Part 2 - Planning for Sidewalks on Local Streets

A two-part briefing before the Land Conservation and Development Commission on September 27, 2001

prepared by DLCD staff and members of the TGM program:

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Presentation outline

I. Why most local streets need sidewalks
II. How TPR guides local planning for sidewalks
III. Acceptable options
IV. Conclusion
V. Review of Green TSP

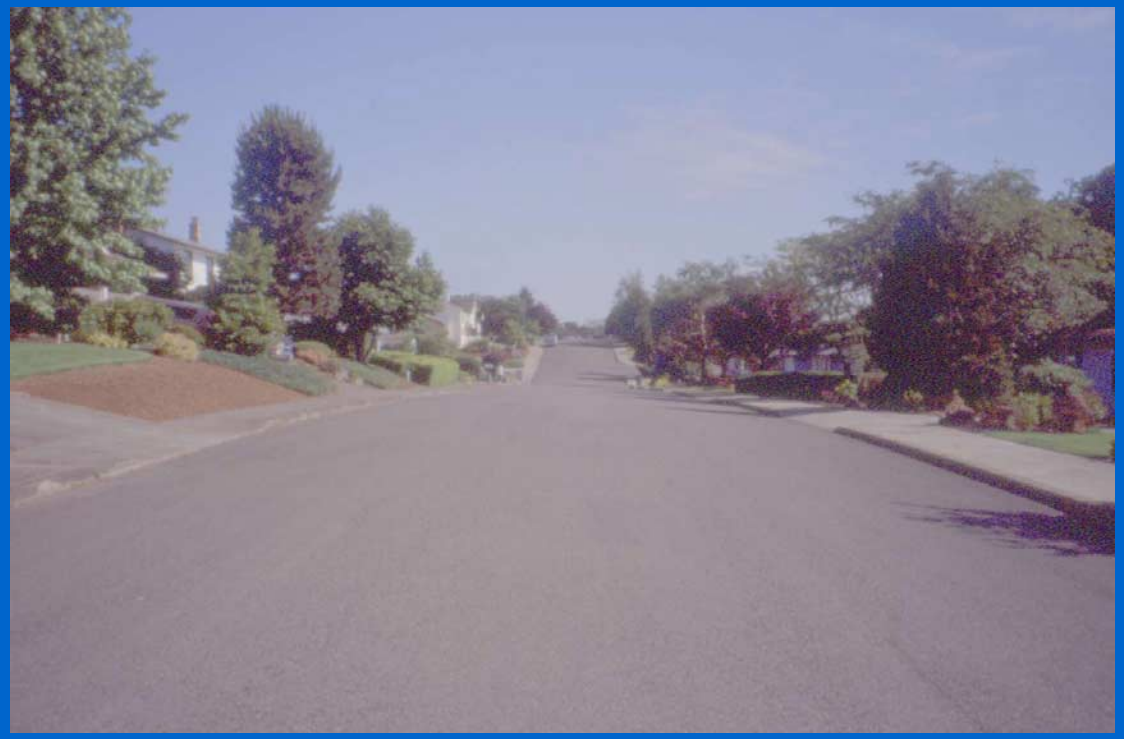
Section I:

Why most local streets need sidewalks

Typical residential local street

- 28-36 feet wide
- 2 way travel, but no striped lanes
- 25 mph
- 400-2000 cars per day

Typical local streets need a sidewalk

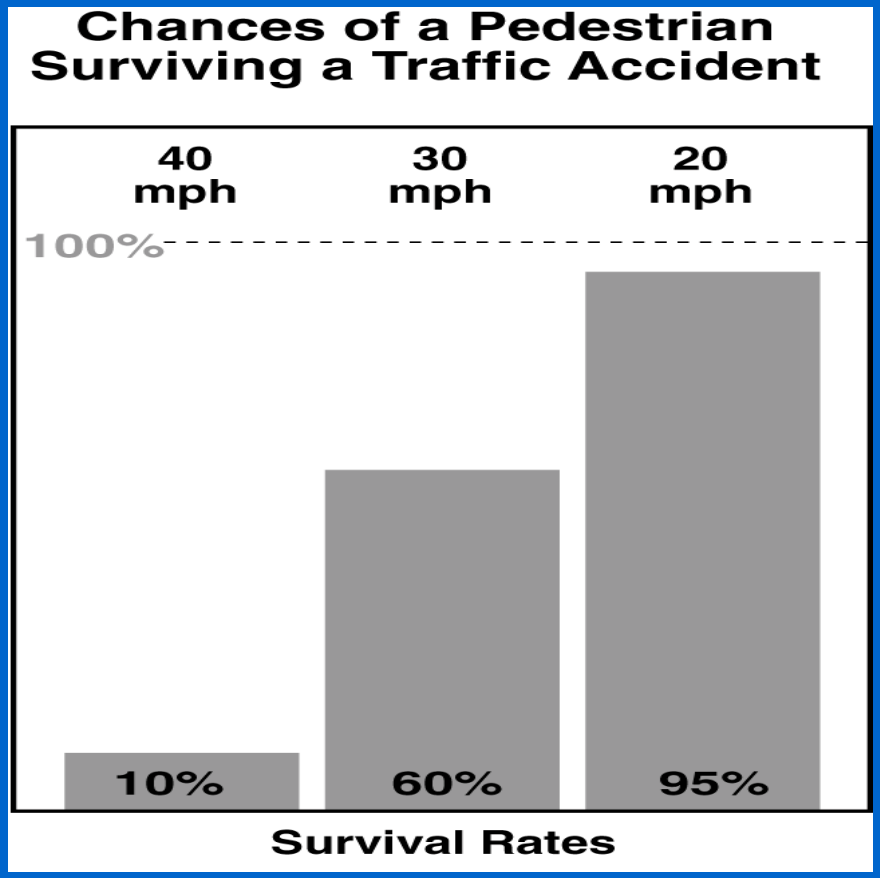


- Designed for level of automobile traffic and speed that make it unsafe for walking

Speeds create a need …

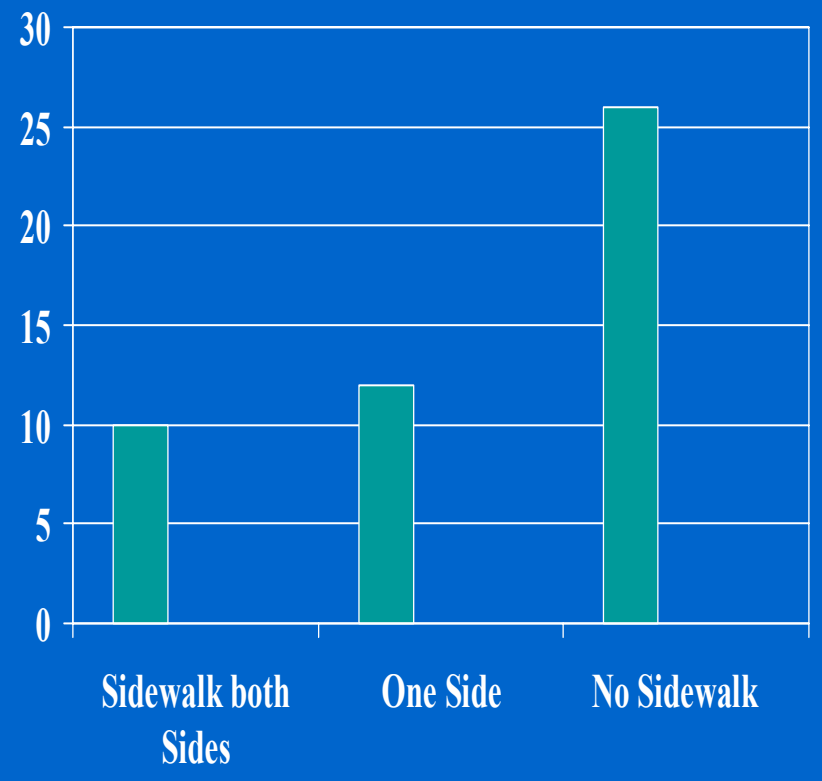
- Statutory speed limit is 25mph
- Residential streets are designed for 25 mph
- Most operate at 25 mph or more

Pedestrians are not safe on streets with cars at 25 mph



- Reducing speeds from 30 mph to 20 mph increases pedestrian survival by 50%

Sidewalks make streets safer



Chance of Pedestrian Auto Crash

- 2.6 times greater on streets without sidewalks
- 1.2 times as great on streets with sidewalks on one side

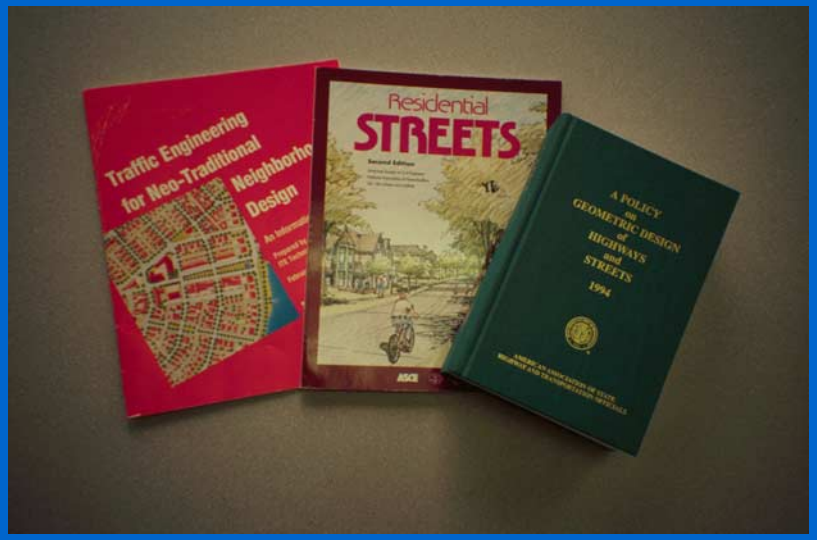
Source: Federal Highway Administration

Planners and engineers agree:

Sidewalks are needed on streets serving 4 or more units per acre

- ✔AASHTO
- ✔ITE
- ✔ASCE
- ✔FHWA
- ✔APA

What AASHTO says:



"In residential areas, sidewalks are desirable on both sides of the streets but <u>need to be provided</u> on **at least one side of all local streets.**"

Source: AASHTO "Green Book" Standards for Local Urban Streets, 1994

What ITE says:

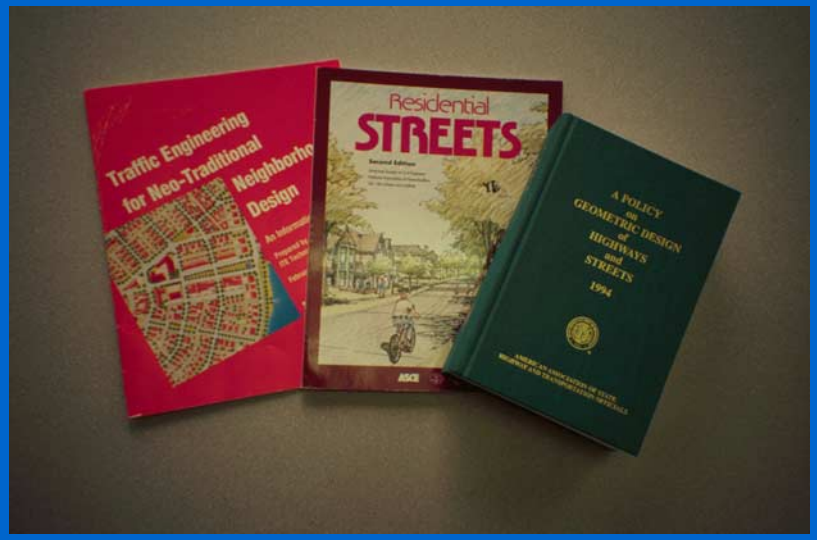
Residential use at more than 4 units per acre:

- **New Streets:** Sidewalks on both sides
- **Existing Streets:** At least one side on existing streets; preferred on both

Source: ITE, Guidelines for Installing Sidewalks, Design and Safety of Pedestrian Facilities Planning for Sidewalks on Local Streets

Especially near schools, parks, shopping areas

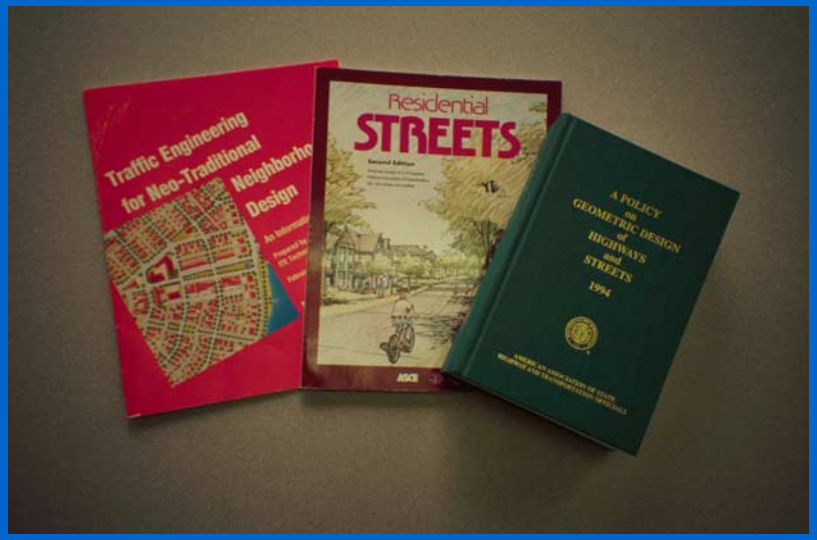
What AASHTO says:



"Sidewalks used for pedestrian access to schools, parks, shopping areas, and transit stops … should be provided along <u>both sides</u> of the street."

Source: AASHTO "Green Book" Standards for Local Urban Streets, 1994

What ITE says:



Any local street within two blocks of a school site that is on a walking route to school -- sidewalk and curb and gutter required

Source: ITE, Guidelines for Installing Sidewalks, Design and Safety of Pedestrian Facilities

Oregon's "Bike" Bill

- ...Footpaths and bicycle trails ... shall be provided wherever a highway, road or street is being constructed, reconstructed or relocated.
- TSPs must be consistent with and implement the Bike Bill

Bike Bill exceptions:

Walkways required except where:

(a) "contrary to public safety"

(b) "cost would be excessively disproportionate to the need or probable use;" or

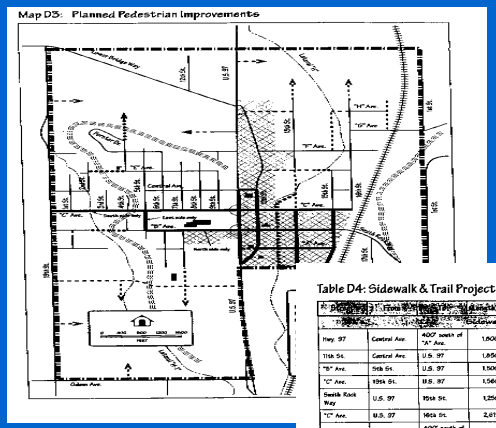
(c) "absence of need due to

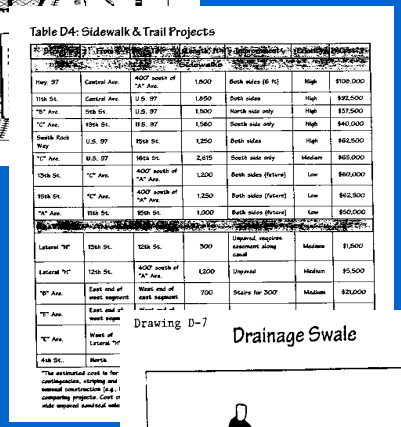
- sparsity of population
- other available ways
- other factors"

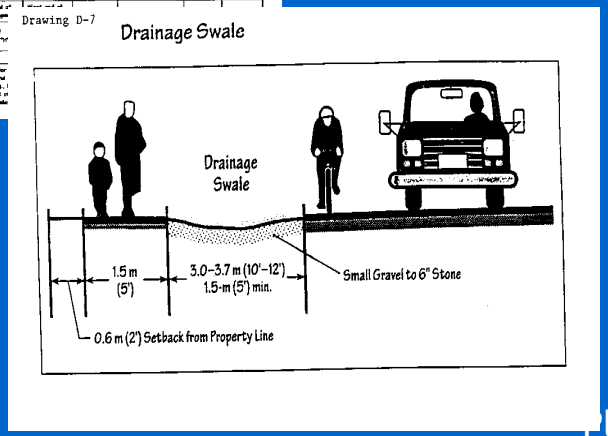
Section II:

How TPR guides local planning for sidewalks

TPR requirements





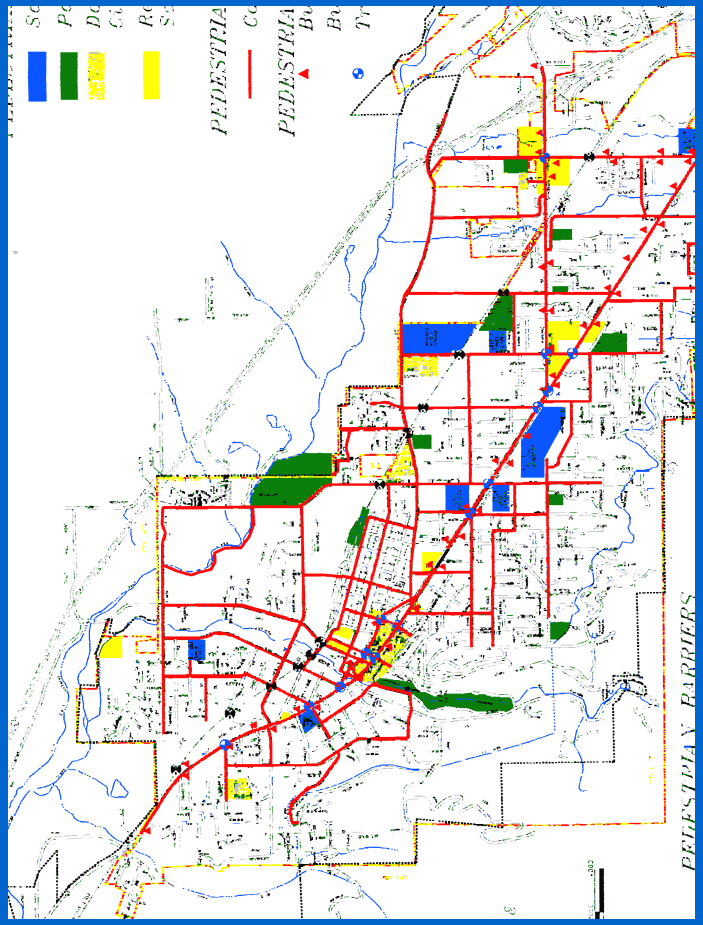


1. Network of routes for the planning area

2. List of needed improvements

3. Ordinances for new streets & new development

Step 1: Identify bike and walk routes

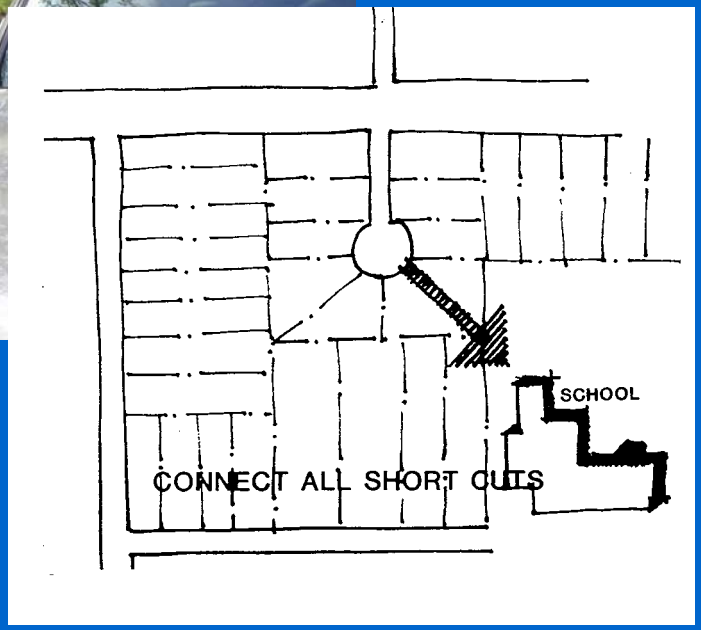


- map of a network of routes throughout the planning area
- connect neighborhoods to schools, parks, shopping

DLCD review factors:

- ✔ Are key destinations, schools, parks shopping areas mapped?
- ✔ Are there planned routes to key destinations?
- ✔ Are the routes are reasonably direct and convenient?

Step 2: Identify needed improvements



- Sidewalk gaps
- Off-street connections to schools, parks, shopping

Step 2: Identify needed improvements

Table D4: Sidewalk & Trail Projects

Street	From	To	Length, ft	Improvement	Priority	Cost*
Sidewalks						
Hwy. 97	Central Ave.	400' south of "A" Ave.	1,800	Both sides (6 ft)	High	$108,000
11th St.	Central Ave.	U.S. 97	1,850	Both sides	High	$92,500
"B" Ave.	5th St.	U.S. 97	1,500	North side only	High	$37,500
"C" Ave.	19th St.	U.S. 97	1,560	South side only	High	$40,000
Smith Rock Way	U.S. 97	15th St.	1,250	Both sides	High	$62,500
"C" Ave.	U.S. 97	16th St.	2,615	South side only	Medium	$65,000
13th St.	"C" Ave.	400' south of "A" Ave.	1,200	Both sides (future)	Low	$60,000
15th St.	"C" Ave.	400' south of "A" Ave.	1,250	Both sides (future)	Low	$62,500
"A" Ave.	11th St.	15th St.	1,000	Both sides (future)	Low	$50,000
Trails						
Lateral "H"	13th St.	12th St.	300	Unpaved, requires easement along canal	Medium	$1,500
Lateral "H"	12th St.	400' south of "A" Ave.	1,200	Unpaved	Medium	$5,500
"B" Ave.	East end of west segment	West end of east segment	700	Stairs for 300'	Medium	$21,000
"E" Ave.	East end of west segment	West end of east segment	700	Stairs for 300'	Low	$21,000
"E" Ave.	West of Lateral "H"	East of Lateral "H"	200	Unpaved connector, requires easement and bridge	Low	$20,000
4th St..	North	Forster Dr.	700	Stairs for 300'	Low	$21,000

*The estimated cost is for a typical facility built in Oregon and includes engineering, installation, minor contingencies, striping and signing. The cost does not include administration, special grading and fill operations, unusual construction (e.g., bridges and tunnels) or land acquisition. Estimated costs are particularly useful for comparing projects. Cost of sidewalk is for 5-ft wide concrete unless otherwise noted. Cost of trail is for 10-ft wide unpaved sandseal unless otherwise noted.

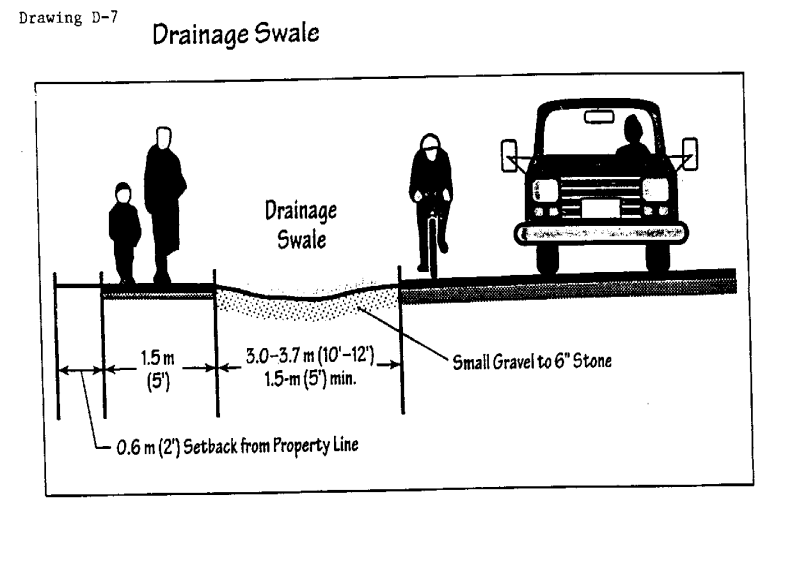
Result:

- List of facility improvements
- Specific projects with costs, timing

DLCD review factors:

- ✔ Are needed improvements shown on planned routes?
- ✔ Are the improvements sufficient to provide safe, convenient routes to destinations?
- ✔ Is there a list of specific improvements with cost estimates?

Step 3: Adopt standards for new streets and new development

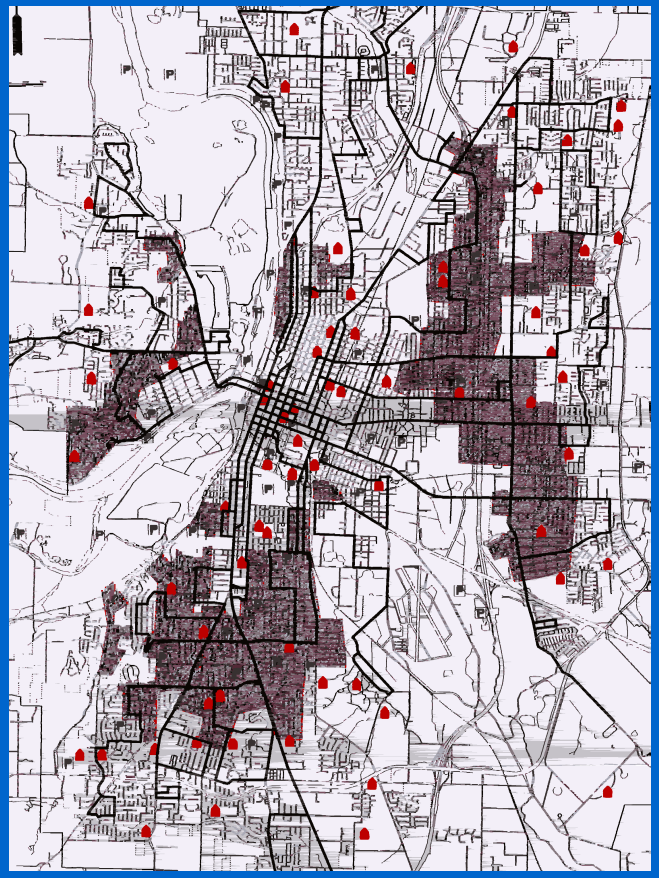


- Sidewalks or other treatments on new streets
- Accessway connections for new subdivisions

DLCD review factors:

- ✔Do ordinances require sidewalks or other treatments on local streets?
- ✔If other treatments are used, are they safe for pedestrians?
  - ✔Do they avoid types or levels of auto travel that make pedestrian travel unsafe?

But what about all those existing streets without sidewalks?



- Large areas
- Sidewalks on every street would be prohibitively expensive

But what about all those existing streets without sidewalks?

- May not be needed
- Environmentally undesirable
- Neighborhood disruption

DLCD review factors

- ✔ Is pedestrian facility needed?
- ✔ Does design provide for safe and convenient travel?

DLCD guidance: be strategic!

- Focus on streets that are routes to schools, parks, shopping or transit
- Evaluate whether existing street is safe for pedestrians
- Evaluate improvements other than sidewalks

Section III:

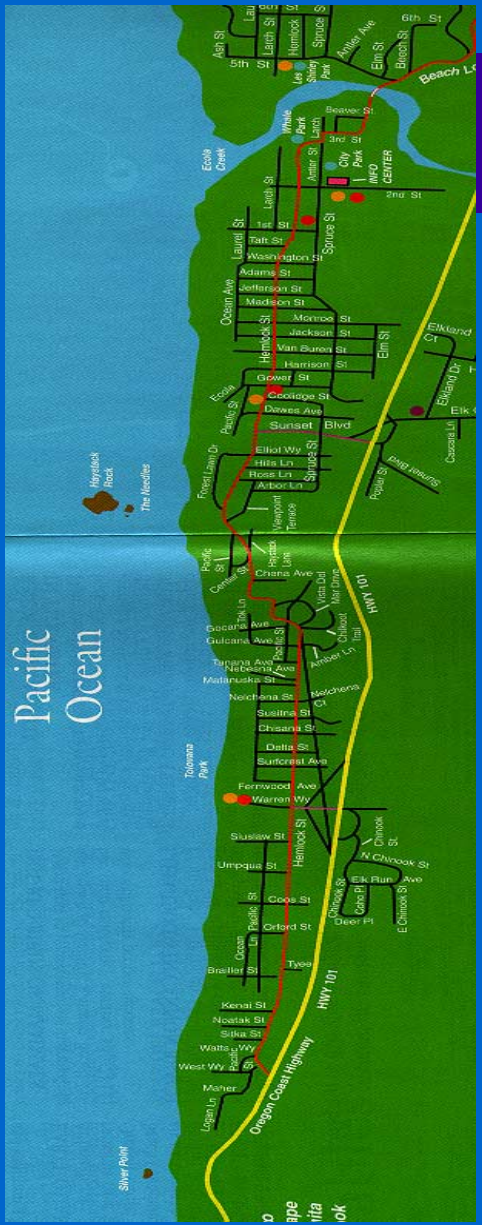
Acceptable options

- Shared streets
- Alternative treatments

Streets without sidewalks

Shared streets

Alternative treatments



Cannon Beach

Most local streets are very short

None have sidewalks

Cannon Beach TSP

TSP Findings

- Low speeds and volumes
- Safe for pedestrians
- It works:
  24% residents walk to work

Cannon Beach TSP

20 feet

<u>Street standard</u>

- 20’ wide street
- 15 mph speed limit
- Intended for shared use
- DLCD says: OK!

Shared streets

Streets that allow pedestrians and vehicles to safely use the same area

Shared streets include:

Existing streets that work

New streets specifically designed to be shared

Shared street designs

Shared streets are part of higher density pedestrian-friendly developments

What makes a shared street work?

- Low speeds
- Low volume
- Supportive street design and street edge

Vehicles speeds are very low

Pedestrians and cars <u>can</u> safely mix at very low speeds of 10 -15 mph or less

Traffic volumes are very low

Pedestrians can share street if traffic is light:

200 fewer vehicles per day

(up to about 20 houses)

Supportive street design

Short, narrow streets help keep speeds low

Planning for Sidewalks on Local Streets

Street edge

Landscaping or buildings close to the street edge reinforce low speed

Alternatives to sidewalks

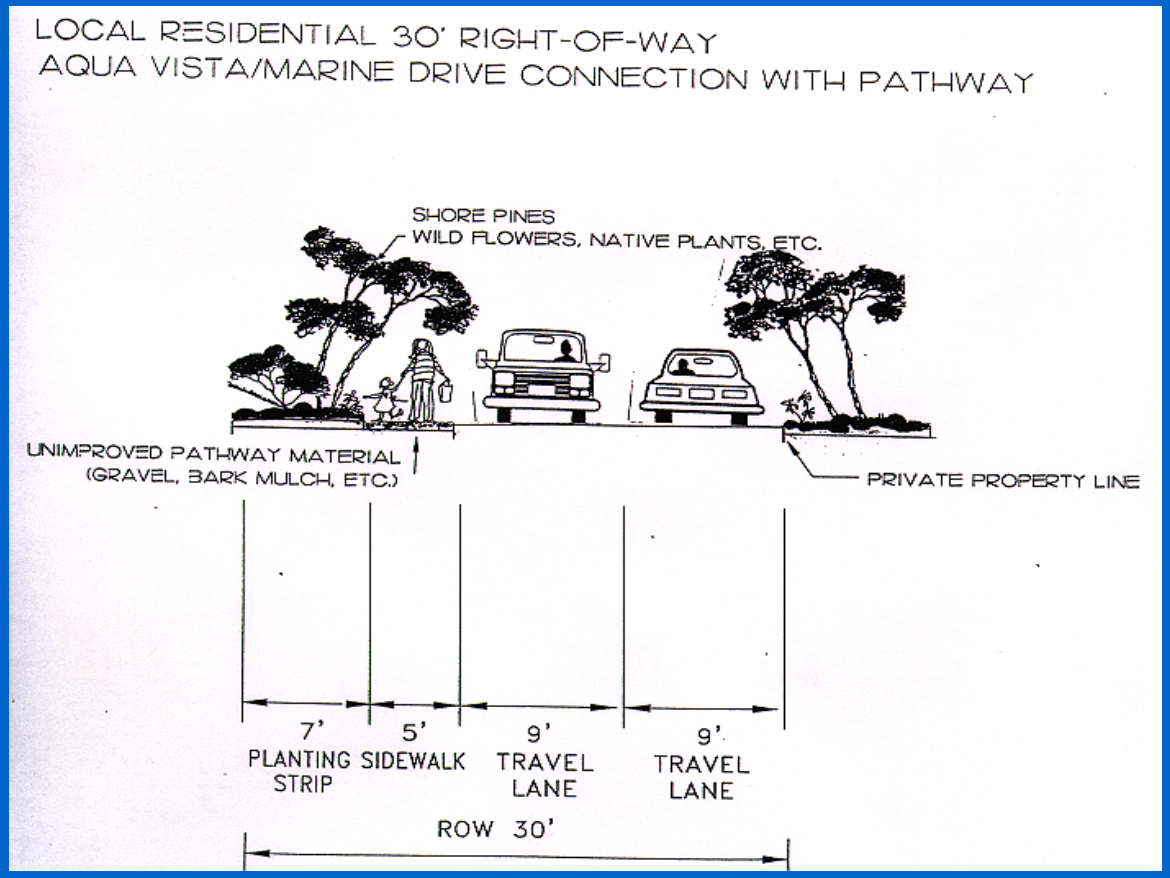
- Options other than sidewalks for making streets safe and convenient for pedestrians
- Usually for retrofitting existing streets

Shoulder walkway

Retrofit treatment for existing streets

Curb stops define walkway

Shoulder walkway (Yachats)



- 18' wide street
- 5' wide gravel path
- 30' right of way

Shoulder walkway limitations

PROTESTING FOR THE SAFETY OF CHILDREN

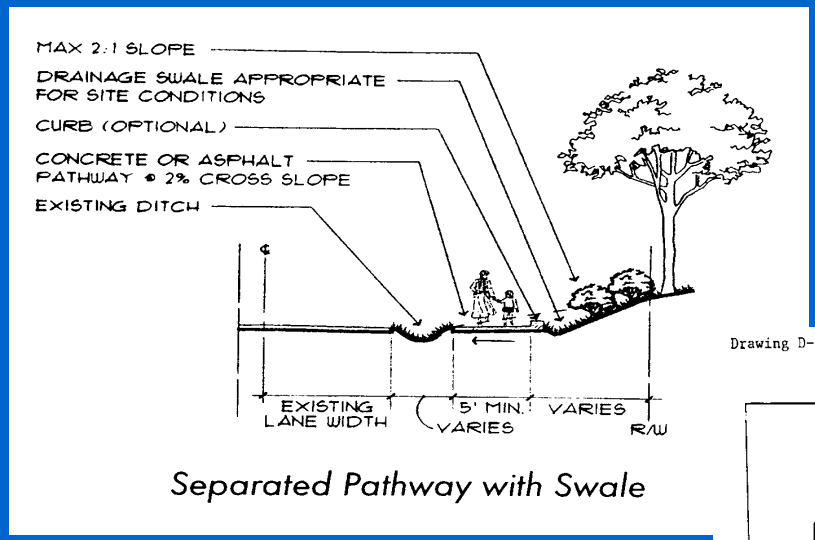
KOBBI R. BLAIR / Statesman Journal

TREK: Lamb Elementary School students walk along Herrin Road on their way to school Tuesday morning on their milelong route, which lacks sidewalks and crossing guards. Parents are rallying for buses for the safety of their children.

Parents rally for bus service

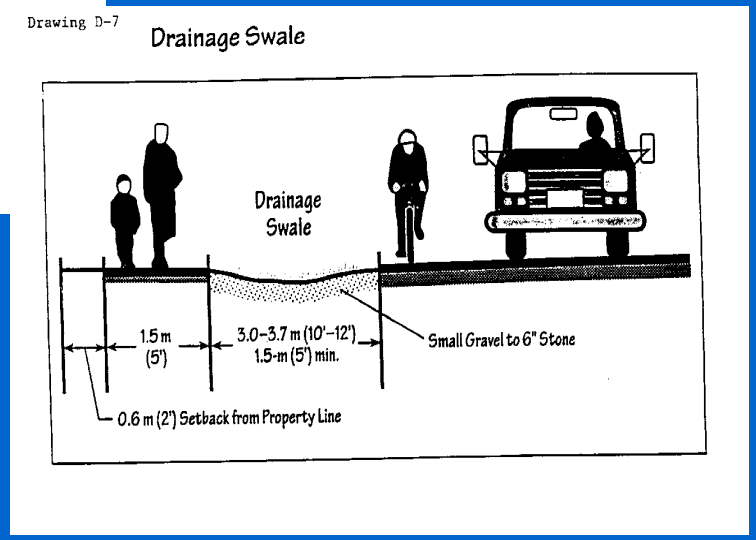
- Least preferable for pedestrian safety
- Intended for rural areas
- Allowed only when other options aren't practicable

Separated pathway



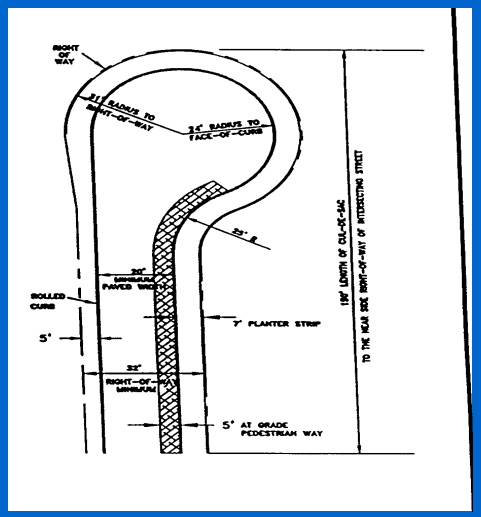
- Environmentally sensitive
- Low cost $28 lf

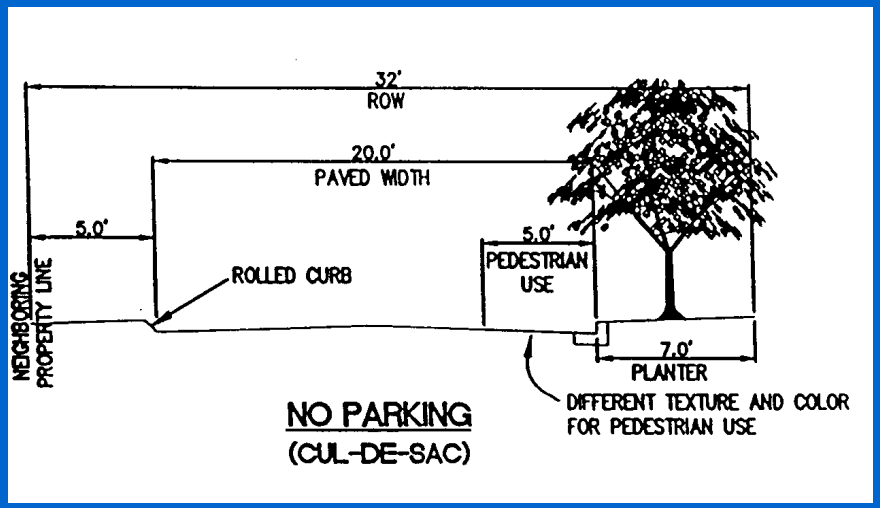
Portland



Terrebonne

On-street walkway (Hood River/Beaverton)





- 20’ wide “Infill” street
- Up to 10 houses
- Includes 5’ at-grade pedestrian walkway
- Different texture and color

Conclusion: most local streets should have sidewalks

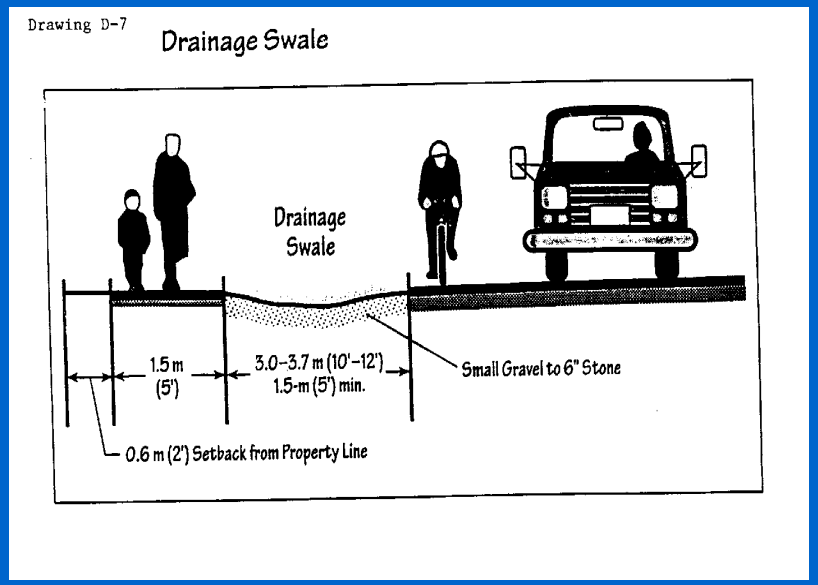
- Consistent with state law and engineering standards

There will be exceptions

- Where sidewalks are clearly not needed
- Some other way is provided that makes it safe and convenient to walk

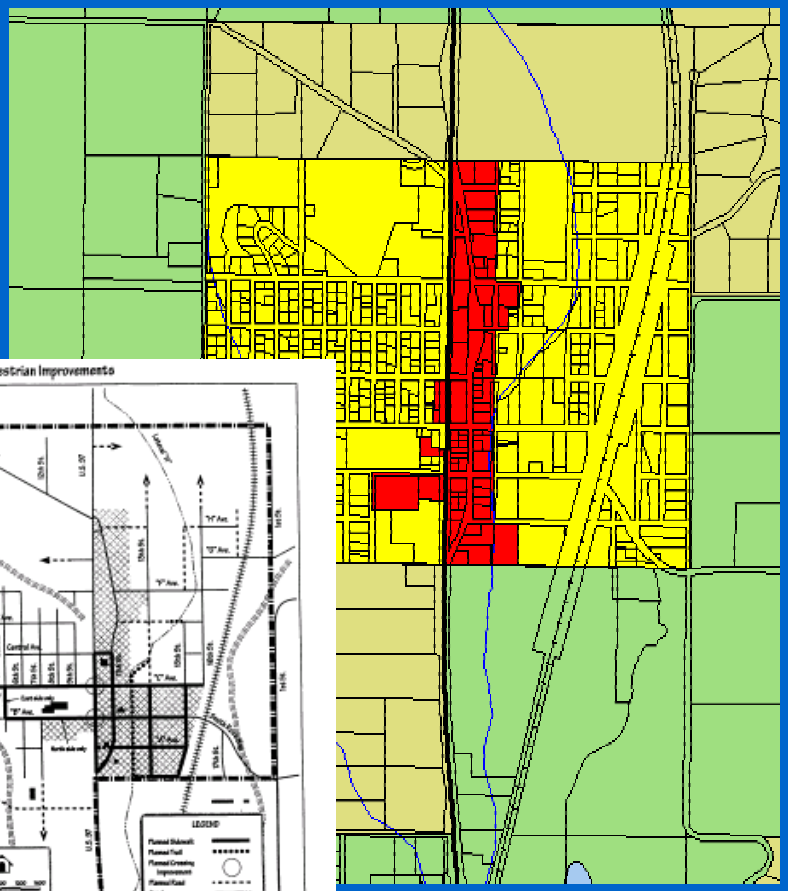
DLCD has accepted a range of alternative approaches

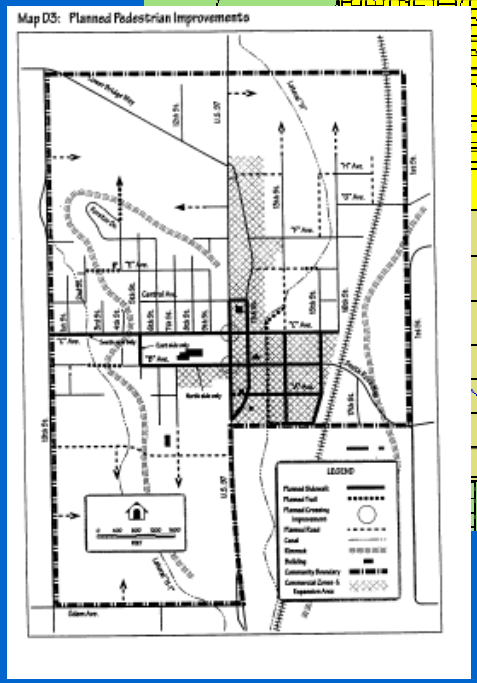
Shared streets



Improvements other than sidewalks

TSPs need to decide:





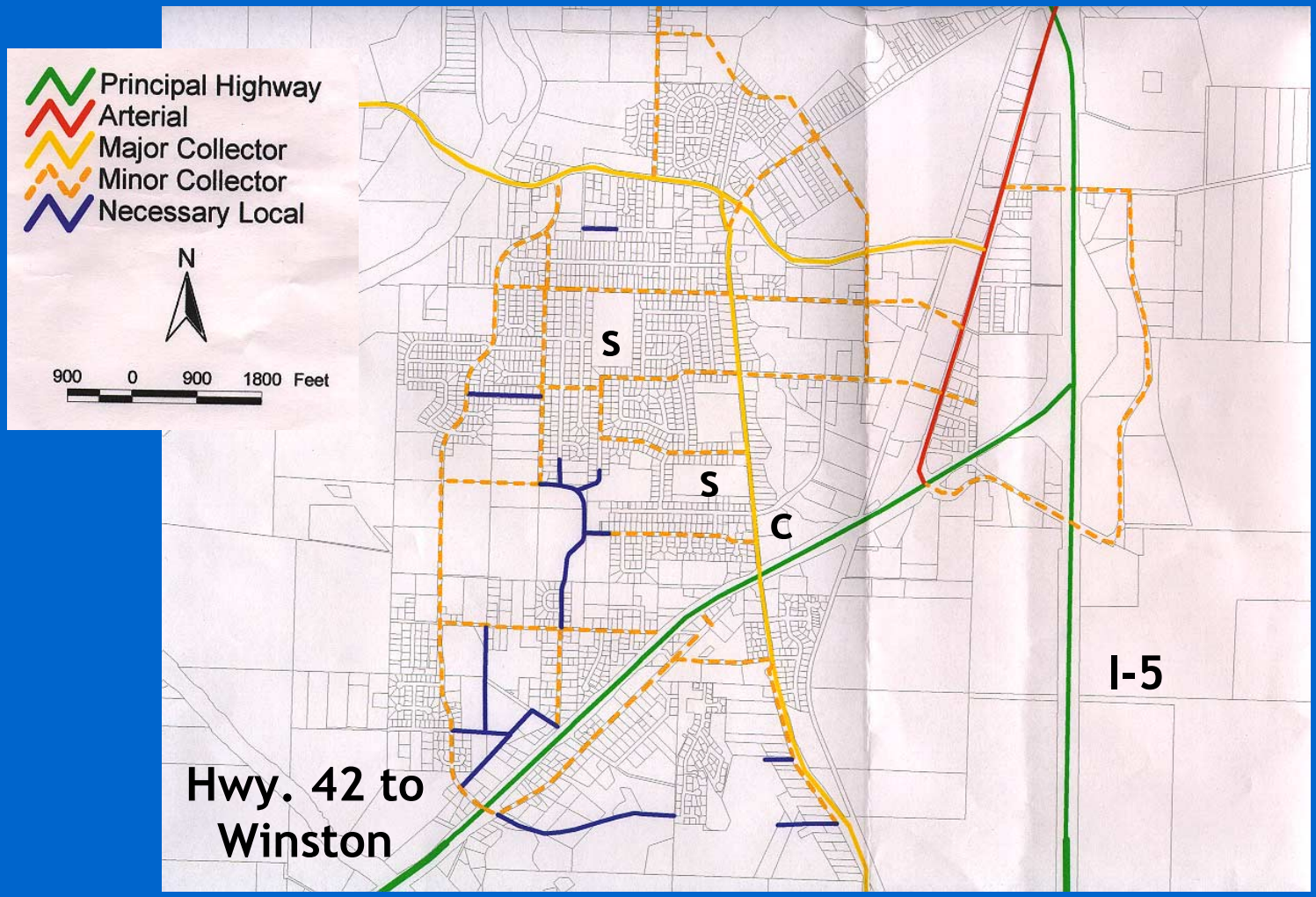
- Consider local circumstances
- What is needed; what is appropriate
- Bottom line: plan adequate safe facilities for walking

Green Urban Unincorporated Area

- Located between Winston and Roseburg
- Population 5,800
- SF and MF residential
- Ave. Lot Size 10,000 SF (4 du/acre)
- Urban water and sewer services
- Two elementary schools
- Commercial services
- Transit service

Green Urban Unincorporated Area

Green TSP… not yet acknowledged



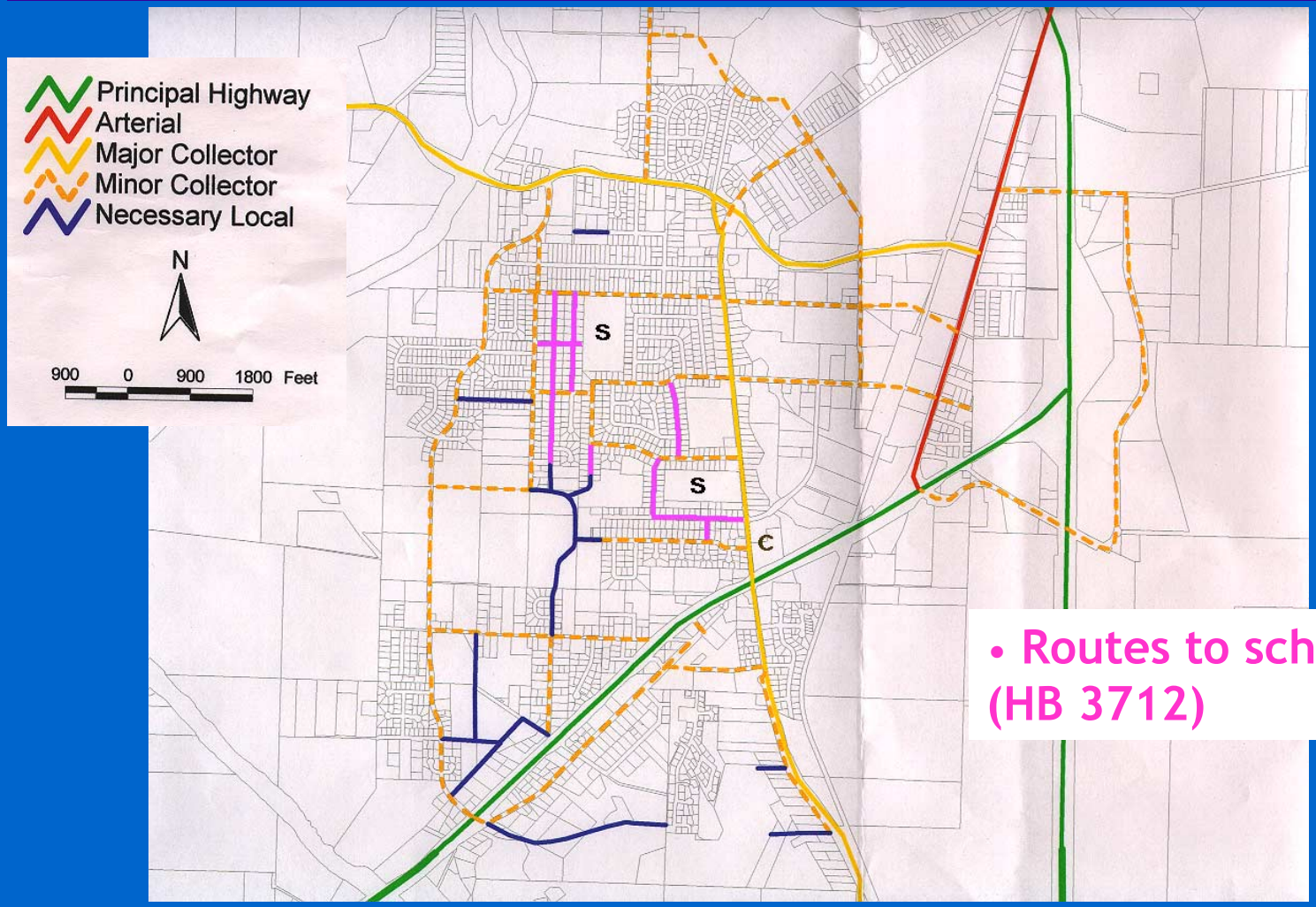
What are local streets like in Green?

Wide streets

Long blocks

No sidewalks

Where should pedestrian facilities be provided?

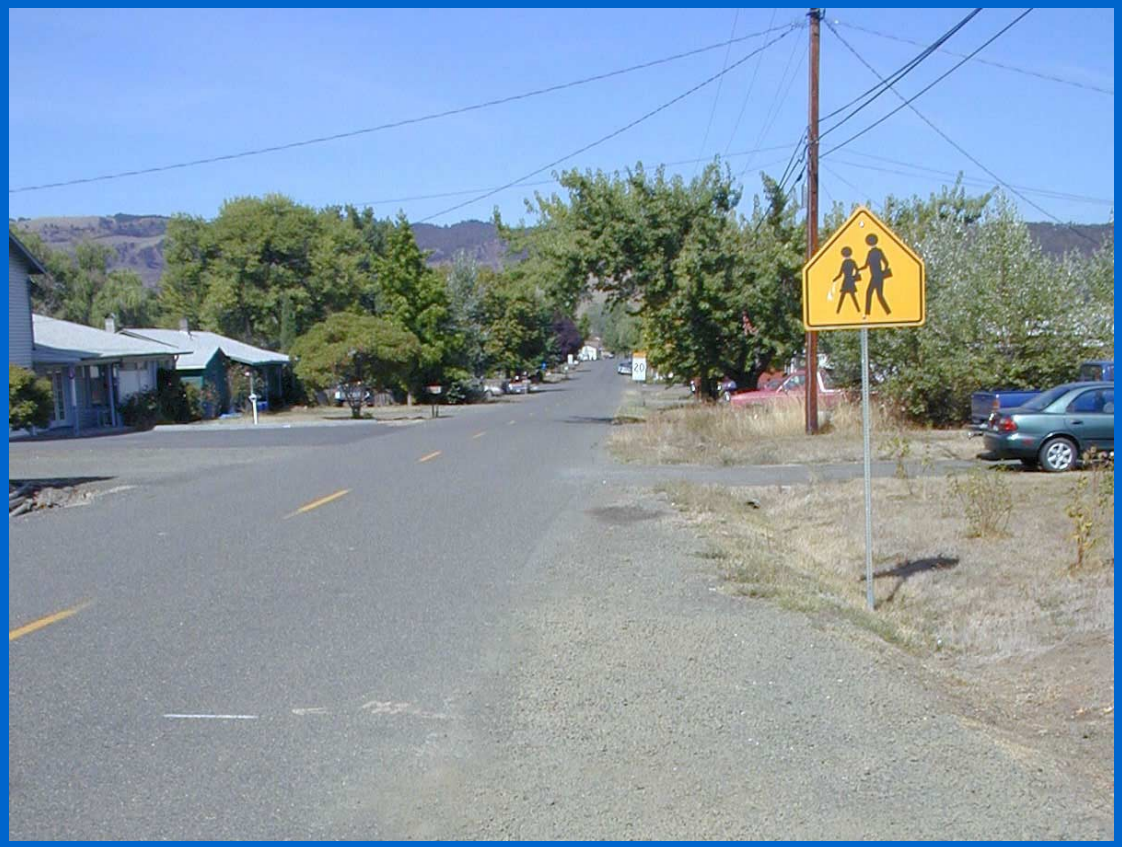


- Routes to schools (HB 3712)

Where should pedestrian facilities be provided?

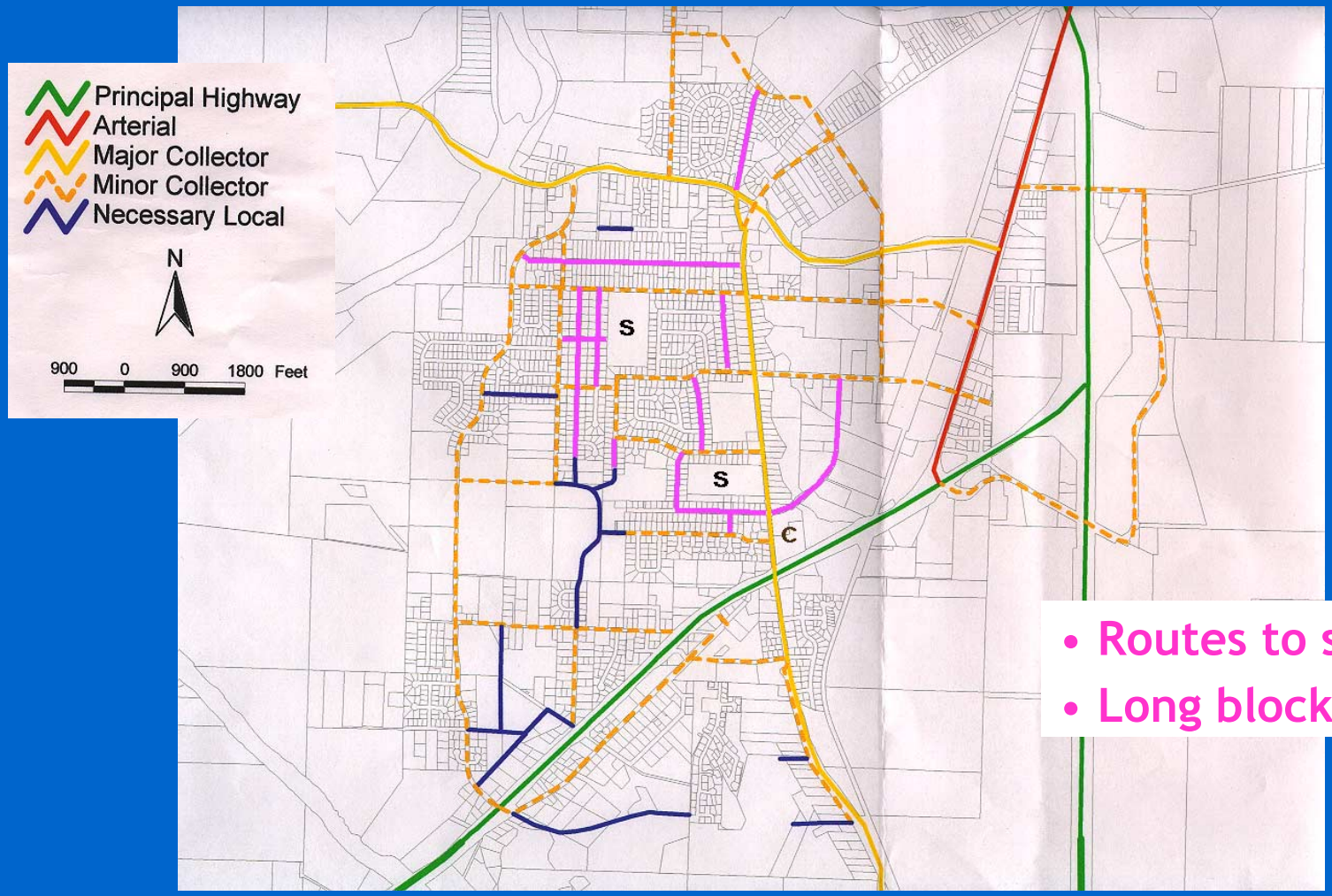
Routes to schools and commercial services

Where should pedestrian facilities be provided?



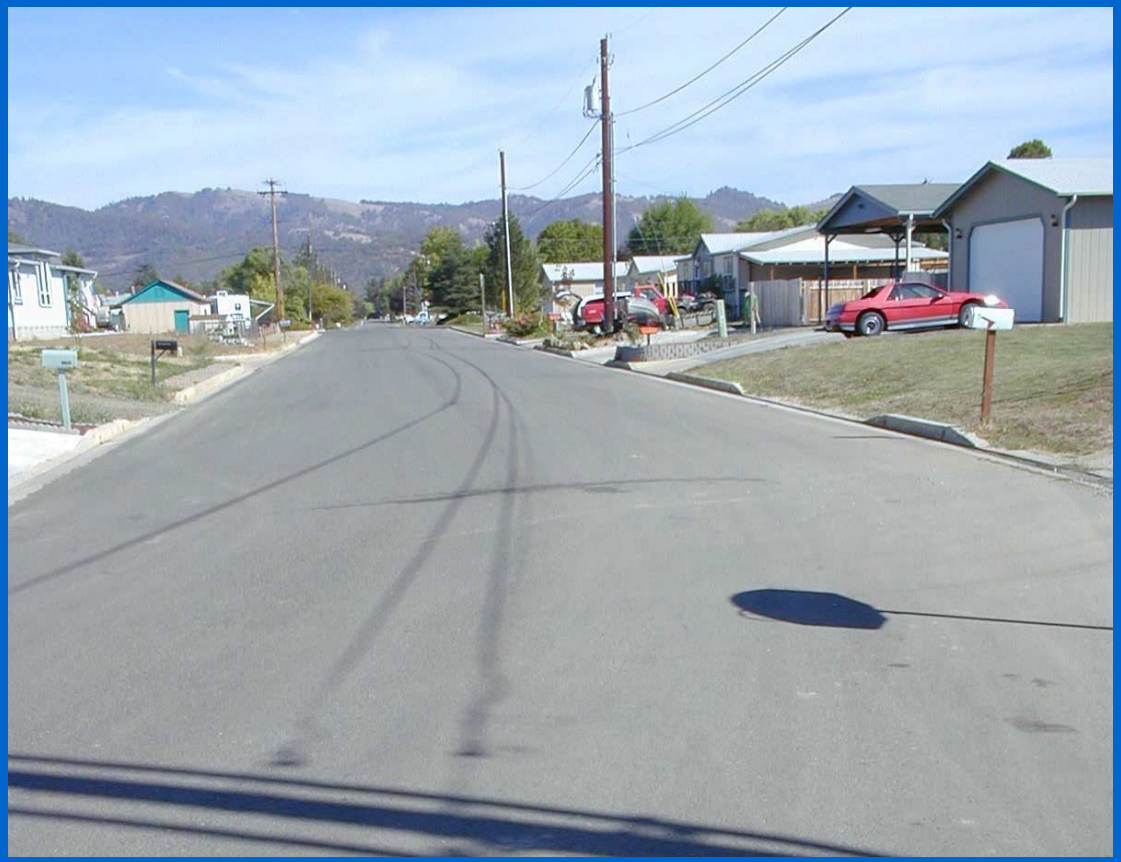
Routes to schools

Where should pedestrian facilities be provided?



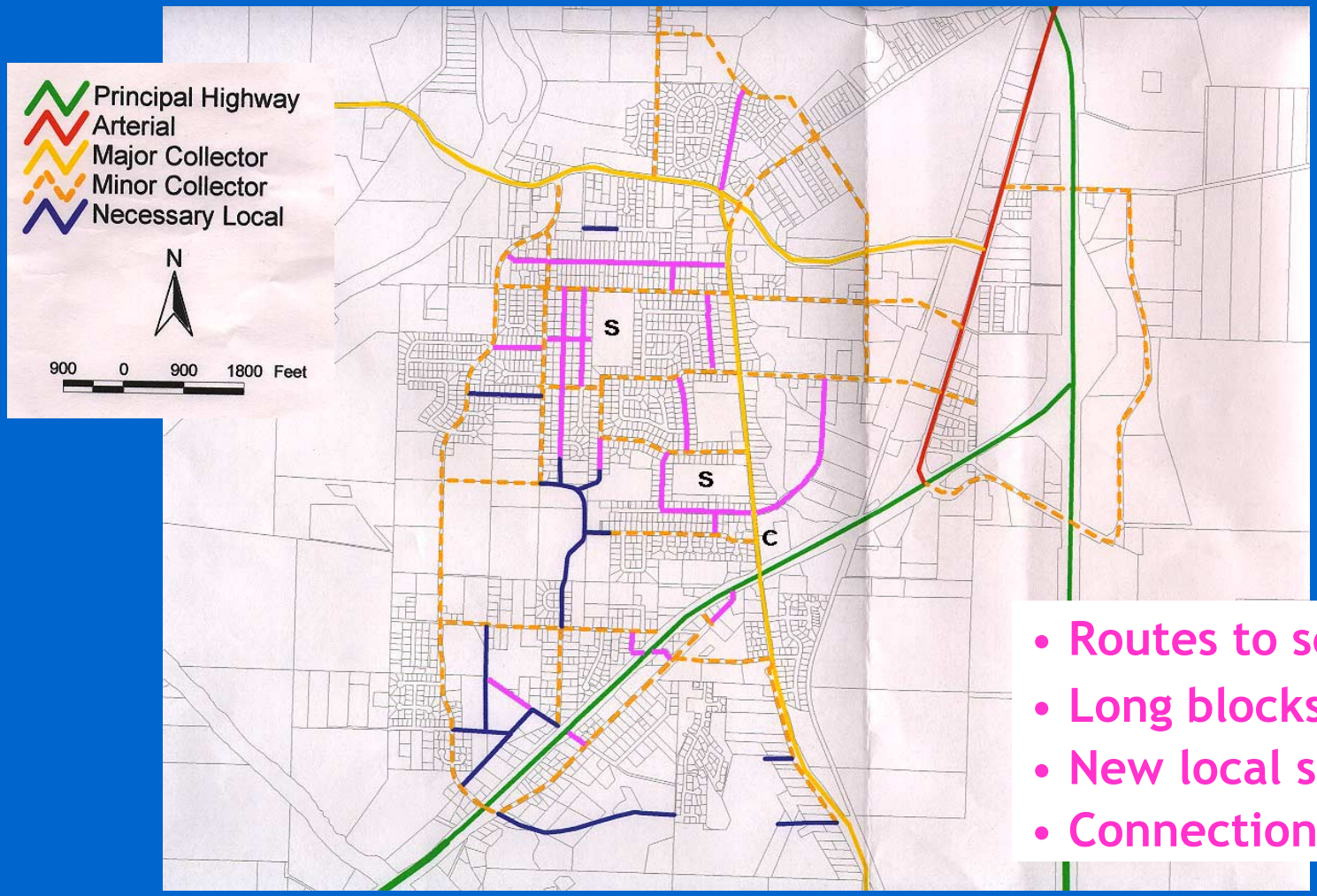
- Routes to schools
- Long blocks

Where should pedestrian facilities be provided?



Long blocks

Where should pedestrian facilities be provided?



- Routes to schools
- Long blocks
- New local streets
- Connections

Where should pedestrian facilities be provided?

New local streets

What guidance has DLCD given local governments?

- Identify important pedestrian routes
- Identify needed improvements
- Adopt implementing ordinances

New Local Streets

- Require sidewalks on most new local streets
- Consider use of shared street designs

Retrofit Developed Areas

- Plan for specific improvements on local streets (i.e.routes to schools, long blocks, etc.)

For further information

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