Building Health Empowerment Zones for People with Disabilities

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Primary Purpose

- Develop a tool to measure the physical environment that addresses walkability *and* rollability

Primary Partners

- Great Lakes ADA & IT Center
- American Planning Association
- Independent Living Centers
  - Access Living
  - Progress Center for Independent Living

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Scope of the Problem

- The built environment has a substantial impact on optimizing health promotion behaviors (i.e., physical activity and nutrition), particularly among people with disabilities.

- Urgent need to identify environmental factors that promote health and reduce the risk of obesity and other secondary conditions among people with mobility disabilities.

Health Empowerment Zone

- 3x3 mile area of urban Chicago
- Undergoing gentrification

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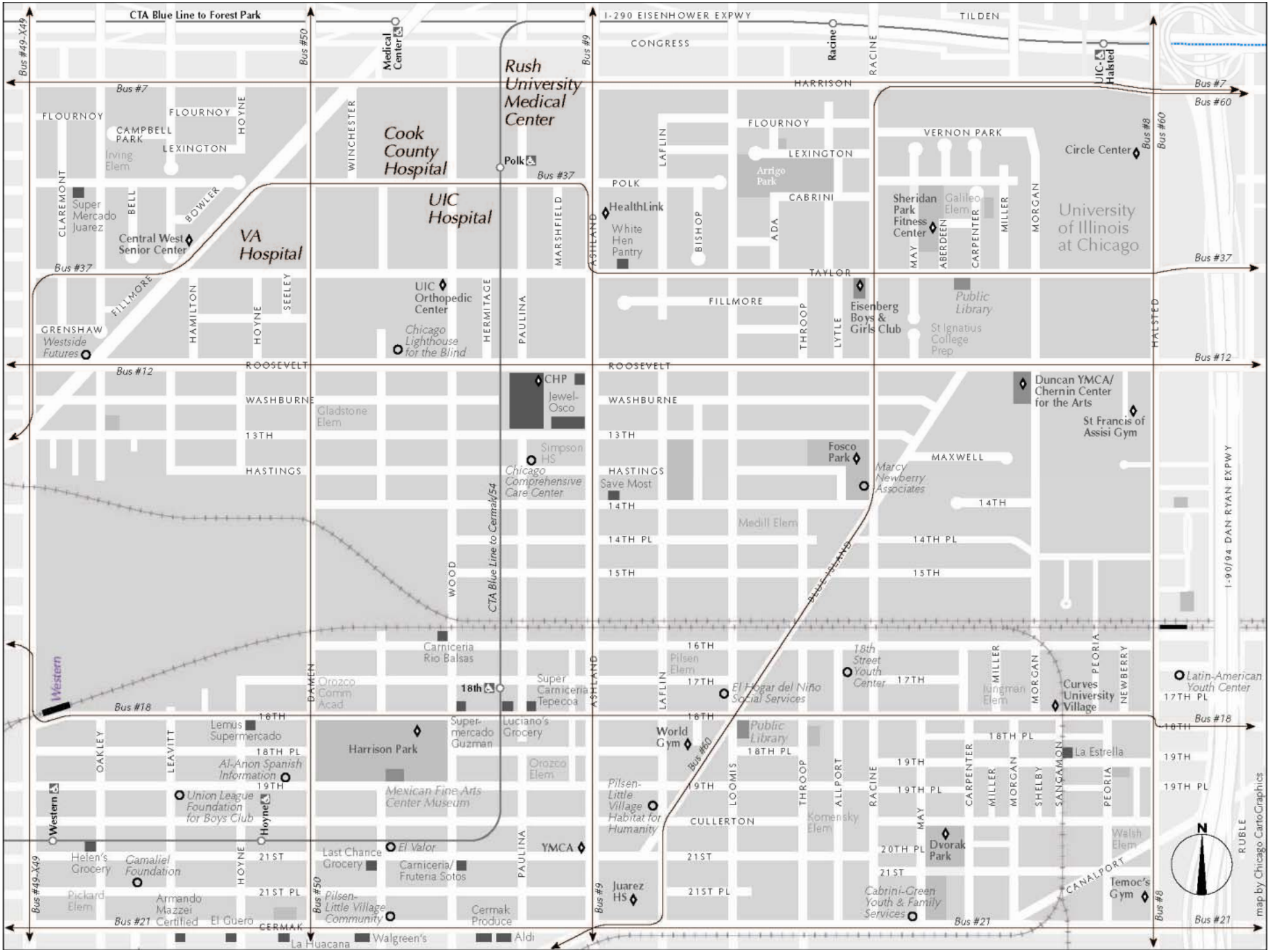
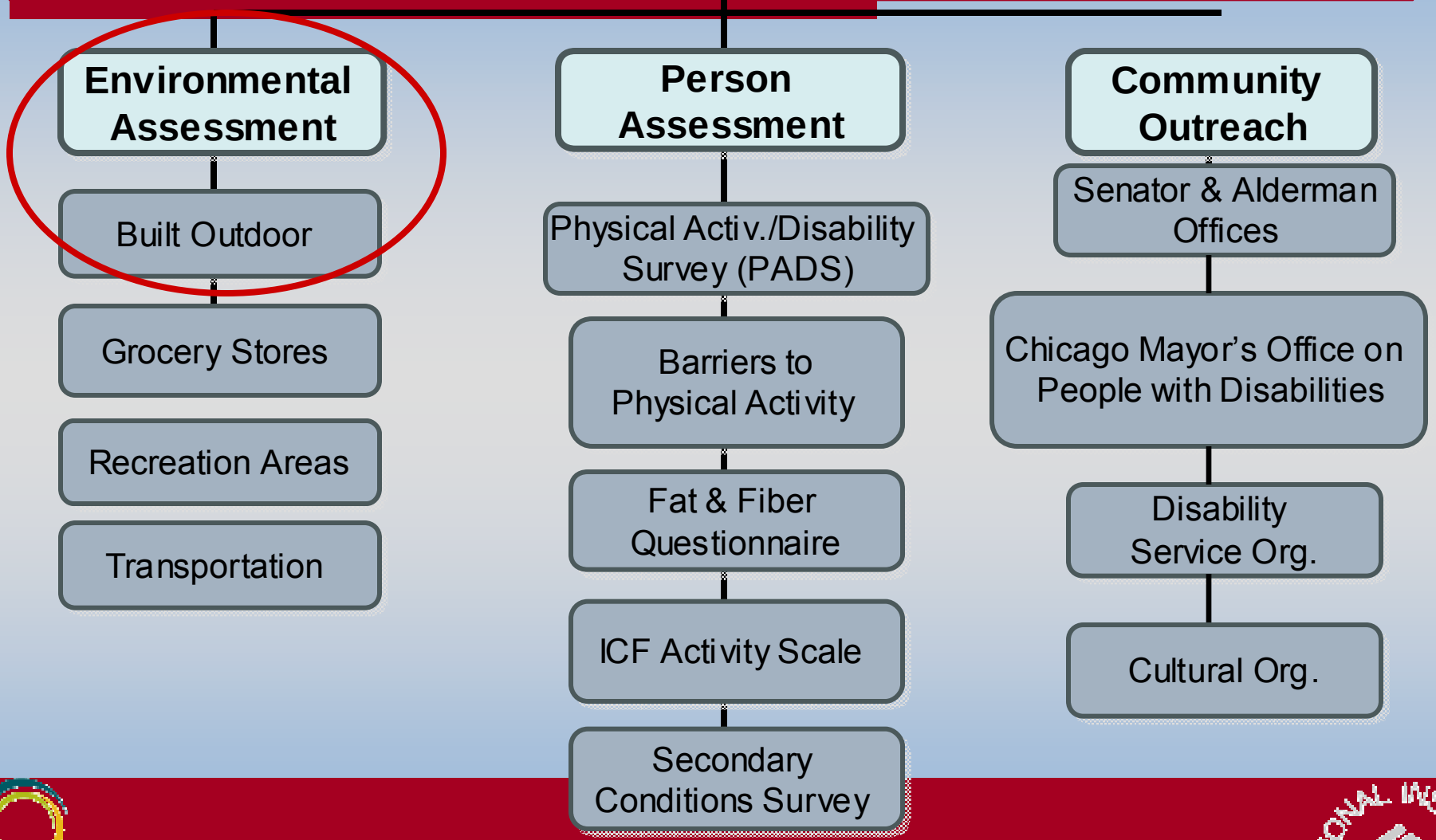


Health Empowerment Zone



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Instrument Development

- Outdoor Environment Accessibility Assessment
  - Developed through Delphi process
  - 5 instruments
    - SPACES, CHEC, CHIEF, ADAAG, FTA Transportation Assessment
    - 9 expert raters in disability and environment fields

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Delphi Expert Panel

- June Kailes
- Ross Brownson
- Ed Steinfeld
- Andrea Hamlein-Mott
- Jon Sanford
- Shelley Kaplan
- Mark Trieglaff
- Marya Morris
- Robin Jones

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Delphi Process

- 2 rounds of rating questions from 5 validated instruments on relevancy and importance for people with mobility disabilities

Delphi Process

- Initial internal review of item content;
- Expert panel in disability and accessibility rated in two separate reviews the accessibility relevance of each item on a 5-point scale (1 "not relevant", 5 "very relevant");
- Content Validity Ratios (CVR) were calculated based on these ratings. A CVR of ≥ .75 was considered statistically significant;

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Delphi Process

- Two rounds of reviews resulted in significant CVRs for 36 of 82 items ($p<.05$);
- These findings support the content validity of this instrument as a brief audit for neighborhood *rollability* using a relatively smaller number of survey items compared to previously validated instruments.

Deleted items

Part 1- Survey of the Physical Environment

Section 3: Street Assessment

3.1 Lane type (for on-road cycling) :

On-road cycle lane – marked

On-road - no lane marked

3.2 Slope: How steep is the street/road? (Only complete if there is no path)

Flat or gentle slope

Moderate slope

Steep slope

3.3 Street/road condition: How well maintained is the street/road?

Poor

Moderate

Good

Under repair

3.8 Check all other routes that are applicable to this segment.

Lane

Access lane through cul-de-sac/ no through road

Path through park

None

3.9 Type of crossings- Check ALL that are in the segment.

Deer or children

Traffic signals

Bridge/overpass

Underpass

None

3.10 Crossing aids- Check ALL that are in the segment.

Median refuge or traffic island

Curb extensions

None

3.11 Presence of streetlights: Are streetlights present in the segment?

Yes

No

Deleted items

Part 2- Survey of the Accessibility of Public Facilities

1.1 Predominant land use(s) on the LEFT side of the street segment:
(check no more than two)

- □ Housing
- □ Retail
- □ Offices, hospitals, or university buildings
- □ Industrial
- □ Recreational
- □ Vacant land
- □ Surface parking
- □Other:_____

Notes:_____

1.2 Predominant land use(s) on the RIGHT side of the street segment:
(check no more than two)

- □ Housing
- □ Retail
- □ Offices, hospitals, or university buildings
- □ Industrial
- □ Recreational
- □ Vacant land
- □ Surface parking
- □ Other:_____

Notes:_____

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2.11 Are the spaces (gaps) between the sidewalk sections perpendicular to the direction of travel:

Left Side:		Right Side:	
□	Yes	□	Yes
□	No	□	No

Notes:_____

2.12 Are there permanent poles, signs, tables or benches that fully or partially obstruct the sidewalk:

Guidance: This question is referring to objects that protrude from the ground level.

Left Side:		Right Side:	
□	Yes	□	Yes
□	No	□	No

Notes:_____

2.19 Do the crosswalks at signalized intersections provide for a person to roll or walk at a pace of 3 feet per second:

Guidance: Measure (or estimate if the intersection is too busy) 3 feet. After marking the distance, count the number of seconds it takes to fully cross the distance.

Intersection One:

□ Yes

□ No _____ seconds

□ N/A

Intersection Two:

□ Yes

□ No _____ seconds

□ N/A

Notes:_____

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Resulting Instrument

- Two sections:
  - Path/Sidewalk Characteristics
  - Outdoor Onsite Characteristics

Part 1- Path/Sidewalk Characteristics

- Consists of 16 questions regarding path slopes/cross-slopes, curb cuts/ramps, gaps, level changes and overall path condition;
- Focuses on the sidewalk and intersection condition of a street segment.

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Part 2- Outdoor Onsite Characteristics

- 20 questions on parking, facility ramps, facility door/entrances and signage;
- Serves as a supplemental section to this tool. It can be used to assess the outdoor environment of a single business.

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ENVIRONMENTAL ASSESSMENT TOOL

1.1 Is the primary path of travel a concrete or asphalt sidewalk: *(If no, please note what material it is made of.)*

□ Yes
□ No
□ No path of travel

1.2 Is the sidewalk or path slope:

□ Slope is consistent with zero or one change- slope is less than 8.3%.
□ Slope is consistent with zero or one change- slope is greater than 8.3%.
□ Sloped at multiple points- slopes are 8.3% or less.
□ Sloped at multiple points- at least one slope is greater than 8.3%.

1.3 What is the slope of the sidewalk or path at its steepest point:
_____%

1.4 How steep is the cross slope at its steepest point:
_____%

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ENVIRONMENTAL ASSESSMENT TOOL

1.5 A. Are there curb cuts or curb ramps at both ends of the sidewalk or path (where appropriate):

□ Yes
□ No
□ No path of travel

B. Are there curb cuts or curb ramps present at other breaks in the sidewalk:

□ Yes
□ Only at some
□ No
□ N/A

1.6 What is the steepest slope of any curb cut or curb ramp on the sidewalk or path (*If no curb cuts or curb ramps present, enter 0%):*

_____%

1.7 A. How many level changes are present in this segment:

_____ level changes

B. Measure the largest level change:

_____ inches

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ENVIRONMENTAL ASSESSMENT TOOL

1.11 Is the sidewalk or path at least 36” wide at its narrowest point:
□ Yes
□ Contains pinch points
□ No

1.12. Where there are two routes (one accessible and one inaccessible), is there a sign that indicates which route is the accessible route:
□ Yes
□ No
□ N/A

1.13 Do the crosswalks at signalized intersections provide for a person to roll or walk at a pace o 3 feet per second:
□ Yes
□ No
□ No light
□ N/A
Location: _____

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ENVIRONMENTAL ASSESSMENT TOOL

1.14 A. Are there broken sections of concrete or asphalt in this segment:

□ Yes; the broken area is passable with little or no effort.
□ Yes; the broken area is passable with moderate effort.
□ Yes; the broken area is impassable or only passable with high effort.
□ No
□ This block face is under repair and cannot be measured
□ N/A

B. Are there broken sections of the curb cut in this segment:

□ Yes; the broken area is passable with little or no effort.
□ Yes; the broken area is passable with moderate effort.
□ Yes; the broken area is impassable or only passable with high effort.
□ No
□ This block face is under repair and cannot be measured
□ N/A

1.15 Are there any accessibility features that have not been addressed?

□ Yes (*detail in Notes)*
□ No

Health Empowerment Zone Environmental Assessment Tool

Outdoor Onsite Characteristics

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ENVIRONMENTAL ASSESSMENT TOOL

2.1 Are there accessible parking spaces with adequate widths and aisles:

Adequate Parking Spaces:

□ Yes
□ No _____ total spaces
_____ accessible spaces

Adequate Space Widths:

□ Yes
□ No _____ inches

Adequate Access Aisles:

□ Yes
□ No _____ inches

2.2 Is there a sign with the international symbol of accessibility at each space or pair or spaces and are the signs located so not obscured by a parked vehicle:

□ Yes
□ No
□ No accessible route
□ N/A

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ENVIRONMENTAL ASSESSMENT TOOL

2.6 If a facility ramp is provided, does the slope meet the maximum acceptable standard of 8.3% slope:

□ Yes
□ No _____%
□ No ramp.

2.7 Is the facility ramp at least 36” wide:

□ Yes
□ No _____ inches
□ N/A

2.8 If the facility ramp rises above the adjacent surface creating a drop off, is there a minimum 2” edge protection to prevent a wheelchair, crutch or cane from slipping off the ramp

□ Yes
□ No _____ inches
□ N/A

2.9 Is the facility ramp located or protected to prevent obstructions by parked vehicles:

□ Yes
□ No
□ N/A

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ENVIRONMENTAL ASSESSMENT TOOL

2.14 A. Pull doors: If there is not an automatic opener, is there at least 18" of clearance on the latch side of the door to pull open the door if using a mobility device:

□ Yes
□ No _____ inches
□ N/A

B. Push doors: If there is no automatic opener AND there is a closer, is there at least 12" of clearance on the latch side of the door to push open the door if using a mobility device:

□ Yes
□ No_____ inches
□ N/A

2.15 Is there at least 32" of clear width in the doorway:

□ Yes
□ No_____ inches

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ENVIRONMENTAL ASSESSMENT TOOL

2.19 Is there signage or arrows posted at all inaccessible entrances or drop off locations to indicate where an alternative accessible entrance is located:

□ Yes
□ No
□ N/A

2.20 Are there any accessibility features that have not been addressed:

□ Yes (*detail in Notes)*
□ No

Training Component

- Environment Data Collection:
  - Trained 6 assessors to collect outdoor environment data using HEZ Environmental Assessment Tool
  - Input data using palm pilot (2 raters)
  - Measurements occurred by block face segment

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Results

- Over 1000 street segments
- 6 months of data collection

Large Cross Slope

Large Curb Cut Slope

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Level Changes in the Path

Large Gap

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Next Steps

- How we are using the data:
- Examining "Chains of Access"
- Basis for recommending change/improvements to policy makers
- Provides way of examining "clusters" of accessibility problems

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Policy Recommendations

- Partnerships with local Independent Living Centers (Access Living, Progress Center for Independent Living)
- Consultants from American Planning Association
- Community Partnerships with MOPD
- Meetings with Aldermen (two wards) and city planners

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Thank You

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