

Overview of the Conference Chairman

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This conference emerged from a meeting of some of the members of the Transportation and Land Development Committee in Washington in January, 1987. Dismay was expressed with the episodic nature of activity in the field of transportation planning and attempts to deal with suburban congestion. Professionals saw trends in suburban development 15 or 20 years ago, but little was done to respond to them.

In 1968 Alexander Ganz, then on the faculty at MIT, wrote (1):

"In 1985 at least half of all metropolitan area workers will be living and working in the outside-central-city areas. . . . This trend was apparent as early as 1960, when only 16% of the total national work force living in metropolitan regions was using radial journey-to-work travel patterns. In one generation, by 1985, the prevailing journey-to-work pattern is due to become circumferential.

The nation's 24 largest metropolitan areas had no rise in employment levels in the postwar period. In contrast, outside-central city areas virtually doubled their level of employment...

In the next 20 years, outside-central-city areas will double manufacturing and trade employment by at least a similar amount as they have gained during the postwar period. In the same 15 years, central cities will continue to lose in manufacturing and trade but will gain in service industries."

The projections were remarkably accurate.

The Conference Planning Committee members also observed that the planning profession has moved from one facet of the overall suburban congestion problem to another. A lot of suggestions were made about what not to do, a few partial solutions, but no coherent recommendations for what ought to be done and no quantitative analysis of travel or development patterns in the suburbs.

One member asked whether there even is a problem, or whether congestion in suburban areas is simply a manifestation of the same kind of congestion that has plagued our cities for years, and is viewed as a problem simply because of its location and the surprise that it occasions outside the central city. Ralph Gakenheimer captured the situation by characterizing it as kaleidoscopic, where the perception, of each group of people which is attempting to deal with it, changes with just a slight twist in its particular view.

Pisarski, in his 1987 "Commuting in America", cites the same basic phenomena that Ganz projected twenty years ago. Pisarski examined the increase in vehicle ownership, the total increase in the number of people who are employed in the

United States, and the fact that both their residence and the location of their work place are increasingly in the suburbs. He emphasized the relationship of travel increase to the number of workers, rather than the population, but there are several more fundamental forces affecting transportation demand.

First, the number of people in the country is increasing. There is higher participation of both women and men in the work force as the economy itself is pushing more and more people into work. There is growth in commuting, because of the increasing suburbanization of the population. People do not live in the suburbs simply for the sake of commuting; they are there for a variety of other reasons.

### FORESIGHT

Twenty-five years ago an effort began to simulate or project growth patterns in urban areas.(?) Most of the theories that lay behind growth simulation models of that era sprang from economic theory, which in turn was based on competition for the use of land in an economic context. There was assumed to be a cost or price responsive selection of location, first by those most able to pay for land, the employing sectors, and then, following the location of the office, service and manufacturing sectors, residential development was presumed to occur with some responsiveness to employment. Third, retailing and more of the service industry were presumed to follow the other two. The notion, certainly correct in the broadest sense, was that people support retail and certain services, and that those who make decisions about their location are responding to the market.

The major problem with that sort of broad theory was that it contained a lot of "slack". As an example, apparently people have a tolerance for travel to work on the order of 25 to 40 minutes. Given any reasonable transportation system, a travel time of that sort covers a tremendous physical geographical area. The fact that people locate households in response to employment does not tell us much about where they will locate.

In any urban area, there are hundreds of locations which might be equally suitable for an industry. Projecting with any precision where an industry would locate, particularly a general kind of industry or office function, certainly left planners in a very uncomfortable position. One other complication was the inability of the best intentioned or well-informed planner to anticipate something "new" in development - suburban activity centers. It is fair to say that planners in the middle 60's, who were planning transportation facilities and doing the zoning which has shaped the suburban activity centers that we see now, really had no concept of a free-standing multi-million square foot activity center combining retail and office functions. At that point, the suburban shopping center had begun to emerge, but the mega-center, combining all of these things on a mammoth scale, was certainly not seen as "part of the future."

Planners, who had the responsibility for advising people who made public investments in transportation facilities, basically recommended a transportation network of arterials, and some freeways, which responded to a rather even, generally low density suburban development which they anticipated would occur

over the next 20 years. They certainly did not foresee the scale of concentration represented by the suburban activity center and, even more importantly, if they could have foreseen those centers, it is difficult to believe that they could have recommended facilities and regulation to accommodate them, because they would have had very little idea about their specific location.

### BEHAVIOR

A second perspective goes back to some research in personal behavior done about 15 years ago.(3) It basically showed that people go outside their homes to do essentially four things; they go to work, they go to shop (most frequently for food and items which are obtainable at food or convenience stores), they go out for social purposes (with surprising frequency to the homes of their friends), and, finally, they go for very special reasons such as a major purchase or to visit a doctor's office. The categories are not surprising. What is important, though, is that the first three comprise between 90 and 96% of the out-of-home activities in which people engage - going to work, going to shop, going to visit friends. The locational characteristics are important too. Work is a unique location. Social recreation at the home of a friend, on the other hand, is likely not to be very far away and suburban. Food or convenience store shopping is easily satisfied at any nearby local shopping center or suburban activity center.

While there is a specific work trip, nearly everything else is not very specialized or is suburban. Work is a loose factor at best in residence location. It is not surprising that people shop at the nearest location that offers them the day-in, day-out kinds of things that they need. Nor is it a surprise that the people who sell those things have located in the suburbs where shoppers live. Parenthetically, it is no surprise that people do not shop downtown anymore. Ninety percent of what they need, they can buy at very small, non-specialized retail locations. Why should they make a trip to downtown?

Research indicates that people do not use the physical urban area very efficiently.(4) It compared urban form, which is the physical location of facilities in the area, to urban structure, which is the pattern of use of those physical facilities. The analysis showed that there was an opportunity to be fairly efficient in movement to satisfy basic household activity needs, but that people were not very efficient, that they choose, as we have all seen in probability distribution of travel, not to go to the nearest place to work or necessarily to the nearest place to shop, but to exercise some choice, which yielded a relatively inefficient use of what was a superficially fairly efficient pattern of physical facilities.

The conclusion was that, even given an orderly arrangement of jobs and residences and places to shop, people will choose to live and work and shop in locations which do not reflect a very strong concern for distance or time. People do not choose a residence or location to minimize a work trip. Something else is very important to them.

A different behavior pattern is the movement of "employment" developers from the centers of cities to the suburbs. They have responded in the same way as the retail developers which is in a very rational and economic way. First, the employers are getting close to where the employees are. As residential land is developing, they are moving closer to the sources of employment. But more importantly, it seems to me that developers are behaving rationally in that they are building where development is relatively inexpensive. Land in the center of any urban region, where the highway and transit infrastructure exists to serve large concentrations, is expensive because the competition for it is keen. Low priced land on the periphery, or in the suburbs, makes much better sense from the cost point of view of the investor/developer. But the land is low priced in part because there is no investment in infrastructure and very little competition for the land. The developer puts the public decision maker in the position of providing the infrastructure, after the fact of development. The development is inexpensive because there is no infrastructure to make the land valuable. Nobody says, "no, don't do that until we can build the infrastructure to support you", much less "no, don't do it all, you can't locate here, because there is no infrastructure". In fact, local governments welcome the development, not in the place where the infrastructure exists to support it, but in response to the developer looking for the inexpensive development or investment opportunity.

The need for mobility in and near suburban activity centers, has emerged as a result of socially and economically rational behavior on the part of the public and the developers, all acting in their own best interest, in response to the signals provided to them by the market. Yet, for the transportation industry, the sum has provided a significant problem because of the after-the-fact nature of the need for investment and the difficulty of after-the-fact provision of infrastructure.

One alternative is that we will wring our hands and say how poorly we understand the situation, then live with it. I think, given political reality, it is likely that there will be a lot of pressure to do something new, and we will try.

One possibility is that we will get serious and tough about how we allow land to be developed, but that is not very likely. The free use of land is so fundamental in this country that it does not seem probable that the kind of regulation that would be required is about to happen. We do need better understanding and stronger regulation of what is going on. There is something to be gained from better understanding of the various social and economic forces at work. We may regulate when we learn what and how.

In the following papers, we will consider the contribution to the problem that is made by the multiplicity of jurisdictions and agencies that participate in decisions about infrastructure and development. There may be some potential in attempting to reduce the between-jurisdiction competition for taxable development, but that is almost as difficult as reforming regulation.

There is a quotation - the source of which I do not know: For every complex problem there is a solution which is simple, neat and wrong.

I am not sure that there is a solution to suburban congestion, but I am confident that whatever it is, if it is simple and neat, it probably is wrong.

Given the approach that we are likely to take, in the sort of social and economic context that we operate, "solutions" will not be strongly regulatory. They will be much more successful if they are founded on inducement and seduction rather than force and regulation.

#### CONFERENCE ISSUES

The conference at Stone Mountain faced two primary questions:

- o What can be done to relieve suburban congestion, particularly in and near major suburban activity centers?
- o If a major suburban activity center were built from the ground up, what should it look like?

The consensus was that there is currently no "vision" of a desirable activity center or arrangement of activities and infrastructure in the suburbs. Given that, at best, only partial answers to these questions were likely.

#### OBSERVATIONS

The need to provide additional capacity was emphasized. The participants felt that one of the most serious problems in and near suburban activity centers, and indeed in the suburbs themselves, is the relative lack of transportation system capacity. That may be translated immediately into highway capacity, and indeed probably should be, but we were thinking more generally of transportation capacity. As an illustration, the average central business district in this country probably has about 40 percent of its area in streets, while in and around suburban activity centers, the percentage of land devoted to streets and highways is on the order of 10-15 percent.

There was a recognition that there is a tremendous diversity of trip purpose at activity centers. Usually we think of shopping and work, but there is also a great deal of personal business and personal service kinds of travel to and in the centers. In some ways the problems at suburban activity centers are not greatly different than the problems that were addressed 30 years ago, when we were all trying to build bypasses around the central business districts so that we could get the through traffic out of them. Now, at suburban activity centers, not only is there the traffic destined to and from the suburban activity center, but also the traffic which is probably not particularly interested in being there, but, because of the road pattern, has very little choice.

We produced a short list of characteristics that help to understand congestion. In many cases, public concern comes not only from real congestion but also from a perception of congestion. Important characteristics include change, the difference in today as opposed to yesterday, or this week as opposed to last or

even this year as opposed to last. Moreover, the rate of change is important to the public, as is the perception of speed, in contrast to other facilities in an area nearby, the amount of delay, and predictability. Intermingled with all of these is the tolerance of the public for congestion (or the perception of congestion) and what we came to call the action ignition point; where or when does the public come to the point that they are fed up with the situation? Finally there is an overall question of environment. How is congestion felt? What effect does it have on the quality of life?

#### WE IDENTIFIED SEVERAL "GAPS"

First we recognized the two kinds of trip generation used in analysis and planning. Traffic engineers work with site and project specific areas, and transportation planners work with regional or urban transportation analysis. Each use a completely different approach to trip generation.

We spoke of the gap between local government development regulation, on the one hand, and state and federal ownership of highway facilities and systems on the other.

#### MITIGATION OF CONGESTION

There are a number of types of activities which could be undertaken to address the problem of congestion. We identified four: (1) highway and transportation system supply, (2) TOPICS - highway and traffic engineering improvements, (3) transportation demand management actions in and near the activity center itself, and (4) re-arrangement or enhancement of the physical design and development pattern in and near the center.

If these four groups can be said to constitute the remedies that are available, then in an undeveloped situation, the productivity of TOPICS and TDM and physical design is likely to be fairly small. Conversely, in a developed, mature area (Bethesda, Maryland as an example), the addition of supply is likely to be a very small part of any remedies that are undertaken, and the TOPICS, TDM and land use or design activities will play a much larger role.

The other thing that is important to recognize, is that it is important to distinguish among suburban activity centers. The phrase is very broad and captures a number of different phenomena, yet any attempt to remedy the problems that are endemic to these centers must recognize the size and the context in which they are found.

#### IMPORTANCE OF STATE GOVERNMENT

Finally, we were struck by the repeated emergence of the important role of the state. We recognize that local government is the regulating and controlling entity, and we all are aware of federal highway programs, but municipalities and counties are creatures of the state and in most cases their power is derived from the state. They are allowed to do basically what the state says they can

do. Simultaneously, the state is the end agent in the supply of highway facilities. Although it may change, for the time being the role of the state is strong.

### RESEARCH NEEDS

In line with the discussion of the differences among suburban activity centers, there is a need for research on how to deal with suburban congestion. Differences in scale, complexity, and mix of use, the spread or density of the center, and its maturity and the maturity of its context, all demand better understanding and description to provide focus in our efforts to deal with congestion.

There remains a critical need for some sort of vision for suburban activity centers. Simultaneously, there is a real lack of objectives or measures of effectiveness for what we are trying to do with suburban activity centers.

Does a suburban activity center really make traffic worse than some of the alternatives? Where would we be, for example, if instead of suburban activity centers, we still had strip development or free-standing development scattered over an area?

How do we develop planning methods that will deal with site-specific phenomena and relate them to regional transportation phenomena? Do we care about the number of trips that occur at or in a suburban activity center as opposed to the number of trips which use publicly supplied facilities? What is going on in internal circulation? What is the contribution of non-home-based travel? We know very little about these questions. We may be missing possible remedial steps to attempt to internalize more of the circulation.

Is there a role for simulation in our analysis and planning? What are the real numbers that are involved in suburban activity centers? Could we do something with "what if" analysis? How can we structure an institutional framework to deal with area-wide phenomena? Do we need a redefined state-local relationship, perhaps involving the Federal Government? Recently the National League of Cities proposed to treat highway funds much as UMTA funds are treated, with funds for urban areas under 200,000 channeled through the state, but with direct funding of federal aid systems through the large urban areas rather than through the states.

What local fund-raising authority is needed? We have heard anecdotes about local sales taxes, local gasoline taxes and other enabling legislation in one or more of the states which offer an increased financing role for local governments. But what does that do about the continuity of highway and transportation facility construction? How does it work in areas, such as Washington, DC with a multitude of local governments, that do not have a common regional interest?

In summary, the Committee's work has provided: (1) ways of viewing and analyzing suburban development and congestion phenomena, and (2) several research areas that need to be addressed in order to gain a better understanding of suburban congestion and activity centers. Both, we believe, can lead to new remedies or more productive and sophisticated use of the broad range of available actions.

### REFERENCES

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### A VIEW FROM THE ROAD

by

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Three years ago in Phoenix, the Committee held a conference on Suburban Congestion and Major Activity Centers. It's summarized in TRB Circular 304, in which we targeted several important research needs. One was better concepts of cost and benefit sharing. A second was improved transportation facility design standards for major activity centers and a third was increased knowledge about travel behavior. During the past three years there has been substantial activity in several of these areas and I will review it briefly.

### COST AND BENEFIT SHARING

The way in which many jurisdictions have embraced impact fees and privatizing is a simplistic solution to the question of cost and benefit sharing. There is the implicit contention that developers either owe more to cover their fair share of the cost of transportation infrastructure improvements or the fees and/or agreements are an investment on their part in order to get more development rights. Transportation Management Associations are essentially privatization ideas which parallel impact fees on the demand side. During the last three years, we have gained a new sense of the limitations of many of the strategies that people are using to manage demand.

### KNOWLEDGE ABOUT TRAVEL BEHAVIOR

In Montgomery County, MD, the Maryland National Capital Park and Planning Commission, which is responsible for land use planning in the County, has embarked on research on travel behavior. They are setting up a data base line. Although the data were not gathered originally for that purpose, what it