Livability/Health and the role of Place, Walkability and Bicycling
Where do we go from here?
A Tool for Organizing Strong Communities and Developing Complete Streets
Is this an Complete Street?
Size neighborhoods for a 5-minute walk

Design for a mix of land uses:

Make blocks a walkable size:
- Block perimeters of 1,500’ to 2,000’
- Create a connected network of streets

Centers include denser housing, a square, civic uses, and neighborhood-oriented retail.
Walking Workshops
Dan has learned to see the world through the lens of his camera, carefully picking subjects of interest to illustrate his view of the world.

There is a saying among National Geographic photographers.

“National Geographic photographers stand on top of the garbage cans to photograph the flowers ... while Life magazine photographers stand in the flowers to photograph the garbage cans.”
Authors of Healthy Street Guide, 1996
Walkability Audits

Introduction

When you are leading a walkability audit, you are teaching yourself and your entire group how to see better, more completely and with understanding. You are learning to see what is good, what is not so good, and what is a virtual nightmare.

As a fast-paced people we have tended to overlook the hundreds of conditions that make walking a challenge. We have made the most natural and time honored way to move -- walking -- un-natural. By breaking down walking environment features into basic components, crossings, sidewalks, buffers, parking, driveways, shade, ADA curb ramps, and other features, we can better evaluate any given block. We laid out this tool to also teach you about the vital role each of these elements -- it is meant to be a walking classroom.

Use this "photo audit" guide to help you pick numbers that most closely represent the level of care of a particular block or 4-5 block area.

Although this guide is meant to cover the basics, later, more complete and tested versions will get into many other details that are critical to walking. Consider this a start to unlock the mysteries and discoveries of how you and your associates can once day again make walking a pleasant, and eventually, a walker's paradise.

Most of all, have fun in your discoveries. Learn much!
Instructions -- Setting Up Your Audit

Walking Audits are fun teaching tools allowing small groups of 4-8 people to self-evaluate a block, street, neighborhood, Main Street, a school site or other part of a community.

Why Evaluate?
Evaluating a section of your town allows you to realize why many people walk or do not walk, or walk in ways that may seem unpredictable (like not crossing at intersections, or walking in the street when a sidewalk exists.) People who can choose their mode of travel will only walk when a number of quantitative and qualitative factors are present.

Who to Invite?
It is important to have a small enough group to enable discussions. Although the walking audit can be performed by one organization, it is best to have a diversity of people, and especially someone who can make the needed changes over time. The following people often take part:

- Planner
- Citizen planner/advocate
- Person with disability
- Local engineer
- Police officer
- School official
- Elected leader
- Planning commissioner

What you need
- Large Tape Measure (1” width, 35’ long role up, or measuring wheel)
- Cameras (take lots of pictures)
- Extra copies of this tool (share)
- Scoring sheets
- Traffic Vests (Recommended)
- Comfortable walking shoes

What you will Evaluate
People walk, bike or visit a place when it feels safe, secure (watched over) comfortable and when the built environment makes walking a natural activity. Notice where people walk in your neighborhood or town. What is working there, and what is not working in other areas?

- Street width
- Number of lanes
- Width of lanes
- Speed of traffic
- Block length
- Block pattern
- Presence of good sidewalks
- Planter strips
- On-street parking
- Places to go to nearby
- Location of buildings
- ADA ramps
- Intersection designs
- Motorist behavior
- Pedestrian behavior
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- ADA ramps
- Intersection designs
- Motorist behavior
- Pedestrian behavior
30 foot FAT MAX

Fluorescent cap

Mustache Optional

Digital Camera to record details

Bright Vest

9 Feet
Bus Audits

At times it is possible to use a city bus or mid-size shuttle bus to handle 15-40 walking audit participants.

In this setting three sister cities of Redmond, Kirkland and Bellevue, Washington did a combination bus and walking workshop.

Key issues for all three communities were arrived at in a short period of time. The fire chief centered in the bottom photo realized he did not need cul-de-sacs, once he stood at one and heard why they were not good for the community.
Walking Audit Feedback, Include Children’s Insights
WALKS!

Walking for Fun, Exercise, and Transportation
National Transportation Expert Dan Burden in Flagstaff for Two Days for International Walk-to-School Day

WALKING AUDITS - How walkable is your neighborhood?
Tuesday, Oct. 5
- **Sunnyside Neighborhood**: Meet at 10 a.m. in the courtyard of the Greenlaw Garden Apartments, 7th Avenue and King Street (behind Price Choppers).
- **Bow and Arrow Neighborhood**: Meet at 1 p.m. in Bow and Arrow Park on the corner of Lake Mary Rd. and Zuni.
- **Coconino Estates Neighborhood**: Meet at 3 p.m. in the parking lot across the street from Marshall School.

PUBLIC PRESENTATION
Tuesday, Oct. 5, 6:30 p.m.
NAU Liberal Arts Building #18, Room 135
Dan Burden will talk about ways to make Flagstaff neighborhoods more pedestrian-friendly, drawing upon his extensive experience and examples of walkable communities all across the country. Public parking is available in lot P1 on the north side of Dupont Ave.

WALK TO SCHOOL
Wednesday, Oct. 6 (Marshall, call 522-7860) (Sechrist, call 714-0504)
Dan Burden will lead parents, students, and teachers on a walking audit ending at Sechrist Elementary School. The County Health Dept. will lead a walk to Marshall Elementary. To participate in the Marshall walk, meet anytime between 7:00-8:30 a.m. Free breakfast for participating children.

Additional information, www.friendsofflagstaff.org or 556-8663

Sponsors: Friends of Flagstaff’s Future, Flagstaff Medical Center, Coconino County Health Department, Coconino County Board of Supervisors, City of Flagstaff Parks and Recreation Department, Northern Arizona University’s Master of Liberal Studies Program, Flagstaff Biking Organization, People for Parks, and the North Flagstaff Trails Alliance.
Five keys to Success of Place

Security
Convenience
Efficiency
Comfort
Welcome
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Composite scores above 5.0 are considered walkable. Highly walkable neighborhoods have scores above 7.0 (total average)
Westside Walk
10:00 AM, February 28, 2008
LAKE OSWEGO
Downtown Area-Wide Transportation Management Plan

FIGURE 2
Vehicle Speed

Legend
- Speed Limits
  - 20 MPH
  - 25 MPH
  - 30 MPH
  - 35 MPH
  - 25 MPH
  - 40 MPH

Observed Speeds
- 85th PERCENTILE

- Study Area
- Taxlots
- Railroad

DKS Associates
TRANSPORTATION SOLUTIONS

NOT TO SCALE
Ten Steps To Walkability

- Compact, lively town center
- Low speed streets, distributed volumes
- Fine grained streets, many trails, transit links
- Neighborhood schools and parks, within one quarter mile or one eighth mile
- Public places with inviting features: benches, restrooms, shade, water and art
- Convenient, safe and efficient crossings
- Affordable, inspiring, well maintained streets and homes.
- Many people of all ages and abilities walking many hours
- Celebrated public space and public life, parades, markets, festivals, awards
- Land use and transportation partnerships
What are the problems here?

- Lack of Security
- Lack of people
- Lack of investment
- Lack of diversity
- Auto dependence
- No place to buy a popsicle
- Lack of diversity
- Lack of activity
Walkability Science

Rubber band planning  Sense of Aesthetics  Levels of Quality
Walkability Support

Openly Hostile

Intolerant

Tolerant

Supportive

Place
Sense of Security
Sense of Shade
Sense of Aesthetics
Rubber Band Planning
Rubber Band Planning
Rubber Band Planning
Both intersections will fail in time and will reach the same Level of Service. In the intersection on the left the low Level of Quality reduces walking, bicycling and transit use, drives out association and depresses the value of nearby properties.

On the right, level of quality is high, walking, bicycling and transit are celebrated, property values are exceptionally high and traffic moves well most hours, since not everyone is driving.
People: Physical, social and psychological Space

Romantic couples need less space, children and seniors often need more
Pedestrian Space Requirements

1.5’ 1’ .5’ 0’ .5’ 1’ 1.5’

People in Motion Require Strolling Width

Planning Includes:
Baggage
Swaying
Speed
Obstacles
Direction Change

1.5. - 2.5 Feet Actual

3.0 - 4.0 Feet Needed for Movement
Pedestrian Space Requirements

3’  2’  1’  0’  1’  2’  3’

Women Carrying Bags

Not able to walk next to one another and socialize

4.5 Feet Actual

6.0 Feet Needed
Pedestrian Space Requirements

3'  2'  1'  0'  1'  2'  3'

Seven people Equivalent of Two SUV’s

Just as with driving, social walking requires two adults to be alongside one another

6.0 Feet Needed
Walk/Talk Zone 15-25 feet
(comfortable width)

Eyes on street

Furniture zone 4-8 feet

Parking buffer

Shore line

Attractive lamps

Properly scaled signs

Great Street
Great Street

Bike parking

Parking buffer

Coordinated street furniture

Canopy 17 years old

Attractive coordinated signs

Sidewalk 25+ Feet

Shy zone 2 feet

Great Street
Neighborhood Walkways
Five Foot Minimum Width Sidewalk

Four Foot Maximum Height Fence

Add Buffer For Shy Distance

Planter and Furniture Zone

Baldwin Park, Orlando, Florida
Five Foot Minimum Width Sidewalk

Add Buffer For Shy Distance

Four Foot Maximum Height Fence

Planter and Furniture Zone

Baldwin Park, Orlando, Florida
Five Foot Minimum Width Sidewalk

Four Foot Maximum Height Fence

Add Buffer For Shy Distance

Planter and Furniture Zone

Issaquah Highlands, Issaquah, Washington
Seven foot sidewalk

Twenty foot Planter

It is Okay to exceed minimums
City of Marina Sidewalk Specifications by Travelway Type and Location

**Local Travel Ways**
- Alleys: No sidewalks
- Lanes: None under 10 houses
- Streets: None under 10 houses

**Schools**
- Elementary
- Middle, High
- Colleges

**Primary Roads**
- Avenues
- Boulevards

**Commercial Areas**
- Main Street
- Other Commercial

**Special**
- Transit Parks
- Pedestrian Parks
- Woonerf (People Streets)
- Other Special Use

**Sidewalk**
- 5 foot width
  - Two ramps per corner
  - Concrete preferred
  - Non-mountable curb

**Planter Strip**
- 6 foot width
  - Trees, 30-50 feet
  - Lighting optional

**Elementary School**
- 8 foot width
  - Two ramps per corner
  - Concrete preferred
  - Non-mountable curb

**Campus**
- 6 foot width
  - Trees, 30-50 feet
  - Lighting required

**Avenue - Mixed Use**
- 6 foot width
  - Two ramps per corner
  - Concrete preferred
  - Non-mountable curb
  - For attached walks add 2 foot width

**Boulevard**
- 8-20 foot width
  - Two ramps per corner
  - Concrete/pavers OK
  - Non-mountable curb

**Main Street**
- 15 or more width
  - Two ramps per corner
  - Concrete preferred
  - Non-mountable curb

**Other Commercial**
- 6 foot width
  - Trees, 30-50 feet
  - Lighting required

**Transit Station**
- 6 foot width
  - Trees, 30-50 feet
  - Lighting required

**Waterfront District**
- 6 foot width
  - Trees, 30-50 feet
  - Lighting required
Places of Discovery
Walking Audit Feedback, Include Children’s Insights
1A CROSSWALKS  Visibility and Detection

Exemplary Crossing: When crossings are highly visible, and speeds are low, motorists almost automatically stop to let pedestrians go. These double set of bands are highly visible to approaching drivers. Yielding rates are high. (Broadway Avenue in Boulder, Colorado)
1B  CROSSWALKS Width of Crossing

Exemplary Crossing: In the ideal crossing, pedestrians would not cross side street widths wider than 14 feet, and motorists would enter the areas at speeds no higher than 10 mph. (Keene, New Hampshire)
2A SIDEWALKS Width

Exemplary Width: Although sidewalks can be too wide, there are places where a wide walkway creates the right mood for comfortable strolls that are fully at ease. Widths of ten feet feel quite good to most people. (Celebration, Fl)
SIDEWALKS Surface Condition and Type

Exemplary Type: Surfaces with high coefficient of friction, such as these bricks in Portland, Oregon were found through research and experimentation ... anti-slip and yet smooth in all weather. (Portland, Oregon)
2C SIDEWALKS Maintenance

Exemplary Maintenance: Sidewalks are built with top quality materials. Careful attention is paid to construction methods, leading to almost self-maintaining systems. Tree selection is important if sidewalks are to have a long life.

(San Diego, Ca.)
3A BUFFER To Street

Exemplary Buffer: When vertical height is added (note wall of trees and ground cover) people feel relaxed and are willing to spend time (and money) in an area. (Lake Oswego, Oregon)
3B BUFFER To Parking Lots, other space

Exemplary Buffer: Highest quality parking edges are adopted and cared for, create no visual screening of pedestrians and create gardens.
(Sacramento, California)
4 DRIVEWAYS Width, Contrast, Speed

Exemplary Driveway: Santa Barbara (below) sets the bar height for virtually everything walkable and aesthetic. A narrow, offset entry graces a pleasant walkway where safety is the quest. (Santa Barbara, California)
Exemplary Shade: The ideal shade planting should create a crowning achievement, sometimes caught on principal streets, and more often caught on neighborhood streets. Many towns call themselves Tree Cities, but it is time to raise the bar height to have streets of this quality become common place. *(Winnipeg, Canada)*
Exemplary ADA: The ideal set of ramps is found on narrow streets with tight corner radii of 15 feet or less. This ramp perfectly aligns with routes of travel, set back from the street. It also sports an edge, while providing contrast. Note how the drainage grates capture all water on both sides of the radius. (Celebration, FL)
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