

Travel Impacts of Smart Growth Land Use Projects in CA

For the

Active Transportation & Livable Communities (ATLC) meeting

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Terry Parker, Senior Planner

Caltrans Planning Division



Overview of Presentation

➤ Topics:

1. “Smart growth”
2. “Trip Generation” and its importance
3. Problems with existing data & tools
4. New evidence
5. **Efforts underway**



“Smart Growth”



- **Urban Infill**
- **Compact development**
- **Mixed land uses**
- **Jobs-Housing “fit”**
- **Safe, convenient pedestrian facilities**
- **Quality transit service**
- **Access to jobs, services, open space**



Transportation Impact Analyses/Studies

Required by local agencies for most proposed land use projects. Estimate travel to/from projects (especially during peak travel periods); associated impacts; and suggested mitigation measures.

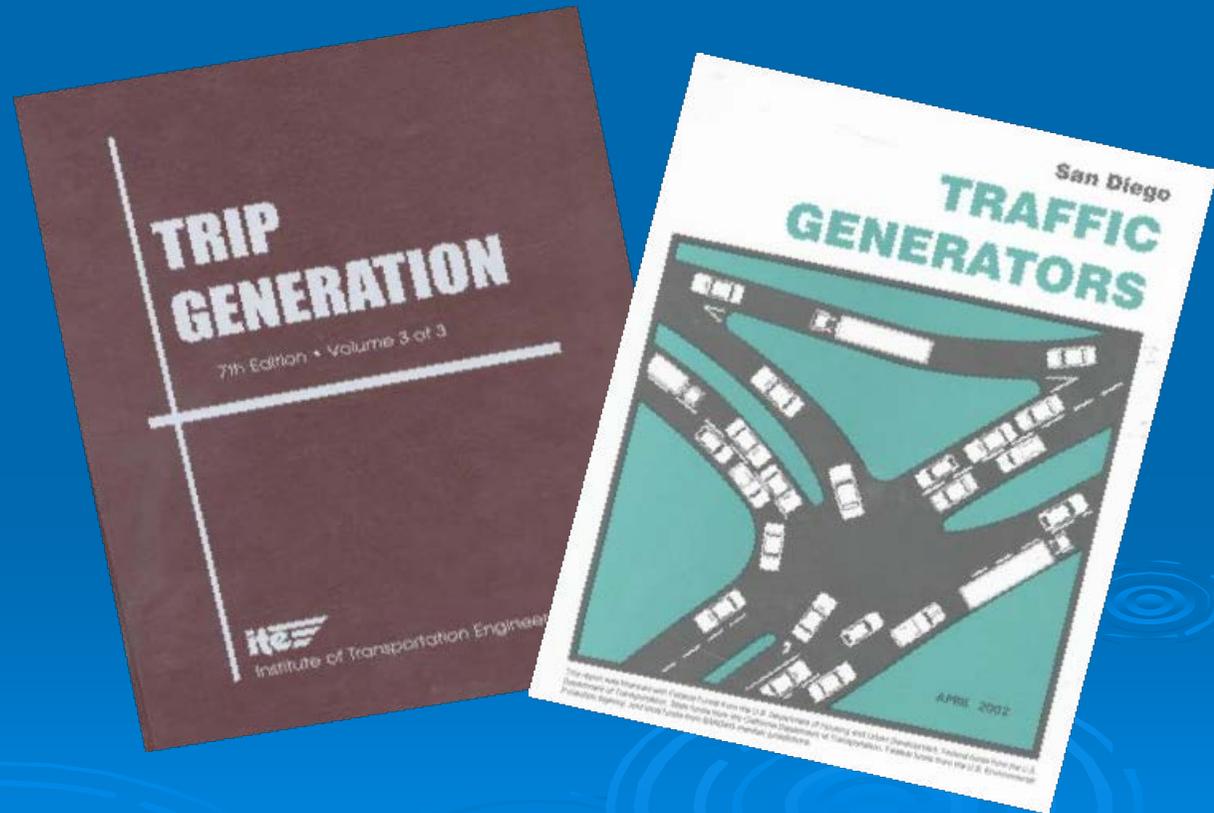
Step #1: Trip Generation:

How many (vehicle) trips will be made to/from project, especially during "peak" travel hours?



Trip Generation Rates Data - *Sources:*

1. **Published vehicle (only) Trip Rates:** *ITE*, SANDAG)*
2. **Adjustments to Trip Rates** (e.g., *ITE's mixed-use methodology*) **-or-**
3. **Collect new data at similar sites nearby.**



* *ITE = Institute of Transportation Engineers (national organization)*

However, ITE Cautions:

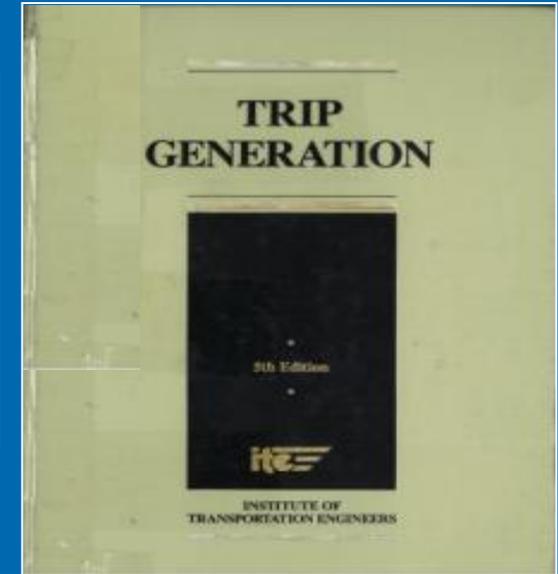
*“If the site is located in a **downtown** setting, served by significant **public transportation**, or is the site of an extensive **TDM program**, the site is not consistent with the **ITE data**.”*

*ITE Trip Generation Handbook, 2nd Edition. June 2004. (Pg. 15)



And, ITE advises:

“ It may be necessary to adjust the trip generation rates to reflect the use of alternative modes of transportation.” (ITE Handbook, 2004)



...However, there is currently no accepted methodology or data available in the U.S. for such projects.

Effects of Lack of Data for Smart Growth Projects:

- **Confusion/controversy**
- **Significant costs & delays**
- **Law suits**
- **No data is provided re: pedestrian, bicycle or transit use.**
- **Wide agreement: An acceptable method to estimate travel for smart growth projects is needed -- *and long overdue!***

Recent Evidence -

- ▶ A national study* collected traffic data at 17 transit-oriented developments (TODs) in the U.S. *Found:* **Vehicle trips av. 44% lower during peak hours than ITE trip rates predict.**

***Transit Cooperative Research Program (TCRP)** Study #128, 2008. Also see: *“Vehicle Trip Reduction Impacts of Transit-Oriented Housing”* by Robert Cervero & GB Arrington, in Journal of Public Transportation, Vol. 11, No. 3. 2008.



More Evidence -

Caltrans' CA Infill Trip Rates study*

- ▶ Collected trip rates data at 25 urban infill sites in the SF Bay Area, LA, and San Diego (in 2007 & 2008).
- ▶ ***Most sites averaged 26 to 40% less traffic than ITE rates predict (during peak travel periods).***

* “**Trip-Generation Rates for Urban Infill Land Uses in California**” Kimley-Horn & EPS for Caltrans, 2009. Report posted at:
<http://www.dot.ca.gov/hq/tpp/offices/ocp/projects.html>



NCHRP 08-66: National Urban Infill Trip Rates study

- Caltrans recommended study to national Transportation Research Board in 2007. Study started in Fall 2008.
- Goals:
 - Develop an adjustment method and test it.
 - Provide additional site data at 10 urban infill sites in Washington D.C.
- **Underway - Expected publication: soon**

Meanwhile, “back at the ranch” – Caltrans/UCD study

“Smart-Growth Trip-Generation Rates Methodology” project

- **GOAL:** Provide an acceptable method to estimate multi-modal trip-generation for urban infill, mixed-use, and transit-oriented land use projects in California for use in Traffic Impact Analyses and CEQA. **Provide data needed to identify adequate multi-modal mitigations, including pedestrian, bicycle, and transit improvements – in addition to streets & highways.**

Caltrans/UCD “Smart-Growth Trip-Generation Rates Methodology” Effort

- Started in Fall 2009.
- Builds on Caltrans’ CA Infill & other previous studies.
- Caltrans has provided: \$485,000.
- *Researchers at:* UC Davis ITS (Susan Handy, PI with Deb Neimeier), UC Berkeley, Cal State Sacramento, and the Texas Transportation Institute.
- Expected completion: *End of 2012*.
- ***Additional funding is needed to complete.***

Caltrans/UCD “Smart-Growth Trip-Generation Rates Methodology” Effort

Major Steps:

- *Done: Worldwide literature review & tools scan.*
- *Done: Evaluated existing methods (none are sufficient).*
- **(This month) – Collect multimodal data at >20 SG sites in San Diego, LA, SF Bay Area, and Sacramento.**
- **(This summer) - Develop a new method & “tool” to adjust ITE rates for smart growth projects.**
- **Calibrate and validate the new method/tool.**
- **Provide new tool (free) on-line.**



NEW effort by the Institute of Transportation Engineers (ITE)

- Announced this month: ITE will update its 2004 Trip Generation Handbook.
- Will update existing mixed-use adjustment method.
- Hopefully will provide a “method” to adjust ITE trip rates for urban infill projects (*but only re: cars and trucks*).
- ITE will consider all available data, such as Caltrans’ studies.
- Expects to complete and publish by **early 2013**.