Integrating Freight into Livable Communities

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Project Objectives

Practical guidance for agencies on integrating freight into livable communities

Document state of the practice

Incorporate social equity considerations

Provide case study perspectives
Menu of Options

- Infrastructure Planning and Design
- Parking and Loading
- Land Use Management
- Traffic and Delivery Management
- Incentives
- Stakeholder Engagement
Case Studies

Average Daily Long-Haul Freight Truck Traffic on the National Highway System: 2007

Note: Long-haul freight trucks typically serve locations at least 50 miles apart, excluding trucks that are used in movements by multiple modes and mail.

Factors that make a community livable create conditions that increase freight demand while reducing freight access.
What Factors?

Road diets

Reapportioning the right of way to prioritize pedestrian use, introduce bicycle lanes, and implement on-street parking generally requires a reduction in lane width or outright elimination of travel lanes. This reduction in capacity focuses activity on the street.

Driver oriented

Pedestrian oriented
What Factors?

Parking/Loading

Because of the focus on street level businesses, livability plans may call for a reduction in dedicated loading areas to promote continuity. While on-street parking can and is used, a lack of dedicated loading areas can result in double parking or truck delays.

Parking fines can cost delivery fleets millions of dollars per year in large urban areas (Rhodes 48).
What Factors?

Turning radii

Narrow intersections benefit pedestrians, whose crossing distance decreases. However, this reduces the space available for trucks to navigate turns, which can cause congestion, accidents, and damage to sidewalks/curbs.

A truck encroaching on a sidewalk at a tight intersection is not an indicator of a pedestrian-friendly street.
Complication:
In addition to being affected by livability measures, freight itself affects livability in a variety of ways.
Impacts:

• Safety
• Emissions
• Noise
• Vibrations
• Congestion

Where livability is a priority or goal of the planning process, freight runs the risk of not being considered except as an afterthought or as something to be excluded.

Because livability includes economic prosperity, freight will play a role in the community—it cannot be ignored.
Livability

(safety)
(bike lanes)
(walkability)

Freight

(demand)
(noise)
(emissions)
(congestion)

(congestion)
(emissions)
(noise)

(intersection size)
(parking spaces)
(loading docks)

(access)
Integrating Freight and Livability

ISSUES AND CHALLENGES
Congested Freight Routes

http://tti.tamu.edu/2011/12/01/new-guidebook-helps-agencies-develop-effective-sustainability-measures/


Congested Freight Routes

Regional economic and quality of life impacts

De facto bypass routes and cut through traffic
Growth of Truck Traffic in Livable Districts

Credit: Kristine M. Williams
Residential and Industrial Sprawl
Urban Industrial Preservation Challenges

Central Eastside Industrial District
Portland, OR
Equity Issues

Equity Issues

Integrating Freight and Livability

STRATEGIES AND APPROACHES
I-4/Sелмон Expressway Connector

- Increases efficiency of freight movement
- Reduces adverse effects of heavy truck traffic
- Allows community roadways to be redesigned for increased livability

[Map Image]


http://www.wtsp.com/story/news/local/2015/01/12/project-to-shift-trucks-to-i-4-connector-restore-ybor-streets/21651223/
Jimmy Deloach Connector

Truck traffic around Port of Savannah creates roadway congestion

Connector bypasses 3 miles of SR21 and improves truck access to Port
Designated Truck Routes

Proactive guidance for regulating truck traffic to/from major streets and “last-mile” streets

Curbside space, parking ordinances, and parking enforcement are important on “last mile” streets

http://www.tampagov.net/sites/default/files/transportation/files/TruckRts.pdf
Designated Truck Routes

Source: Port San Antonio
Innovative Delivery Approaches


https://www.portlandoregon.gov/bps/article/480760
# Context Sensitive Strategies

## Applicability of Freight Facility Design Considerations on Non-Limited Access Roadways

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Low Activity</th>
<th>Community Oriented</th>
<th>Freight Oriented</th>
<th>Diverse Activity</th>
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<td>Geometric improvements</td>
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<td>Grade-separated crossings</td>
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<td>Truck routes bypassing conflict areas</td>
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<td>Access and circulation plan</td>
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<td>Way-finding signage program</td>
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<td>Pedestrian street crossing protection</td>
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**Legend:**
1 - Applicable
2 - Somewhat Applicable
3 - Limited Applicability

*Source: Florida Department of Transportation, Tampa Bay Regional Strategic Freight Plan*
Context Sensitive Roadway Design

Example: Right turn treatment

What characteristics are likely to be context-appropriate?

Source: Florida Department of Transportation, Freight Roadway Design Considerations, prepared by Renaissance Planning, Inc.
Context Sensitive Roadway Design

Source: City of Portland, Freight Master Plan
St. Johns Truck Strategy

https://www.portlandoregon.gov/transportation/article/87368
http://www.oregonlive.com/portland/index.ssf/2012/05/st_johns_residents_push_for_st.html
Boston On-Street Parking Strategies

Eliminate parking on one side of street from 8:00 to 11:00 a.m. to guarantee areas for loading;

Provide limited loading zones after 11:00 a.m. and space for short-term metered parking;

Regulate all previously unregulated curb space;

Extend meter hours of operation from 6:00 to 8:00 p.m.; and/or

Prohibit loading or curbside use during peak periods
Equity and Living Wage Jobs

BUILDING A 21ST CENTURY WORKFORCE: THE ALAMO ACADEMIES

The Alamo Academies, part of community college district Alamo Colleges, is a nationally renowned program that has opened doors to hundreds of high school students with college-level training in aerospace, information technology, advanced manufacturing and healthcare professions.
Lessons Learned

Integrated Transportation and Land Use Planning

Information on Trends and Needs

Education and Stakeholder Engagement
Integrated Transportation & Land Use Planning in Tampa Bay
Understanding Freight Trends & Needs

SH130 bypass route around San Antonio and Austin

Intended to relieve congestion for cars and trucks on I-35

However, a large proportion of traffic is destined for the city and does not utilize the route
Understanding Freight Trends & Needs

Education and Outreach
For Further Information

“Integrating Freight into Livable Communities”
National Institute of Transportation and Communities
NITC-RR-752
http://nitc.trec.pdx.edu/research/final_reports

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