

The Deep Mystery of Traffic Congestion

by Hannah Twaddell

Even after sixteen years in the profession, the way transportation planners talk is still a mystery to me sometimes.

Take the acronym “TDM.” It’s actually a fairly old term in the transportation lexicon. But, as slang is wont to do, it has begun journeying to new places in the planning world. Local planners now find themselves being asked by everyone from citizens to elected officials about how they are using TDM to deal with traffic congestion. I daresay more than one has wrinkled a brow and thought, “Now what the heck is that? Traffic Diet Methods? Turnaround During Midtrip? Timed Disruptive Measures?”

Our bewildered planner actually isn’t too far off with any of those guesses. The official term is Transportation (or Travel) Demand Management, but it does involve – albeit a bit loosely – all the strategies mentioned above, and then some.

A typical definition of TDM runs something like this: “Transportation Demand Management (TDM) is a set of planning processes, strategies, and policy decisions that are aimed at relieving congestion and improving efficiencies of the transportation infrastructure.”

Sounds impressive, doesn’t it? Except

it doesn’t quite tell me what one does to achieve the aforementioned benefits. Here’s another way of putting it:

Let’s say “Transportation” means “satisfying a need that compels us to go from here to there;” and “Demand” means “the amount we use our roads and paths.” Finally, let’s try defining “Management” as “finding the most efficient way.” TDM would thus mean something like this: “Finding the most efficient way to use our roads and paths in order to satisfy the needs that compel us to go from here to there.”

I’m not sure my language is much more interesting, but it does put the emphasis on the fundamental factor that makes TDM a unique approach to solving congestion. Instead of assuming that ever-increasing traffic is a given and our solution is to engineer more and bigger roads to carry it, a TDM approach asks “What compels us to travel in the first place?” and “What can we do to get those needs met and make the necessary travel more efficient?” It makes us think about the root causes of congestion and find solutions that speak to them.

Why do we travel? To get to work or school. To shop. To visit friends. To see people who provide services for us. To have fun. Those five purposes cover a lot

of ground, figuratively and literally. Because those types of activities are, in many communities, spread out over a pretty large area. Few of us could walk to all of them, and most of us can’t walk to any of them. Thus we drive, even just a quarter-mile sometimes, to accomplish the ordinary goals of daily life. We put a lot of demands on our road systems, et voila! – we’re stuck in traffic.

What can we do to get those needs met and make the necessary travel more efficient? First of all we can ask whether it’s necessary to travel at all in order to accomplish our purpose. For example, many of us can work from home. Transportation planners got very excited starting back in the 1980’s about the potential of telecommuting, or telework, as a solution to congestion.

While it’s certainly a worthwhile strategy, our experience is indicating that it may not be the traffic panacea we’d hoped for. For one thing, most of us still need to go work in person at least some of the time. In the age of the Internet, we are finding that nothing can quite replace F2F (face-to-face) communication. Still, the benefits of taking a chunk of commuters off the roads – even if only once a week – add up.

However, research is also showing that people who work at home still make a lot of trips. They go the gym, they go shopping, and find ways to get “face time” with people, although they may be more likely to go out at random times of day. So the congestion-reducing benefits of telework, while perhaps helpful in reducing “peak hour” traffic, seem to be minimal in the end, at least as long as we have to drive for most of the other types of trips we make.

Well then, if most of us have to travel to work, how can we get there more efficiently? That’s where the energy of most TDM programs is focused. TDM pro-

Resources:



- For a comprehensive resource of all things TDM, visit the National Center for Transit Research TDM & Telework Clearinghouse: <www.nctr.usf.edu/clearinghouse>.
- Expand your TDM vocabulary with the Victoria Transport Institute’s Online TDM Encyclopedia: <www.vtpi.org/tdm/>. The Institute has also done numerous studies on the cost-effectiveness of TDM.

- If you’re in an urban area of at least 50,000 people, your Metropolitan Transportation Planning Organization (MPO) should know who sponsors TDM locally. Or visit <www.ampo.org> for a national perspective.
- Your locality may be part of a regional council of governments, which often sponsor TDM programs. Contact your local council or visit the National Association of Regional Councils <www.narc.org> to find out more.

gram managers have come up with truly ingenious ways to do away with the “single occupant vehicle” commuter (SOV, to those of you playing Acronym Bingo). Check out the annual awards given by the Association for Commuter Transportation <<http://tmi.cob.fsu.edu/act/2003Awards.pdf>> to see some creative projects promoting carpooling, vanpooling, car-sharing (what’s that? see <www.flexcar.com>), buses, HOV (“high occupancy vehicles”) lanes, bike lanes, sidewalks, you name it. If it gets someone to choose an alternative to driving alone, TDM folks will promote it.

On the management side, TDM managers work tirelessly with employers to try everything that might help alleviate traffic and get their employees to work on time: opening earlier, closing later, or staggering shifts to spread out rush hour traffic; guaranteeing emergency rides home in a cab or rental car; sponsoring company vanpools; putting in bike racks, lockers, and showers; offering bus passes or pre-tax payroll deductions for transit expenses; and arranging for employees to work from home or at telework centers in bedroom communities. Employers and localities have also banded together to form Transportation Management Associations (TMAs) that raise funds for strategies like shuttle buses and toll roads.

“Congestion pricing” (no acronym available yet) strategies are also gaining popularity. Basically they involve charging people for driving in congested areas. Many of us have followed with interest the London experiment to charge vehicles coming into the downtown district, which seems to be working despite all the controversy. Other communities are charging more for public parking in areas where they want to promote transit, or raising tolls during peak hours. When packaged with transportation alternatives, congestion pricing can be effective, but the other options must really be viable.

TDM programs can effectively reduce congestion by reducing people’s need to drive alone and encouraging them to choose SOV alternatives. But land use

decisions are ultimately the “make or break” factor for TDM success. TDM managers’ goals of promoting more efficient travel choices are almost impossible to achieve in inefficiently designed communities. If we spread out activities and separate them with huge streets or physical barriers, we force residents to drive for even short trips. We also strangle the potential of our transit systems. Buses that try to connect neighborhoods to shops and workplaces sprawled along congested commercial corridors can take hours to complete a loop, making them a choice only for those who have no choice.

The cause-and-effect relationship between community planning and traffic congestion is no mystery. There is a growing body of resources on how to create walkable communities and offer people alternatives to driving for at least some of their daily trips, a topic I’ll return to in future columns. I encourage us as local planners – citizens and staff – to continue working toward organizing our communities in ways that help make destructive traffic congestion a thing of the past. ♦

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With more than 16 years of experience in local planning, Twaddell previously served as Assistant Director of the Thomas Jefferson Planning District Commission (in Charlottesville) and as chief staff to the Charlottesville-Albemarle Metropolitan Planning Organization.

Editor’s Note: This is the first of a series of columns Hannah Twaddell will be preparing on transportation and related topics for the Planning Commissioners Journal. If you have any ideas or suggestions, feel free to contact her at: htwaddell@ciesthatwork.com

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