Universal Design and Public Open Space

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THE NEXT GENERATION ACCESSIBLE BUS

2011 Design Competition
Call for Submissions

ARCHITECTURAL RECORD
AUGUST 2011

ARCHITECTURAL RECORD

Leddy Maytum Stacy Architects / By Clifford A. Pearson

ED ROBERTS CAMPUS

A new home for organizations serving people with disabilities demonstrates how universal and sustainable design can disappear when done well.

IDEAS COMPETITION

PRESENTED BY
THE AMERICAN INSTITUTE OF ARCHITECTS
THE YOUNG ARCHITECTS FORUM
THE COMMITTEE ON DESIGN

THIS YEAR'S BIG IDEA:
UNIVERSAL DESIGN
Goals for this session

• Why Universal Design? Who benefits?
• Case studies from US and abroad
• Universal Design’s role in Sustainability
• Inspire Universal Design in future projects
Core thoughts:

“Design is powerful and profoundly influences our daily lives and our sense of confidence, comfort, and control.”

“Variation in ability is ordinary, not special, and affects most of us for some part of our lives.

Valerie Fletcher, Institute for Human Centered Design
Universal Design

Definitions:

Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

Ron Mace
The Center for Universal Design
NC State University

A framework for the design of buildings, products and information technology to be useable by the widest range of users.

Valerie Fletcher
The Institute for Human Centered Design
Seven Guiding Principals of UD

• Equitable Use  The design is useful and marketable to people of diverse abilities.

• Flexibility in Use  The design accommodates a wide range of individual preferences and abilities.

• Simple and Intuitive Use  Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration level.

• Perceptible Information  The design communicates necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities.

• Tolerance for Error  The design minimizes hazards and the adverse consequences of accidental or unintended actions.

• Low Physical Effort  The design can be used efficiently and comfortably and with a minimum of fatigue.

• Size and Space for approach and Use  Approximate size and space is provided for approach, reach, manipulation, and use regardless of the user’s body size, posture, or mobility.

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UD and the ADA

The ADA Standards for Accessibility are limited in application and set minimum design requirements focused largely on mobility aid users.

UD is a framework for rethinking the design of all environments, products, information AND communication for the widest possible spectrum of users.
Human Factors

Humans come in a wide range of abilities, sizes, ages, cognitive and sense acuity. We must embrace designing for the range, not for some narrow portion considered the “norm”.

The Human Spectrum

Image by Barbara Allen, author, UD instructor
Census Data

Disability Status of the Aged, 2000

- No disability
- Sensory disability only
- Physical disability only
- Mental disability only
- Selfcare disability only
- Mobility disability only
- Two or more disabilities
Buildings are static, people aren’t!
Environment influences Ability

A person with low hearing notices their “impairment” more in noisy environments and may not be able to participate.

A person who uses a wheelchair is restricted by steps or steep slopes and may not be able to get to their chosen location.

A person who has low vision is limited by low or no-contrast in surface materials and may inadvertently wander into an automobile zone.
Millennium Park, Chicago, IL
Millennium Park, Chicago, IL
BP Bridge (Frank Gehry)
Millennium Park, Chicago, IL
Jay Pritzker Pavilion (Frank Gehry)
Millennium Park, Chicago, IL
Jay Pritzker Pavilion (Frank Gehry)
Millennium Park, Chicago, IL
Millennium Park, Chicago, IL
MAX lightrail, Portland State Univ., Portland, OR
Pioneer Square, Portland, OR
MRT Station, Singapore
MRT Station, Singapore
Ponte de Frati, Venice, Italy
Ponte de Frati, Venice, Italy
Ponte, Venice, Italy
The Trecento Tombe forms part of a national and winds its itinerary which begins in Piazza Farnese and arrives at the slope of the Quirinale. The itinerary includes the open spaces and the grand monuments of the ancient Roman monarchy. Its appearance today is the result of a long process of transformation which can be divided into two principal eras:

During the first phase, the medieval city settled into the large spaces left by the ruins of the classical city and later the area surrounding the monuments of Aula and Regia to create its squares. In the second phase, the Renaissance and Baroque city of the 15th century reordered the same streets and squares, giving them a new appearance with squares and consorciations:

The passage from the shadows of the Ionic streets to the light-filled squares accentuates the contrast between the monumental buildings and the minor constructions. The contrast between the depth of the façades and the grandiose arch of the columns.

Rome, Italy
Rinku Park, Japan
Yoshisuke Miyake, SEN, Inc.
Sensory Garden, Oizumi Ryokuchi Park, Osaka, Japan
Yoshisuke Miyake, SEN, Inc.
Sensory Garden, Oizumi Ryokuchi Park, Osaka, Japan
Yoshisuke Miyake, SEN, Inc.
Jennifer Schweiger Playground, Graniteville Park, Staten Island, NY
Jennifer Schweiger Playground, Graniteville Park, Staten Island, NY
Ed Roberts Campus
Terminal 2, San Francisco Intl. Airport
The Three-legged Stool

Sustainability

Social Equity

Environmental

Economic
Sustainable and Universal

The 2006 Rio Charter on Universal Design for Sustainable and Inclusive Development defines the purpose of Universal Designs as

“serve needs and make possible social participation and access to goods and services by the widest possible range of users, contributing to both the inclusion of persons who have been prevented from interacting in society and to their development.

Examples of such groups include: poor persons, persons marginalized for reasons of culture, race, or ethnicity, persons with different types of disabilities, very obese persons and pregnant women, very tall or very short persons, including children, and all those who for different reasons have been excluded from social participation.”
UD and Sustainability

Social Equity

Socially Sustainable

Economically + Socially Sustainable

Environmentally + Economically Sustainable

UD + Sustainability = Good Design
“Design is only one part of the solution to a more inclusive world in which all people have equal opportunity for independence, autonomy and participation.

But design matters.

Understood as the work of 'changing existing situations into preferred ones' [Simon, 1967], and expanded to embrace solutions that include everyone, Universal Design is a framework that accepts diversity of ability and age as the most ordinary reality of being human and evaluates strategies and solutions based on how well they meet the needs of the widest possible group of potential users and enhance everyone's experience.

It demands a quality of creativity and invention that can energize generations of designers to become partners with users in a revitalized appreciation of design as intrinsic to social sustainability.”

Institute for Human Centered Design
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- Jennifer's Playground: http://www.nycgovparks.org/parks/R114/


  Chapter 15, Accessible Design in Italy

  Chapter 48, Landscape Design