Sidewalk Inventories: A Tool for Equity and ADA Compliance

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Sidewalk Inventories: A Tool for Equity and ADA Compliance

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Background

- Sidewalk networks are important for economy, environment, and health
- Few reports describe sidewalk inventory methods, uses, or costs
- Current research focuses on available technology
Research Questions

- What are the best practices for conducting a sidewalk inventory?
- Why are inventories conducted and how are they used?
- What methods produce the most complete and accurate inventories?
- What are the costs of inventories?
Definitions

- **Basic Inventory**: Identify sidewalk network segments (present or absent)
- **Condition Assessment**: Identify sidewalks and quality of each segment
- **Complete Sidewalk Inventory**: Identify sidewalks with field inspection of each segment for quality
Methods

- Literature review
- Internet search for sidewalk inventories
- Selection of study cities from among 120 inventories identified
- Key informant interviews with public works departments in 21 cities
Cities Selected for Sidewalk Inventory Review (n=21)

Cities were selected for diversity in geography and population size
Sidewalk Inventory Methods

- Mobile Lidar
- App-based collection
- Satellite/GIS Map Based
- Paper-based Collection
## Sidewalk Inventory Practices

<table>
<thead>
<tr>
<th>Method</th>
<th>Accuracy</th>
<th>Labor Intensity</th>
<th>Time Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field observers walk each sidewalk segment with tablets</td>
<td>***</td>
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<tr>
<td>Field observers using Segway or vehicle with Lidar</td>
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<tr>
<td>GIS/satellite data plus field observers</td>
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<tr>
<td>GIS/satellite data without field observers</td>
<td>*</td>
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<tr>
<td>Sample of existing sidewalk network data</td>
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Value of Sidewalk Inventories

Inventories critical for equitable sidewalk networks - construction and maintenance

○ Replaces reliance on 311 calls
○ Necessary to identify gaps, ADA compliance
○ Facilitates active transport to access services
Sidewalk Inventory Costs

- Inventory cost $86 - $826 per mile of road in 6 cities that provided data

- Inventory costs usually do not exceed 1% of budget for department responsible for sidewalks

- Costs vary widely based on: inventory type, miles of sidewalk covered, technology, and labor used
ADA Compliance and Inventories

While the ADA is the primary impetus for conducting inventories, need local political will

- Concern over ADA lawsuits is a key motivation
- Local priorities determined by municipal leaders
Next Steps

● Develop a practical guide to help advocates and city agencies conduct sidewalk inventories

● Develop better estimates of costs and benefits for sidewalk inventories

● Document incremental health benefits obtained for each additional investment in sidewalk construction and repair
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America Walks - https://americawalks.org/
PBIC - https://www.pedbikeinfo.org/
Why Sidewalk Inventories Are Helpful

**Big City Infrastructure**
- Approx. 1,000 miles of sidewalks
- $200 Million in Deferred Maintenance

**Smaller City Dynamics**
- Birmingham Pop ca. 1960: Approx 350,000
- Birmingham Pop ca. 2023: Approx 200,000
- FY24 Sidewalk Funding: $250,000
- Private or Public Responsibility?

**Help Is Needed**
- Inventory
- Action Plan
- Commitment to Deliver the Plan
Past Efforts

- Pre-2015:
  - Sidewalk repairs prioritized by complaints or field inspection
- 2015: Sidewalk Master Plan
  - Consultant walked each street
  - Blocks given ‘good’ and ‘poor’ ratings
  - Priority Corridors per 23 Communities
  - Short-, Medium-, and Long-Term Projects

Challenges

- Inadequate Funding to Implement
- Slow Project Development
- No One to Manage Data
- Labor Intensive Inventory Process
- Infrastructure is Dynamic
- Liability Concerns
Going Forward

- Continued Use of Old Inventory Methods
- Creative Project Deliveries
- New Asset Management Techniques and Technology
OpenSidewalks part of the TDEI

Presented at
America Walks – PBIC Sidewalk Inventory Webinar

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The TDEI is one of several projects being performed under ITS4US, IT'S TRANSPORTATION FOR ALL OF US.
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Visit the ITS4US Deployment Program Website or TDEI Website
https://its.dot.gov/its4us/
https://transitequity.cs.washington.edu/
Current electronic maps lack key pedestrian path features

- Pedestrian navigation instructions are often not useful when using a wheelchair or pushing a stroller
- Planners lack information about pedestrian infrastructure (sidewalks)
OpenSidewalks: standardized, accessible data help achieve mobility equity, improving quality of life

- Pedestrian movements require a connected network
- Barriers break up that connectivity
- What constitutes a barrier is specific to each individual

- We need to collect objective data
- Allow users to identify barriers that impact their travel opportunities

- Agencies can’t manage their infrastructure and services if they don’t understand what exists and how it connects
There are many ways to record data about sidewalk infrastructure. A routable, urban pedestrian network, usable by all, requires:

**Objective descriptions of infrastructure not subjective “accessibility” labels**

- sidewalks
- street crossings
- links (connections)
Detailed data on pedestrian infrastructure allow personalized routing and navigation.

“I need curb ramps, I cannot go up steep slopes I want to cross streets using crosswalks and traffic signals.”
Who can walk to locations of interest?

15-minute walk shed requiring curb cuts (accessible) and 15-minute walk shed not requiring curb cuts (inaccessible) around a grocery store in South Seattle and showing existing curb cuts.
Who can actually walk to transit?
10-minute Walkshed to B-Line BRT Stops, Bellevue, WA

½ mile circle
Comparison of 15-min walksheds around Wilburton Elementary School

Curb-cut required walkshed:
- 9 total crossings, all marked

Curb-cut not required walkshed:
- 66 crossings
- 49 marked, 17 unmarked
Getting Connected

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