## Pedestrian Science Beyond Lip Service



Charlier Associates, Inc.



#### **TRANSPORTATION PLANNERS**















#### Outline

Problems with Traditional Approaches Pedestrian Science Types of Walkers Types of Pedestrian Environments Practical Local Policies Examples & Case Studies Follow-up Information

Traditional Approaches to "Pedestrian Issues"

Pedestrian Mode Share
Kids' Routes to School
Pedestrian Safety
ADA

(piecemeal – ineffective – not enough)

Traditional Approaches to "Pedestrian Issues"

Pedestrian Mode Share
Kids' Routes to School
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# "Walking is an alternative mode."

# Walking

"...is not an "alternate mode"

# Walking ...is Human



#### We Walk Because We are Human

#### We are Human Because We Walk

#### **Pedestrians**



**Modern DNA** 



#### Because We Walk...

We speak We sing We use tools We orient spatially at 3 mph A day in easy country = 20 miles A day in rough country = 8 miles









### To be human...

# ...is to be a pedestrian

### def. "PEDESTRIAN"

A pedestrian is a person moving from place to place, either by foot or by using an assistive mobility device. Pedestrians include people of all ages and abilities.





#### We cannot escape our DNA...



#### ... no matter how hard we try.



and the second second

Box Rewall, Days

A brisk walk in the park kceps Marey B in shape between dog to give her 3-year-old Doberman his regular workout. Th down His owner, Columbus resident Cathy Stombo, got up early typically log D miles in Berliner Park.

#### Designing for pedestrians

# means

Designing for human occupation

# pedestrians

elderly **customers** voters clients disabled friends young neighbors rich family poor

taxpayers parked bus rider bicyclist

**Traditional Approaches to** "Pedestrian Issues" Pedestrian Mode Share Kids' Routes to School Pedestrian Safety V ADA








**Traditional Approaches to** "Pedestrian Issues" **Pedestrian Mode Share** Kids' Routes to School Pedestrian Safety V ADA

# % Change in Pedestrian Danger Index (2002-2003)

### Fort Collins – Loveland

Pueblo

**Colorado Springs** 

**Denver-Boulder-Greeley** 

**Grand Junction** 

Source: STPP



# Why Pedestrian Safety Projects Are Not Enough

Most of the \$\$\$ spent on pedestrian facilities is spent as part of roads & streets projects

The fewer pedestrians present, the less status they have as a legitimate presence in the roadway

Most pedestrian incidents go unreported







**Traditional Approaches to** "Pedestrian Issues" Pedestrian Mode Share Kids' Routes to School Pedestrian Safety ✓ ADA









# **Universal Design**

### **Universal Access**







Needed: A More Comprehensive Approach

(Pedestrian Science)

# Pedestrian Science Objective:

Develop a comprehensive, realistic planning system for creating human environments in cities that want them.

# **Pedestrian Science**

Types of Walkers
 Types of Pedestrian Environments
 Practical Local Policies

# Pedestrian Science

# Types of Walking

### "Pedestrians will walk a quarter mile."



## Pedestrian Walk Distance



Types of Walking Rambling Utilitarian Walking Strolling, Lingering Promenading Special Events









# **Boulder Special Events**

# **Pedestrian Science**

Types of Pedestrian Environments "It's either pedestrian friendly or it isn't."

# Pedestrian Environments

# "Pedestrian Friendly"

### Pedestrian Environment Continuum

Pedestrian Friendliness

**Pedestrian Place/District** 

**Pedestrian Supportive Environment** 

**Pedestrian Tolerant Environment** 

**Pedestrian Intolerant Environment** 

### **Pedestrian Place**

- Commercial, recreational or institutional setting (not residential)
  Gathering place identifiable as a PLACE
  Significant pedestrian presence
  Motor vehicles can be present, but may not dominate
- Substantial supportive transportation systems required (parking, transit, bike)














# Riomaggiore, Italy **Pedestrian Place**

#### **Pedestrian Supportive**

Commercial, recreational, institutional or residential setting – most but not all land uses

May include gathering PLACES
Pedestrians present at busy times
Motor vehicles can be present, but may not dominate



#### Pedestrian Supportive

Mt. Vernon, IA

## **Pedestrian Supportive**

Longmont

# Berkeley **NPER** MIKT'S PAPER Pedestrian Supportive

#### Kirkland, WA

Pedestrian Supportive







All land uses except freeway and limited special uses (airport runway, garbage dump, etc.)
Utilitarian walking and rambling only
Motor vehicles are present and tend to dominate

Redmond







Any land use
Very little if any walking
Motor vehicles dominate
Unsafe, unpleasant

Longmont

MARTIN ST

Longmont

Hawaii Island

=

#### Walk Environments and Types of Walking







#### DOWNTOWN KAILUA PEDESTRIAN ENVIRONMENT GUIDELINES









PREPARED FOR: KANECHE RANCH COMPANY, LIMITED MARCH 2005

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#### DOWNTOWN KAILUA

p. 23

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## **Pedestrian Science**

#### **Practical Local Policies**

#### **Practical Local Policies**

Pedestrian Districts
 Multimodal Corridors
 Establishing a Grid

## 1. Pedestrian Districts

#### **Practical Local Policies**

"The City of <name> will be pedestrian friendly"

# The entire city is not going to be "pedestrian friendly" any time soon.




#### Pedestrian Macro Structure (Nodes and Corridors)



#### **Downtown Boulder Pedestrian Mall**



Pedestrian Districts People are drawn to the center > The center will have an axis > Walk range from the axis is limited Sources of pedestrians: Parked cars Nearby residential Transit Nearby lodging 



#### Pearl Street Pedestrian Mall





















# Boulder's pedestrian mall works because ...

... it is supported by a balanced multimodal transportation system.





**Summary: Pedestrian Districts** Pick a small number of pedestrian places Write guidelines Focus investment (set priorities) **Deploy supportive transportation (all** modes)

# 2. Multimodal Corridors

## **Practical Local Policies**

## Boulder 1996 TMP



## Redmond 2005 TMP









# 3. Establish a Grid

## **Practical Local Policies**









#### **Pedestrian Networks**



The ideal pedestrian "grain" is 250' to 300'









Hundreds of Year	<i>s:</i> 200	400	600	800	1000
					1
Transportation Corrido	rs				
Major Roads					
Rail					
Pathways					
Architecture					
Civic					
Residential					
Commercial					
Landscaping					
Trees					
Other Planting	S I				

# Follow-Up Information

www.charlier.org