USE OF CENSUS DATA FOR TRANSPORTATION PLANNING

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There are 3 subjects that I would like to review and comment on: (a) use of census data to analyze the impact of transportation changes, (b) problems related to the use of the special transportation tabulations, and (c) planning of the 1972 Census of Transportation.

I would like to sketch briefly some of the potential I see for using census data in analyzing the impact of transportation changes. In the simplest condition, I can see opportunities for assembling block data for those blocks within a potential transportation facility's right-of-way. This would provide insight into the number of persons displaced or affected by the facility and their socioeconomic conditions. In a slightly more sophisticated approach, we would be able to begin the determination of a definition of neighborhood. Studies have been performed to find a definition of neighborhood as input to evaluation criteria of alternative facility locations. They have always been hampered by a lack of small-area data and, more significantly, data whose detail has not been submerged by arbitrary geographic aggregation. This leads to an area of potential research where substantial benefits could accrue, that is, the use of a data surface where area is a dependent variable. Variables such as life cycle and period of residency are collected by the census and frequently in home interview surveys. These could be utilized in neighborhood socioeconomic analysis and definition studies to produce areas defined by like characteristics. Certainly this approach has potential applications beyond impact analysis. The problems and distortions caused by aggregation of data into traffic zones are familiar. The opportunity to work with data aggregated into areal units that have been determined by the data themselves should be of great value.

My second point focuses on the impression that I have that for most transportation planners the major point of contact with the 1970 census will be through the special transportation tabulations. I think these tabulations represent a tremendous increase in the speed and ease with which each urban area will be able to acquire census data. Perhaps, even more significantly, data will be of greater utility than ever before because of much greater geographic detail and control, especially at the work end. The opportunity for intercity comparisons on a common data base is particularly exciting.

There are significant problem areas where research is required to realize the full capabilities of this new data resource. The best overall description of the problems that I can give is the necessity to transpose the orientation of the data from a population universe to a transportation universe. There is now a mismatch of these universes in terms of geography, definition, and structure.

Specifically, there will be problems in many cities because of the difference between coverage within the census area boundary and that within the transportation cordon line or study area boundary. This mismatch is exacerbated by the problems of handling inbound work trips made by nonresidents of the region and not covered by the census data. Then there are the incompatibilities in the definitions of a worker in the census and in the standard transportation survey. There are also variations in the handling of mode choice, particularly "change-mode" trips. These must be over-

come by research and analysis. Finally, there is the problem of relating the work trip to other, more comprehensive transportation measures such as peak-hour travel and total trips. These research requirements are hardly exhaustive, but they as well as others have to be resolved to make these tabulations fully effective. Fortunately, because of the nationwide comparability of the data, such research can be centralized and the products made available to all. The U.S. Department of Transportation has begun to structure a program to provide the needed research. Comments and suggestions will be very valuable to that program.

My final point relates to the historical content of this conference. More than 2 years ago the proposal was advanced for the special transportation-oriented tabulations. It took all of these 2 years and a great deal of effort to bring that idea to fruition. I see a parallel to our situation now and the impending 1972 Census of Transportation. I think it is ironic and unfortunate that in a conference on the uses of census data in transportation planning the transportation census played no role. This is a major potential resource of transportation planning data that has not been tapped. Hoping that the same combination of skills that was so successful in the previous endeavor can succeed again, I would like to propose that a joint working group be created by the Highway Research Board and the U.S. Department of Transportation to work with the Bureau of the Census to propose and implement ways of making the upcoming transportation census as effective an instrument for transportation planning at the urban and state levels as possible. The time is already short. Work must begin.