

How to Preserve the Safety and Capacity of Intercity Roadways

And the role of access management

La Administración Del Acceso



Florida Department of
Transportation
Tallahassee, Florida USA

For:



This Presentation

1. How this work fits into the PIARC TC 2 mission
2. What is Access Management?
3. Practices and Challenges
4. Recommendations

Association
mondiale
de la Route



World Road
Association

ST2 - Sustainable Mobility

*TC 2.2 – Interurban Roads and
Integrated Interurban Transport*

■ How to Preserve the Safety and Capacity of Intercity Roadways – *Access Management*

Source: adapted from
Ginny Clarke
ST2 Coordinator

How this work fits into the PIARC TC 2 mission

The Practice of Access Management

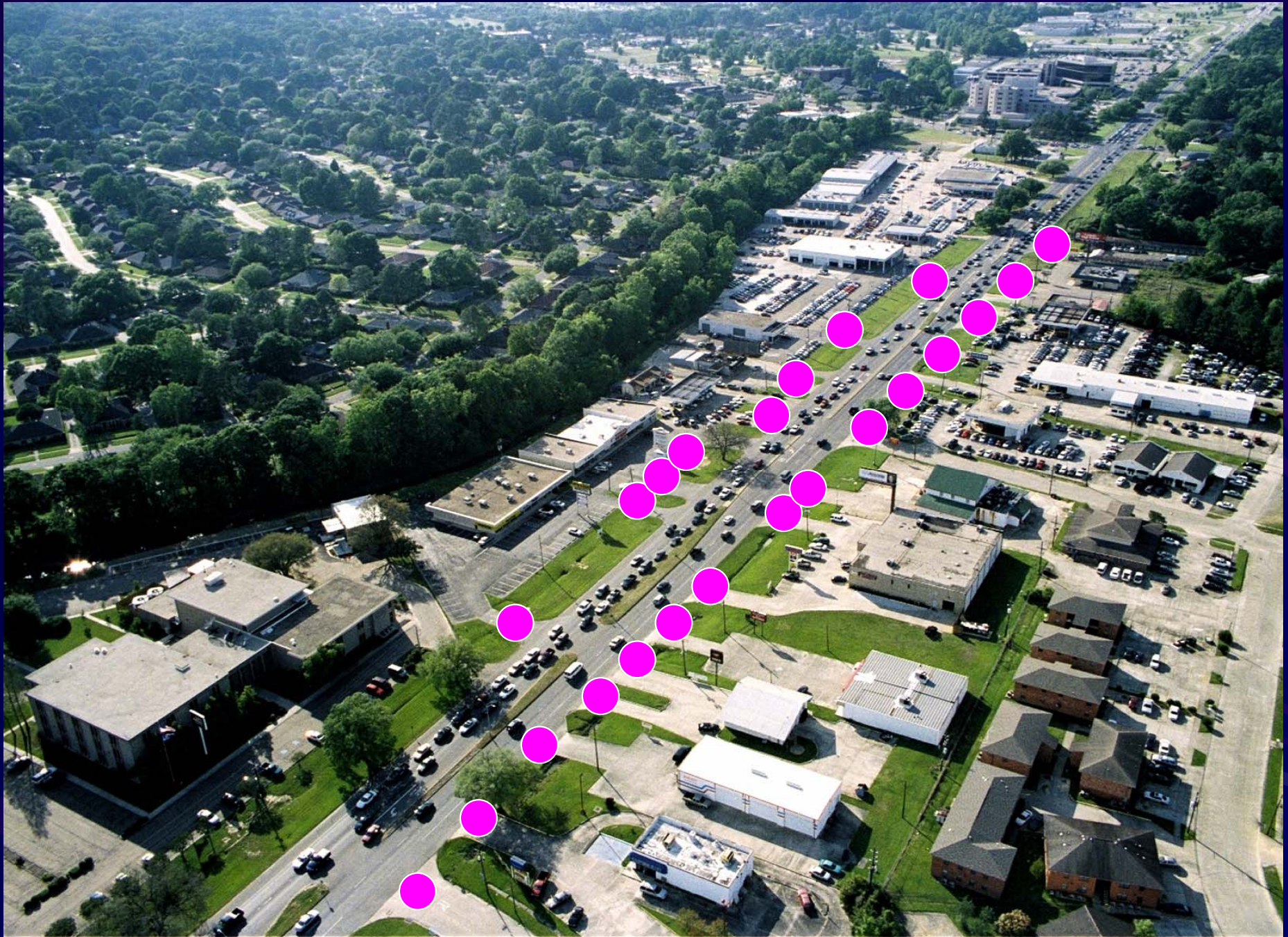
How we did the study

- **Used case studies**
- **Internet Search**
- **Spoke to national experts**
- **Policies and practice in CONTEXT**
 - **See how different regions have addressed the problem**
- **Recommendations for implementation**
- **More questions**

¿En Qué Consiste La Administración Del Acceso?

What is **Access
Management** ?





What is Access Management?

Open Property Frontage



India — Source: Michigan State University - USA

What is Access Management?

What is **Access Management** ?

Managing the location, spacing and design of:

Manejo de la localización, del espaciamiento y del diseño de:

Driveways

Entradas de vehículos

Medians *camellones*

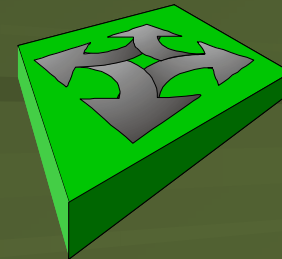
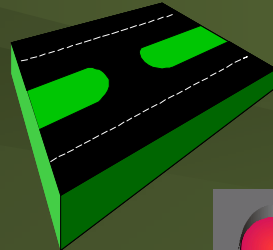
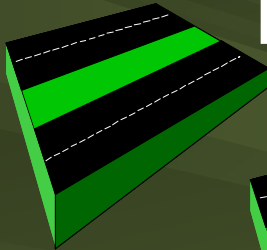
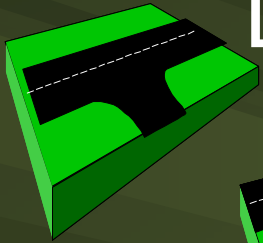
Median Openings

Aberturas en los camellones

Traffic Signals *Semaforos*

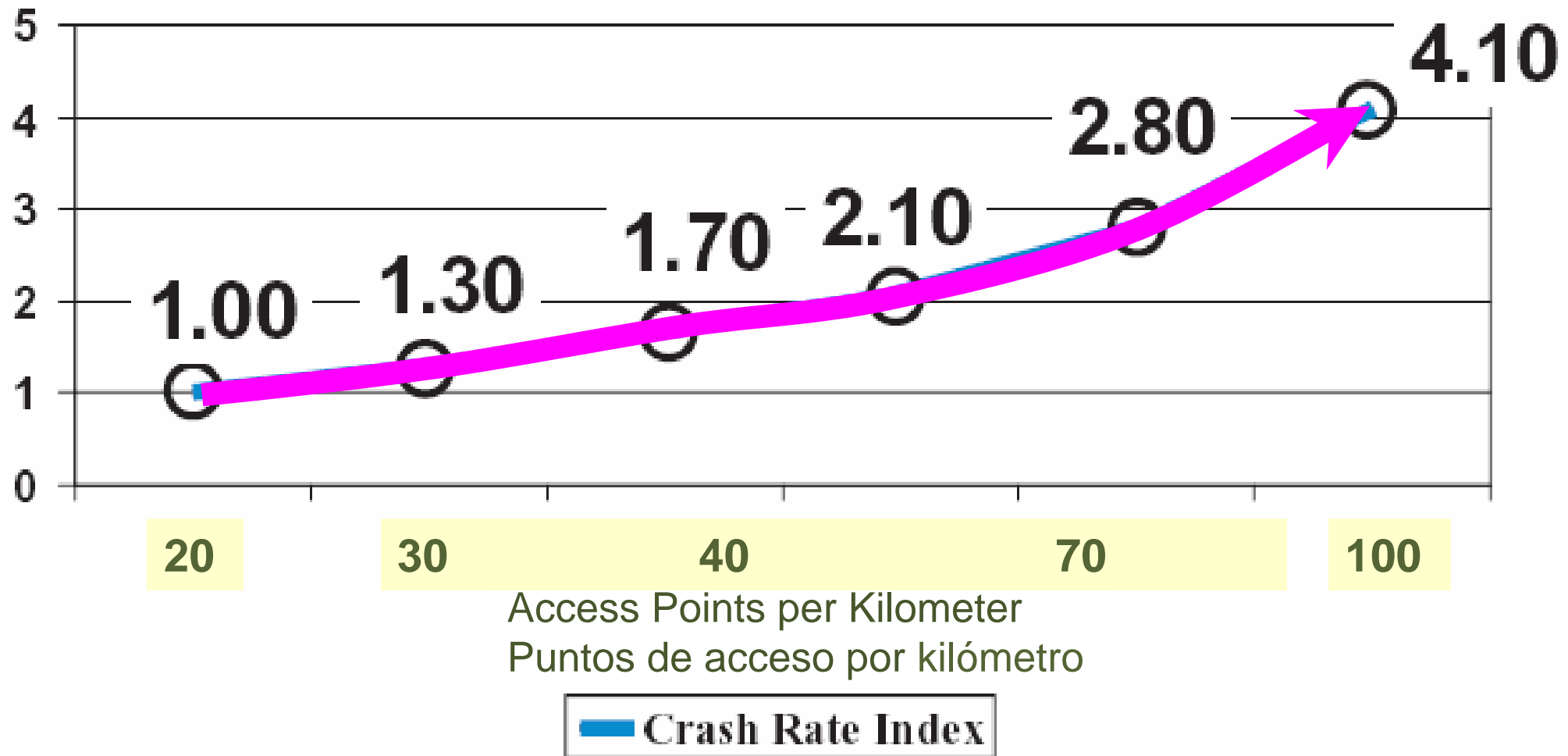
Freeway Interchanges

Entradas a Las Autovías



More Access Points = More Crashes

Mas Puntos de Acceso = Mas Accidentes



Source: NCHRP 420, 2000

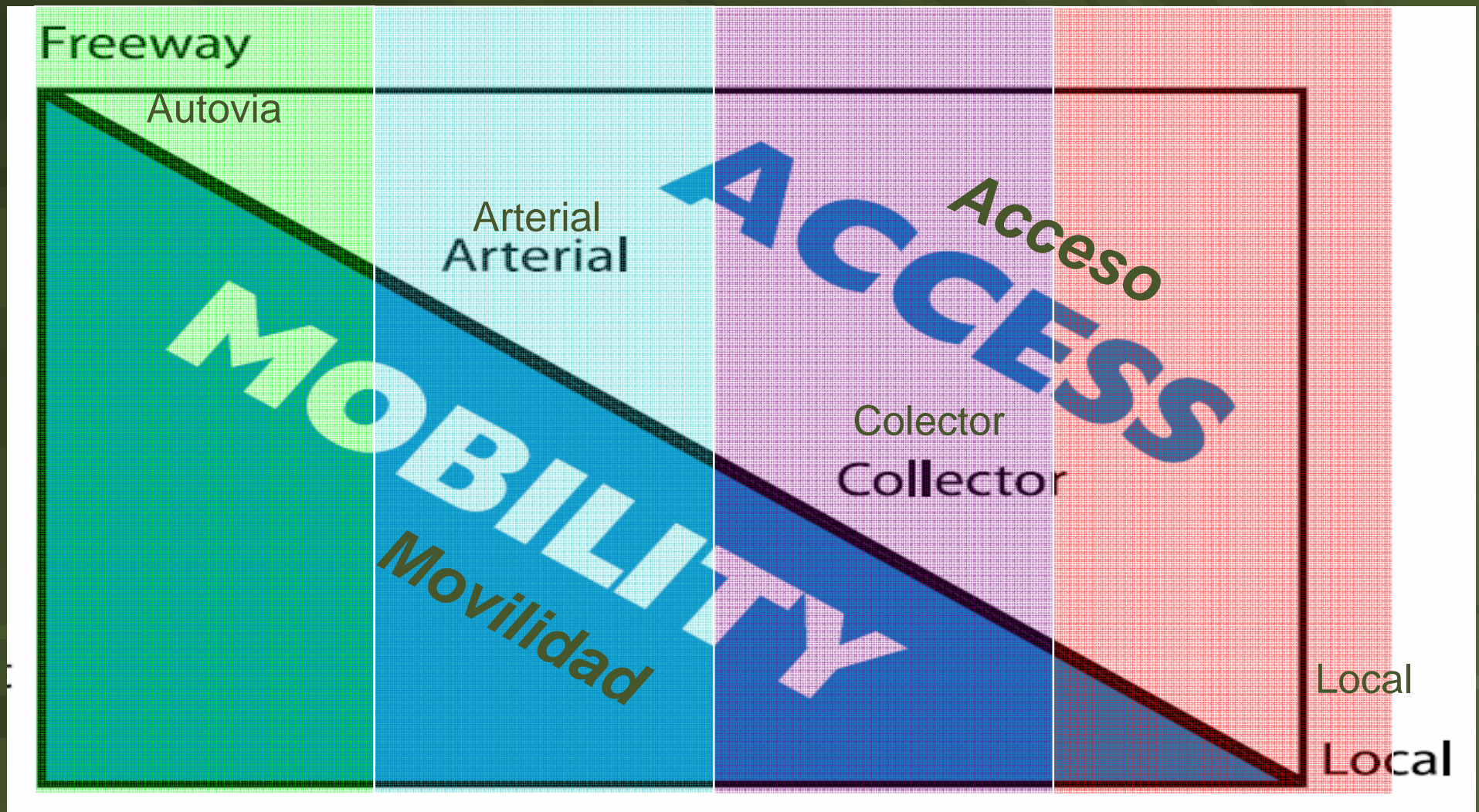
Source: Estimated from Various Sources

Figure 15. Composite accident rate indices.

What is Access Management?

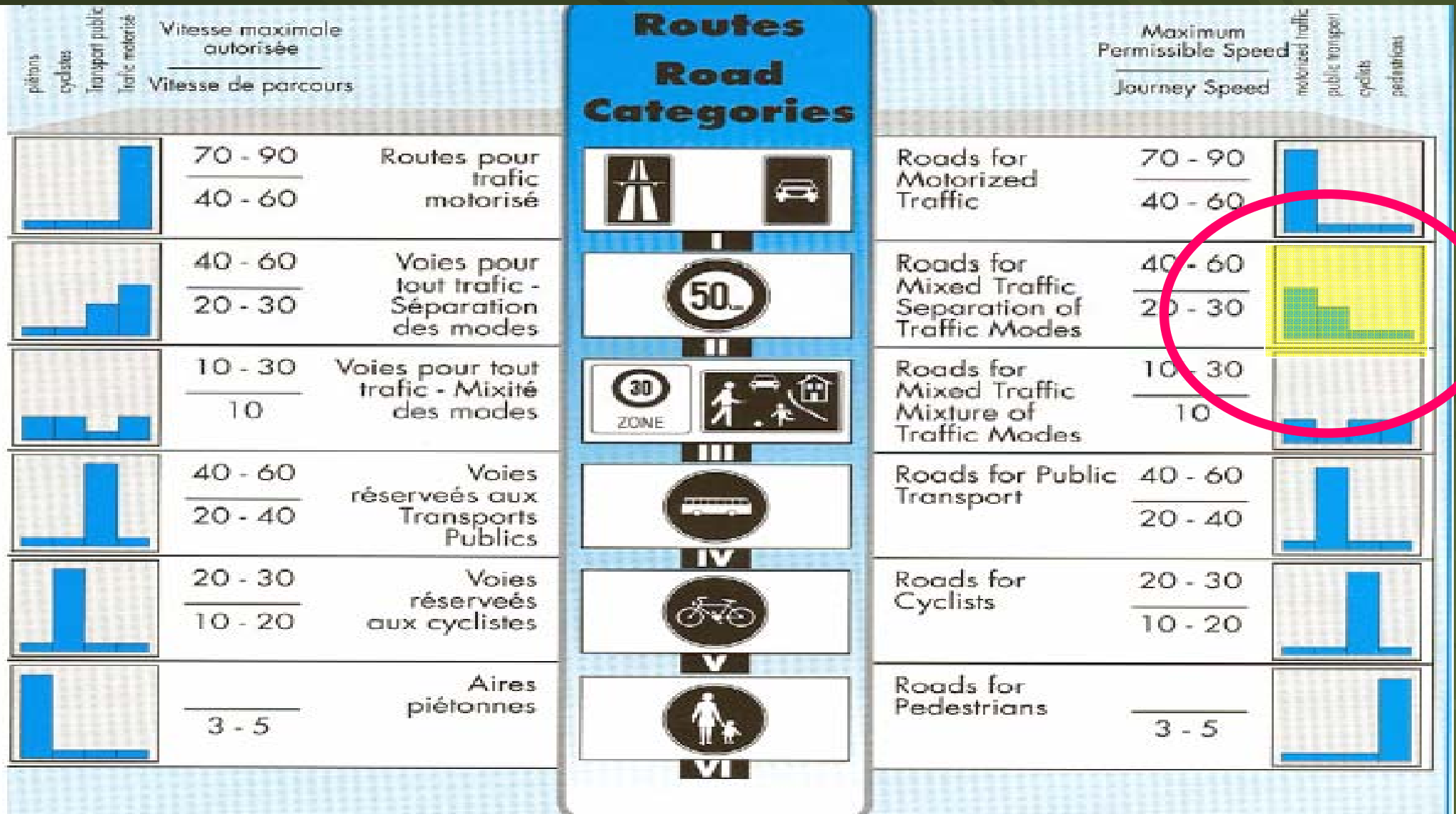
Different Roads Have Different Objectives

Diferentes Caminos Tienen Diferentes Funciones



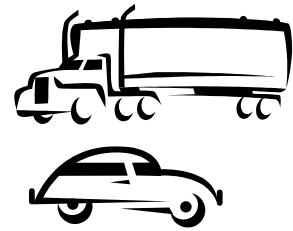
What is Access Management?

Roadway Types *the European Model*



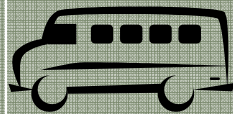
Source: Through Traffic in Small Towns - PIARC – Special Report 04.03.B 1991

What is Access Management?

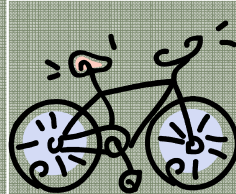


Motorized Traffic

Public Transport



Cyclists



Pedestrians



Roads for mixed traffic Separation of traffic modes

Source: Through Traffic in Small Towns - PIARC – Special Report 04.03.B 1991

What is Access Management?

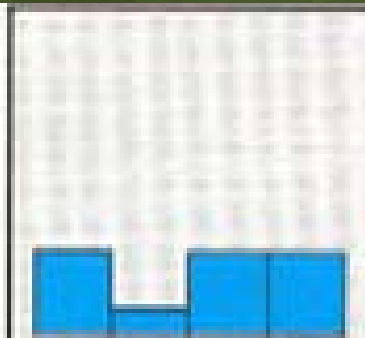
Balancing Modes



Roads for
Mixed Traffic
Mixture of
Traffic Modes

10 - 30

10



Holland



Ghana

Source: Dan Burden

Source: Dr. Parsosnson Ga. Tech
What is Access Management?

Paris Boulevard



What is Access Management?

Access Management Practices and Challenges



NATIONAL HIGHWAYS DEVELOPMENT PROJECT

Status as on April 30, 2005



Delhi - Mumbai NH - 1, 76 & 71 : 3419 Km.

PKL No.	Section	Length (km)	Current Status
1	Delhi - Meerut	14.00	Completed
2	Meerut - Ghaziabad	14.00	Completed
3	Ghaziabad - Delhi	14.00	Completed
4	Delhi - Gurgaon	14.00	Completed
5	Gurgaon - Faridkot	14.00	Completed
6	Faridkot - Ludhiana	14.00	Completed
7	Ludhiana - Jalandhar	14.00	Completed
8	Jalandhar - Amritsar	14.00	Completed
9	Amritsar - Delhi	14.00	Completed
10	Delhi - Jaipur	14.00	Completed
11	Jaipur - Ahmedabad	14.00	Completed
12	Ahmedabad - Mumbai	14.00	Completed
13	Mumbai - Goa	14.00	Completed
14	Goa - Bangalore	14.00	Completed
15	Bangalore - Chennai	14.00	Completed
16	Chennai - Kolkata	14.00	Completed
17	Kolkata - Silchar	14.00	Completed
18	Silchar - Imphal	14.00	Completed
19	Imphal - Dispur	14.00	Completed
20	Dispur - Jorhat	14.00	Completed
21	Jorhat - Tezpur	14.00	Completed
22	Tezpur - Dibrugarh	14.00	Completed
23	Dibrugarh - Jorhat	14.00	Completed
24	Jorhat - Tezpur	14.00	Completed
25	Tezpur - Dibrugarh	14.00	Completed
26	Dibrugarh - Jorhat	14.00	Completed
27	Jorhat - Tezpur	14.00	Completed
28	Tezpur - Dibrugarh	14.00	Completed
29	Dibrugarh - Jorhat	14.00	Completed
30	Jorhat - Tezpur	14.00	Completed

INDIAN ROAD NETWORK

National Highways	65559
State Highways	131899
Major District Roads	467763
Minor District Roads	2650000
Total	33 Lakh Kms (Approx.)

LEGEND

Completed	Red line
Under Implementation	Green line
To Be Awarded	Blue line
Port Connectivity	Black line
W.H. Number	Circle

Status of NHDP & Other Projects as on April 30, 2005

	04/04/05	04/04/05	Total
Total length (km)	8,844	7,100	15,944
Completed Total (all date) (km)	4,772	107	4,879
Under Implementation			
- Length (km)	1,848	107	1,955
- Corridor (km)	88	27	115
Letter of Award Issued / Agreement signed & Work to be started			
- Length (km)		406	406
- Corridor (km)		18	18
Total	1,088	1,373	2,461
Length to be awarded	88	42	130
Length to be awarded	8	8,194	8,202

Delhi - Kolkata NH 2 : 451 Km.

PKL No.	Section	Length (km)	Current Status
1	Delhi - Meerut	14.00	Completed
2	Meerut - Ghaziabad	14.00	Completed
3	Ghaziabad - Delhi	14.00	Completed
4	Delhi - Gurgaon	14.00	Completed
5	Gurgaon - Faridkot	14.00	Completed
6	Faridkot - Ludhiana	14.00	Completed
7	Ludhiana - Jalandhar	14.00	Completed
8	Jalandhar - Amritsar	14.00	Completed
9	Amritsar - Delhi	14.00	Completed
10	Delhi - Jaipur	14.00	Completed
11	Jaipur - Ahmedabad	14.00	Completed
12	Ahmedabad - Mumbai	14.00	Completed
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29	Dibrugarh - Jorhat	14.00	Completed
30	Jorhat - Tezpur	14.00	Completed

Kolkata - Chennai NH - 5 & 60 : 150 Km.

PKL No.	Section	Length (km)	Current Status
1	Kolkata - Howrah	14.00	Completed
2	Howrah - Durgam	14.00	Completed
3	Durgam - Secunderabad	14.00	Completed
4	Secunderabad - Hyderabad	14.00	Completed
5	Hyderabad - Bangalore	14.00	Completed
6	Bangalore - Chennai	14.00	Completed
7	Chennai - Kolkata	14.00	Completed
8	Kolkata - Silchar	14.00	Completed
9	Silchar - Imphal	14.00	Completed
10	Imphal - Dispur	14.00	Completed
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27	Jorhat - Tezpur	14.00	Completed
28	Tezpur - Dibrugarh	14.00	Completed
29	Dibrugarh - Jorhat	14.00	Completed
30	Jorhat - Tezpur	14.00	Completed

Chennai - Mumbai NH - 4, 7 & 6 : 1200 Km.

PKL No.	Section	Length (km)	Current Status
1	Chennai - Madurai	14.00	Completed
2	Madurai - Tiruchirappalli	14.00	Completed
3	Tiruchirappalli - Karaikal	14.00	Completed
4	Karaikal - Pondicherry	14.00	Completed
5	Pondicherry - Karaikal	14.00	Completed
6	Karaikal - Pondicherry	14.00	Completed
7	Pondicherry - Karaikal	14.00	Completed
8	Karaikal - Pondicherry	14.00	Completed
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29	Pondicherry - Karaikal	14.00	Completed
30	Karaikal - Pondicherry	14.00	Completed

NORTH SOUTHER & EAST WEST CORRIDOR

Corridor	Length (km)
North-South Corridor	14,113.75/2,747
East-West Corridor	14,113.75/2,747
Total	28,227.50/5,494
100%	28,227.50/5,494



India

The Golden Quadrangle

Practices and Challenges



costly, and often, impossible. The result is that the main traffic on the National Highways is subjected to a lot of hardship and there is widespread criticism about the deteriorating level of service.

3. The absence of legislation empowering the competent authority to remove

India - Enabling Legislation

The Control of National Highways (Land and Traffic) Act, 2002



congestion, waste of fuel, reduced speed, high incidents of accidents, high vehicle operating costs and unhealthy and unhygienic conditions. It has been observed that highways are frequently dug up by utility organizations and the traffic on highways in danger. The highway authorities have no adequate legal authority to prevent such nuisances.

5. To overcome the aforementioned problems, it is proposed to bring the Bill in Parliament to enact legislation to regulate traffic, as well as, the right of way on the National Highways. The salient features of the proposed legislation are as follows:-

Non Standard Vehicles



Practices and Challenges

Road Access Management in Iran

Issues and Regulations

Dr. Saffarzadeh – Ministry of Transport – PIARC Member



Source: Dr. Saffarzadeh – Ministry of Transport – PIARC Member

Practices and Challenges

The Problem of Encroachment USA – Circa 1700's



Picture found by:
Philip Demosthenes

Practices and Challenges

Pedestrian Safety



South Africa

Practices and Challenges

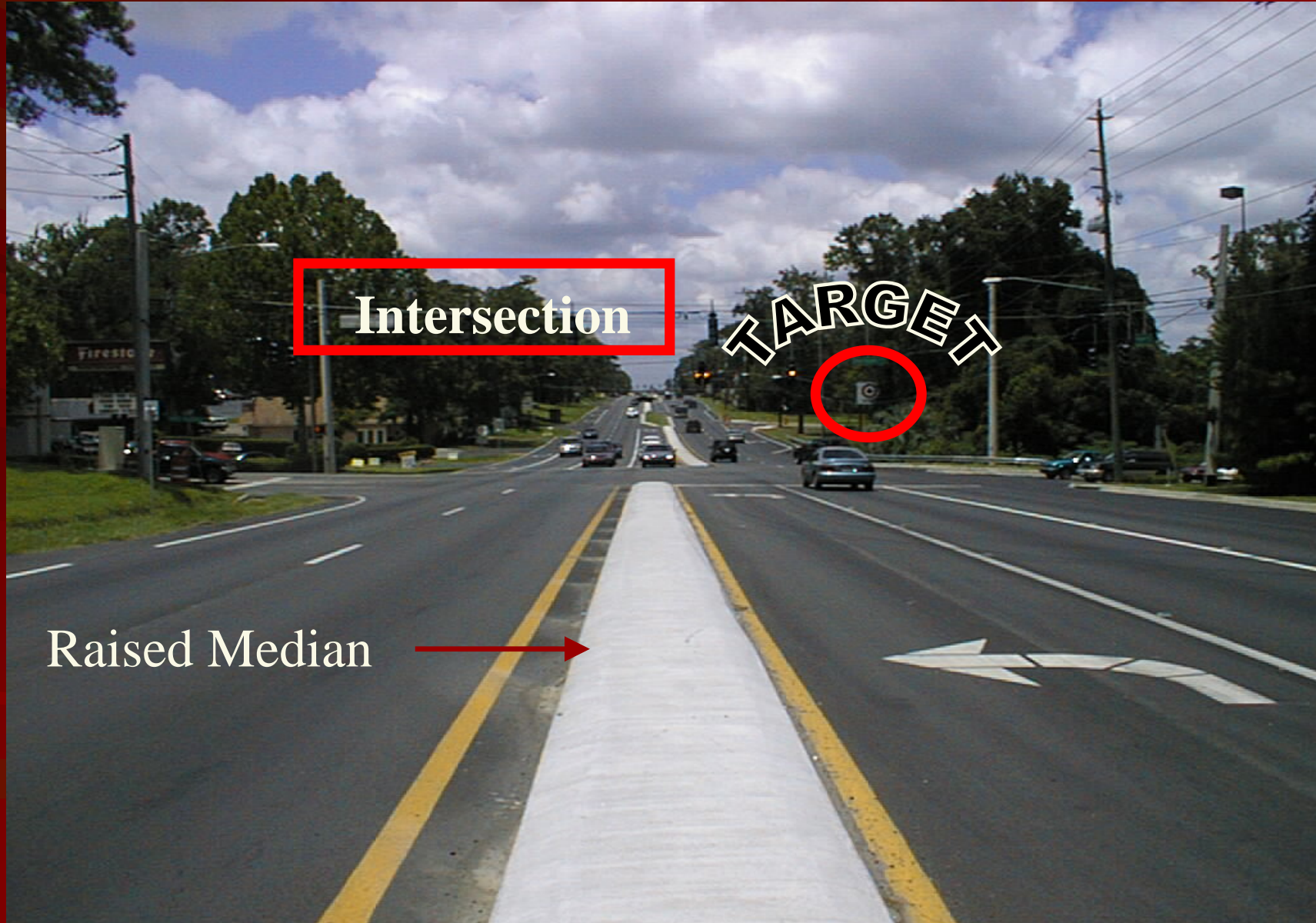
Pedestrian Safety

Center Lane

Carril del Centro



With New Median *Con Camellon*



Access Management Can Be Controversial

Green Cove 'road wars' heating up

By Bill Broome
Staff Writer

GREEN COVE SPRINGS - The "line wars" between the Green Cove Council and a City Council people's war are heating up.

Group claims victory in median battle

Transportation planners recommend project redesign



Gloria Aboud, FLORIDA TODAY

By Dennis Thompson Jr.
FLORIDA TODAY

Business owners and residents along South Patrick Drive won a battle Wednesday in their fight against the raised median threatening to tear their community apart.

They convinced Brevard County's transportation planning group to oppose state plans to widen South Patrick Drive to four lanes, with a raised median separating the northbound and southbound lanes.

Residents of Indian Harbour Beach and Satellite Beach said the median would hamper traffic and rob businesses of customers who would have to go out of their

TRANSPORTATION

way by U-turning to reach shops across the road.

"I think we won today. I thought we got a very fair shake at that meeting," said Richard Ferry, president of Valjean Corp. on South Patrick Drive. "But to use the cliché, I'm cautiously optimistic."

"Like all political bodies, they love to tell you everything's taken care of to defuse the situation, then things go into planning, and six or nine months from now God knows what you've got."

See MEDIAN, Next Page

Businesses want median erased from road plan

Opponents say a median on State Road 44 would cause too many access problems for area stores.

By GEORGE WILKENS
Tribune Staff Writer

LECANTO — It will be a couple of weeks before state Department of Transportation

without a median, to accommodate turning, Fowler said.

Charles R. Clendenny of CRC Fence & Garden, who helped organize a petition drive opposing the median, said the median also was removed when the highway was widened from County Road 381 through Inverness.

Clendenny said that when DOT amended plans to include the raised median, it failed to take into account the many large delivery trucks serving S.R. 44 businesses.



The median on Memorial Drive, here dividing a westbound stretch of the road toward Stone Mountain, has been blamed for

forcing merchants to close or relocate their businesses since the concrete strip was installed as a safety measure in July.

Up against the 6-inch wall

Median saves lives, costs customers

LEAVING MEMORIAL DRIVE: Merchants say the concrete strip built to reduce accidents has made their businesses inaccessible, forcing them to close or relocate.

By Katie Long
Staff writer

Nine months after workers poured a 4.3-mile slab of concrete down the center of Memorial Drive, transportation officials say the median is saving drivers.

But merchants along the strip say it's killing their businesses. The Blockbuster Video near Memorial College Avenue is gone. So is the Ace Hardware Workbench across the street from Memorial

blend shopping center. A Pike Nursery moved a couple of blocks east and off Memorial Drive onto Rays Road.

Duane County stores and shops along the DeKalb County stretch from Interstate 285 to Goldsmith Road have closed or moved to more accessible locations since the 6-inch-high concrete wall went up in late July.

"Since the median has gone in, it's been very difficult to lease any property along there, and all business is dropping off," said a real estate agent who handles property along Memorial Drive.

"For a destination-type place like Nooters [restaurant], it's OK," said the agent, who asked not to be identified.



Merchant Dave Cardwell says the Memorial Drive median ruined his business.

Please see MEDIAN, B10 ►

It's Controversial

So speak the language of your shopkeepers

Jesyon Aksè



Haitian Creole

Source: Florida DOT



Spanish

Practices and Challenges

South Africa

Draft

National Guidelines for Road Access Management in South Africa

Revised edition
February 2004

COTO: Committee of Transportation Officials

South Africa

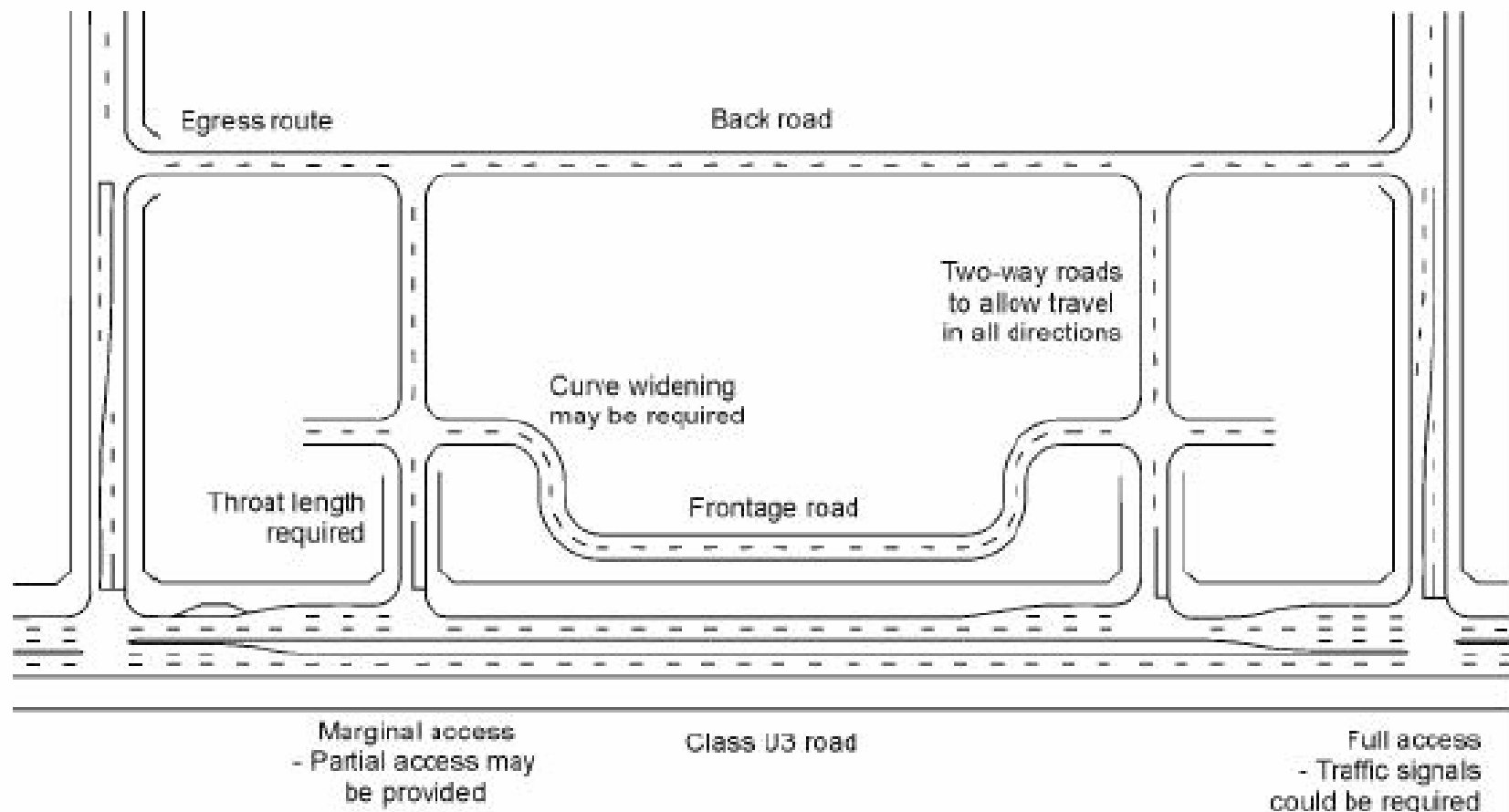


Figure 5.5 Frontage road on a Class U3 road

Informal Settlement – South Africa

Equity is a major concern



Informal Trading Area South Africa



Practices and Challenges

Boulevard - Beijing China



Source: Kristine Williams CUTR

What is Access Management?

China

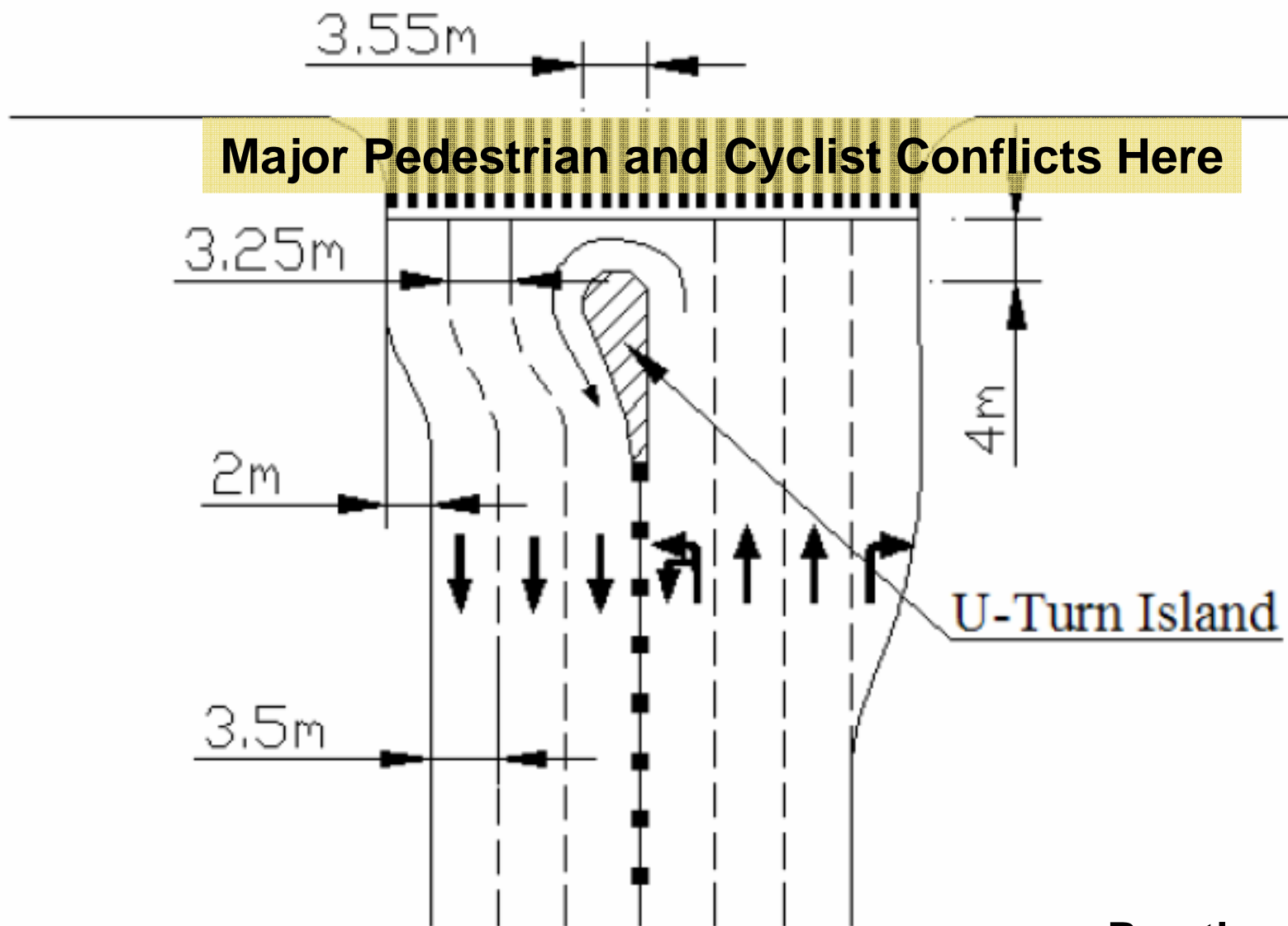
Analysis of Median Use on Beijing Urban Roadways

by

Shi Yu Juan¹, Yang Xiao Kuan², Kristine M. Williams³,

Transportation Research Center,
Beijing University of Technology, Beijing, China

Accommodating U-Turns



Practices and Challenges

Figure 5. U-turn Island at Approach of Signalized Intersection

Some Considerations for Developing Nations

- Different problems than more developed nations
- Must learn what works for their situation
 - Remoteness of many areas
 - Less money



Possible Future Activities

- Report still in Draft stage
- More cross-national contact
 - More training seminars
 - More PIARC involvement
 - More engineers educated outside their country
 - PIARC's On line network of experts



Further Information

Más Información

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