
International Paralympic Committee

VISTA Conference 2015

Girona, Spain



Sally Swanson Architects, Inc.

Presented by Sally Swanson, AIA | 09-October 2015

ACCESSIBILITY ASSESSMENT

San Diego Community College District

UNIVERSAL DESIGN

Ford Elementary School

West Contra Costa Unified School District, Richmond, California

ACCESSIBILITY EVALUATION

2018 Winter Olympics & Paralympics, PyeongChang, South Korea





Sally Swanson, AIA

- Over 35 Years ADA Experience
- Recognized as a leader in Access Compliance
- Helped develop the building code requirements for California's Title 24 disabled access regulations
- Appointed a member of the California Division of the State Architect (DSA) Advisory Access subcommittee
- Founding Member of the Standards Development Committee, Global Universal Design Commission (GUDC)
- 2007 Assisted Sochi, Russia -
Host 2014 Winter Olympics/Paralympics
- 2011 Assisted PyeongChang, South Korea -
Host 2018 Winter Olympics/Paralympics



➤ **Paralympic reporter for the U.S. Paralympics, a division of the United States Olympic Committee:**

- **2008 Beijing Summer Paralympic Games**
- **2010 Vancouver Winter Paralympic Games**
- **2012 London Summer Paralympic Games**
- **2014 Sochi Winter Olympic/Paralympic Games**
- **2018 PyeongChang Winter Olympic/Paralympic Games**



Agenda

- I. Seven Principles of Universal Design**
- II. San Diego Community College District**
- III. Ford Elementary School
West Contra Costa Unified School District
Richmond, California**
- IV. Five Elements of Architectural Wayfinding**
- V. 2018 Winter Olympics & Paralympics
PyeongChang, South Korea**



Universal Design Guidelines Manual

Implementing Universal Design Standards

- **Two key components: *Site Elements & Building Elements***
- **Not an Access Compliance Manual**
 - Accessibility laws eliminate barriers in the built environment for use by people with disabilities
 - Universal Design provides improved usability and safety for all groups in the community
- **Goal is to extend ideals of accessible design to everybody and recognize that improved participation enhances the value of the built environment**

NC State University is the copyright holder of the principles. The Standards cited in this report were developed in part with funding from the Global Universal Design Commission, Inc. (GUDC) and the National Institute on Disability and Rehabilitation Research (NIDRR), through the Rehabilitation Engineering research Center on Universal Design and the Built Environment (RERCUD). Sally Swanson is a member of the GUDC Definitions and Ratings Committees.



Seven Principles of Universal Design



Principle 01: Equitable Use =

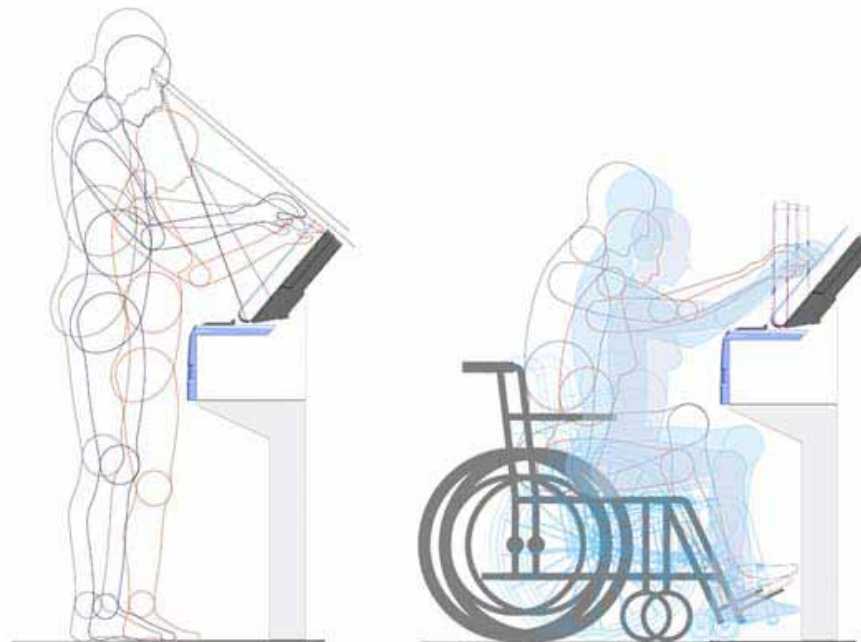
Building design should make it equally usable by everyone and must never employ privilege one group over another.



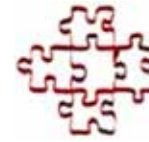
Principle 02: Flexibility in Use



Building design should have the built-in flexibility to be usable in more than one prescribed way (e.g. countertop orientation map that is viewable from a seated or standing position).



Principle 03: Simple and Intuitive



Building design should make it easy for everyone to understand the purpose of each design feature and how to use it.



Principle 04: Perceptible Information



Building design should provide all essential information in a variety of modes to ensure effective communication with all users (e.g. written, symbolic, tactile, verbal).



Principle 05: Tolerance for Error



Building design should eliminate, isolate or shield any design features that could prove hazardous to or inconvenience any user.



Principle 06: Low Physical Effort

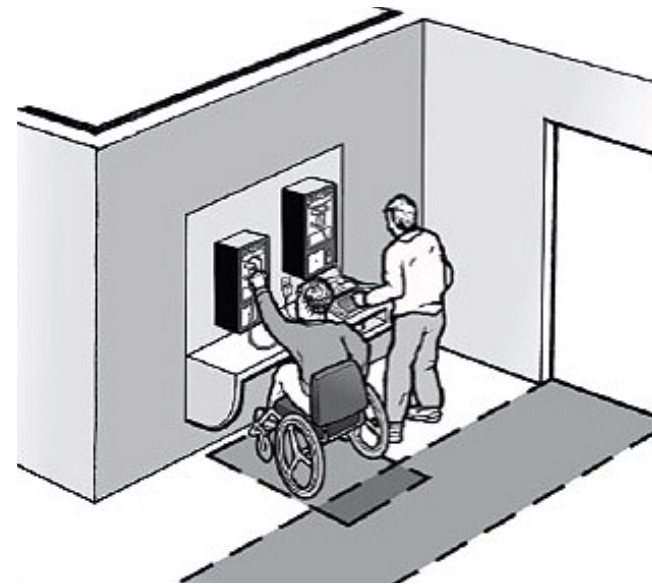


Building design should employ design features that require little or no physical force to use.



Principle 07: Size and Space for Approach and Use

Building design features should provide an adequate amount of space that is appropriately arranged to enable anyone to use them.





Accessibility Assessment for San Diego Community College District

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How to Rate Your Environment



GOOD



CLOSE/NEEDS WORK



NOT PROVIDED



Mesa



Campus

ID #

At least two heights for spigots at any location; facility for filling up personal water containers; activation feature requires little effort

1.5.1

Location

Amenities are located in safe and convenient locations



SDCC
Campus 10 #

Entrances or gathering places within sight of primary circulation paths; identified by a distinctive form, color and/or signs; located in well lit and public places, where users are not isolated or at risk

Meta 25
Campus 10 #

Amenities are not located in safe and convenient locations



1.5.3

Water Fountains

Water fountains are available and usable for people with a wide range of sizes



Meta 25
Campus 10 #

At least two heights for spigots at any location; facility for filling up personal water containers; activation feature requires little effort

Meta 12
Campus 10 #

At least two heights for spigots at any location is not provided; does not have activation feature that requires little effort; does not have at least three heights - children, wheeled mobility users, standing adults not provided



1.5.4

Public Information Displays

Public information displays are available and provides access for all users



Meta 5
Campus 10 #

Text is large enough to read from the expected viewing distance; text and figures have high contrast

Meta 10
Campus 10 #

Text is not large enough to read from the expected viewing distance; text and figures do not have high contrast; surfaces are not free from glare from the expected viewing location; illumination or backlighting for readability at night not provided



Section: 1

Site Elements: 1.5 Outdoor Amenities
San Diego Community College District



1.5.5

Seating Areas

Site furniture is accessible, conveniently located and comfortable



Mesa
Campus ID #

On an accessible path of travel; different types of seating available; seating clusters facilitate face to face conversation without twisting bodies; choices provided for different diurnal and seasonal conditions, e.g. shade as well as sun, and different activities and social groups

Mid-City
Campus ID #

Not on an accessible path of travel; seating clusters do not facilitate face to face conversation without twisting bodies; choices not provided for different diurnal and seasonal conditions, e.g. shade as well as sun, and different activities and social groups



1.5.5

Seating Areas

Site furniture is accessible, conveniently located and comfortable



Mesa
Campus ID #

On an accessible path of travel; different types of seating available; seating clusters facilitate face to face conversation without twisting bodies; lightweight, movable furniture

Nevada
Campus ID #

Not on an accessible path of travel; different types of seating available; seating clusters do not facilitate face to face conversation without twisting bodies; tables provide knee and toe clearance on at least one side



1.5.6

Waste Receptacle

Waste receptacles are convenient to use



SDCC
Campus ID #

On an accessible path of travel; receptacles usable with only one hand, e.g. open tops, slots and push doors; recycling containers not provided wherever garbage receptacles are located

Mesa
Campus ID #

Not on an accessible path of travel; recycling containers not provided wherever garbage receptacles are located



Section: 1

Site Elements: 1.5 Outdoor Amenities San Diego Community College District





Universal Design
FORD ELEMENTARY SCHOOL
West Contra Costa Unified School District
Richmond, California



Existing Ford Elementary School



Ford Elementary: before images

- School replaces outdated and unsafe 1949 school
- Series of well-attended community design workshops
- Parents and neighbors advocated:
 - security
 - community involvement
 - welcoming school building

Challenges

- **Students with complex needs who learn at different rates**
- **Disconnect between students and academics**
- **Socio-economic issues**
- **Connection between students, school environment, and learning**
- **Collaboration and linkages in design**



Guiding Universal Design Principles – Whole Child



Cultural Inclusion



Sustainability



Comfort



Community

Cultural Inclusion



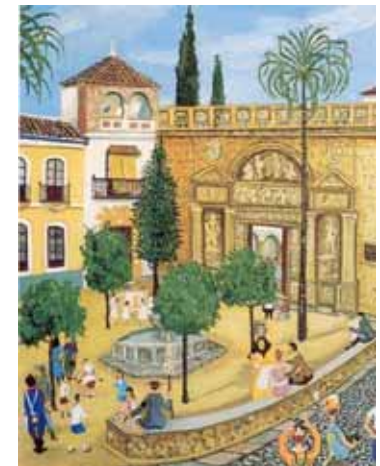
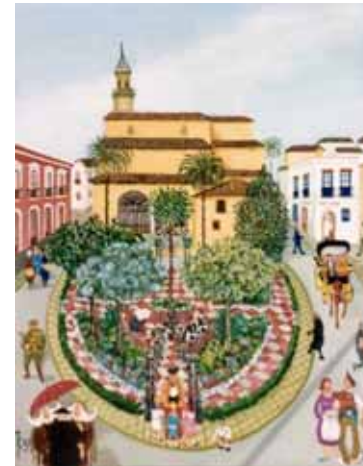
Exterior



Culture & Home

Design references surrounding Latino culture:

- Imaginative interpretation of the Mission style
- Wide-eave red clay roof, decorative blue and yellow tile
- Outsized arched library window
- Tower
- Tiled columns
- Arcade
- Seating
- Placita



Comfort



Outdoor Classroom



Playful Learning Environment



Universal Design - Street



Classroom Hallway

- **Bright warm colors act as a creative stimulus**
- **Carefully articulated entrances promote student ownership and identity**
- **Skylight:**
 - provides natural light
 - reduces energy use
 - has the same insulation value as a regular roof

Community



Community Connection



A community success: 50 parents presently working at school site and 50 more have applied

Community Spaces



Sustainability

CHPS
Collaborative for High Performance Schools

+45
Overall Points

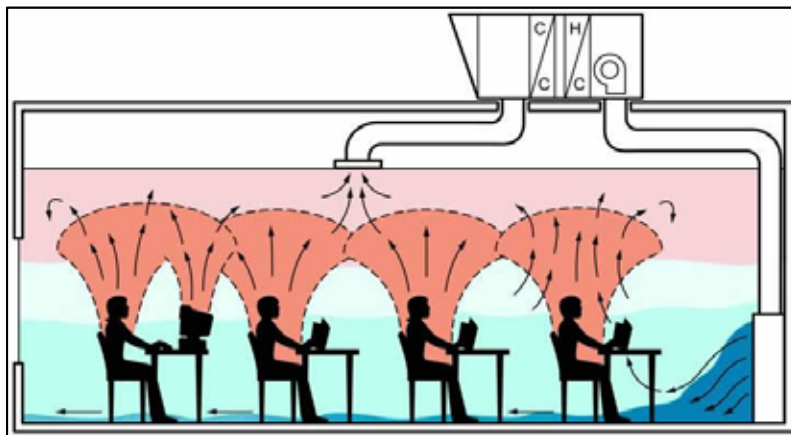


- Sustainable Sites +11
- Water +3
- Energy +9
- Climate +1
- Materials and Waste Management +2
- Indoor Environmental Quality +19

 CHPS SCHOOLS MEMBER  HPI \approx CHPS \approx LEEDS  BALLY SWANSON ARCHITECTS, INC. 115 EAST 10TH AVENUE SUITE 100 DENVER, CO 80202 WWW.BALLYSWANSON.COM



Light & Air



- **Variety of window shapes and sizes optimize sunlight into classrooms and corridors**
- **100% daylighting in classrooms**
- **Flexible classroom lighting**
- **Enhanced displacement ventilation system**
- **Separate controls in every classroom**

Retention Pond



Universal Design at Ford Elementary School



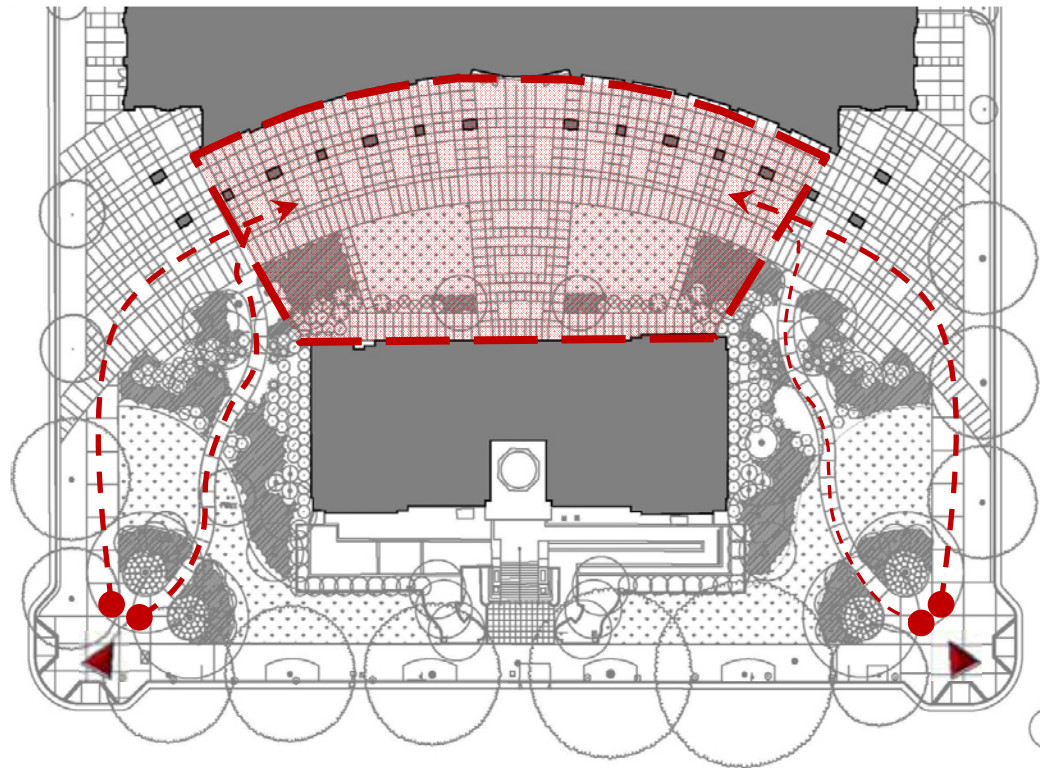
Five Elements of Architectural Wayfinding



Element 01: Paths/Circulation

key to organizing elements of a site or building -
circulation systems help to develop a mental map

- Creates focal points
- Distinguishes paths & places
- Creates repetition or rhythm
- Leads people from node to node



Element 02: Markers

objects that serve as mental markers in wayfinding

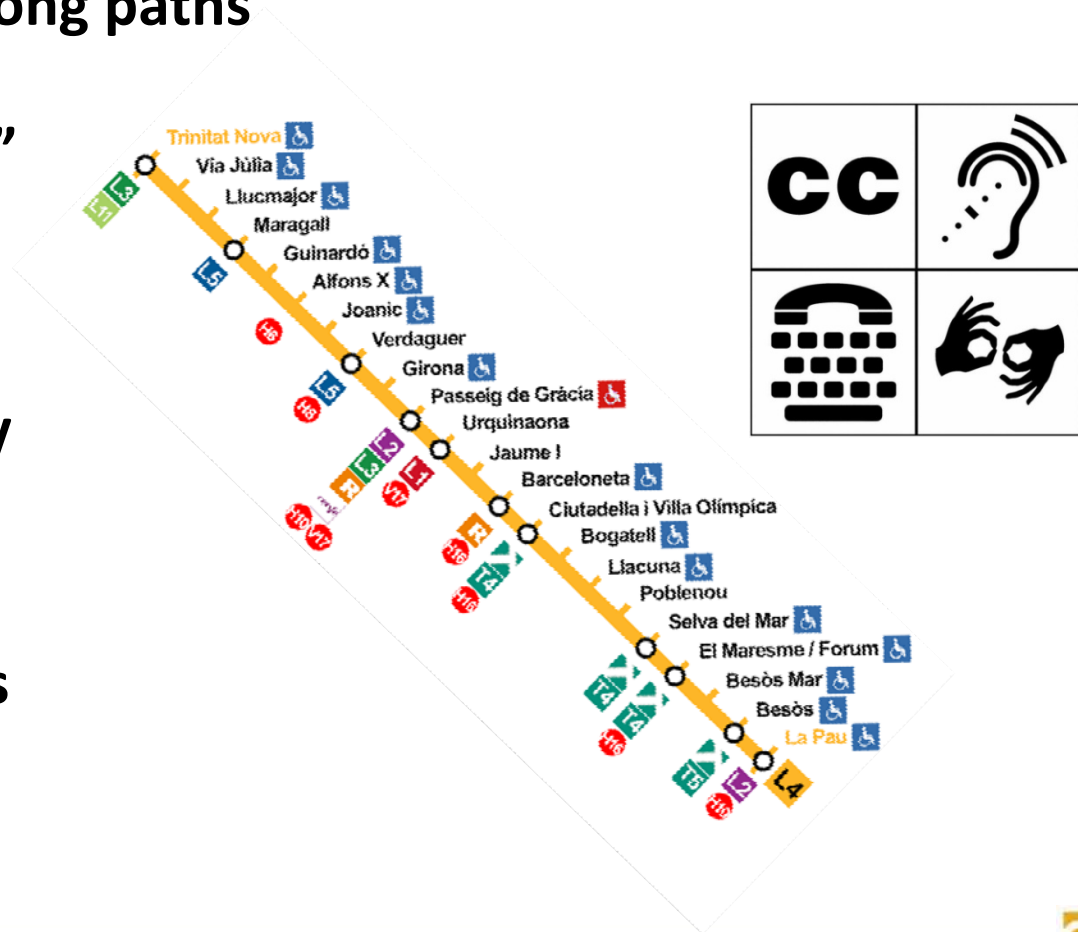
- Arches, monuments, artwork
- Locate at intersections
- Landmarks
- Paving
- Kiosks
- Signage (apps)



Element 03: Nodes

where subsidiary parts originate - decision points are made at nodes along paths

- “connect-the-dots”
- Communicates circulation
- Only use necessary information
- Visual, tactile, and auditory indicators



Element 04: Edges

where an area begins and ends

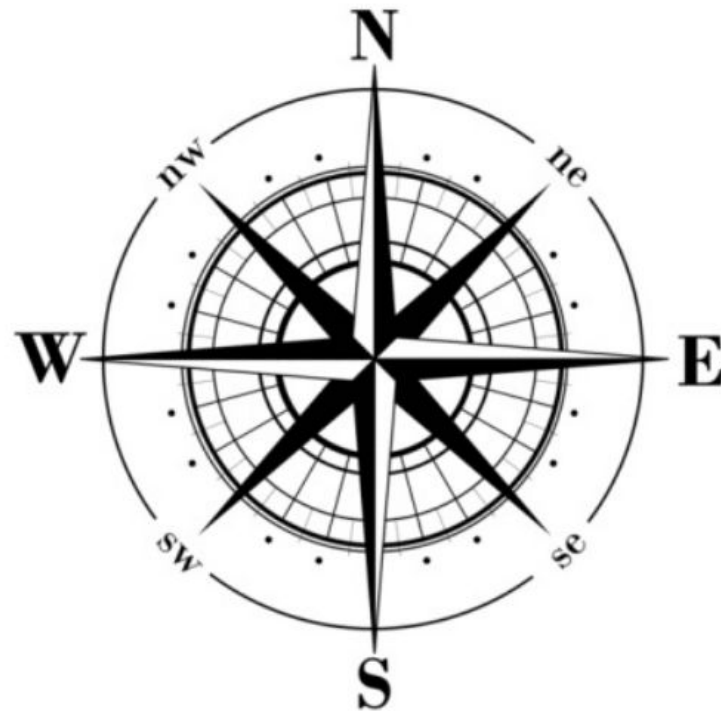
- Visual and tactile detection
- Contrasting elements
- Story board



Element 05: Zones/Districts

distinguishable characteristics (outside or within buildings) assist in the general identification of place

- Unique and memorable in its context
- Identify zones with a letter prefix such as “A” or cardinal points (e.g. North wing)



“...ordering of light...” - Antoni Guadi



PyeongChang 2018

CANDIDATE CITY

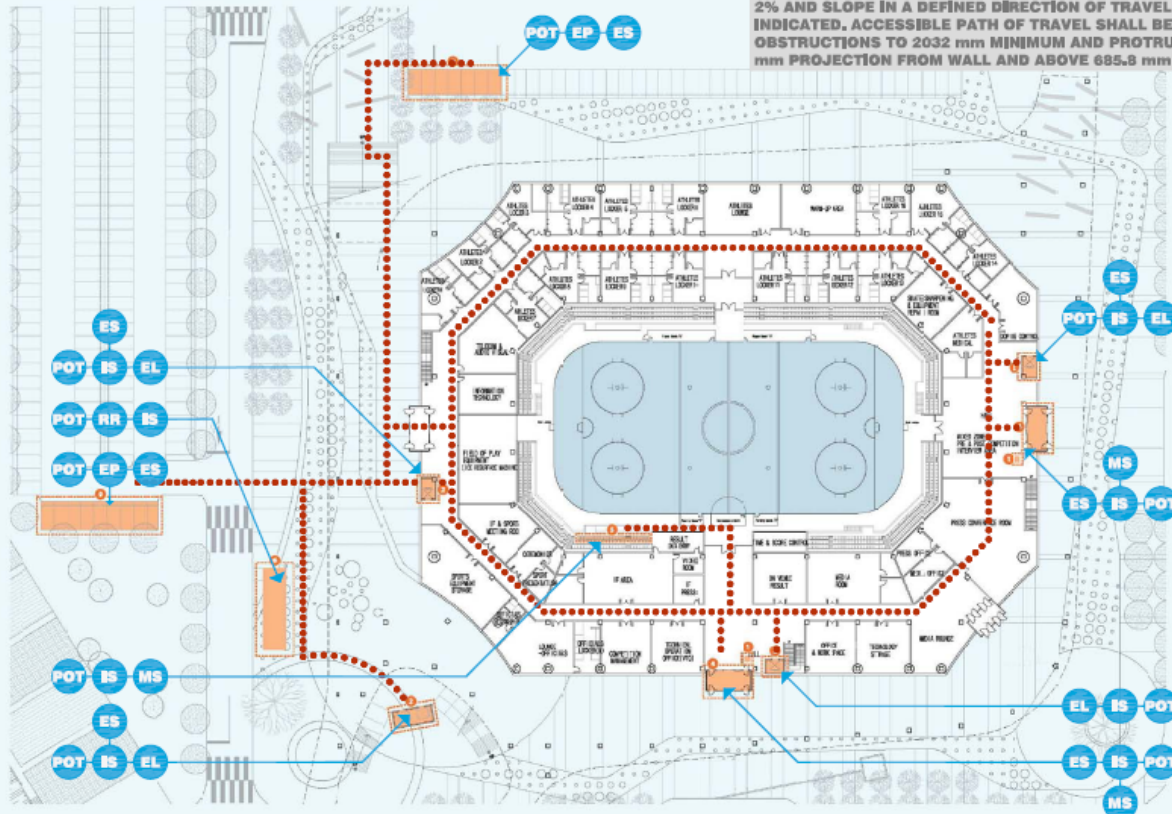


Accessibility Evaluation



ALL PATHWAYS ON SITE TO BE ACCESSIBLE.

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 12.7 mm IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 6.35 mm MAX AND AT LEAST 1219.2 mm IN WIDTH, SURFACE IS STABLE, FIRM, AND SLIP RESISTANT, CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN A DEFINED DIRECTION OF TRAVEL IS LESS THAN 5%, UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 2032 mm MINIMUM AND PROTRUDING OBJECTS GREATER THAN 101.6 mm PROJECTION FROM WALL AND ABOVE 685.8 mm AND LESS THAN 2032 mm.



1 FIRST FLOOR PLAN

ISH

6

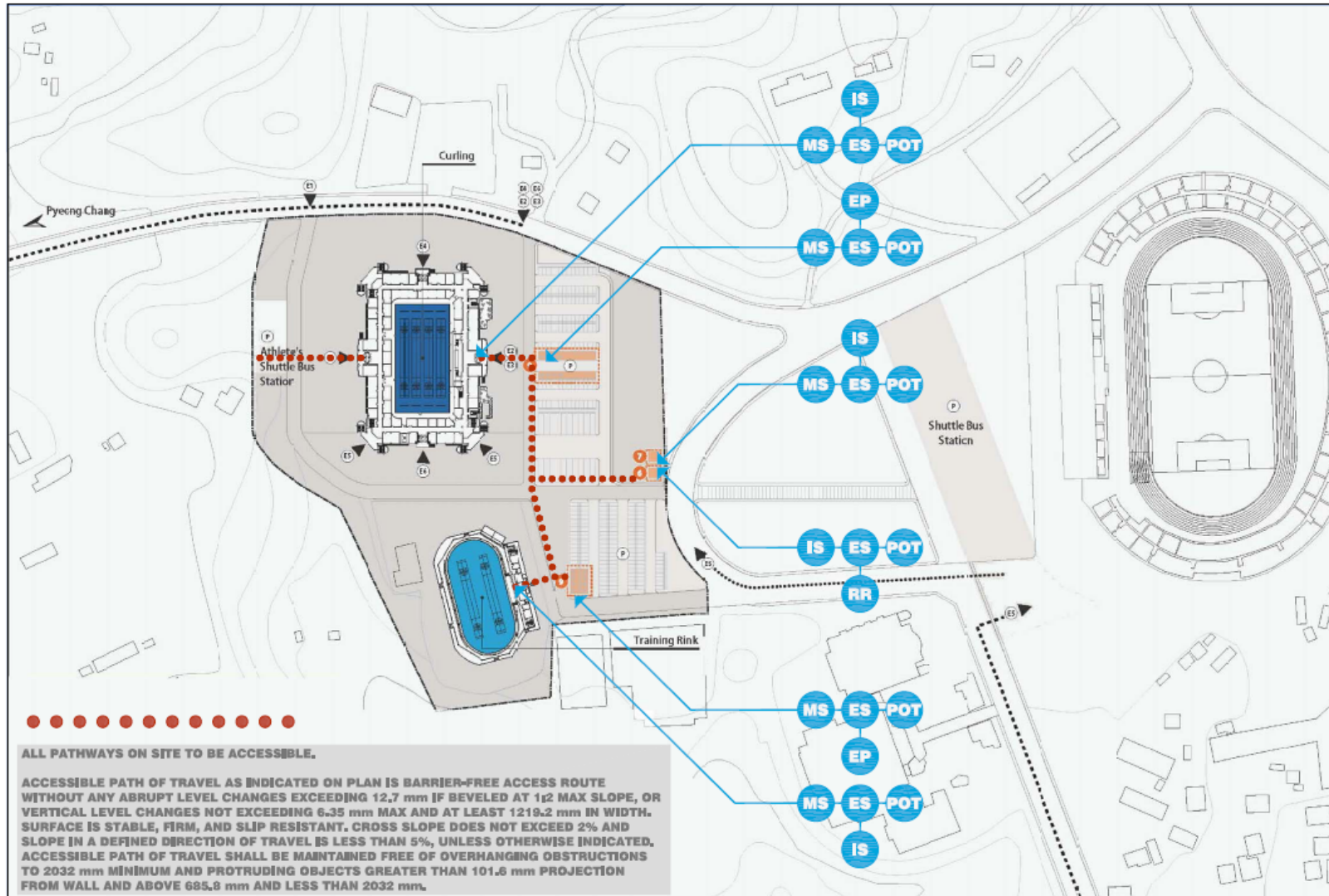
ICE SLEDGE HOCKEY

2018 PYEONGCHANG
OLYMPIC-PARALYMPIC
FEBRUARY 2, 2011



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1 VENUE BLOCK PLAN

WCC

8

WHEEL CHAIR CURLING

2018 PYEONGCHANG
OLYMPIC-PARALYMPIC
ALPINE SKIING SPEED (NEW)
FEBRUARY 2, 2011





Resources

- Levine, Danise R. *Universal Design New York*. Buffalo, N.Y.: IDeA Publications, Center for Inclusive Design and Environmental Access [IDEA], U at Buffalo, The State U of New York, 2003. Print.
- California Division of the State Architect www.dsa.ca.gov
- LightHouse for the Blind and Visually Impaired gkehret@lighthouse-sf.org
- Click and Go Wayfinding info@clickandgomaps.com
- Center for Interactive Design and Environmental Access
University at Buffalo, The State University of New York www.ap.buffalo.edu
- U.S. Access Board www.access-board.gov





Thank You

for giving

Sally Swanson Architects

an opportunity to share
Universal Design with you!

