

On-Street Priority Transitways

Sustainable Transport
Using Available Right-of-Ways

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Parsons Brinckerhoff

The Urban Transit Challenge

- Increase urban mobility & transit speed
- Use available rights-of-way
- Minimize costly tunneling and elevated structures
- Integrate transit with communities
- Improve livability of urban public spaces.



Cairo, Egypt

A Sustainable Approach: On-Street Transitways

- LRT, Bus, or Mini-Bus
- Semi-Exclusive Lane or Guideway:
 - No other traffic in lane
 - Pedestrians and cars cross at-grade
- Enhanced Stations or Stops
- Limited Underpasses & Overpasses.



On-Street BRT Transitways

- Curitiba, Brazil
 - Extensive Busway System
- São Paulo, Brazil
 - Four Distinct Busways
- Quito, Ecuador
 - Electric Trolleybus Transitway
- Bogotá, Colombia
 - High-Capacity Transitway.



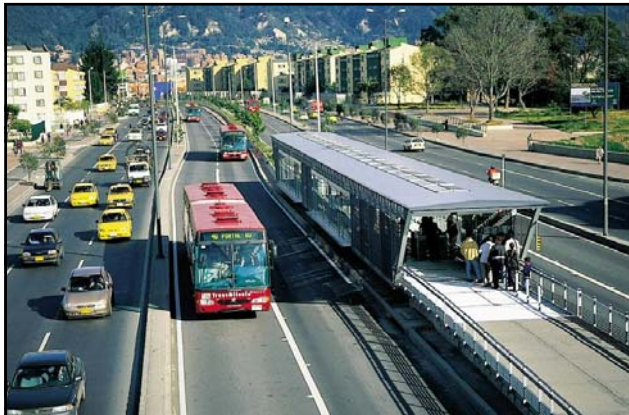
Curitiba, Brasil



Sao Paulo, Brasil



Quito, Ecuador



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Bogotá, Colombia

On-Street LRT Transitways

- Segments of many North American, European, & other LRT systems:
Birmingham, Boston, Cairo, Calgary, Cologne, Dallas, Denver, Dresden, Hanover, Hong Kong, Istanbul, London, Los Angeles, Manchester, Manila, Munich, Pittsburgh, Portland, Sacramento, San Diego, San Francisco, San Jose, Stuttgart, Toronto, Tunis, & others.

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San Diego, California

Challenges for Implementation

- Finite space (width) available - must accommodate:
 - Transitway & Station Platforms
 - Traffic Lanes & Turning Lanes
 - Sidewalks & Pedestrian Amenities
 - Parking
 - Landscaping



Tunis, Tunisia

Challenges for Implementation

- Integration between elements - need to coordinate:
 - Transit and traffic movements,
 - Transit with pedestrian circulation,
 - Increased pedestrian activity and traffic,
 - Business concerns (esp. parking)



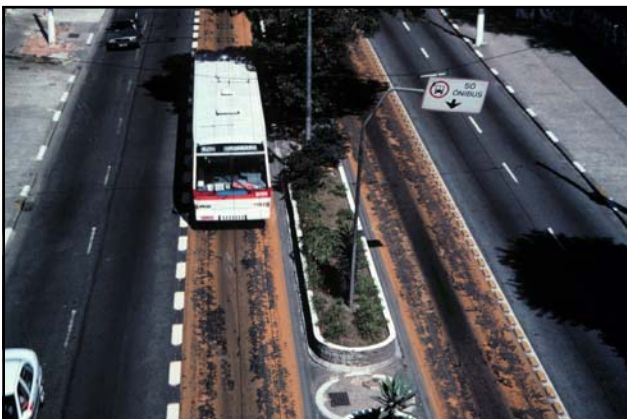
Melbourne, Australia

Key Planning & Design Issues

- Placement of Transitway:
 - Center Of Street (median)
 - Both Sides of Street (curb lanes)
 - One Side of Street
 - Other Configurations



Ciudad de México



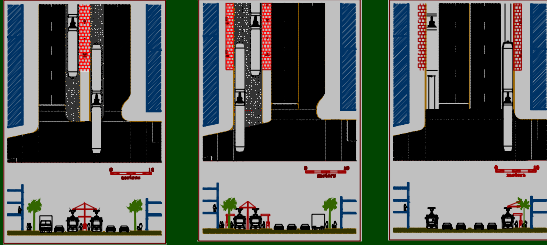
Sao Paulo, Brasil



Quito, Ecuador

Key Planning & Design Issues

- Station Platform Placement:
 - Center, Side, On-Sidewalk, Other



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Bogotá, Colombia

Key Planning & Design Issues

- Access for Emergency Vehicles
- Access to Utilities & Potential Relocation
- Business Concerns:
 - On-Street Parking
 - Visibility of Facades
- Access to Abutting Properties (curb cuts).



Operational Issues

- All-Stop vs. Express & Local Service
- Left or Right Turns Within or Across Transitway?
- Signal Preemption
- Effect of Fare Payment and Boarding on Operations & Capacity.



Curitiba, Brasil

Planning & Design Opportunities

- Enhanced Paving
- Attractive Barriers (for Traffic & Pedestrians)
- Landscaping, Trees, Street Furniture
- Pedestrian-Friendly Building Facades
- Supportive Urban Design
- Transit-Oriented Land Uses.





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Cairo, Egypt



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Stuttgart, Germany

Potential of On-Street Transitways

- Enhance transit speeds, capacity, & comfort within available rights-of-way
- Provide highly visible transit: (vehicles, guideway, and stations)
- Opportunity to upgrade street design: (paving, signage, & landscaping)
- Potential for incremental implementation
- Guide improved patterns of development.

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Portland, Oregon

On-Street Priority Transit Facilities



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