URBAN ACCESS CHALLENGES FOR GOODS MOVEMENT IN COMPLETE STREETS ENVIRONMENTS

Dr. Alison Conway
City College of New York
Lehigh Valley Planning Commission - Freight Advisory Committee
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Project Funder and Partners

NYSERDA

The City College of New York
Project Motivation

- Rapid redesign of urban streets
- New design guidance → limited information on goods movement
- Existing guidebooks focus primarily at a network level
- Rapid evolution of logistics
Methodology

- Literature review
- Web-based survey
- Expert feedback
What is urban freight?

• Broad range of business sectors
  • Manufacturing and warehousing
  • Construction
  • Retail
  • Hospitality
  • Service
  • Hospitals, schools, ....

• Waste management
• E-commerce
COMMON CHALLENGES
Design Vehicle vs. Control Vehicle

- Minimum Truck
  - WB 62/67
  - SU 30
  - DL-23

- Intercity, City, and School Buses
Turning Radius

- **Design**
  - **Median nose design**
  - Mountable curbs/flush pavement markings
  - Recessed stop line
  - Curbside parking or bicycle lanes

- **Operations**
  - Restrict conflicting turning movements

- **Regulatory**
  - Parking restrictions
  - Vehicle size restrictions
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Turning Blind Spots

• Design Elements
  • Bike boxes
  • Conflict zones

• Operational
  • Signal prioritization
  • Curbside infrastructure
  • Vehicle technologies

• Education programs
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VEHICLE PARKING SPACE
Vehicle Parking Space

- Design
  - Dedicated on-street loading zones
  - Offset/floating bus/bicycle lanes

- Regulatory
  - Zoning regulations → loading dock requirements
  - Pricing
  - Scheduling
  - Flexible use of curb space
  - Enforcement
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Curb and Area Access
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- Design Elements
  - Mid-block curb cuts
  - “Lincoln” curb
  - Shared streets

- Regulatory
  - Vertical clearance zone
  - Horizontal clearance zone
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Photo Courtesy of Laetitia Dablanc
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Speed Reducers

- Design
  - Speed cushions
  - Mini roundabouts

- Regulatory
  - Reduced speed limit
Network Connectivity

- Consider connectivity
- Consider impact of changes in directionality
Demand and Externality Management

• Demand Management
  • Off-hour deliveries
  • Urban consolidation centers
  • Lockers and pick-up points

• Emissions Management
  • Recognition schemes
  • Incentive programs
  • Low emissions zones
Final Products

• PDF Guidebook
• Educational Module

• Expected by September 2017
• Will be available on the MetroFreight Website:
  https://www.metrans.org/metrofreight-education
Questions?

• Contact
  Alison Conway
  Assistant Professor of Civil Engineering
  City College of New York
  aconway@ccny.cuny.edu