Leveling the Playing Field for Sustainable Transportation

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Transportation Choices for Sustainable Communities
Sources:


- Transportation Studies in the 21st Century: Accommodating all Modes, panel at the 2014 ProWalk ProBike ProPlace conference

- ITE Transit Council Committee: “Transit and Traffic Impact Studies”
Why we need CHOICES…

C - Congestion
H - Health
O - Others
I - Impacts
C - Costs
E - Efficiency
S - Safety
It's All About Choices

Unhealthy Food Choices

Unhealthy Transportation Choices

Leveling the Playing Field for Sustainable Transportation
Consequences

**Effects of an Unbalanced Diet**
- coronary heart disease
- high blood pressure
- obesity
- tooth decay
- diabetes

**Effects of an Unbalanced Transportation System**
- Auto Congestion
- Air Pollution
- Climate change/GHG
- 20 % fatality rate for pedestrians
- And all the problems to the left as well
Status Quo: Singular Focus on Maintaining Auto LOS D
Unintended Consequences:

1. Inequitable Development Conditions

- First in pays least
- Last in pays most (or changes project)
2. SPRAWL
3. Huge wide swaths of asphalt unused for 22 hours a day
Focus on 2 hour period-
LOS Measure Here
4. Double Standard
Problem: only measure one thing, only improve that thing

- Undue attention is given to the LOS of the surrounding freeways and arterials

- Very little attention to the Transit Service
  - Report may mention the number and frequency of busses, but does not rate whether the existing transit service is "good" or "adequate"

- Conclusion often is that Roadways are operating at LOS F and "need improving" whereas the Transit service just "is".
Result of Lopsided Analysis

MORE Capacity for Auto

NO Changes to Transit, Bicycle or Pedestrian Infrastructure
21st Century Setting - Social Landscape is Changing

- Fewer miles driven
Fewer Teen Drivers 1983-2010
21st Century Setting:

CAR FREE Households Are Increasing
Even State Laws Are Changing

- Many States now have GHG reduction targets

- SB 743 in California prohibits vehicle congestion from being considered significant impact in Environmental Documents
Many Metrics but all still only measure AUTO Travel

- Roadway volume-to-capacity (v/c)
- Auto delay at Intersection
- Corridor travel time
- Vehicle miles of travel
WHAT YOU MEASURE... IS WHAT YOU GET/ FIX
Purpose of ITE Committee on Transit & Traffic Impact Studies

Document whether and how:

- Transit Quality of Service is addressed.
- Traffic impacts on transit service and operations is addressed.
- Transit providers are involved in the TIS process.
State of the Practice Study Methodology

- Survey practitioners on the state of the practice on Transit and Traffic Impact Studies.
- Review of known traffic impact studies and TIS guidelines to see how well they address transit.
- Write a “State of the Practice” report to be published by ITE.
- Phase 2 will be to develop an ITE Recommended Practice
How to Level the Playing Field Between Modes??

1. Need to analyze transit, bikes and peds at the same level of scrutiny as for autos.
2. Impact of auto traffic on other modes should be analyzed not vice versa.
3. Include ways to improve mobility of transit users, cyclists and pedestrians
Current Transit QOS Measurements*

- **SERVICE AVAILABILITY**
  - Spatial - where the routes are
  - Temporal – hours of service, headways
  - **Capacity** - [function of vehicle size and headways] (1)

- **COMFORT AND CONVENIENCE**
  - Passenger load
  - **Average Speed** - Travel Time (2)
  - Reliability
  - Safety and security
  - Stations and stops

*Source: Transit Capacity and Quality of Service Manual 3rd Edition, TRB
Possible Metrics for use in Traffic Studies

1. Capacity

- compare capacity of traffic lanes serving a site to the capacity of transit service in the same corridor

Mitigation measures to improve capacity:

- Decrease headways
- more/larger train cars
SAN FRANCISCO MUNI – Frequency standards

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Source: SF Congestion Management Program, SFCTA, 2013
Possible Metrics for use in Traffic Studies

2. Travel time-
   - Compare transit travel time to the site to the auto-travel time.

Mitigation measures to improve travel time
   - Transit signal preemption
   - Bus only lanes
## SAN FRANCISCO CMP – Travel Time Comparison

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Source: SF Congestion Management Program, Appendix 6, SFCTA, 2013
21st Century Way of Thinking:

1. System is not “failing” when there is auto congestion.

2. Congestion indicates that more & better public transit is needed as well as more & better bikeways/walkways.

3. Studies must measure transit, bike and pedestrians as seriously as as automobiles.

4. We can start by assessing – with the aim of improving – transit travel times and capacity to project sites.