SUSTAINABLE DESIGN CASE STUDY

40%
of materials regionally extracted

94%
of project waste diverted from landfill

57%
of materials regionally manufactured

Girl Scouts
Totem Council River Ranch
Carnation, Washington

Completion:	June 2005
Project Size:	16,942 sf
Owner:	Girl Scouts - Totem Council
Architecture:	GGLO
Interior Design:	GGLO
Contractor:	W.G. Clark
Civil Engineer:	SvR Design Company
Landscape Architecture:	SvR Design Company
Structural:	Swenson Say Faget

LEED® Certified

LEED for New Construction
Certification awarded June 9, 2006

Total LEED® Points	27
Sustainable Sites	07 of 14
Water Efficiency	03 of 05
Energy & Atmosphere	01 of 17
Materials & Resources	04 of 13
Indoor Environmental Quality	07 of 15
Innovation & Design	05 of 05

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Girl Scouts Totem Council River Ranch

LEED® POINT HIGHLIGHTS	
Sustainable Sites	
SS 4.2	Bike storage with changing facilities
SS 5.1 5.2	Conserve natural areas by concentrating building footprints and construction
Water Efficiency	
WE 1.1 1.2	No potable water use for landscape and no irrigation system installed
WE 2	All wastewater is treated on-site
Energy and Atmosphere	
EA 4	HVAC system contains no ozone depleting refrigerants
Materials & Resources	
MR 2.1 2.2	94% of construction waste, 63 tons, was diverted from the landfill
MR 5.1 5.2	57% of materials regionally manufactured, 40% of materials regionally sourced and manufactured
Indoor Environmental Quality	
EQ 3.1 3.2	Construction air quality management plan protected absorptive materials and systems from contamination
EQ 4.2 4.3	Low VOC paints and carpet
EQ 5	Indoor measures provided to minimize occupant exposure to potentially hazardous particulates and pollutants
EQ 8.1 8.2	Large operable windows provide daylight, expanded views and decrease use of electric lighting

Background

A major goal of the Girl Scout's master planned camp expansion was to "best utilize the natural attributes of Camp River Ranch in a way that preserves its health and integrity". River Ranch is a beautiful, heavily-wooded site including Lake Langlois, exemplifying the perfect natural setting and quality outdoor experiences for which the Girl Scouts are known. The GGLO design team's motto comes from the traditional hiker's "leave no trace" ethic, using a light touch throughout site development and building design. This commitment is demonstrated in the camp's achievement as the first scout camp to achieve LEED certification in Washington.

Sensitive Site Solutions

- Existing roads used rather than building new ones
- Forest duff and native plants preserved for reuse
- Clustered buildings minimize impact and preserve natural setting
- Rock cisterns, pervious surfacing and direct infiltration landscaped swale for parking area runoff manage stormwater and protect Lake Langlois

Conserving Water and Energy

- Native plant materials require no irrigation
- Skylights and light tubes enhance daylighting
- Low voltage and fluorescent fixtures/lamps reduce electricity use
- 20% more ceiling insulation than required by code & flow-through/cross ventilation for all structures keeps buildings cool in summer
- Low wall vents in addition to roof and gable vents eliminate need for shower house mechanical exhaust

Better Materials and Indoor Environment

- Locally harvested materials including framing lumber, stone, gravel & wood flooring as well as locally manufactured materials reduce transportation impacts and support the local economy

- Renovation and reuse of existing structures combined with salvaged and refurbished material use, reduces demand on virgin materials
- Low VOC carpet and paints improve indoor air quality
- Strict construction practices combined with a flush-out of spaces before occupancy reduces harmful contaminants from entering the air campers breathe
- Extensive use of daylighting and enhancement of views connects campers to their environment and reduces the need for electric lighting
- Thru-wall make-up air assures adequate bath and kitchen ventilation

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