Freight and the Seattle’s CBD: giving insight about the battle for the curb

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Talking Freight Webinar: Curbside management and freight deliveries
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The Load/Unload Infrastructure

Curb Parking Spaces

Alleys

Private loading/unloading infrastructure

Photos: Gabriela Giron, 2018
Seattle: the No. 1 growing U.S. city of the last decade

Sources: U.S. Census
MARK NOWLIN / THE SEATTLE TIMES
UFL Survey of Center City Private Loading/Unloading Infrastructure

- Residents and businesses depend overwhelmingly on the curb, not private loading bays
- 87% of Seattle’s Center City buildings rely solely on deliveries from curb and alley load/unload spaces, documenting the importance of public spaces.
SDOT commissioned this research to understand current commercial vehicle operations in urban curb spaces.

The UFL research team observed all types of commercial vehicles loading/unloading at the curb.
Q1. Where were Commercial Vehicles parking?
Load zones provide areas solely for loading and unloading people and goods. Load zones should not be used for parking.
Other Seattle’s Curb Uses

- Center Lane
- Buses Only
- No Stops
- Tow-Away Zone
- 2 Hour Parking
- 7AM-6PM Except Sun. - Hol.
Q2. What is the commercial vehicle fleet configuration?
Data Collected

Commercial Vehicles

- Delivery Vehicles (CVs)
- Service Vehicles (SVs)
- Garbage Trucks
- Construction Vehicles

- Trailer
- Box Truck
- Cargo Van
Q3. Who is using the Commercial Vehicle Load Zones (CVLZs)?
Data Collected

- Commercial Vehicles
- Passenger Vehicles
- Taxi
- Motorcycles
- Public transit
- Others
Study Area

The study was conducted in a three-by-three city block grid around one building in each of the following categories:

1. Hotel;
2. Historic commercial building;
3. Residential tower;
4. High-rise office building; and
5. Retail Center.
Data Collection Method

Human observers monitored:

a. the time commercial vehicles (CVs) spent in the curb;
b. where CVs parked; and
c. the time non-CVs spent in CVLZs.
Curb Occupancy Study

Data were collected during the morning peak of each building.

For the residential tower, data were collected from 8:00 am to 5:00pm.

The data collected provided a sample of 1,816 on-street parking operations: 1,254 CVs and 562 non-CVs.

Credits: Gabriela Giron (2017)
Curb Occupancy Findings
Most commercial vehicles were parked outside CVLZs

- Unauthorized Parking: 41%
- CVLZ: 34%
- Meter Parking: 21%
- Other: 2%
- Temporary Construction: 2%
CVs and passenger vehicle drivers are using CVLZs and PLZs fluidly

26% of all CVs parked in PLZs.

Of all vehicles parked in CVLZs 52% were passenger vehicles; but half of these were only there 5 min.
CVs dwell times are mostly short, but some operations clearly take longer.

<table>
<thead>
<tr>
<th></th>
<th>30 min or less</th>
<th>More than 30 min</th>
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<tbody>
<tr>
<td>All CVs</td>
<td>72.2%</td>
<td>27.8%</td>
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<tr>
<td>Delivery vehicles</td>
<td>81.0%</td>
<td>19.0%</td>
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</tbody>
</table>
27% of SVs parked for an hour or more

Service vehicles

- 30 min or less
- 30 - 60 min
- More than 1 hr

All CVs
Service vehicles (SVs) made up 36% of the total CVs parked in the five locations.

The Seattle data shows between 20 and 40% of commercial parking operations are service trips across study areas.
Conclusion

The research team developed a replicable and transferable data collection method to record commercial vehicle parking behavior.

This data informed about Seattle’s CVs parking behavior and gave the opportunity to revise existing parking policies.

Seattle’s data shows that a big share of commercial users of the on-street parking infrastructure were not in compliance with the current parking management strategies.

This research displays the importance of providing tailored solutions that consider the spectrum of load/unload operations. For example, servicing trips could skew the dwell time distribution of all CVs, as they tend to take over most of the longer CV parking operations.
Other SCTL’s Research

• Curb allocation Project

• Common Locker Test Pilot

• Common MicroHub

• Technology Integration to Gain Commercial Efficiency for the Urban Good Delivery System, Meet Future Demand For City Passenger and Delivery Load/Unload Spaces and Reduce Energy Consumption

For more information:

http://depts.washington.edu/sctlctr/research
Questions?

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