Traffic Engineering Studies for Public Agencies

Consultant’s Approach

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Freese and Nichols
A "how to" guide on conducting various studies
Standardized study techniques and current technology
A “must have” for the transportation professional's library

Manual of Transportation Engineering Studies, 2nd Edition

Institute of Transportation Engineers

Together we can save millions of lives.
DECADE OF ACTION FOR ROAD SAFETY 2011-2020
www.decadeofaction.org
Traffic Engineering Study Types

- Volume Studies
- Spot Speed Studies
- Intersection and Driveway Studies
- Traffic Control Device Studies
- TCD Compliance Studies
- Travel Time and Delay Studies
- Freeway and Managed Lane Studies
- Simulation Studies
- Pedestrian and Bicycle Studies
- Public Transportation Studies
- Goods Movement Studies
- Parking Studies
- Traffic Collision Studies
- Alternative Safety Studies
- Roadway Lighting
- Transportation Planning Data
- Environmental Impacts of Transportation Projects
- Traffic Access and Impact Studies
Developing a TE Study for a Public Agency Client

- Listen to Client issues & concerns
- Understand the Client’s end audience
- Know recommended and common practices
- Devise appropriate methodology and assumptions
- Document existing conditions, findings and recommendations and review with Client
- Prepare audience-specific materials
- Manage Client expectations
Listen to Client Issues & Concerns

- “Discovery”
- Gather all the facts
- Read between the lines, unsaid items
- Ask questions
- Example: Denton Downtown Plan Traffic Study
Understand the End Audience

- Keep study focused on the “end game”
- Touch all the bases
- Study needs to be as un-biased as possible
- Example: Denton Bike Plan Update
Recommended/Common Practices

- Ethics guidelines
- Recommended Practices
- Informational Reports
- “Standard Care of the Industry”
Methodology and Assumptions

- Review budget & schedule with Client
- Discuss intended application of results
- Discuss appropriate degree of accuracy
- Discuss acceptable assumptions
- Devise data collection plan and QC the data
- QC each stage of the analysis
Documentation

- Existing conditions – review with Client
- Concurred methodology and assumptions
- Initial findings – review with Client
- Recommendations – review with Client
- Study Report in appropriate format and detail
Audience-Specific Materials

- Know decision makers & influences
- Know potential distractors
- Understand sensitivities
- Materials will be scrutinized over time
- Be objective, un-biased

Traffic Calming
Traffic calming is a term referring to roadway design techniques that are used to slow down traffic or to reduce the speed of vehicles.

- Bump-outs
- Speed humps
- Speed tables
- Envelopes
- Domes
- Sideslips
- Diversions
- Diverter

Many of these techniques are already being successfully utilized in various locations.
Manage Client Expectations

- Don’t “oversell” anticipated product
- Keep them informed
- Involve them in key decisions
- Hit the mark on deliverables & schedule
- Let them know about project issues early

If I had a Million Dollars, I would ... | Total | Percent of Total
--- | --- | ---
Designate More Lanes on Streets | 31 | 18.6%
Make Bike-Friendly Crossings at Major Intersections | 21 | 12.0%
Build More Bike & Hike Trails near Neighborhoods | 9 | 5.2%
Build part of the Regional Network | 8 | 4.6%
Build a Trail connecting Downtown to the Garden Trail | 9 | 5.2%
Build Some Off Road Trails for All Terrain Biking | 2 | 1.2%
Build More Natural Trails for Mountain Bikers | 2 | 1.2%
Provide Sidewalks and Lanes for Safe Routes to Schools | 9 | 5.2%
Provide Recycling and Material Education, Public Information | 6 | 3.5%
Summary

- You are the Client’s hired “expert”
- Be thorough
- Be objective
- Be relevant