

41%  
water use reduction

97%  
of project waste  
diverted from landfill

55%  
of materials regionally  
manufactured

## Asa Flats + Lofts

Portland, Oregon

Completion: December 2008  
Project Size: 329,063 sf - 231 units  
Statistics: 20,000 sf retail - 72,000 sf parking  
Owner: UNICO Properties  
Architecture: GGLO  
Landscape Architecture: GGLO  
Interior Design: GGLO  
Contractor: Anderson Construction Company  
Civil Engineer: KPFF  
Commissioning Agents: Glumac & Lew Seagraves  
Electrical (Design Build): Dynalectric Company  
Mechanical (Design Build): Hunter-Davison  
Energy Modeling: Glumac

**LEED® Gold**



LEED for New Construction  
Certification awarded July 29, 2009

Total LEED® Points	47
Sustainable Sites	12 of 14
Water Efficiency	03 of 05
Energy & Atmosphere	11 of 17
Materials & Resources	06 of 13
Indoor Environmental Quality	10 of 15
Innovation & Design	05 of 05



# SUSTAINABLE DESIGN CASE STUDY

## Asa Flats + Lofts

LEED® POINT HIGHLIGHTS	
<b>Sustainable Sites</b>	
SS 2	Dense urban location close to community services
SS 4.1	Local bus & streetcar access,
4.2	priority parking for fuel efficient vehicles,
4.3	secure bicycle parking
SS 5.1	Over 30% of site is restored habitat
5.2	and over 40% of site is vegetated open space
SS 6.1	Eco-roofs for 30% of site area, filter
6.2	and mitigate stormwater
SS 7.1	Over 75% of roof area is vegetated
7.2	or has high solar reflectance, mitigating heat-island effect
<b>Water Efficiency</b>	
WE 1.1	50% reduction in water use utilizes high efficiency drip irrigation
WE 3.1	41% water reduction - Low-flow
3.2	showerheads, faucets & dual flush toilets
<b>Energy and Atmosphere</b>	
EA 1	Designed for nearly 40% savings of utility costs compared to a conventionally designed building
EA 4	HVAC system contains no ozone depleting refrigerants
<b>Materials &amp; Resources</b>	
MR 2.1	97% of demolition and construction waste, over 4,500 tons, was diverted from the landfill
2.2	
MR 4.1	24% of materials, from metal framing to linoleum, cork & carpet tile contain recycled content
4.2	
MR 5.1	A minimum 20% of building materials harvested and manufactured locally
5.2	
<b>Indoor Environmental Quality</b>	
EQ 4.1	Low VOC emitting adhesives, sealants, paints and carpets
4.2 4.3	
EQ 6.1	High controllability HVAC systems provide greater comfort
6.2	
EQ 8.1	Daylight fills 78% of interior spaces
8.2	Views from 97% of interior spaces

### Background

LEED is the U.S. Green Building Council's leading rating system for designing and constructing energy efficient and high performing buildings.

### Better Site Solutions

Located on the Portland Street Car line, the project takes advantage of urban amenities which contribute significantly to the project's sustainable goals:

- Who needs a car? Multiple transportation options help residents reduce their carbon footprint while promoting bicycle and pedestrian activities.
- Vegetated roofs, making up 30% of the site area, along with a detention tank manage stormwater runoff and help protect the Willamette River



### Conserving Water

Design to conserve potable water inside and out:

- Dwelling units are individually metered to encourage conservation
- Drought tolerant landscaping requires 50% less potable water for irrigation
- Rain barrels collect roof water for residential P-Patch watering

### Conserving Energy

Key energy efficiency features of the building include:

- Reduced domestic hot water demand – Less hot water flowing out of low-flow showerheads and faucets results in less energy used to heat water
- Efficient lighting for parking, residences and common areas
- Low conductivity aluminum windows; Energy Star appliances; high efficiency, central hot water heaters; water-source heat pumps and condensing boilers
- An occupant survey is planned to collect user feedback and the project is committed to post occupancy participation in GGLO's on-going Building Performance Evaluation [www.gglo.com/insight.aspx](http://www.gglo.com/insight.aspx)

### Better Materials and Indoor Environment

Materials were selected for their durability, promotion of healthy indoor air quality, recycled content and location of manufacturing and harvesting. Attention was given to the installation and disposal of the products:

- Reclaimed timber from the Wilbur Ellis warehouse that previously occupied the site was repurposed into stair treads, exterior benches and interior artwork
- 55% of building materials, including durable concrete and masonry, were regionally manufactured, reducing negative impacts of transportation while stimulating the local economy
- Large floor to ceiling windows with operable units provide daylight, views and ventilation
- Construction practices protect the health of the workers as well as the end users
- Low emitting sealants, adhesives, paints, coatings and carpeting improve indoor air quality
- HVAC systems provide individual controllability and fresh air for more user comfort

