annually
- Building HVAC system with an estimated energy savings of 46% above code requirements, including a customized water-cooled chiller system more efficient than standard chilled water systems.
- CFC and HCFC free refrigerants on all refrigeration equipment
- Lighting system layout and lighting control system reduce lighting power use by more than 20%
- Interior building materials that meet LEED criteria including:
 - Wall insulation made from rapidly renewable and recycled cotton fabrics
 - Resilient "Marmoleum" flooring made from linseed oil, rosin binders, dry pigments on a jute backing
 - Wall fabrics made from 52% post-industrial recycled polyester and 48% post-consumer recycled polyester
 - Carpet tile with nylon that has a minimum of 40% total recycled content
 - Casework substrate particleboard made from straw and chaff using a new binding agent known as MDI (does not contain harmful urea formaldehyde emissions)
 - Door frames, metal studs and ceiling grid systems mad with recycled steel
 - Drywall, acoustic ceiling tile and VCT flooring made with recycled materials
- 90% of workstations have outdoor views
- Facilities recycling collection system for use by building occupants
- Kitchen wall panels, drywall, acoustic ceiling, fabric wall panels, toilet compartments and fire extinguisher cabinets all manufactured within 500 miles of project
- Lab casework, custom millwork, wood doors and standard casework made almost entirely of FSC certified wood
- LEED-CI display to promote education about sustainable building practices
- Indoor air quality measures including:
 - Carbon dioxide sensors
 - Air quality management plan during and immediately following construction
 - Low VOC emitting paints, coatings, adhesives, sealants, carpeting, composite wood and furnishings.
 - Isolation and 100% exhaust of copier rooms