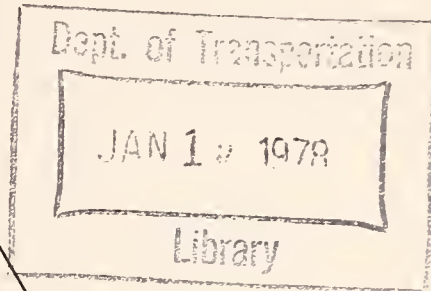
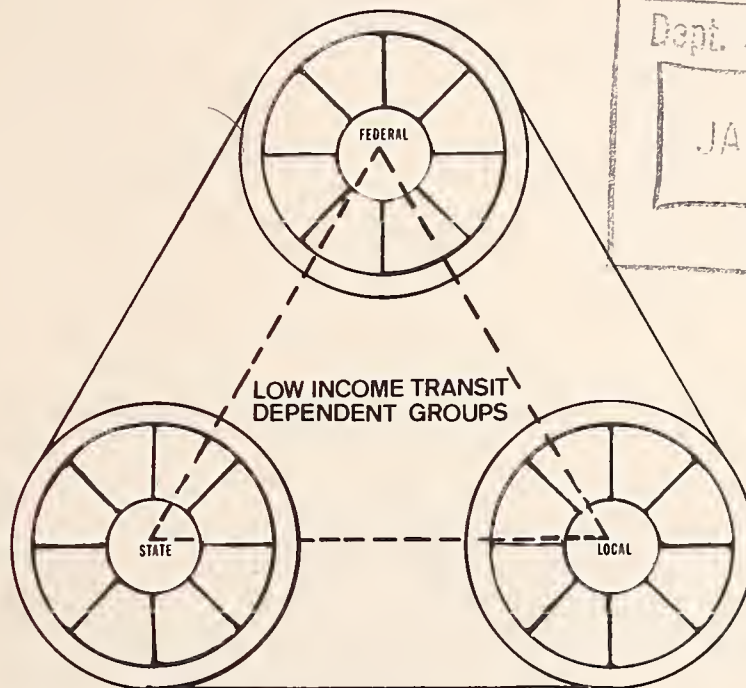


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STRENGTHENING ORGANIZATIONAL CAPABILITIES FOR TRANSPORTATION PLANNING



**Final Report
June 1977**

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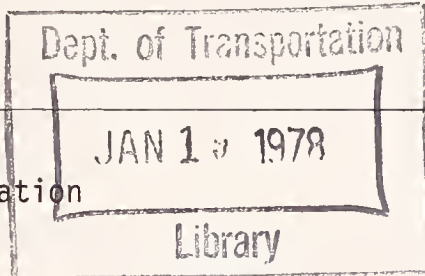
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PROCEEDINGS OF THE
FIRST NATIONAL CONFERENCE ON
STRENGTHENING ORGANIZATIONAL CAPABILITIES
FOR TRANSPORTATION PLANNING

Sponsored by:

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Texas Southern University
Houston, Texas 77004

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1.0 EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

In her opening remarks to participants in the 1977 National Transportation Conference on STRENGTHENING ORGANIZATIONAL CAPABILITIES FOR TRANSPORTATION PLANNING, Conference Director, Naomi W. Lede' gave this challenge:

Past conferences have dealt with issues and alternatives in planning for transportation at the local, regional, state, and national levels. In the main, attention has been devoted to problem definition and a delineation of the needs of transit groups, to an analysis of alternative solutions to the problems, and possibilities for implementation. Insufficient attention has been given to the fundamental need for unity of purpose in planning for total transportation systems. The many diverse population elements -- whether users of service or producers of service -- must be supportive of one another. To this end, the charge of this conference is to explore in a meaningful way, mechanisms through which various agencies and organizations; general and specialized "publics" can pool their capabilities and resources in a way that can insure or facilitate a more effective planning process.

The above challenge became the focus of Transportation Forum '77, a national conference sponsored by the Urban Resources Center in Texas Southern University in cooperation with the Texas Department of Highways and Public Transportation. The Conference was supported in whole or in part by funds under contract #DOT-OS-60123, Office of University Research in the U.S. Department of Transportation. During the period of March 1-3, 1977, more than 250 individuals from 17 states convened in Houston, Texas.

The conference focused on the ability of transportation planners to deal with the diverse interests and desires of an urban community, particularly the low income segment of the population. It provided an atmosphere for discussions of all dimensions of planning. A cadre of experts from such interdisciplinary fields as urban and regional planning, sociology, law, political science, economics, urban geography, architecture, and engineering examined the extent to which the existing planning process was working sufficiently well to incorporate the needs and demands of low-income transit dependent groups.

Additional concerns related to how the various organizations, agencies, and groups working directly with low-income transit dependents could provide unified planning to serve these same groups. Other issues involved problems inherent in existing planning requirements of UMTA and FHWA and/or whether the demand modeling process was one of exclusion rather than inclusion. To this end, the keynote speakers and other participants were asked to address these questions: (1) *What kind of involvements can be made to produce the most effective planning mechanism?* (2) *What kind of technical process is needed to enhance or produce the most effective transit planning?* (3) *And, given that we are concerned with federal guidelines, what additional planning requirements should be imposed?* Each of the participants was asked to address the aforementioned questions when considering overall techniques and methodologies for strengthening the capabilities of organizations and groups for transportation planning.

The effective participation of middle and low-income persons (users of transit facilities) is both the root necessity and the most distinctive characteristic of comprehensive transportation planning. Knowing how to improve and to strengthen the capabilities of organizations directly concerned with planning and implementing transportation facilities is extremely important to the success of programs designed to serve citizens at the local, regional, state, and federal level.

The objectives of the conference were: (1) *To explore how low-income transit dependent groups can become meaningfully involved in transportation planning;* (2) *to examine the overall impact of the transportation planning process on low-income transit dependent groups;* and (3) *to examine techniques and methodologies for strengthening organizational capabilities for more effective comprehensive planning.*

National Transportation Forum '77 provided a forum for an examination of successes in interagency relationships, the identification of issues, the resolution of concerns, and the sharing of ideas amenable to a unified thrust to meet common transportation goals at all levels.

Critical issues identified by those attending the conference fell into several broad categories: Interorganizational planning requirements and strategies, strengthening agency/institutional relationships for transportation planning, planning for public transit service delivery and techniques for citizen involvement, and planning/implementing transportation policies and programs.

To evaluate the success of the conference and the results achieved, participants were asked to complete an evaluation of the overall conference and each workshop session. The data collected indicate that 89.5 percent of the participants rated the workshop sessions as excellent. The overall conference rating was excellent, with 95.9 percent of the participants providing a rating of from very good to excellent.

More concrete results have been manifested in local, regional, and state citizen involvement activities. An increased level of cooperation has been observed between local, regional, state, and federal transportation planning officials. Of particular interest has been the cooperation of senior citizen organizations, State Department of Welfare transportation planning individuals, social service agencies, church groups, and ordinary citizens in the task of formulating a long range plan for citizen participation in Houston. Further evidence of the conference's impact is contained in letters from individuals and group representatives from the various organizations and agencies involved in the conference proceedings. All indicated an interest in continuing efforts to achieve a strong bridge of cooperation between organizations concerned with the needs of low-income transit dependent groups and the more established local,

regional, state, and federal agencies involved in transportation planning and implementation.

The Conference on Strengthening Organizational Capabilities for Comprehensive Planning was jointly sponsored by the Urban Resources Center in Texas Southern University, Houston, Texas and the Office of University Research, Office of the Secretary, U.S. Department of Transportation in cooperation with the Texas Department of Highways and Public Transportation. Special recognition must be given to the Staff members of the Urban Resources Center (See Staff Roster) and the Office of University Research at DOT. Samuel Wright of the Federal Highway Administration in DOT served as the monitor for the project. Invaluable assistance was also provided by Wilbur Williams, Robert E. Paaswell, and William F. Brown of the Office of University Research, and William M. Wood of FHWA of DOT. Anthony J. Mumphrey, Jr. of the University of New Orleans, and Paul N. Geisel of the University of Texas at Arlington assisted us during the early stages of planning, analyzed UMTA and FHWA requirements, and summarized findings, observations, and specific recommendations relative to conference deliberations. The success of the Conference must be attributed to the cooperation and contributions of these individuals; the keynote speakers, workshop leaders and participants.

Urban Resources Center
Texas Southern University
Houston, Texas

Naomi W. Lede'
Director of Conference

June, 1977

SUMMARY OF CONFERENCE OBSERVATIONS,
RECOMMENDATIONS, AND EVALUATION
by
Naomi W. Lede'
Director, Urban Resources Center
Texas Southern University (Houston)

The effective participation of middle and low income transit users in the planning process is crucial to the effective implementation of transportation plans. The conference on "Strengthening Organizational Capabilities and Techniques for Comprehensive Transportation Planning," by design, sought to explore the needs and demands of middle and low income transit dependent groups; to assess the nature of existing UMTA and FHWA joint planning requirements and regulations in the light of their special needs; and examine the overall impact of the transportation planning process as it relates to interorganizational and/or interinstitutional relationships.

One assumption which guided the deliberations throughout the conference was that certain factors may exist which could impede or otherwise affect technically sound plans for transportation planning. These specific issues were addressed:

Whether the existing planning process was working sufficiently well to incorporate the needs and demands of low income transit dependents;

The importance of assessing the overall impact of existing planning requirements on the level of involvement of low income persons (transit users), with a special emphasis on whether such requirements, and the demand modeling process in particular, involve policies of exclusion rather than inclusion;

The kinds of involvement needed to produce the most effective planning mechanism; the kind of technical process needed to enhance more effective transportation planning; and

Whether or not additional planning requirements should be imposed.

In addition to the aforementioned issues, the conference addressed issues relative to the need to improve the pattern of organization, representation, and

financing of transportation planning in the region, state, and nation; the relationship of transportation planning to other community development plans and activities; and the range of alternatives available for organizing, financing, and strengthening the capabilities of organizations to deal with user objectives and transportation service delivery.

Given this background on the focus and scope of the conference, several suggestions, recommendations, and general observations were presented, of which the following are highlights:

General Recommendations

1. In developing future FHWA and UMTA transportation planning requirements, careful consideration should be given to modifying existing planning regulations so that they can be more clearly conducive to addressing the needs and demands of low income transit dependent groups.
2. There is need to develop and carry out a nation-wide, flexible coordinated plan which would recognize existing organizational/institutional arrangements in areas affecting land use planning, community development, social service needs, and transportation planning. This plan should emphasize the need for coordinated, interorganizational planning involving all organizations and agencies having transportation service interests.
3. Provide opportunities for and encourage continuous participation in conferences on specific transportation issues by an admixture of citizens, including all age groups, occupational interests, business and industry, city planning officials, governmental sectors, and transportation planning representatives.
4. While models for public participation or citizen involvement strategies have been developed by previous studies, few of these techniques have been tested to determine their applicability to low income transit dependent groups. It is recommended that additional research be conducted on methodologies proposed for increasing the efficacy of the citizen participation experience for low income transit dependent groups.
5. Make the widest possible use of available leadership and facilities in local areas when transportation planning requirements are being developed. Encourage the kind of arrangement that would assure that transportation planning is integrated into a comprehensive planning process that would enhance greater consideration of local values and local initiative.
6. As a first step in establishing working relationships for transportation planning, it is recommended that the functions and responsibilities of agencies in local areas who are providers of transportation service be identified

so as to develop the kind of reciprocity necessary for the successful coordination of transit service delivery.

7. Develop and carry out studies to determine some criteria for evaluating the organizational alternatives for citizen group planning techniques and increased public awareness of transportation planning. This recommendation has special significance for areas involved in developing ways to meet mass transit needs.

The foregoing recommendations were compiled by resources persons who monitored and analyzed the information presented during conference activities. Other observations were made by one of the key consultants for the conference, Dr. Anthony J. Mumphrey, Jr., associate professor of Urban and Regional Planning and associate director of the Urban Studies Institute in the University of New Orleans. A registered engineer and professional planner, Dr. Mumphrey provides his comments and observations concerning the transportation planning process.

SPECIFIC RECOMMENDATIONS RESULTING FROM WORKSHOPS AND OTHER PRESENTATIONS

The following recommendations were proposed to stimulate and guide the development of a coordinated transportation system:

Interorganizational Planning Requirements and Strategies

● It is recommended that each state enact legislation establishing a broad intermodal department of transportation headed by a chief administrator appointed by, and responsible to, the governor, directly invested with strong and effective intermodal planning, policy-making, budgeting capabilities, and supported by adequate staff to enable him [or her] to carry out the responsibilities as assigned.

● The most feasible approach to meeting areawide transportation needs is to use existing regional councils and regional planning commissions as recipients of federal and state aid for planning and to strengthen their decision-making powers.

● An areawide multimodal transportation authority should be designated so as to provide directly, coordinate, or assist in financing existing and needed areawide transportation services and to consolidate or otherwise integrate the transportation activities of existing areawide operating units.

● Federal, state, and local governments should be authorized to provide financial subsidies to private transportation providers and consumers

to establish local pricing policies for transportation designed to meet transportation goals other than simply to meet costs. Special recognition should be given to the transportation needs of low income transit dependent groups. [McDowell]

● Supplementary local transportation services should be delivered. Local governments would continue to provide whatever strictly local transportation services their citizens demand in accordance with authority granted by the states. These services would supplement or buttress existing areawide, statewide, and nationwide transportation service efforts.

Interdisciplinary Team Planning

The most successful interdisciplinary team operations seem to place emphasis on the following practices:

● The agency creating the team should exact an indepth analysis of the problem and recommendation for action, and be prepared to deal with various ramifications of the problem that were not discernible at the beginning of a study.

● Administrators should plan to provide input into a study of transportation needs and continue throughout the course of the study. This involvement should be incorporated into planning efforts of experts so that implementation of project plans is more greatly enhanced.

● The team should prepare a formal community involvement plan, participate in various types of functions established to implement the plan, and then carefully consider the values and opinions of citizens in reaching a decision. [Iverson]

● An atmosphere of mutual trust should be created so that administrators and team members can feel free to discuss all aspects of the problem -- not just those facets that pertain to technical evaluations and solutions. [Iverson]

Strengthening Organizational Capability For Planning (Interagency Cooperation)

● To insure that low income transit dependent groups are properly served with adequate transportation and community services, there is great need to expand current notions of housing and community development planning to include transportation concerns at the initial outset. [Moore]

● There is need for integrated planning for transportation and community development at the county and municipal levels. This is where the strengthening of capabilities of organizations must focus. It is at this level that the impact of limited and narrow planning has the greatest adverse effects. [Moore]

● The planning process must, of necessity, include discussions and cooperative efforts among agencies, groups and individuals. Both long-range and short-range programs and plans for public transportation and highways should make effective and efficient use of all available resources. [Keck]

● The preparation of long and short range regional transportation plans and programs required by current Federal regulations has begun to highlight the need for interagency coordination more than any other activity to date. There is need for a forum in which to make priority decisions when faced with limited financial resources. [Keck]

● There is need for agencies to become aware of the benefits which can be gained from increased interaction. [Keck]

Low Income Transit Dependent Groups

● There is need for areawide coverage by city public transit systems so as to accommodate inner city residents who are currently in need of transportation services to improve accessibility to jobs. [Saltzman]

● Federal funds should be made available for state and regional transportation planning agencies to support financially the organization and technical assistance to low income transit dependent user groups. [Catanese]

● It is recommended that we rely more upon our existing tools of inquiry, that we generally call survey research, to assess user attitudes, needs, and desires pertinent to transit and transportation planning in general. [Catanese]

● Instead of stopping evaluation when a transit system is in operation, we should increase our evaluation of service and the parameters that were used in planning to see where we were right and wrong. [Catanese]

● There is need to monitor and analyze how well transit serves dependent groups even after we have built the system because we may have to change it or other systems. [Catanese]

● Current transportation problems do not lie so much in the design of our planning processes as they do in the general governmental setting within which we do this planning, and our inability to actually perform the planning which already is required by Federal guidelines. There is need to create new partnerships with low income transit dependent groups so that our ability to negotiate consensus and resolve conflict is improved. [McDowell]

● There are basically two problems associated with public transportation and the elderly. One problem is specifically related to the physical structure and design of transportation modes (hardware); the second problem deals with the question of accessibility. There is need to consider the mobility or activity space of the aged when planning for the specific needs of this groups. [Deskins]

● There is an absence of crucial base information on transit socio-economic impacts which may prove useful in discovering the right policies and planning programs more adequately. Major gaps in the information base relate

to an identification of elderly and handicapped persons and determining their transportation needs, identifying the travel needs of minorities and other low income persons; a determination of the income redistributional effects of transit programs; approaches to implementing transportation system management requirements; and a determination of long term relationships, investments, land use patterns, and energy supply and demand. [Gallamore]

● There is need to recognize that prior transportation planning and project implementation may have reduced the mobility patterns of citizens with low incomes. It is, therefore, recommended that new plans should be designed to improve the mobility of low income groups; that they should redress prior inequitable resource allocations which have impaired their mobility. [Sid Davis]

● It is recommended that the Urban Mass Transportation Administration should encourage and underwrite studies on the "no-barrier concept," especially the legal issues involved; that they should fund at least one well-planned demonstration of such a fare collection concept. [Stanger]

● Strengthen existing forms of transit through fare subsidy on publicly-owned transportation systems. Through discounted fares (even free passes with payment made to the transit line to cover approximate use), low income transit dependent groups would benefit while maintaining this form of transportation for the larger community. [Schores]

● Create citizen advisory groups for private and public transit agencies. If appropriately organized, such groups would both sense the pulse of the now unreached citizenry and make specific recommendations concerning transportation needs of all segments of the community. [Schores]

● Place voting representatives of transit dependent groups on public decision-making bodies concerned with transportation. There is need for effective programs of citizen involvement where the efficacy of the participatory process is actualized. [Schores]

OBSERVATIONS ON THE TRANSPORTATION PLANNING PROCESS

by
Anthony J. Mumphrey, Jr.

In compiling these observations, I have served as a "reporter" at various sessions of Transportation Forum '77. I have noted what other speakers have said and shall present to you what I consider to be their most important comments. Hopefully the points which I shall make will refresh your memories and challenge you to go back to work and return here next year with solutions to the plethora of transportation problems presented during this Forum.

Let me begin by noting that over the last twenty or so years, great improvements have been made in the transportation planning process. These include:

1. The "3C Process" -- Continuing, Comprehensive, and Cooperative Planning (Federal-Aid Highway Act (FAHA) of 1962).
2. Public Hearings (FAHA of 1950).
3. Environmental Impact Statements (National Environmental Policy Act of 1969 and the Clean Air Act of 1970)
4. Social, Economic, and Environmental Process Guidelines and resulting state "Action Plans" (FAHA of 1970).
5. Relocation Assistance and Payments (Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970).
6. Highway Trust Funds for Mass Transportation (FAHA of 1973).
7. Mass Transportation for Elderly and Handicapped Persons (National Mass Transportation Act of 1974).
8. Noise policy, erosion and water pollution control, trails in right-of-way, landscaping and roadside development, joint development of highway corridors, et cetera.

In spite of the progress already made, there still are some serious problems. Public hearings do not lead to meaningful citizen participation in plan formulation. Hearings are mainly for comments on plans already made. Members of citizen advisory committees may be co-opted or committees can be stacked by politicians to ratify their desires. Sincere advisory committee members may find that their participation in the transportation planning process may result in the gain of some desirable but minor transportation improvements at the loss of more meaningful economic (or other) activities such as jobs to suburbs. These participants might better spend their time on comprehensive regional planning issues rather than transportation planning. Perhaps their increasing

sophistication may lead in this direction to the detriment of the transportation planning process.

Some of the improvements in transportation planning that were elaborated earlier resulted not from (and in some cases, in spite of) transportation planners. It is our shame that responsiveness did not come about from need but mainly through political pressure. A valid question to be contemplated is which groups and problems are we presently failing to consider.

Those people who have been neglected in the planning process are sometimes missed by methods for determining demand since, as a result of past neglect, they exhibit none. Perhaps if we should plan less and implement more, such missed demand would become obvious. Plans are sometimes an excuse for a lack of implementation. This demand problem may be somewhat mitigated if we should develop better transportation survey research methods.

Intergovernmental coordination remains a problem. Regional planning agencies may insure coordination at the local and state levels while failing to bring about cooperation between them and the federal levels. For example, I have heard of a case where a local office of the Social Security Administration has failed to cooperate with local planners in surveying the needs and locations of the elderly and handicapped.

Those groups who are inarticulate and unsophisticated in the planning process can do little more than present their problems and may be unable to cause the implementation of their solutions. Several speakers suggested that federal and state funds be used to support technical personnel assigned to assist these groups.

The organization of federal and state departments of transportation around modes was felt by some speakers to result in needless competition and lack of coordination. Some relief may result from the issuance of joint Urban Mass Transportation Administration and Federal Highway Administration regulations.

The lack of monitoring plans after implementation has led to a repetition of past errors. U.S. Department of Transportation regional offices are in some cases understaffed to properly monitor, supervise and advise on transportation planning.

The fact that the local match for primary, secondary, or urban roads is only fifty percent while for interstate highways is ninety percent has led to a lack of planning for routes alternate to interstate highways. The problems caused by insufficient lower level alternate routes are more severe in the newer and expanding metropolitan areas.

Citizen groups disagree on transportation problems and solutions as do the persons within the groups. Planners should undertake education programs to enhance people's accurate perception of problems and solutions and to subdue group and personal self-interest in favor of community well being.

Governmental operating subsidies in which a certain return on investment to a private transit company is guaranteed may lead to the retention of inefficient lines at the taxpayer's expense.

Even if mass transit is implemented within an area, it is not convenient for certain types of trips -- large package shopping, nighttime social, suburb to suburb, etc. Thus planners should attempt to achieve a balance in modes and routes in their transportation systems.

Transportation modeling may not be reliable or precise enough to base plans on. Models should be subjected to sensitivity analysis by varying the parameters of the models as well as the input data.

Finally planning for transportation while the long term energy picture is unclear should perhaps only be done for short-term improvements.

These, then, are some of the problems which the Forum speakers have presented. I hope that next year you will be able to offer solutions to them.



Professor Naomi W. Lede', Director of the Urban Resources Center in Texas Southern University (Houston) reviews procedures and provides special instructions during a pre-conference meeting with keynote speakers and workshop leaders.

2.0 GENERAL SESSION

P R O G R A M

Tuesday, March 1, 1977

GENERAL ASSEMBLY

THEME: EXPLANATION OF ISSUES, AND INTER-ORGANIZATIONAL
PLANNING REQUIREMENTS AND STRATEGIES

Presiding: Naomi W. Lede, Director
Urban Resources Center
Texas Southern University

Keynote Speakers: Bruce D. McDowell
Senior Analyst
National Advisory Commission on
Intergovernmental Relations
Washington, D.C.

Anthony J. Catanese, Dean
School of Architecture and Urban Planning
University of Wisconsin

Evan Iverson, Supervisor
Social and Economic Planning
Washington State Highway Commission
Olympia, Washington

Barry Goodman
Transit Administrator
Public Transportation
City of Houston

LEDE: This is our fourth transportation forum and our first national conference on transportation. The conference is designed to explore means by which travel demands for low income transit dependent groups can be more effectively incorporated into existing planning requirements of transportation in urban and rural areas of the local areas of the states and nation. It's overall theme emanated from the conviction that strength; indeed, planning, progress, and quality urban growth come from pulling together. To this end our purpose today here is clear.

We seek to explore in a deliberate way how various agencies and organizations or the providers of services can improve their capabilities and resources in a way that will insure or facilitate more effective planning for transportation.

This conference is sponsored by the Urban Resources Center at Texas Southern University in cooperation with the Texas Department of Highways and Public Transportation. Funds for the conference and technical assistance came from the Office of University Research, Office of the Secretary, U. S. Department of Transportation, Washington, D. C. This, in itself, is an example of the theme we chose. It symbolizes how cooperation can be effectuated. Since July of '76, the staff of the Urban Resources Center has been involved in planning this conference. We enjoyed both the expertise and guidance of the Office of University Research at DOT, Dr. Michael J. Rabins, Director of that office, his staff persons--Wilbur Williams, Robert E. Paaswell, Chip Woods, Samuel Wright, and Bill Brown assisted us with logistic problems and Jim McQueen gave us vital assistance during the initial stages of the project. Locally we have worked with the Texas Department of Highways and Public Transportation. Bill Ward and Bill McClure, Oliver Stork and Dennis Smalley of that staff gave us invaluable input and assistance in planning so as to reflect local, regional, state and national interests. As indicated at the end of the conference program, we have received tremendous cooperation from individuals and agencies in Houston. Various members of the electronic and printed media provided ample coverage for the events which begin here this morning. We have individuals participating from the Houston's Citizens Chamber of Commerce, the Houston Area Urban League, the Austin Area Urban League, the Houston Chamber of Commerce, colleges and universities through the state and nation, the Houston-Galveston

Area Council of Governments, the Houston Regional Galveston Transportation staff directed by Oliver Stork, the Regional Director, Glen Ford, from the Urban Mass Transportation Administration in Fort Worth and staff persons from FHWA in Austin and in Fort Worth assisted us in identifying key individuals for participation in this conference. We enjoyed continued cooperation from the City of Houston's Office of Transportation and the Texas Transportation Institute at Texas A & M University. We have included in your conference package biographical data on the majority of the participants in this conference. They are experts trained in a variety of fields all of which impact in some way the transportation planning process. We want you to interact with them, disapprove but politely, and make any comments and other contributions which you consider germane to this conference.

The workshop sessions for this afternoon have been designed to elicit maximum input from experts, resource persons, and community residents and all others attending this conference. We have a representative number of students from Rice University, Texas A & M University, Bishop College of Dallas, Clark College of Atlanta, The University of New Orleans, University of Texas at Arlington, North Carolina A & T University, Johnson C. Smith University, Stephen F. Austin College and Texas Southern University. We would like to invite them to attend all of the workshop sessions. Workshop A will deal with Policy Alternatives in Transportation Planning. Dr. Anthony J. Mumphrey from the University of New Orleans, assisted by Cindy Fromherz of that same institution, will deal with how to demonstrate how citizens, politicians, and decision makers can work cooperatively in planning for transportation. It is a policy alternatives game that he has

developed. Dr. Paul Geisel from the University of Texas at Arlington will moderate a session that deals specifically with community agency relationships. Issues such as transportation costs, mobility needs of the disadvantaged, program planning and budgeting will also be addressed. When the conference ends, we shall need evaluations of the proceedings. We randomly selected individuals to do this. So, if you find that you do not have an evaluation form in your packet, it simply means that you were not a part of our sample. If you find one in your packet, remember to complete it and return it to the registration desk or mail it back to us.

Finally, our staff at the Urban Resources Center and representatives from the U. S. Department of Transportation, Office of University Research are here to assist you. If you have problems let us know. There is one special announcement near the end of your programs, a single insert that concerns a Friday Morning meeting in Castillian Room A & B with Dr. Robert Gallamore, who is Administrator of Transportation Planning at UMTA. Dr. Gallamore would like to meet all transit operators, transportation engineers, and persons involved in transportation planning. You will hear more about that later when Dr. Gallamore joins us tomorrow morning.

During the session this morning, Keynote Speakers will proceed on the theme "Explanation of Issues, and Interorganizational Planning Requirements and Strategies. Mayor Hofheinz could not attend because of a City Council meeting but we are pleased to have The Honorable Judson Robinson, Jr., a friend of mine, a friend of yours, and a Councilman for the City of Houston. Mr. Robinson will bring greetings on behalf of the City of Houston. Following his remarks, Mr. William V. Ward, Engineer-Manager of the Houston Urban Project Office from the Texas Highway

Department will introduce the first speaker. He will be followed by Dr. James Race of Texas Southern University who will introduce the second speaker and Jerry King from the City of Houston who will introduce the third. Again, thank you for coming and engaging in this dialogue with us. We are pleased to have you. We welcome you to Houston and will look forward to a very inspiring and fruitful conference. Thank you so much.

(Applause)

THE HONORABLE JUDSON W. ROBINSON, JR.: Ladies and Gentlemen good morning. I'm pleased to see so many people that I have had the pleasure of meeting before attending our conference. I'm happy to see so many people that I work with every day in the City of Houston here. And it's kind of interesting too because I am wearing two hats this morning. I'm first of all representing our City which I am pleased to do of course, and secondly, I'm serving as a member of the Board of Regents at Texas Southern University. We're kind of a host too as it were, so I bring you greetings from both the City of Houston and Texas Southern University.

It's important and significant that you are here in Houston. There are a lot of brags about our City and I am sure that you have heard them all and if you haven't, during the next couple of days you will hear them all. One of the things that I can safely say is that we have our fingers on the pulse of transportation in this country. We are seriously going about the problem of transportation. We understand and recognize that in order for transportation to be effective it has to service all people - people in the inner cities, people in the outlying areas, people all over for it to work. We want you to enjoy yourselves while you are here in Houston. And on behalf of our Mayor Fred Hofheinz and all the Councilmen, we are

pleased and happy to bring you greetings from the City of Houston once again. Thank you very much.

WILLIAM V. WARD: Ladies and Gentlemen, it is my privilege and pleasure this morning to present to you our first speaker, Mr. Bruce D. McDowell. He is a Senior Analyst on the National Advisory Commission on Intergovernmental Relations. I met Mr. McDowell for the first time last night and incidently this is his first trip to Houston, Texas. My first question was, what is the National Advisory Commission on Intergovernmental Relations? And he explained it to me. And the best I could say is that they do whatever is necessary. Mr. McDowell is a native of Montgomery County Maryland, graduate of American University, B. A. in Sociology. He went later to Georgia Tech and got his master's degree in city planning. In 1965 he earned his Ph. D. at American University in Public Administration and Intergovernmental Relations. He has been in the trenches. He spent four years on the Maryland National Park and Planning Commission on the local level. He spent another term of work for four years in the Metropolitan Western Council of Governments. He has since been employed since 1972 on the Advisory Commission on Intergovernmental Relations. He has had prolific experience as a writer, my intelligence sheet here shows some 18 publications which he has had a large part to do with. Probably one of the most outstanding pieces of work that he has done was that he made the first draft of the bill which later became the Title IV of the Intergovernmental Cooperation Act of 1968 which, in turn led to the Office of Management and Budget A-95 credit process. This is the process by which federal grants and aid are reviewed by local authorities for assessment and coordination. Mr. McDowell has also been a teacher.

He has taught at Montgomery College at Rockville, Maryland, been guest lecturer at Catholic University, University of Illinois, University of Maryland, George Washington University, American University, and Virginia Polytechnic Institute.

Mr. McDowell's presentation this morning is "Intergovernmental Relations, Transportation Planning/Decision Making, and Community Agency Relations." It is my privilege to present to you Mr. Bruce McDowell, so let's please give him a big Houston welcome. (Applause)



Bruce D. McDowell, Senior Analyst for the National Advisory Commission on Inter-governmental Relations, Washington, D.C., addresses the First General Assembly of the National Transportation Conference held in Houston, Texas on March 1-3, 1977.

STRENGTHENING ORGANIZATIONAL CAPABILITIES
FOR
COMPREHENSIVE TRANSPORTATION PLANNING
by
Bruce D. McDowell
Senior Analyst
Advisory Commission on
Intergovernmental Relations

The purposes of this conference, if I may summarize them briefly, are (1) to examine the Nation's present transportation planning processes, (2) to determine how well these processes incorporate the needs of low income transit dependents, and (3) to determine how these processes might be improved where deficiencies show up. It will become apparent to you as I make my remarks, I believe, that our transportation problems do not lie so much in the design of our planning processes as they do in the general governmental setting within which we do this planning, and our inability to actually perform the planning which already is required by Federal guidelines.

One of the questions posed to all of your speakers at this Conference is whether we need additional Federal guidelines and planning requirements. Basically, my answer is no. We already have requirements for metropolitan planning organizations, for A-95 Federal aid reviews and comments by state and areawide clearinghouses as well as by local governments, for long range comprehensive intermodal transportation plans, for shorter range transportation improvement programs and annual budgets, and for transportation systems management programs. Federal guidelines tie together rather tightly all of these requirements. Furthermore, local elected officials and ordinary citizens must be involved in the process, in addition to the state and Federal officials who have been intimately involved for

many decades. The Civil Rights and Environmental Protection acts, along with specific provisions in transportation legislation, mandate equal opportunities for minorities, the disadvantaged, and the handicapped, as well as protection of our natural surroundings. The Uniform Relocation Act of 1970 guarantees that no individual or business will be displaced by a transportation project or other Federal aid project before their relocation needs have been met.

What more could we ask? Certainly, not more guidelines!

What we need is better performance! And, we need some new partnerships if we are to get this performance.

But, before I give you my list of needed partnerships and some suggestions about how you can develop them, I must describe some of the complexities of the U.S. system of government and the Nation's present transportation programs.

Complexities of the U.S. System of Government and Present Transportation Programs

The United States, to a much greater extent than almost any other Nation, has built into its governmental system three levels of government, three branches of government at each level, the largest feasible role in society for private (nongovernmental) action, and a variety of other separations. Our traditions include the concept that the least possible government is the best, and that where government is necessary its powers should be divided and balanced.

In this sense, our three-part Federal system of government is a non-system. The Federalist Papers from which our Constitution came show this quite clearly, and the Constitution itself gives evidence of the political compromise between proponents of strong government and proponents of limited government.

Shared Responsibilities. As a result of these separations, limitations, and willy-nilly efforts to bridge them, our system of government has been described quite accurately as "marble cake" Federalism. There are very few functions, particularly in the domestic field, which can be classed as the exclusive responsibility of any one level of government -- Federal, state, or local. Rather, it has been common ever since the beginning of the Nation to have these functions all mixed up together, with the three levels of government involved in nearly every program. Transportation certainly is no exception.

Generally speaking, the sharing of responsibilities takes place as follows. The Federal government provides substantial policy leadership and financial assistance -- and the tremendous increase in Federal aid programs over the past two decades gives ample evidence of these roles. The state governments typically provide enabling legislation for state agencies, local governments, and other instruments of government to participate in these Federal aid programs -- and sometimes the states also provide financial assistance of their own. Local governments and private companies frequently are the action agents -- particularly with respect to meeting local needs.

Deliberate Separation of Powers. In addition to (1) the Constitutional separations between our three levels of government, (2) the traditions separating public from private activities, and (3) the resulting shared responsibilities, the internal workings of our governments exhibit still other deliberate separations. Planning responsibilities frequently are separated from the regular operations of government -- as illustrated by the independent planning commission in local government, and by the ad hoc regional planning bodies at the areawide level where there seldom is any regular government either to be connected to or separated from. Of course, law-making is separate from administration at the National and state levels under the Constitutional separation of powers among the three branches of government --

and this pattern now is being exhibited much more frequently at local levels as well, where elected chief executives at city and county levels are replacing the council-manager and commission forms of government which combined local legislative and administrative prerogatives in a single body. Finally, government secrecy and arrogance evolved to such an extent, as the Nation grew and moved away from the earlier town meeting forms, that government became separated from and unresponsive to the people -- and this has resulted in efforts over the last two decades to bring new citizen participation and open meetings laws into effect.

While the separation between government and the people was inadvertent -- at least so far as political theory was concerned -- the separations between planning and regular government and between the legislative and executive branches of government were deliberate attempts to institute balances of powers. Planning began in a formal sense at about the beginning of this century in a citizen movement for good government which was opposed, at first, by the regular governmental establishment. As that movement gained favor with the populace, it was co-opted into official planning commissions most of which had advisory powers only. Much of the early history of planning can be described in terms of "watch dog agencies," and some political scientists saw these bodies constituting a fourth branch of government. Only recently have large numbers of local governments begun to bring their planning commission activities within the orbit of their regular departmental structures. At the regional level, the establishment of areawide governments to which regional planning bodies can relate is limited to just over a dozen cases.

While these separations between planning and regular government are being bridged now -- often quite painfully -- the typical American separation between legislative and executive continues to strengthen at the state and national levels even as it is being applied more broadly at the local level. And, as these two branches of government compete with each other more seriously,

a significant tendency has developed for each branch to create its own planning and policy coordination capabilities to guard its equality in the balance of powers arrangement.

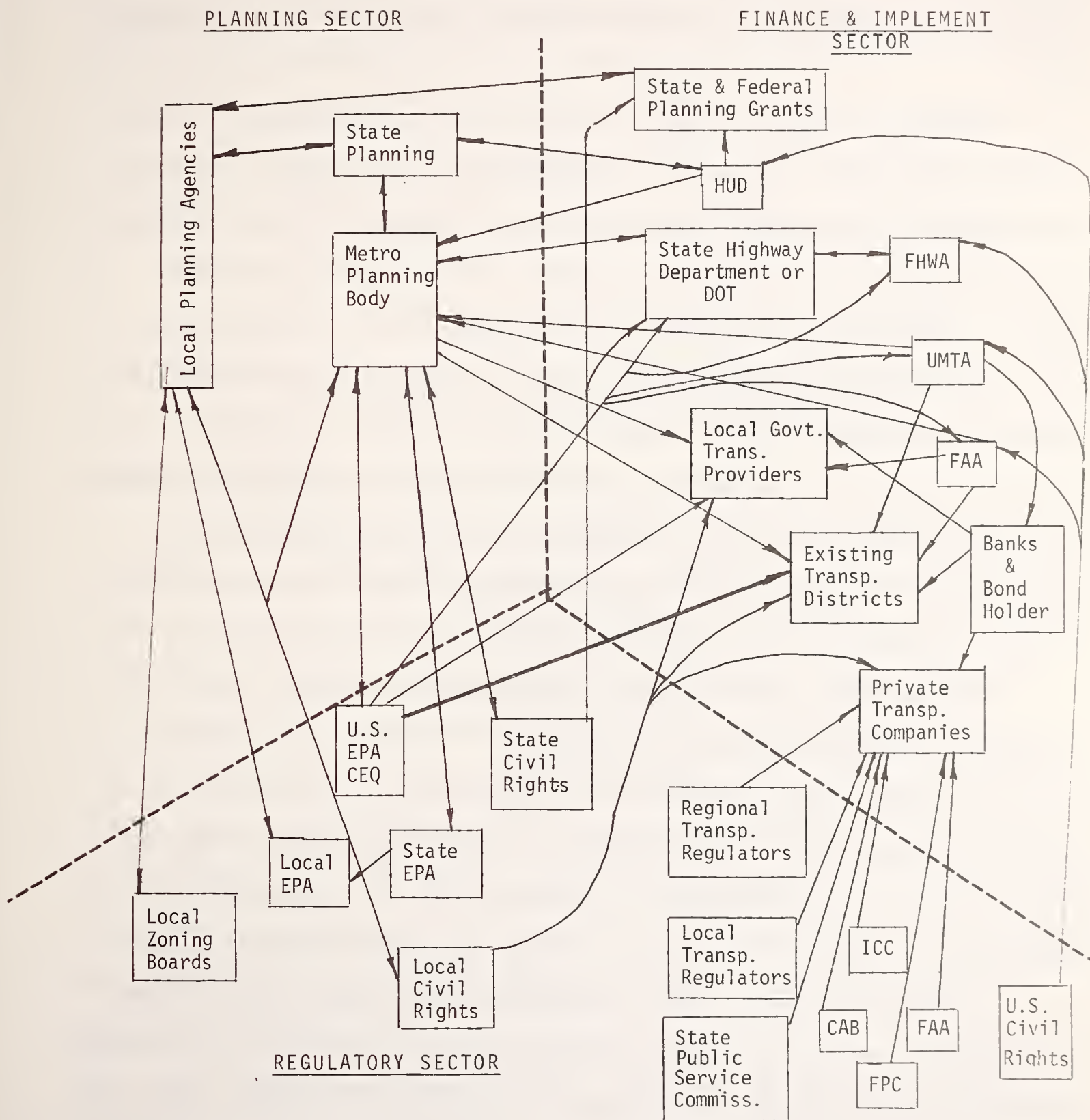
The upshot of all of these efforts to separate, balance, and share governmental powers is the heightened necessity for reliance upon negotiation. Differences must be resolved and consensus built if government is to work in our Nation.

Pluralism in Transportation. As I noted earlier, these processes most definitely are at work in our transportation programs. Without going into great detail, you will note on the following chart how complex the relationships are. This chart is highly oversimplified, but it still gives a reasonably accurate picture of how the Federal, state, local, and regional agencies in our Nation plan, finance, implement, and regulate transportation systems and services. Substantial separations exist between the three sectors of activity -- planning, finance and implementation, and regulatory. It is interesting to note, however, that many more bridges have been built between the planning and the implementation and finance sectors (as illustrated by doubleheaded arrows) than can be identified between either of these two sectors and the regulatory one.

Regulatory impacts are one-way for the most part. There is little if any conscious attempt to plan and manage regulatory efforts consistent with public policies for constructing transportation facilities and providing transportation services. As a result, privately operated transit may be regulated into receivership and transferred out of the regulated sector into public ownership.

Largely missing from the analysis in this chart is a group of 63 Federal human services programs which authorize transportation services. These normally hidden programs belatedly have been brought to the surface in a very useful directory published in January 1976, by the Southeastern

EXISTING ORGANIZATIONAL
RELATIONSHIPS FOR URBAN
TRANSPORTATION: 1974



Regional Office of HEW. Entitled Transportation Authorities in Federal Human Services Programs, this directory identifies not only the names of the programs, but also the administering agencies, the programs' legal authority and characteristics, and Federal agency contact points. The forward to this directory also suggests how the programs might be coordinated more effectively.

Currently, I believe, there is very little coordination among the 63 Federal human services transportation programs, and probably even less coordination between these programs and the big Federal highway and transit programs. In fact, the Nation's urban areas are lucky at the present time, in most cases, to experience real coordination just between these two big programs, even though it has been required since 1962. In nonmetropolitan America, not even this requirement exists -- so here is one case where I would make an exception to my general observation that we do not need more Federal requirements. The adverse economics of public transportation in sparsely settled areas is enough, by itself, to establish the need for coordinating all relevant efforts, if even a modest capability for serving the public is to be achieved.

On the hopeful side, however, is the Federal government's new transportation systems management requirement. This requirement, taken seriously, mandates the coordination of a wide range of transportation operating programs. While this requirement applies only in urban areas, it has the clear potential for helping to coordinate the 63 human services transportation programs with the major highway and transit programs.

Anyone who has ever tried to coordinate such a large array of Federal aid programs as now exists in the transportation field, sooner or later asks why the programs should not be consolidated with each other. There is a very obvious, and so far effective, answer to this question; no guarantee can be given that

special needs which each of the separate programs is designed to meet, still would be met effectively without such programs. Separate funding and separate staff to advocate meeting these special needs constitute the surest means of success -- even though it might be more expensive overall to proceed this way. So, there is a very real question about whether the objectives of these Federal human services transportation programs would survive the "comprehensive" planning process established for DOT's primary programs. Clearly, they could survive, because comprehensive transportation planning now is required to encompass services programs as well as facility plans, and to take into account their social and economic impacts as well as protection of the environment. But, coordination without advocacy frequently means loss of priority! So, while consolidation of some existing Federal transportation programs may be a significant component of efforts to improve transportation in America, complete consolidation probably is not the answer.

The Coordination Delusion. It should be obvious from the foregoing that the need for coordination will be with us always, and that this need will continue to be very difficult to satisfy because of the complex array of programs which is involved. What is often not so obvious is that coordination is not something which can be supplied simply by "good management." Basic conflicts exist in public policy, and the diversity of existing programs reflects that. Transportation systems and services are designed to meet conflicting needs. It is too much to expect that good managers and "right thinking administrators," with a little extra effort, can successfully coordinate any set of programs for which they are responsible. But, it is not too much to expect that they should try. Still, they will need our patience. As long as they really keep trying, they are due our sympathy when they fail, as they inevitably will on many occasions. A coordinator is like the batter in a baseball game; anything over a .300 batting average should be considered very good. After all, most coordinators have little more in their own hands

than an advisory planning process, with review and comment responsibilities for projects proposed to be carried out by others.

Partnerships Needed

The many separations in American government cited above can be bridged, at least partially, by negotiated partnerships. Perhaps the most obvious bridge needed is the one between land use planning and transportation planning. This one has been recognized for many years, and it has received a great deal of attention. For the most part, these two types of planning now have been linked, at least within metropolitan areas.

The linkages needed between government and its citizens also have been developing strongly through many newer techniques which augment traditional public hearing requirements.

The needed linkages which still are least well developed are of two types. First, is the set of linkages which must be made between the legislating of a program, the planning and programming of specific activities to carry out legislative policy, the implementation of construction and service projects, and the regulating of private transportation providers in the public interest. The second set of linkages, still largely unrealized, is the one which ties together physical, economic, and social planning and programming.

With respect to the linkages among policy, planning, implementing, and regulating, the coordinator has the job of directly overcoming very deliberate separations of power. Generally, therefore, all we can hope for here is a set of very fluid and flexible linkages developed with great sensitivity toward the prerogatives of the contending branches of government. However, we should expect one link in this chain to be substantially strengthened. To the extent that planning comes within the executive branch of government, its link to implementation should be expected to become much more direct and solid.

With respect to the linkages among physical, economic, and social programming, coordination depends much less on bridging the separation of powers among branches of government, and much more upon bridging professional, departmental, and committee separations within the branches of government. In this case, good central management should be expected to be more successful. Interest group politics certainly will still play a major role, but increasingly the public is holding top executives responsible for balancing diverse interests and getting their engineers, planners, social workers, and budget people together behind an internally consistent program which provides for the needs of people by whatever physical, economic, and social program means can be most effective. For example, proposals for new facilities, new capital outlays on equipment, and new or expanded service programs can be balanced against each other as viable public policy alternatives. While some such analyses are being performed today, relatively few actually receive serious public attention on an equal footing at the present time.

Each of the above needs for coordination involves different professions and different units of government -- and tests the skills of a partnership negotiator to the fullest.

Basic Types of Partnerships. There are at least five basic types of partnerships which can be developed to bring together contending factions within the public service. These are:

1. Governmental Reorganizations;
2. Transfers of functions;
3. Interlocal agreements and contracts;
4. Interagency agreements and contracts; and
5. Regional organizations and planning processes.

Governmental reorganizations may take several forms. At the local level, cities and counties may be consolidated into larger units, (perhaps even areawide ones sometimes), and local units which are already too large

might be subdivided into subordinate neighborhood units -- to emphasize legitimate localized needs and desires. There is also the option of consolidating departments and programs within existing units of government -- to bring greater efficiency and coordination. In addition, central management capabilities might be expanded to help chief executives discharge their overall management coordination responsibilities more effectively. Frequently, however, reorganizations require hard-to-get new legislation -- so other means need to be tried as well.

Transfers of functions might be used between departments, between cities and counties, between local governments and the state, or between other units. The purpose would be to put similar functions in similar organizational locations, or to move a function which has become too large for the unit administering it to a larger unit. State laws and local charters frequently provide for transfers of functions, or can be amended to make such provisions.

Almost all local governments are empowered by state law to enter into agreements with other localities to perform jointly any services which they may perform individually. Likewise, most local governments can contract with other units of local government (and in many cases with the state also) for services to be provided them. Frequently these techniques can save money or avoid competition and conflict.

Interagency agreements and contracts usually are possible among departments and agencies within the same government. A special form of this technique was authorized for Federal aid programs by the Joint Funding Simplification Act of 1974. Under this act, Federal departments and agencies which administer Federal aid programs can agree to award two or more such programs to the same state or local recipient by means of a single contract based upon a single integrated work program. This technique has the potential for significantly reducing duplicative expenditures, reducing paperwork, and achieving superior integration of programs.

Finally, regional organizations have become quite common throughout the United States in the past two decades. They serve every metropolitan area, and almost every nonmetropolitan area in the Nation. In every case, their primary function is coordination. Through their planning operations, they are expected to coordinate the activities of local governments on an areawide basis, to coordinate more than 200 Federal aid programs through the A-95 Federal aid review and comment process, and to coordinate federally required planning at the areawide level through interagency agreements among diverse regional planning bodies -- as required under Part IV of OMB Circular A-95.

ACIR has studied all of these types of intergovernmental partnerships, and has prepared reports and model legislation concerning them. I invite you to write to me for more information on any about which you might need to know more.

Better Partnerships for Transportation. Specifically in the field of transportation, ACIR has a 1974 report and follow-up model legislation for State action to create intermodal state departments of transportation, to enhance state and local transportation powers, and to improve the regional approach to transportation planning and implementation in both metropolitan and nonmetropolitan areas. The details of these recommendations are contained in a summary of the ACIR report which has been placed in your conference packets. Briefly, these recommendations are designed to increase flexibility in transportation planning and financing so that intermodal as well as capital and non-capital solutions to community transportation problems can be found and applied more easily. At the regional level, a much clearer link between planning and implementation is provided. Areawide financing of transportation programs is proposed, along with increased state and Federal aid to the regions. The regional activities would meet areawide transportation needs directly, while enhancing the ability of local governments to meet their own internal needs more effectively, consistent with the larger areawide systems and services.

How to Create Partnerships

Creating the new partnerships which are needed to improve transportation opportunities in your own communities clearly depends upon the ability to negotiate consensus and resolve conflict. It is a cliché, perhaps, to note that successful negotiations usually proceed from positions of strength on both sides. This leads me to suggest, however, that building greater capacities in your local governments to manage their own affairs, in a coordinated way, may be the most important contribution that can be made initially to the problem of building better intergovernmental partnerships. To get a better idea of what I am talking about, I would refer you to a recent best seller by a psychiatrist named Thomas A. Harris. That book, I'm OK -- You're OK (New York: Avon Books, 1969), points out how important it is for a person (or a government) to feel secure in his own position, and to feel that he is "OK" before successful relationships can be conducted with the outside world. With a secure, OK, feeling about yourself, you can approach the other person or organization in a more objective fashion. As long as negotiations are approached with feelings of disdain for or fear of other professions, other departments, or other branches and levels of government, successful negotiations are very unlikely. Thus, changing your attitudes and changing the attitudes of others (about yourself and them) may be necessary before new transportation partnerships can be formed. Without this change, legitimate competition among differing public interests may degenerate into little more than turf battles.

Sometimes, involving the public, and approaching issues from the general viewpoint of the consumer and taxpayer, helps to break down the barriers which separate the various parts of government. Yet, it should be realized that citizen participation is far from being a panacea. In a recent article entitled "How Does the Planner Get Everybody in on the Act and Still Get Some Action?" (State Planning Issues, Council of State Governments, Lexington,

Kentucky, June 1974), Harland Cleveland pointed out how hard it is to get everyone fairly represented, and still come to any conclusion about public policies and programs. I recommend his article to you as a source of very practical guidance.

I want to close by suggesting that many of our transportation problems today really are minority problems. The majority drives automobiles, and roads go everywhere. For those who don't drive, or those who need to go to an auto restricted zone, public transportation is the answer -- or at least it should be. That's where our biggest problems arise, and that's where we have done the poorest job for the consumer. The transit dependent minority simply has not had the political clout needed to demand better treatment. The majority who will have to foot the bill for such services, still needs to be convinced of their own self-interest in having equal opportunity transportation which makes their community a better place to live for all. The non-discrimination laws which have now been built into our system provide the basic levers to solve this problem. However, as Bayard Rustin pointed out in the February 12th issue of The Washington Afro-America, the leadership of the courts in cases of minority rights, is falling off now, and the emphasis must shift to politics. I would add only that the politics of transportation planning, and the politics of negotiating new partnerships for transportation programs, must reflect this reality.



Dr. Alice Kidder of North Carolina A&T University discusses the impact of transportation planning of elderly and handicapped persons with Samuel Wright of FHWA, Wilbur Williams of the Office of University Research at DOT and Pat Massey of Positive Futures, Inc.

JAMES RACE, JR.: Anthony J. Catanese is Dean of the School of Architecture and Urban Planning, University of Wisconsin (Milwaukee). He holds a B. A. degree from Rutgers University, Masters in Urban Planning from New York University, and a Ph. D. in Urban and Regional Planning from the University of Wisconsin (Madison). Dr. Catanese has served in numerous positions including the Senior Planner with the New Jersey Division of State and Regional Planning, as an Associate Professor in City Planning and Director of Urban Systems Simulations Laboratory, School of Architecture, Georgia Institute of Technology and as an Associate Dean of Architecture and Planning, James A. Ryder Chair in Transportation and Planning, School of Engineering and Environmental Design in the University of Miami. He is also President of the A. J. Catanese and Associates Consulting Firm. His professional affiliations include membership in the American Institute of Planning, American Society of Planning Officials, Regional Science Association, National Association of Housing and Redevelopment Officials, Transportation Research Board, National Academy of Sciences, and the American Association of University Professors. His publications are numerous, having published outstanding books dealing with transportation. The book, Urban Transportation in South Florida was published in 1974 following the release of New Perspectives in Transportation Research in 1972. Having served as a Senior Fulbright Professor during the period 1971-72, Dr. Catanese has contributed 75 articles, monographs, reports, and papers to professional journals and other publications. I met formally and officially with Dr. Catanese on last evening. Dr. Catanese had been in the Wisconsin system for a period of time just prior to when I came, and is quite familiar with the School of Architecture at the University

of Wisconsin (Milwaukee). Having reviewed his credentials it is apparent that he has the professional and educational credentials to talk on the subject "Effectiveness in State/Regional Planning: Issues and Possible Answers." Dr. Anthony J. Catanese. (Applause)



The Honorable Judson Robinson, Jr. City Councilman of Houston, brings greeting to conference participants on behalf of Mayor Fred Hofheinz.



Dr. Anthony J. Catanese, AIP, Dean of the School of Architecture and Urban Planning, University of Wisconsin (Milwaukee), discusses issues and answers relative to increasing the effectiveness of state/regional transportation planning.

EFFECTIVENESS IN STATE AND REGIONAL PLANNING:
ISSUES AND POSSIBLE ANSWERS

by

Anthony James Catanese
Dean, School of Architecture and Urban Planning
University of Wisconsin-Milwaukee

We have three concerns at this Forum. The first is to examine the involvement of people, especially those dependent upon transit for achieving basic requirements of life, in the transportation planning process. We have relied heavily on the public hearing as our pretext of involvement, but this occurs after the process has made certain decisions. Certainly the "revolt" of people against the Embarcadero Freeway in San Francisco and the creation of the non-technical Boston Transportation Planning Review are the foremost symbols of this failure and the movement for reform.

Our second concern is to improve the transportation process itself. What had been previously a technical process is slowly becoming a social-political economic process as well. We now know that seemingly esoteric concepts, such as level of service, have other than purely technical merits. There is the social concern of meeting user needs. There is the political acceptability of transit proposals. There are increasing tradeoffs with the economic benefits of highways as well. It has taken us a long time to reach this level of understanding, but we are moving in the right direction.

Our third concern has to do with the direction established for transportation by the Federal Government, most often seen in rules and regulations and guidelines. This has been very problematical in the past. States and regions have tended to accept this direction without much debate in order to receive funding. Yet there are inherent problems with

the modal organization of the U.S. Department of Transportation that exacerbate the difficulties inherent in transportation planning. The continuous, comprehensive, cooperative planning program is a good foundation for improvement, but, once again, the social-economic-political factors must be better articulated and handled than presently. There are other variables, constraints, and functions that must go into the models if we want to improve the process.

Along with these concerns are a number of realities that we must not overlook. To cite just a few, let me suggest the following.

While transportation demands are generated by local governments, the transportation process unfolds primarily at the state and regional level. It is inherently true that citizen-involvement decreases at the higher levels of government.

States largely respond to Federal incentives for funding. It makes a big difference whether you are talking about 90% funding or 70%.

There are so many jobs tied to the automobile industry and highway-building that to avoid this reality may be to hurt low income people more than imagined.

We have not had many success stories with rapid transit. Even the much-heralded Bay Area Rapid Transit System has only accounted for 8% of the journey-to-work. Rapid transit may help serve transportation problems, as will mass transit bus systems, but they are not panaceas.

The transit industry has a long way to go in the improvement of management, responsiveness, marketing, and service. The real problems are not technological or hardware.

The real problem is financing. We are laboring under a false hope that transit can pay all or most of its way. There is more and more evidence to show that is not the case, and we should consider it as a public service with public subsidy of fares. Atlanta is making a convincing case

for the success of a publicly subsidized bus system which may extend into their rail system as well. Lower fares, in fact, generate more transit riders.

We are too conservative in our urban regional planning because we do not use transit to shape the form and structure of growth. Most industrial countries in Europe, Asia, and Scandinavia learned this lesson.

Given this set of concerns and realities, allow me to be bold enough to offer some answers (even at the risk of over-simplification). At the state and regional level, we should view the public hearing as primarily a legal requirement, based upon a romantic nostalgia for New England Town Meetings that is irrelevant to modern urban situations, and seek other ways to create public awareness and involvement.

User Organizations. We are basically a pluralist society in which groups compete for their own interest. Unfortunately the low income, transit dependant user group is not organized. Federal funds should be made available for state and regional transportation planning agencies to support financially the organization and technical assistance to such groups.

Survey Research. We should rely more upon our existing tools of inquiry, that we might generally call survey research, to assess the user needs, attitudes, and desires pertinent to transit and transportation planning in general.

Monitoring Analysis. Instead of stopping evaluation when a transit system is in operation, we should increase our evaluation of service and the parameters that were used in planning to see where we were right and wrong. We should monitor and analyze how well transit serves dependent groups even after we have built the system--because we may have to change it (or other systems).

User Needs Surveys. The fields of architectural research and environmental behavior have made progress on the development of User Needs Surveys. These surveys translate group demands into realizable needs by borrowing techniques from psychology, anthropology, and sociology. While these surveys have been used mostly for buildings and housing developments, it is possible to use them for transportation planning.

While I have offered some very general directions for examination, let me conclude by saying something very obvious but germane: we must make the transportation planning process more human--or we should abandon it. If we cannot make it more human, then we may not really need it and might better accomplish the economic function of that process by direct subsidies to industries and governments. I wish that I could conclude that states and their regions would take the initiative in this reform, but it does not appear to be the case. We may have to rely upon the Federal Government for such change.

To close on an optimistic note, I will predict that the new Carter Administration is well aware of the concerns of this Forum and will launch major reforms for improvement of the transportation planning process.

JERRY KING: Thank you, Naomi. It is a pleasure to be invited to introduce one of the top City Officials for the City of Houston and a man whom I have come to admire and respect over the last couple of years. It is nice to see such a large turnout. I guess that this is the third or fourth year Naomi has put this program together. It seems to be growing every year both in interest and in participation. Barry Goodman will be addressing you today on the subject of the "Role of Planning: The Relationship Between Transportation Planning and the Acquisition of Funds to Implement Proposed Programs." A subject of which I am very certain that Barry is qualified to speak on. Barry was born in Los Angeles, California. He received a B. A. Degree from San Fernando Valley State College, he received his law degree from the University of Southern California about 7 years ago. He is a member of the Bar of California and District of Columbia, a member of the ABA, and a member of the Transportation Research Board of the National Academy of Arts and Sciences. His experience, although his career has been brief in terms of the rest of our careers, has been in the areas of Public Transportation. His latest, and the job from which he came to the City of Houston under the recruiting of Mayor Hofheinz in 1974, was as the Senior Attorney for Project Development for Urban and Mass Transportation Administration. In that role he had responsibility for the legal review of grants for capital improvement, technical study, research development and demonstration programs. It was his duty to assure that there was compliance with all applicable legal administrative requirements including the review and drafting of contracts, writing opinions, and contacting the appropriate local, state, and federal officials. He has a thorough working knowledge of the National

Environment Policy Act, the Clean Air Act, the Davis-Bacon Act, and the Highway Act of 1973. I am not going to read the publications and projects in which Barry has participated with UMTA. But I will say a brief word or two about the accomplishments of his office since its inception in 1974. As all of you here that live in Houston know, Houston was very slow getting started in public transportation in terms of overall planning. And the real turn came in 1974 when the City under Mayor Hofheinz' leadership acquired the bus company, Barry Goodman was hired to come to Houston. Since that time through the grants of some 50 million dollars demonstration programs bus acquisition, you know the rest of the story as well as I do. Barry Goodman has become a household word in transit improvements and transit planning in Houston. Without any further ado I'll introduce Barry Goodman, It's a pleasure to be here this morning. (Applause)



Participants of the Conference examine studies on various aspects of Transportation at the Book Display Table.

ROLE OF PLANNING: THE RELATIONSHIP BETWEEN TRANSPORTATION
PLANNING AND THE ACQUISITION OF FUNDS TO IMPLEMENT PROPOSED PROGRAMS

by
Barry Goodman
Administrator of Public Transportation
City of Houston

Thank you for those kind words, Jerry. It is a pleasure for me to be here. I think that this Forum, the Urban Resources Center, and activities like this are helping to solve a tremendous problem that we have in this nation and in urbanized areas, and certainly, in Houston. It is unfortunate, in my opinion, that we have more problems in the area of transportation than we ever had before. There is more chaos, more uncertainty, more lack of direction than has ever existed before. I think that is a result of diminishing resources. I think that we have a situation today where there is just not enough money to do everything that needs to be done, and that is causing both the federal, state, and the local government to change their focus on things. I just returned from Washington, and I can attest to you that things are in a state of chaos. I would hate to rely right now on the guidance of Washington to help solve our problems locally, because we would be in a poor state of affairs.

Now, I have great hopes for the Carter Administration and Brock Adams, the new Secretary of Transportation. Over the last ten years we've all had great hopes as each successive administration has come into power. Specifically, speaking right now of the UMTA administration, hope for new changes, new directions and a practical viewpoint which can guide our transportation planning have not yet come into fruition. I am firmly convinced

from my experiences in Houston, at this juncture, that it is not the federal government or the state government that will give us the guidance to help solve our problems, but it is indeed the local community, the local agencies and the ability to coordinate ourselves locally, that will help be the root to solving our problem.

Now, what is the problem? The problem is mobility -- its getting around. We have congested urbanized areas. How do we attack it? For the last few days I have been thinking what I should say here. I had a difficult time of it because I'm not a planner and I don't normally focus on traditional planning methodology -- the 3-C process, Section 134, the Transportation Improvement Program, the Transportation System Management, Transit Development Programs, and Transit Action Programs. I don't really focus on that specifically because it is part of a whole process, and I think that the problem we have today and why we have so much chaos is exemplified by the piece of paper that was on everybody's desk.

This is titled, "Existing Organizational Relationship for Urban Transportation 1974". If you can make sense of this, then I would like for you to make an appointment with me as soon as possible so that I can begin to understand what is going on today in transportation. This is part of the problem -- process. We have so much process in the area of transportation planning and improvement that is clouding our thinking in many instances, and is preventing us from making progress in solving the problems.

Now, Houston is a very good example of a city that has avoided getting caught in the process. We avoided it for so long simply because we didn't do anything. As Jerry mentioned, it was 1974 when we got into public

transportation. A very interesting thing happened at the federal level over the last years, between 1970 and today. During 1970, 1971, and 1972, there was ample supply of federal money both in the area of capital improvement for public transportation and in the area of improvement in the highway area. Through the late 1960's to the early 1970's there was ample money to spend in the area of planning. There were not enough requests for that funding to have actually eaten up all of that money. I remember many years when working with UMTA, during the last few weeks of the fiscal year, we had to find places to spend the money so that we could justify asking for more the next year. In 1973 and 1974, we were faced with the energy crisis, and the great awareness of the need for improved transportation, particularly public transportation. Following this, we became aware of the various increased demand for money. The situation as it exists today is that there are three or four times the demands for requesting federal dollars for improving transportation, particularly in the area of public transportation.

Now, part of the problem that exists today -- the diminishing resources problem -- is the result of the fact that it costs much more to do things today than it did years ago. Today, it costs eighty to ninety thousand dollars to buy a bus, when five years ago we could buy it for forty thousand dollars. So the dollars aren't being spread as well as they could. Another reason is that many cities and many urbanized areas during the late 1960's and the early 70's -- because of the abundant amount of funding -- got involved in long range regional transportation projects as they asked the question: What can we do to help improve our transportation situation? Washington responded by saying, "What you need is a plan." "We want to see a one year plan; a

five year plan; a ten year plan; and a twenty year plan of what you are going to do to improve yourself. Then, when we have the plan, we will be able to give you the money to make those improvements." Well, a lot of cities took this advice and spent millions upon millions of dollars on plans. They called the consultants in, and the consultants started doing regional planning. But regional planning, for the most part, was being done not to address the real local concerns in the community or the real needs in the community. What was being done to address the availability of federal funding to major improvement in the area of transportation?

In 1971, we completed the transit action program which was prepared by Allen M. Voorhees and prepared in exact response to what many other cities were doing at the same time -- as to what was an apparent availability of federal money -- an apparent desire to improve our transportation situation. The orientation was really on the rail because those were the systems that were in vogue. We had the money to pay for it and it seemed that that was the best way of doing things. Very little attention was paid to what was going on locally. Was there a local funding available to support it? We had several speakers this morning talk about attitudinal surveys. Were citizens surveyed in the community as to their acceptance of a multi-billion dollar solution to the transportation problem? All I can tell you is, that if that was done in Houston, something fell through the cracks because apparently we lost the HARTA (Houston Area Rapid Transit Authority) election by a 3 to 1 or 4 to 1 margin. So, there probably was not enough done to test the attitudes of the citizens in terms of paying local dollars necessary to support billion dollar systems. This is taking place all over the country. Then, we have

the energy crisis, the diminishing resources of funding, and a very, very great change of profile at the federal level, which I think have created a lot of chaos but also created one of the most productive or potentially productive areas of transportation improvement that we've had for ten years. What was the change in profile? If we don't have the federal dollars to fund all these regional transit programs around the country, then we have to start using our dollars more effectively. New guidelines came out in September, 1975 from then Secretary of Transportation, William T. Coleman, which set the stage for what we have to deal with today in terms of the planning process and linking federal funds. What we are dealing with today is within the context we have to operate in order to justify the funding. We are dealing with the least cost-effective transit improvements which are linked to local resources, local needs, and local characteristics.

Transit System Management

You've heard a lot about that. It's in vogue today, the idea that we more effectively utilize our streets and highways. Look at the signalization, and people like Jerry King helping to see how we can speed up the flow of traffic or give priorities on streets to buses, car pools; and park and ride efforts. All of these things are very important today, not because five years ago, transportation planners projected a five year plan that showed that they would be important today, but because the federal dollars aren't there to pay for more grandiose systems.

It's very good and very productive. We had a great opportunity then, to more effectively utilize the dollars we had. Take, for example, a

situation where there were enough federal dollars to pay for those rail systems today. We might, indeed, be buying up right-of-ways, and laying out rails over this City. I, for one, am convinced that even if we had the money to build those systems, we wouldn't have the density in most areas to support a rail system or enough money locally to support the operation. So, in a sense, the change in profile and the planning picture has forced us to look at our local situation more. I think this is the most productive thing that has happened in the last few years. And, I think that in Houston we have the opportunity to turn it into great productivity.

So, we've talked about planning. Now, to be honest with you, I don't really know what planning is per se. Planning is useful for many reasons. Some people say that planning is useful simply as an end in itself. You can make a plan, and if it's good, it should work. And, even if that plan is done somewhat in a vacuum, you can put it on the shelf and some day it may be useful. I disagree with that. Other people say that the only useful purpose of planning is simply to justify or to put ourselves in a good position to justify federal dollars. A commonly held belief is that you must have an effective planning program to justify federal dollars or you could get into trouble, if you don't. I don't think, personally, that many people here feel that this is the only reason or rationale for planing. Planning is also a justification to do more planning. For example, the City of Houston is involved in what we call a transit action program update, which is an updating of the 1972 Voorhees transit action program in order to bring it into a more realistic context. I don't know what we would be doing if we didn't have the 1972 Voorhees plan to bat around back and forth to update. And after this

transit action program update, we'll come up with an interim plan, and then probably draft a final interim plan, and then three years from now we can do the update of this. It involves more than just planning. With the planning process we now have in Houston, I think other urbanized areas are going to be forced to look at it this way. I think the federal government is directing us more to this financial reality, and political reality, in the same process. So, planning does not have to be done in a vacuum.

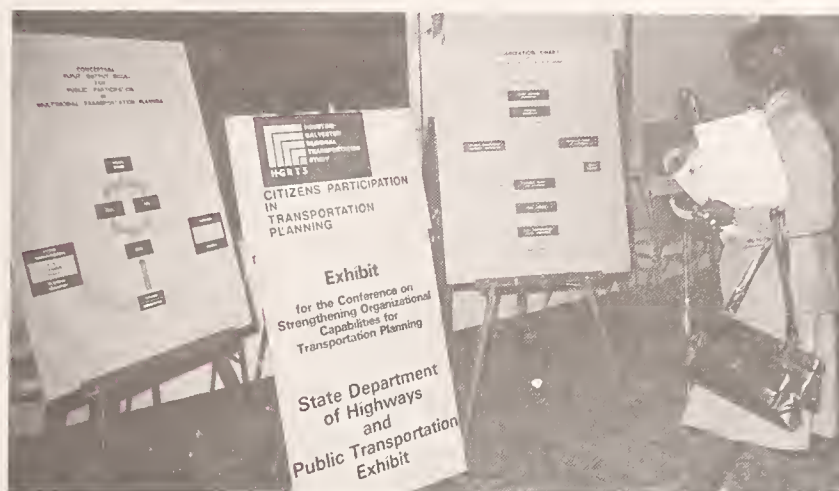


Barry Goodman, Administrator of Public Transportation, City of Houston, explains what he perceives to be the relationship between planning and the acquisition of funds to implement transportation programs.

G. SADLER BRIDGES: Thank you, Barry. That was very stimulating to hear someone who actually does implement plans rather than just direct them. I would like to take a few moments of personal privilege here to tell Naomi that the Texas Transportation Institute appreciates her asking us to be involved in her program and we're most excited about being here.

I would like to spend the next few moments introducing you to our next speaker who I think you will also find is a person who is involved in the actual process of getting things done such as Barry has been. He is currently the Supervisor of Social and Economic Planning for the Washington Department of Highways. He brings to this job a distinguished list of qualifications including professorships at both the University of Oregon and Utah. He has served as consultant to both state and local government in Utah and in Oregon. His educational background includes both the University of California at Berkeley and the University of Utah where he earned his doctorate. His list of professional services and memberships in professional organizations are too long for me to list individually. But let me assure you that they are of first quality. But what does all of this tell us about Dr. Iverson, the man? To show that he is a transportation and highway man, let me tell you that he owns two cars in his family, and to show that he is a sociologist, each one of them has an excess of 100,000 miles on them. Dr. Iverson is deeply religious, not only does he spend his full time doing social and economic planning for the State of Washington, but he also spends an equal amount working for his church. He is currently working on a major project which will result in a new church for his faith. His concern for the community and for society goes well beyond just his job. At the Department of Highways, Dr. Iverson

has recently completed two studies, one on Highway Noise Factors and Property Values and another on a Guide Book on Team Methods for Locating Highways. It is this study that is the basis of his talk which will be "An Analysis of the Role and Effectiveness of Interdisciplinary Teams in Transportation Planning." I introduce to you, Dr. Evan Iverson from Washington. (Applause)



Special exhibits were used. Included were: "1976 Highway and Its Environment Photo Exhibit" by Federal Highway Administration; "City of Houston Transit Program," and the exhibit on "Citizen Participation in Transportation Planning" by the Texas Department of Highways and Public Transportation.



Registration of Conference Participants.

AN ANALYSIS OF INTERDISCIPLINARY TEAMS IN
TRANSPORTATION PLANNING AND DESIGN

by
Evan A. Iverson
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Social and Economic Planning
Department of Highways
State of Washington

During the last decade changing values and priorities of modern America have greatly affected transportation planning. Greater concern about protecting and improving the quality of life, maintaining a viable economy and conserving energy has made it necessary to adjust the planning and design process to include many additional factors. Citizens have become more involved in transportation planning and various groups which were not active in the formulation of legislation and policies have now become quite adept at injecting their concerns in the decision-making process. The major problem of transportation planners, designers, and administrators has not been a lack of adequate technological expertise but rather difficulties encountered in dealing with conflicting demands of citizens within the communities they serve. The strong desire of citizens for fast, safe and efficient transportation frequently must be reconciled with their other demands to avoid social disruption, protect the environment, reduce governmental expenditures, provide employment and conserve energy.

This increased concern over the type of transportation services provided and the affect that various facilities have on people and the environment has emphasized the need in transportation agencies to develop adequate organizational tools that can meet these changing requirements. One such tool that has been used quite extensively in transportation agencies in recent years has been the interdisciplinary team. It is extremely difficult for

any single discipline to encompass satisfactorily all of the various types of expertise that must be considered in the planning and design of major transportation facilities. Likewise, a great need exists to relate well to the various interests of the public.

In transportation, as in other essential public services the interaction of qualified people representing different types of concerns can usually evaluate problems and reach decisions that provide for a more balanced solution than a decision reached by any single discipline. An interdisciplinary approach to transportation can only become a valuable tool, however, if the necessary personnel are available to the governmental agencies on a continuing basis and the role of the interdisciplinary team is related to the existing organizational framework of the agency in such a manner that the findings and recommendations of the team can be integrated into the decision-making process. The role, responsibilities and management of such teams, has varied considerably among and within individual states. The purpose of this document is to explore the responsibilities, operation and implementation of interdisciplinary teams in more detail and present an analysis of the experience that we have gained from utilizing teams in the State of Washington.

Role of the Interdisciplinary Teams

To analyze the role and relationships of an interdisciplinary team, the goal and objectives of a multi-disciplinary approach must be examined. The goal of a transportation agency is fundamentally to provide adequate transportation service and ensure that decisions are made in the best overall public interest. A more specific objective of an interdisciplinary approach is to provide a means by which pertinent expertise is utilized in an orderly, integrated manner to determine transportation requirements, identify impacts and seek the best possible solution to problems. To achieve this objective,

technical studies and an active public involvement program must be undertaken with the teams utilizing data derived from such a program in the written reports of the team and the recommendations concerning the course of action to be taken. Teams encounter difficulties functioning separate and distinct from the ongoing planning and design operations. In some instances, interdisciplinary teams have been used as a separate body not to be biased by the detailed planning and design process of the agency. In some other instances, teams have been used primarily as evaluators of social, economic, and environmental factors with no direct relationship to the planning and design process. When the State of Washington prepared its Action Plan, the goals and objectives of the interdisciplinary approach to planning were carefully examined as they had functioned elsewhere and guidelines were prepared to assist the team members and those persons having managerial responsibilities for the team process. Even though rather detailed operational guidelines were prepared, the responsibilities of interdisciplinary teams and the role they were to play were confusing to team members and management as the process was applied to specific problems. A decision was made by the management of the Department of Highways to give the team responsibility and authority to undertake the following basic tasks:

- Conduct indepth studies and utilize the results to delineate alternative solutions to transportation problems;
 - Develop and implement a community involvement program and utilize the findings in technical studies in the decision-making process;
- and

Develop a Departmental recommendation concerning action to be taken. The interdisciplinary team, therefore, is a problem solver rather than simply a problem analyzer or solution justifier. You will note that the teams have been given the responsibility to conduct a public involvement program after they are assigned to a project and then they are charged to utilize

findings in reaching their recommendations. Efforts were made to avoid problems that public works agencies have recently encountered in having a task force or team study a problem, hold public meetings, and then make a recommendation that is not acceptable for implementation because of either legal problems or technical standards. Procedures adopted in Washington call for input throughout the total process from the administrators of the agency, other state agencies and local governments in an effort to produce a recommendation which the management of the department can implement after the study process has been concluded. The team is responsible as a body for the decision reached. Under the system utilized in Washington State, each team member has a dual role. He is a technical analyst in the engineering, social, economic, or environmental disciplines and he is a member of a team charged with reaching a workable solution. Hence, each member has the responsibility of not only evaluating the consequences of various courses of action as they relate to his particular expertise or discipline but also to maintain a perspective of the actual significance of his concern in the particular problem under consideration. This requires not only good professional judgment but also a willingness on the part of the team member to consider public desires and values and to give appropriate consideration to the views of the other team members. The technical reports including the environmental impact statement and the design report are products of the system rather than major objectives. The team members contribute their analyses to such documents but the reports are prepared by the staff of the project manager.

How well have various people with quite different areas of expertise reacted to such a system? In general, the team members have been able to maintain a good perspective of the relative importance of their discipline to the overall problem. Difficulty has been encountered in maintaining the interest of some individuals in the total team responsibility. Some have preferred to concentrate upon their area of expertise only and not be sufficiently concerned

with the responsibility each has as a team member to actively seek a solution to a problem.

In the team process it is very easy for teams to become so involved in the technical analysis and the preparation of reports that the basic objective of the team process is lost. Good team management is essential and the team chairman and project manager have the responsibility to repeatedly emphasize the dual objectives of the team process. Experience has verified an assumption made when the interdisciplinary team efforts were undertaken that the interests, perspectives and attitudes were more important in determining whether an individual would make a good team member than the technical expertise of the person.

Size and Membership of Interdisciplinary Teams

Size has proven to be an important factor in the efficiency and viability of the teams. We have had large teams which attempted to include all relevant disciplines, as well as small core teams that include those disciplines which have the greatest on going contribution to make in solving particular problems under consideration.

A team of five to seven members has proven to be the most effective for the majority of the projects undertaken. The size and scope of the project determines team membership and the number of "support disciplines, while providing a sufficient level and quality of information, has also been able to evaluate projects and develop solutions more effectively than a group that is smaller or even larger. The smaller group encounters difficulties from insufficient expertise on major projects and on extra workload placed on each individual. The larger group tends to duplicate the expertise requirements in addition to encountering coordinative and management difficulties.

Personnel to serve on interdisciplinary teams are drawn from within the Department, regional and local agencies, and private consultants. However, to provide the continuity of membership that teams require for successful operation,

teams are composed primarily of personnel from the Department of Highways within each of the disciplines involved. Staff members of local planning agencies are frequently utilized as team members to obtain a greater knowledge of more localized community values and views. Private consultants have been included as team members to provide special kinds of expertise, as well as generate information and views representing the private sectors.

An interdisciplinary approach to transportation can only become a valuable tool if the necessary personnel are available to the governmental agencies on a continuing basis and if the role of the interdisciplinary team is related to the existing organizational framework of the agency in such a manner that the findings and recommendation of the team can be integrated into the decision-making process.

In some instances, difficulties have developed in including personnel from other agencies as the workload these persons have with the employing unit has not permitted them to devote adequate time to accomplishing team tasks in a timely manner. There have also been instances when the personnel from within the Department have encountered difficulties in devoting sufficient time because of other assignments.

As teams are organized, it becomes essential to discuss the time and resource needs required and to achieve a sufficient level of commitment from each person involved and the employing unit for accomplishing team tasks. In this way, much confusion can be avoided, and the team process can be a more satisfying and efficient organizational tool.

Team Interaction

How well have various people with quite different areas of expertise reacted to such a system? In general, the team members have been able to maintain a good perspective of the relative importance of their disciplines to the overall problem. However, difficulty has been encountered in maintaining the interest of some

individuals in the total team responsibility. Some have preferred to concentrate exclusively upon their area of expertise and not be sufficiently concerned with achieving an overall perspective of the problem and the active search for a solution.

The major factor in a successful interdisciplinary team operation is to create and maintain an atmosphere and an administrative process that encourages team members to feel free to evaluate relevant factors objectively, receive advice and opinions from the public, and discuss their study findings and opinions together. This requires that a team member have the necessary training and experience in the discipline he represents, and that each person is receptive to hearing and considering the views of the public and the other team members. Since all of these qualities are essential for a team member, it is necessary to be quite selective in choosing team members.

A person may be well qualified and productive in his technical field but both disinterested and confused by the various facets of the interdisciplinary team process. Training and experience are necessary but receptivity to the team objectives in an elementary consideration and one that is easy to overlook in naming team members.

In the team process it is very easy for teams to become so involved in the technical analysis and the preparation of reports that the basic objective of the team process is lost. Various disciplines have differing traditions and work processes. Often misunderstandings based on such different conventions lead to more difficult team operating problems such as "defensive goal tending" (the assertion that one team member shouldn't interfere with another).

Good team management is essential, and the team chairman and project manager have the responsibility to repeatedly emphasize the dual objectives of the team process; namely, to provide technical expertise and maintain a perspective of the actual significance of the discipline in reaching a workable solution.

Experience has shown that interest, perspective, and attitude were extremely important in determining whether an individual would make a good team member, and that the technical knowledge of the person should not be the only factor considered.

Team Management

In the operation of interdisciplinary teams, effective management is a crucial ingredient to the success of the team. Experience in the State of Washington has indicated that assignments given to teams that are too detailed become self-defeating because issues are raised as any major study progresses by the public and other agencies and conditions change. Conversely, a team charge that is unduly broad can carry the team into basic transportation planning rather than a more limited problem, particularly if pressure is applied from various sources as the study progresses.

A clear definition of the problem is essential. It may be that significant areas of inquiry are surfaced at this stage. One of the keys for effective team management seems to be the definition of the problem in such a manner that a workable solution can be developed.

The project engineer who serves as team manager plays a major role in determining how successful a team operation will be. The project managers who have been most successful in working with teams have assumed the role of catalyst and coordinator with the team. Deadlines for completion of various aspects of the study are clearly established, and the manager works with the team chairman to see that major questions are being addressed by the team. Good agendas, objectives of individual meetings, production of necessary graphic materials, etc., all help to expedite team activities and focus members on the subject. The project manager who can place various responsibilities and questions before appropriate team members and avoid assuming an all-encompassing role seems to

stimulate the team and facilitate greater action than a manager who tried to take care of everything he can himself.

The scheduling and coordination of the activities of the various members of the team is a complex, yet essential, element of team management. At the outset "tried and true" techniques of complex project control, such as critical path method (CPM) and Program Evaluation Review Technique (PERT), immediately suggest themselves as descriptive and coordinative tools. These methods, however, do not seem to work. These methods are based upon a sequence of tasks beginning and ending at specified times. In reality, many tasks of the team are not dependent upon the completion of any other task. Numerous tasks can progress at the same time, and it is frequently necessary to return and re-do various activities. Modification and flexibility are essential aspects of team scheduling. As a group the team can review all factors that need to be investigated. A team member is then assigned responsibility for each factor. Each team member assumes responsibility for his area of expertise and develops study plans and scheduling. These are then reviewed with the project manager to insure that a coordinated effort results. The design or research processes to be executed by each team member, whether done jointly with other team members or singly, should be visible to all other disciplines, for this enhances the quality of team participation and furthers the achievement of ultimate goals of the design team.

This emphasizes the important role of the team chairman in leading his team through the study process. The chairman can place emphasis where needed, bring out the opinions of members, expedite the study, and help place various considerations in perspective. He also plays an important role in community meetings.

An interdisciplinary team does not fit neatly into an organizational chart or with certain established professional mores, and this raises some managerial concerns. None of the management problems concerning interdisciplinary

teams is unusually difficult, but planning and a somewhat different approach or type of management practice is required.

Evaluation of Interdisciplinary Team Efforts

Recently a group of professional personnel that included manager, team members, and project engineers met to evaluate the team process as it has operated in Washington. All those persons who were involved had been involved with several interdisciplinary teams. This group concluded that the interdisciplinary teams have been most successful in the following areas:

● Community Involvement Programs

The teams were required to prepare and implement formal community involvement plans that attempted to reach citizens from all the various segments of the communities. Team members usually relate well to citizens and local officials because the various individuals on the team can discuss numerous types of concerns of citizens; and through this type of organizational structure, the public seems to have a greater confidence that a wide variety of problems are being addressed.

● Evaluation of a Range of Problem Areas

The teams have been valuable in addressing and evaluating a wide variety of separate but interrelated problems. When all of the various problems of major projects are brought to a team, questions arise and suggestions are made that usually do not result when any one discipline is addressing the problem. The team as a whole seems to sort through the various considerations raised quite effectively and place importance upon the major factors involved.

The evaluation process includes several steps. First, the alternates under consideration are investigated by each discipline; and secondly,

each alternate is weighed by the team according to its relative desirability. Through these steps it becomes possible for the team to sort out a number of factors that relate most specifically to a project and then to address very systematically both the technical factors and the community opinions and values. This formal structured approach has contributed to the evaluation of issues systematically, and it has avoided either overlooking or down-playing certain factors when they should play an important role.

● Effective Interaction Among Team Members

The teams have been quite effective in providing for interaction among the various disciplines thereby improving the quality of the special studies and sorting out those points which seem to be of minor significance. The shared responsibility in accomplishing a group effort suggests that the success of team interaction is due to no small extent to the horizontal relationship of the various roles of members to each other and to management.

In the operation of the interdisciplinary team in the State of Washington, each member has been required to present his findings to the entire group for their consideration in reaching a decision concerning the type of action they believe should take place. In doing this, each team member is required to not only present his findings in an understandable manner but also to respond to various types of questions, suggestions, and ideas concerning his field. This interaction brings about an analytical review and investigation that in many cases would not result simply because the person preparing the study would not be subjected to this type of cross-examination and discussion. This has been one of the most effective contributions of the team process.

Problem Areas

Some of the problems that have been encountered in the interdisciplinary team approach have been communication difficulties, systematic completion of work, the cost of utilizing an interdisciplinary team, and confused conception of team responsibilities. The use of interdisciplinary teams is still in the experimental stage, and the experience of the State of Washington had undoubtedly been part of the evolution that must necessarily take place. Some of the difficult problem areas that have been encountered have been the following:

● Communications

If a team is to develop satisfactory solutions to problems, all aspects of the problem should be discussed and rapport established between the team and the administrators. The most successful team efforts have resulted when administrators giving the teams the assigned study have felt free to discuss all the important problems with the team including economic, financial, and political ramifications as well as the engineering and the technical impacts that must be considered for the environmental impact statement. If the team is placed in the role of having to consider all of the difficulties involved, a concern for an appropriate solution develops which is not evident when a more structured technical recommendation is the only result of the team effort. The team members likewise have a responsibility to discuss their collective problems with management before approaching sensitive issues in public. Keeping these channels of communication open among people who are busily involved in work assignments, in addition to the project assigned the team, requires some special attention and a willingness on the part of all parties to achieve the goal of the team.

Another part of the communication problem relates to community groups.

A part of team management is to avoid overreaction to any facet of the problem, whether it be technical problems or unreasonable demands from certain groups. If the team can develop a process by which various concerned groups can explain their concerns to the team without feeling that they are in a confrontation type of situation, our experience has been that the team members and the groups involved can reach a greater mutual understanding. Obviously, this usually requires situations other than public meetings, since people are understandably more defensive and sometimes more aggressive in such meetings than they are in situations where their "opponents" are not present. They feel they have a team willing to listen and consider their problems.

● Systematic Completion of Work

Each team effort begins with a work schedule that is based upon the best information available at that time. Major problems concerning the completion of schedules have been the difficulties which some team members have found in devoting adequate time to the project and in changes in alternatives and the scope of work that almost inevitably takes place as the project progresses.

Experience has shown that a team activity cannot be just one more duty added to an already full schedule for an employee. Likewise, when changes result because of unforeseen factors, then schedules have to change. Facing these problems when team members are appointed and a project has begun are highly important for the success of the total effort.

● Cost of Conducting Interdisciplinary Team Studies

The cost of the team operation relates directly to the efficiency of

the team management. Even though comparisons are difficult, there seems to be no question that a process which involves a team and community interaction is time-consuming and more costly than one that does not. However, the short-range and the long-term costs of reaching solutions to problems must be considered. Through an evolutionary process it has been possible to improve efficiency of teams somewhat, but much remains to be done in this area. The evolution of the interdisciplinary team process is gradually moving from quite formal detailed procedures to a greater degree of flexibility. This appears to be normal evolution as a greater familiarity with the team process has developed.

It is difficult to assess the cost effectiveness of interdisciplinary teams because there are at least 17 separate federal and state statutes that require transportation agencies to review a number of factors that are quite different in nature and evaluate the impact of pursuing various courses of action. All of the statutory requirements would have to be completed regardless of whether a team is formed or not. Hence, a greater cost question relates to the organization and efficiency by which the personnel involved are utilized rather than attempting to relate cost comparisons of the more traditional planning and design process to team efforts.

● Confused Concepts of Team Responsibilities

Major confusion quite often seems to result concerning the expectations of a team effort. If the desire is to reach a solution to a problem and reports are viewed as a product of the system rather than ends in themselves, then one type of activity can proceed. On the other hand, if the solution is more or less locked in and the team is to evaluate

the impacts of taking defined action, then another type of process develops. The major problem that seems to exist in various efforts is giving adequate attention to the real objective of the team effort when the study is originally undertaken. If this is not done, confusion develops, because different people involved in the total team activity are operating under quite different assumptions.

Conclusions

An interdisciplinary team can serve as a valuable organization tool to achieve a number of important objectives. An interdisciplinary team does not fit neatly into an organizational chart or the ongoing professional mores, and this raises various types of managerial questions. Overall, the interdisciplinary teams with which I am acquainted have provided a useful service in generating ideas, evaluating alternatives from various perspectives, assessing community opinions and desires, and recommending solutions that seem to receive a greater degree of acceptance than recommendations from individual technicians or citizens, however valid they may be. The most successful team operations seem to require an emphasis on the following practices:

1. The agency creating the team should expect an indepth analysis of the problem and recommendation for action, and be prepared to deal with various ramifications of the problem that were not discernible when the study began.
2. The administrators should plan to provide input as the study progresses along with the public and various technical experts so that the recommendations of the team can be implemented and managers are not placed in a position of having to reject the recommendations of the team for technical reasons or departmental policy.
3. The team should prepare a formal community involvement plan, participate in various types of functions established to implement the plan, and then care-

- fully consider the values and opinions of citizens in reaching a decision.
4. An informal atmosphere of mutual trust should be created so that administrators and team members can feel free to discuss all aspects of the problem-- not just those facets that pertain to technical evaluations and solutions.
 5. The team members have an obligation to conduct special technical studies, relate well with the public, and participate constructively in team deliberations. For this objective to be realized, individuals selected as team members should be well qualified in their profession, have sufficient experience and maturity to enable them to place the problem in perspective, and carefully evaluate the relative importance of their findings when various solutions are considered.
 6. The managers of the interdisciplinary teams should seek to expedite the study, provide for flexibility in relating to problems as they arise, require team members to fulfill their responsibilities, and maintain an open communications system.



Eugene Cleckley of FHWA's Fort Worth (Texas) office confers with Phillip Wilson, State Planning Engineer for the Texas Department of Highways and Public Transportation.

3.0 WORKSHOP PAPERS

CONCURRENT WORKSHOP SESSIONS

GENERAL ASSEMBLY

Tuesday, March 1, 1977

WORKSHOP SESSION A: "STRENGTHENING AGENCY/INSTITUTIONAL
RELATIONSHIPS FOR TRANSPORTATION PLANNING"
(ANALYTICAL AND PROCESS PERSPECTIVE)

Moderator: Paul N. Geisel, Professor
(Panel I) Institute of Urban and Regional Studies
University of Texas at Arlington

Panelists: Paul N. Geisel, Professor
University of Texas at Arlington

Robert L. Moore, Executive Director
Houston Housing Authority
City of Houston

Moderator: Oliver F. Stork
(Panel II) Houston-Galveston Regional Transportation Study
Department of Highways and Public Transportation

Panelists: Bill Kopecky
Transportation Manager
Houston-Galveston Area Council of Governments

Donald E. Harley
Budget and Planning Office
Governor's Office
State of Texas

Moderator: Anthony J. Mumphrey, Jr.
(Panel III) Associate Director and Associate Professor
Urban and Regional Planning
Urban Studies Institute
University of New Orleans

Panelists: William J. Murin
Associate Dean of Faculties and Associate Professor
Public Administration
University of Wisconsin (Parkside)

Anthony J. Mumphrey, Jr.
(Assisted by) Cindy Fromherz, Graduate Student
Urban and Regional Planning
University of New Orleans

PAUL N. GEISEL: As moderator for the first panel in this workshop session, I would like to make some philosophical remarks prior to any discussions we might have on the specific issues involved. For a number of years now, I have been keenly interested in how organizations interact and how organizational change can take place, and about the processes involved in public decision-making.

The debate about the feasibility of social planning; about the needs of low income transit dependent groups; and about governmental decision-making in general would be incomplete without some reference to community agency structures and the overall concept of social service delivery. The total question of service delivery, then, becomes one of considering how to best utilize available resources at the local, regional, state, and federal levels of government; and how to combine the special competencies inherent in various organizations to address the yet unresolved issues in planning and the delivery of services.



Dr. Paul N. Geisel of the University of Texas at Arlington and Southern Methodist University, opens Workshop A. Others include: Dr. Robert Moore, Executive Director of Housing Authority for City of Houston, Oliver Stork of Houston-Galveston Regional Transportation Study, Bill Kopecky of HGAC and Donald E. Harley, Budget Planning Office, Governor's Office, State of Texas.

BLUEPRINT OF ORGANIZATIONAL STRATEGIES
COMMUNITY INVOLVEMENT
by
Paul Geisel
Institute of Urban and Regional Studies
University of Texas at Arlington

This is the first workshop session to deal with the issue of Interagency Cooperation. The theme of today, as you have heard, is that citizens need to be involved in transportation planning and agencies need to be involved in transportation planning. We have already had numerous comments on the simplicity of the federal system and experiences in dealing with it. Now, we are going to have to talk a little bit about some of the other hard issues of how to bring the agencies and the folk into the picture. We'll spend a moment for resolution.

My name is Paul Geisel, I'm from University of Texas at Arlington and Southern Methodist University. I have been involved in the idea of Citizen participation for a number of years, and am attempting to find places for it. What I am going to discuss is essentially the dilemma of how the citizens, in effect, come into this. I was asked to speak on the issue of a "Blueprint of Organizational Strategies for Community Agency Involvement." I always appreciate that particular challenge, particularly when I read regional and national reports and their recommendations. We are very good at making studies these days, identifying problems, and, the problem is "that the folks are not involved." The pros are coming up with responses to grants in terms of anticipating their planning. It is much like our former speaker, just before lunch, told us that transportation ought to be laying out ground rules for the future; laying out regional plans for the future and that we are delighted to have the "People Mover" in Houston, which was a direct response to the federal program and money was available in every major city that came forth with the dramatic and great need for a

People Mover, indeed. We learned in Dallas that we could not survive if we did not have it. We didn't know that we needed it up until that point, but we do now. We need it badly because Houston has it. That kind of community chauvinism, I think is a large part of our whole approach. We are not sure we know what our alternatives are. Nor are we sure of where the citizens should come in -- other than to react. We have already heard that it is important not to have citizens simply respond or look at planners slides or overlays. But, then we receive from the planners how they intend to involve us. I brought with me, for example, a report from the Council of Governments in North Central Texas giving various recommendations on what should be done, what should be accomplished in order that better services be provided for the handicapped or elderly. And, I can pick any disadvantaged group or any aspect. One recommendation is (see if this comes as a shocker to you) It is recommended that a means be established by which public and private transportation resources be coordinated so as to provide improved transportation services for the client. Not a word on "how" -- not a "cent" spent on how, not a "cent" spent on the certain requirement of all the agencies. There are 39 agencies in the North Central Texas Region providing transportation services for the elderly and the handicapped; 308 vans, 474 automobiles are driving elderly all over Tarrant and Dallas County. If you are a lady and you live in Garland and you need to get to the Senior Citizen Center in Fort Worth, it requires 8 different persons, 9 different vehicles to get you there. You can get there in approximately three and one half hours but we are very sorry we don't have a return trip arrangement possible. So, we do need some coordination.

The second recommendation is that the providers ought to provide more information as to their services, and spell out for whom and to whom the services are available. They will respond by saying the people who know us, know it and the rest are irrelevant. With that number of vans and that number of buses,

we are effectively transporting all together (and this report did not point it out, I decided to do a little research to find out how many different bodies we actually move everyday) we are moving 504 people a day. Now that is less than a person per day per vehicle for any kind of trip for the elderly and handicapped. Most of our vehicles are sitting there for most of the day. We have tremendous complications relative to who has the chauffeurs license or who has the insurance. Who has the bond? Who is responsible for the bond? Who owns the van? Who should make the calls? Thirty-nine (39) agencies providing transportation, and dealing with 61 other agencies. It's a classic case. It's a good deal; and, I digress to tell you that we are not alone in this particular nightmare.

Last year I did a study of the agencies in the Dallas area that were dealing with drugs. Let me digress on them for a moment and you will see where we are going with this discussion. In the City of Dallas, we have 72 agencies that deal with drug abuse. We have a total combined budget of 9.5 million dollars and the capacity to resolve 15 addicts a year. If all the addicts survive we will have the problem solved in the year 3181. Now, what are you going to do with this kind of nightmare? Will the United Way convene a meeting and resolve that crowd? Probably not, because they don't want the community to find out exactly what their rip-off is. And they don't have the staff and they are waiting for the "Feds" to give them some guidelines. Will it be the Council of Governments "our hope for the future" will that be it? We're suffering with a real problem in our Region. We have an active prominent Council of Governments. What we are discovering is considerable less enthusiasm for regionalism than we had before because we don't have it. We have a staff that is lovely. They are the best looking staff in the region. They are the best looking officers and they never leave Arlington. We have a new surrogate branch of the federal government reviewing our grants and proposals and if you deal with any city government or

any agency you learn appropriately, and how politically to "plank" them. We have the crumbiest system of representation in the history of man. What everybody wanted in the Council of Governments, and what everybody wants in this business is a negotiating table. They want to come to the table to do business. They want to get the premises on the table and they want a neutral site and an objective kind of staff resource available in order to do business. What we are all searching for is some kind of decision-making system with some clear rule established on how to negotiate. We also need some mechanism, some way to organize that word called "clout" in such a manner that if a decision is made, it will be achieved and implemented. And it's a difficult task. For the last five years I have been trying to organize a group called the "DALLAS ALLIANCE." It makes many people nervous.

The Dallas Alliance officially launched its operation in February, 1975, following a feasibility study conducted over a three-year period by a 12-member committee of the Dallas Chamber of Commerce. As in all cities, Dallas has an abundance of community and service organizations addressing themselves to various aspects of community needs and problems. The Dallas Alliance was conceived as an organization which would serve as a catalyst to stimulate and encourage combined efforts of community groups in seeking resolution to urban problems affecting the City of Dallas. Hopefully, this process shall reduce duplication of effort and facilitate a more effective means of attaining positive action.

The Alliance is governed by a 40-member Board of Trustees comprised of eight Ex-Officio members, eight elected or appointed governmental officials, and twenty-four members from the business sector and the community-at-large. The racial composition of the Board reflects the racial ratio of the City's population.

There are 88 community organizations affiliated with the Alliance, who are designated as Correspondent Organizations.

Initially, the Alliance had determined two priority areas to which it would address itself: Criminal Justice Reform, and Neighborhood Regeneration and Maintenance. Task Forces were formed and are presently functioning, utilizing the expertise and resources of various Correspondent Organizations.

The Alliance became involved in the Dallas desegregation issue in October, 1975, following Board action which called for the formation of an Education Task Force. A twenty-one member Task Force was organized, consisting of seven Anglos, seven Mexican-Americans, six Blacks and one American Indian. The intent of the Alliance, in this regard, was to convene a racially mixed group in order to gain input from representatives of all ethnic segments of the community. At the outset, the Task Force realized there were no perfect solutions to such a monumental problem, yet the Dallas Alliance believed strongly that a consensus plan developed by a racially mixed group could provide a stimulus for community support and implementation.

Of the six plans for desegregation submitted to the U.S. District Court in Dallas, Judge William M. Taylor adopted as the Court ordered plan that which was submitted by the Education Task Force of the Dallas Alliance. In spite of the fact that the Court order is being appealed by the NAACP in the 5th Circuit Court, the community is now intensely involved in the implementation process and has garnered the support and participation of numerous business and community leaders, community organizations and agencies, and citizens. Community support has been further demonstrated by the recent voter approval of an \$89 million dollar School Improvement Program which enables the school district to fulfill the new school construction and renovation requirements stipulated in the Court order.

In the area of Criminal Justice Reform, the Alliance Task Force has been working on several elements of the justice system, in cooperation with City and County officials. Three subcommittees have been formed, which are 1) Legislative Reform, 2) Diversion Programs, and 3) Youth Development and Juvenile Justice. Significant progress has been achieved, particularly in the juvenile justice and diversion program components.

The Neighborhood Task Force has gained momentum via planning sessions and meetings with local and national professionals, as well as Correspondent Organizations, to consider strategies for organizing and strengthening neighborhoods and to explore financial availability for the improvement of neighborhoods.

The Dallas Alliance has the controlling power of the Citizens Planning Council of Dallas, the Citizens Council of Dallas, the United Way and the community of Dallas. There was a study done of 72 agencies. This study was an effort to call the agencies together and somehow merge them into a coordinated operating agency. These 72 agencies are today 24 agencies and merging.

Now the transportation hassle is exactly the same issue. A decision table is necessary, a negotiating arena. That's what we want with the councils of governments. That's what these cities want. They want to come in and sit down with the suburbs and say "get your thoroughfare plans in order so that we can have some alternative routes other than the network of freeways which we have surrounding Houston." If we had some way to move in Houston, other than the freeways we would have resolved most of the congestion that is already there. But we don't. Now you can hear all you like about the freeways of Houston, they are the only way to get there. In terms of alternate thoroughfare planning, there don't seem to be any. I'm delighted to hear how the City of Houston cooperates with the Texas Department of Highways and Public Transportation. Without them they would not be here. Little, if any, coordinated planning has

been done within regions.

Is there a need for a regional approach to transportation? We are finding that over the years the basic transportation responsibilities of government have been shared by the Federal, state, and local levels; the need for sharing is greater than ever, but it focuses more on local needs and on joining local governments together in areawide cooperative ventures designed to meet inter-modal needs. While most of these unmet needs are interjurisdictional or area-wide the existing means for meeting them are uncertain. So, improving transportation requires a regional approach; it requires a coordinated approach. More than that, the comprehensive planning concept would necessarily require a viable blueprint entailing organizational strategies for community agency involvement. All of the capabilities and resources of existing organizations must be combined with those of planning officials and engineers if we are to alleviate the current transportation dilemma; if we are to effectively plan for the year 2000 and beyond.

STRENGTHENING ORGANIZATIONAL CAPABILITY
FOR COMPREHENSIVE PLANNING

by
Robert L. Moore
Executive Director
Housing Authority of the City of Houston

Transportation, particularly low-cost public transportation, increasingly becomes more central to community economic and social problems daily, as a major part of their solution. The theme of this conference, "Strengthening Organizational Capability for Comprehensive Planning", is right on target as the needed focus for the difficult years ahead. Not only will transportation mode and routes continue to help shape our urban environment, but it will, in the main, help to determine the quality and frequency of our economic and social interaction patterns in the future.

I am sure that Von Thunn, Christaller, Hoyt, and others who developed the foundation for the still evolving concept of location theory did not clearly envision the urban metroplex where the location of goods, services and interaction points would become so crucial to urban life.

We have passed through an era of the nation of small neighborhoods with their own economic, employment, and service infrastructures in place and easily available to the average resident. During that period of decentralization citizens set a high value on compact, self contained neighborhoods. Overnight, the costs of fragmented employment places, shopping areas, and entertainment facilities become excessive and a massive move to centralize becomes economically crucial. The net effect on the urban landscape, particularly in Houston, has produced multi-functional centers, regionally oriented where a variety of goods and services are available. Most certainly these diversified centers are private automobile oriented.

While this scenario is responsive to the needs of middle income Americans, it most certainly works a severe hardship on lower-income citi-

zens who depend on public transportation. While centralization and aggregation of goods and services tend to lower costs and expands the variety of goods available at one location, they pull these resources further away from lower-income citizens, heightening the importance that comprehensive planning be carried out in a way that makes all citizens equal beneficiaries of these resources and services.

Recently, we completed a comprehensive study of the community service needs of residents at Allen Parkway Village, a traditional public housing complex near downtown Houston. When asked; "What mode of transportation was needed to get to the places where services are provided," 64% responded by city bus; 24% by walking; 21% by neighbors car; and 13% by taxi.

The places most frequently travelled to found 42% grocery shopping, 21% education, and 15% to health services.

Clearly, for those of us in lower-income housing community development, public transportation planning and its execution becomes crucial to adequately servicing those without resources to afford a private vehicle.

The possession of income attracts goods and services and the lack of it repels in a simplistic statement. Yet the quality of life in Houston is to a large extent proportionate to the availability of transportation.

Because of the importance of transportation the U.S. Department of Housing and Urban Development (HUD) has required that all new assisted housing be located on or near a public transportation route, with direct access to shopping and social service facilities. Without adequately responding to these "site selection criteria," HUD will not approve a proposed project.

The Housing and Community Development Act of 1974, Section 8 Housing Assistance provides local communities with flexible funds to rehabilitate substandard housing, construct new facilities or subsidize the rents of lower-

income families, the elderly or the handicapped in existing standard rental property. In Houston, the Housing Authority provides rental assistance to over 1900 families, one of the largest programs in the nation. These families live in privately owned rental housing dispersed throughout the city. The intent of the Legislation is to give lower-income families the option of choosing their own residence, rather than being restricted to living in projects and to deconcentrate or disperse program participants from deteriorated neighborhoods. Shortly, the Authority will enter into a contract with Texas Southern's Urban Resources Center to assess the locational choices and quality of life improvements of program participants, central to the centers' assessment will be, "what part did the availability of transportation modes and routes play in their housing choice" and does the new location of the family improve access to jobs, services, schools, recreation, etc. We believe that the TSU assessment will provide some valuable data on the impact of the program that will be useful to the housing and transportation planners.

Relative to new construction, Section 8 provides resources to produce housing for specific underserved groups. Last week the Authority sold \$ 6.5 million in revenue bonds to construct 200 units of housing for the elderly and handicapped. In November, 1976, the Authority purchased a 16 unit complex that has been rehabilitated for residence/training center for the blind. In 1977, we will construct a 60 unit development for young handicaps along with three (3) 200 units elderly and two (2) 100 unit family projects.

All of these new initiatives will have an impact on transportation planning, as housing becomes more specialized and targeted for specific groups.

To insure that these populations are served with adequate transportation and services, there is a great need to expand current notions of housing and community development planning to include transportation concerns

on the front end. Our current fragmented planning systems and the execution of less than comprehensive plans often are counter-productive to the goals we try to achieve.

Most certainly the C.O.G. has a valuable service to render in terms of regional issues, however, I am concerned about integrated planning and the general purpose at county and municipal levels. This is where the strengthening must be focused, for it is at this level that impact of limited and narrow planning has the greatest potential for positive planning impact. Most certainly those of us engaged in housing and community improvement planning must find ways to develop stronger linkage with transportation planning. Too often we react to transit issues rather than being involved in the initial planning, (Harrisburg Freeway).

I am convinced that new mechanism for joint planning, that if developed thoughtfully can give us a way to move toward making comprehensive planning a reality rather than a vague term spoken, but never actualized.



Workshop participants listen as various speakers discuss processes for coordinated transportation planning.

TRANSPORTATION, COORDINATION, AND BUDGETING:
A PLANNING PROCESS
by
Donald E. Harley
Budget and Planning Office
Governor's Office
State of Texas

Introduction

Transportation planning and transportation programs do not exist in isolation and cannot be considered in isolation from the other needs of society. This is true whether the plans and programs are developed at the local, state or national level. It's my purpose here today to attempt to provide some perspective on the state mechanisms for coordination to produce implementable state governmental programs in Texas -- giving particular emphasis to three mechanisms in the budget and planning office:

1. Interagency Planning Councils
2. A-95 and House Bill 1172
3. Budget Process

Planning Process

SLIDE 1

Variety of Methods are used to produce state plans:

1. Aggregate local or regional
2. Separate statewide effort
3. Adapt portion of national

All seem to begin with some inventory of existing situation, establish goals and objectives, and through an iterative process project, analyze, and select a plan for accommodating current and future needs.

Two mechanisms for coordinating planning:

1. A-95 (H.B. 1172)
2. Interagency planning councils

At approximately this point, the plans are ready to be funded for implementation.

Texas (by Constitution) must operate within available revenues.

Plans recommended for implementation are always larger than available revenues.

SLIDE 2

Last biennium transportation programs accounted for approximately 15 percent of the state budget.

Health and Welfare -- 25 percent

Education -- 48 percent

Other -- 12 percent

SLIDE 3

Historical trend for transportation has decreased from 25 percent to 15 percent in 10 years (5 biennial).

Education by contrast has stayed at approximately 48 percent.

Health and welfare rose from 5 to 25 percent during the 10 year period.

Fluctuations indicate changes in society's perception of the most pressing needs.

SLIDE 4

5 modes of transportation

Dr. D. Philip Locklin, 1935

5 modes make up state transportation program.

In addition to the 5 modes, we have three categories:

1. Promotion -- planning, design, construction, maintenance, operation, and administration.
2. Regulation -- promulgation of safety and economic rules to protect consumer and business.

3. Enforcement -- policing or regulations

SLIDE 5

Using 5 modes and 3 categories, we can construct a matrix of state agency responsibilities for transportation in Texas.

Table displays the wide variety of responsibility among agencies. Examples:

1. DPS -- several modes but one category
2. TAC -- one mode but several categories.

Table does not tell about size of involvement. Examples:

1. SDHPT -- 15,000 employees, \$900 million budget
2. BCDRI -- No employees, \$7.3 million budget
3. BMTSR -- No employees, \$500 budget

With the large number and wide variety of responsibility and agency size, coordination between modes and categories of transportation is difficult.

SLIDE 6

The budget process in Texas provides a third mechanism to achieve some coordination and evaluate needs of the modes and categories of transportation.

The Budget process in Texas also provides a mechanism for evaluating the relative needs of health and welfare, education, transportation, and other functions of State government.

Steps in the process

1. Public input
2. Dual Process: LBB and executive office issue joint budget instructions
3. Agency prepares budget request
4. LBB and executive office
 - A. Hold Hearings
 - B. Prepare Recommendations
5. Legislature considers both documents

- A. Substantive Committee
 - B. Appropriation Committee
 - C. Hearing Process for Public Testimony
 - D. Prepare Appropriation Bill -- Passed in Both Houses
 - E. Comptroller Certifies
6. Governor vetos line items/entire bill or signs
 7. Agency implements

The process provides an opportunity for the policy maker in Texas state government to weigh and judge the merits and needs in various program areas.

SLIDE 7

To aid the policy maker in deciding which programs receive the available revenues, Texas has instituted a "Program Budget Format"

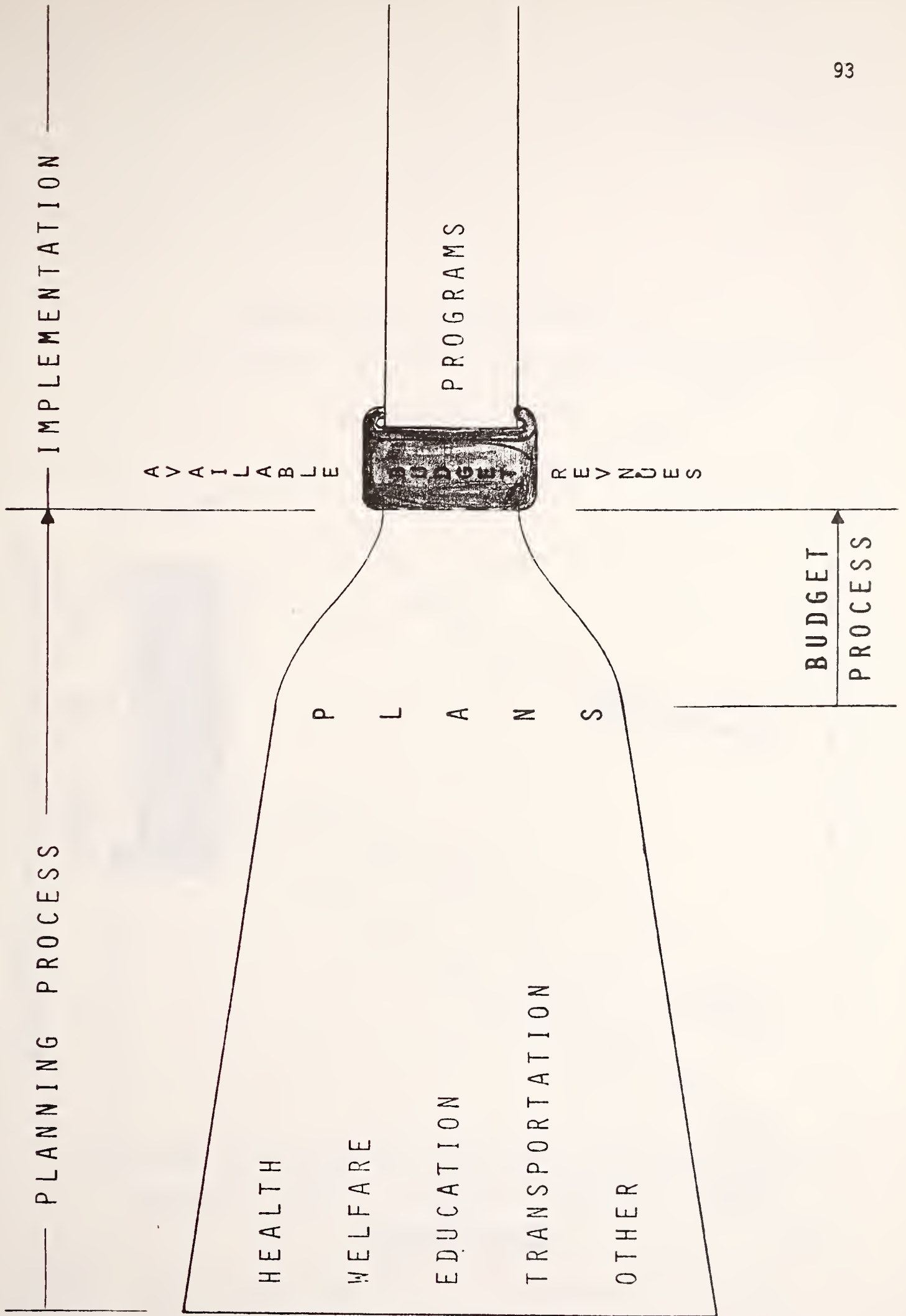
1. "Zero-Based: -- Misnomer
2. 1977 level of expenditure and measures of performance or work activity.
3. 90 percent level
4. Need
5. 110 percent level
6. Measure of cost vs. output

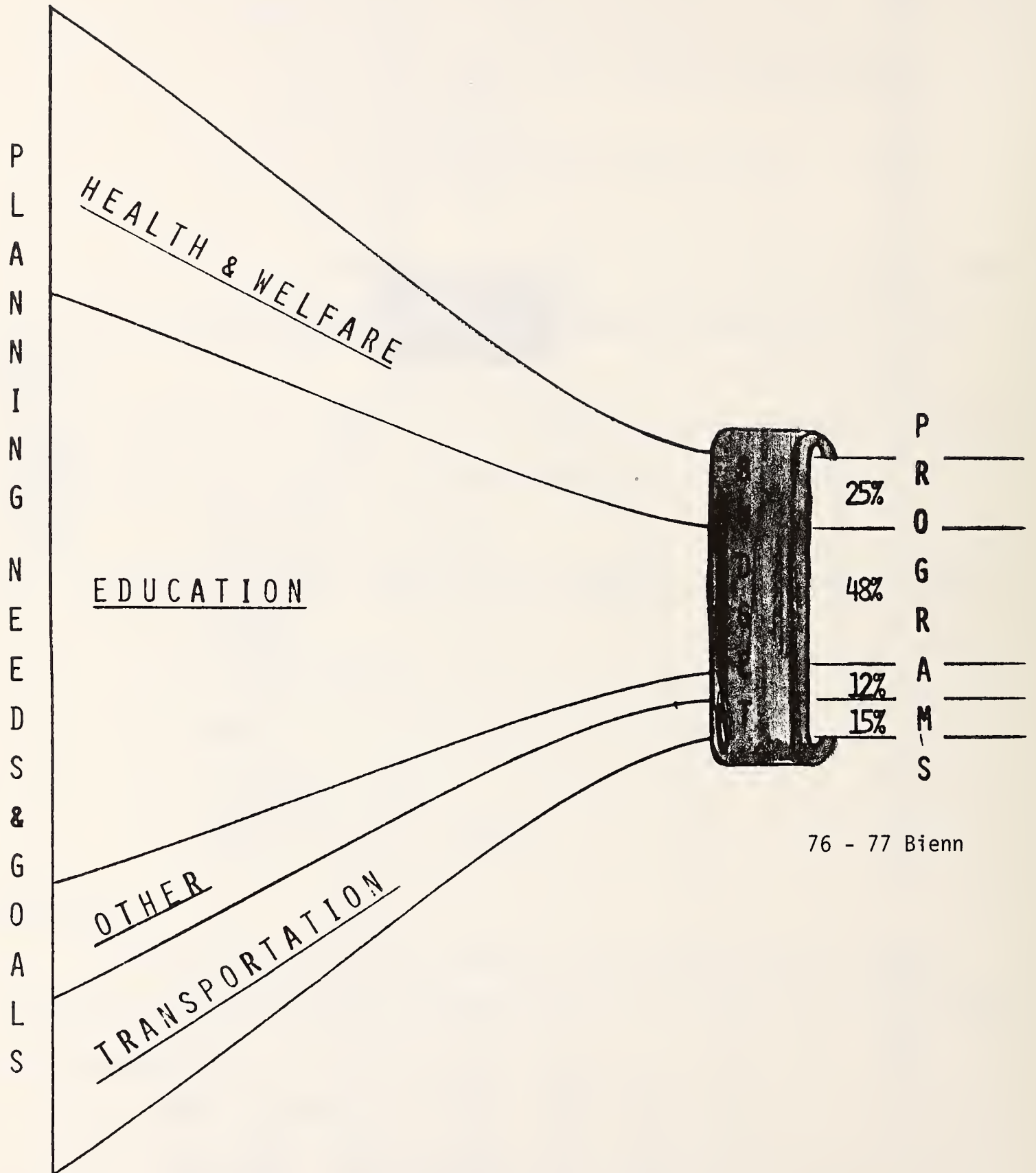
Conclusion

In summary: I've briefly presented three methods that the State of Texas employs to coordinate the planning process and to select and fund programs for implementation

1. A-95 (H.B. 1172)
2. Interagency Planning Councils
3. Program Budgeting

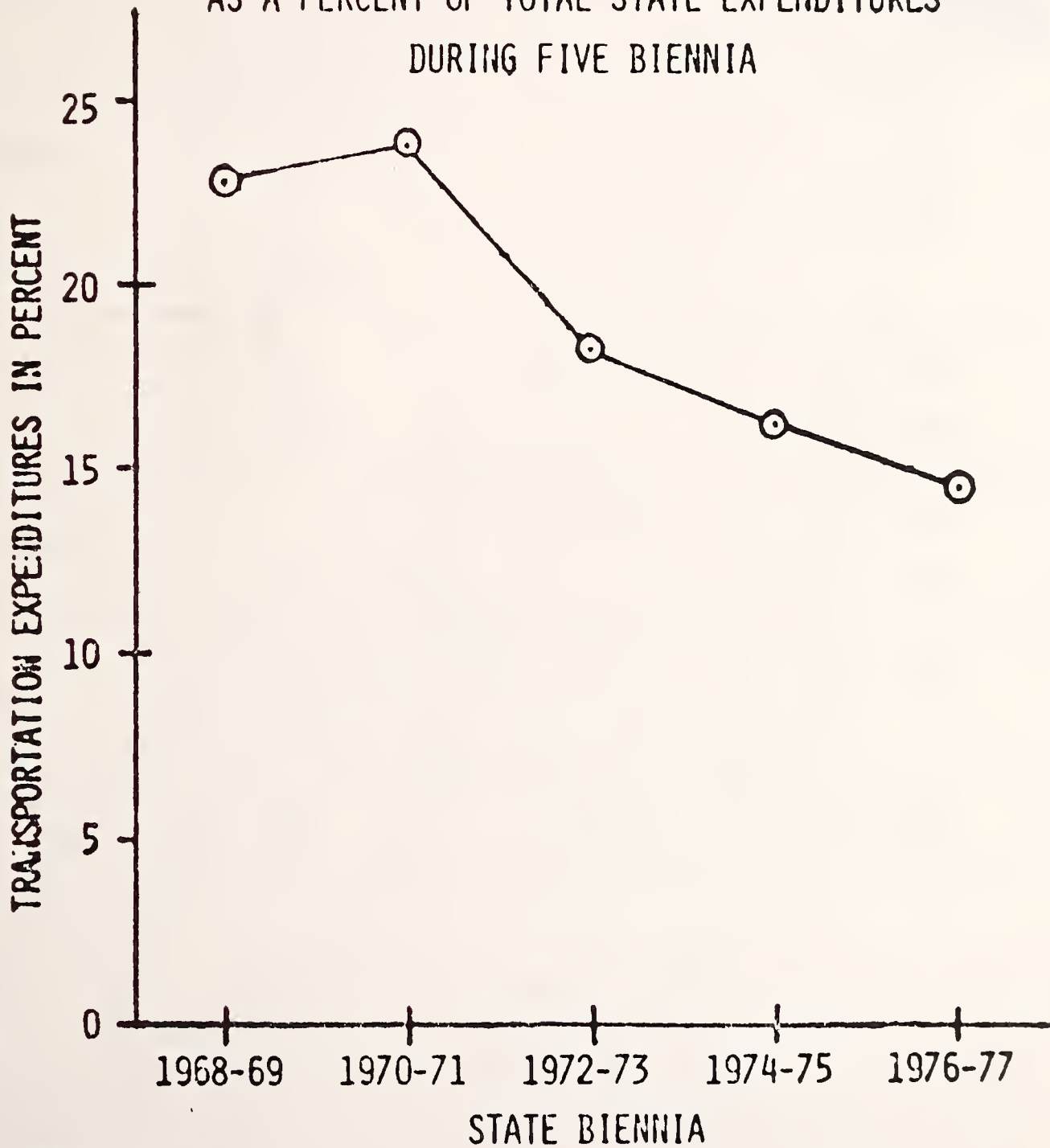
This is certainly not an all inclusive list of activities at the State level as it excludes individual efforts by individual state agencies, federal,



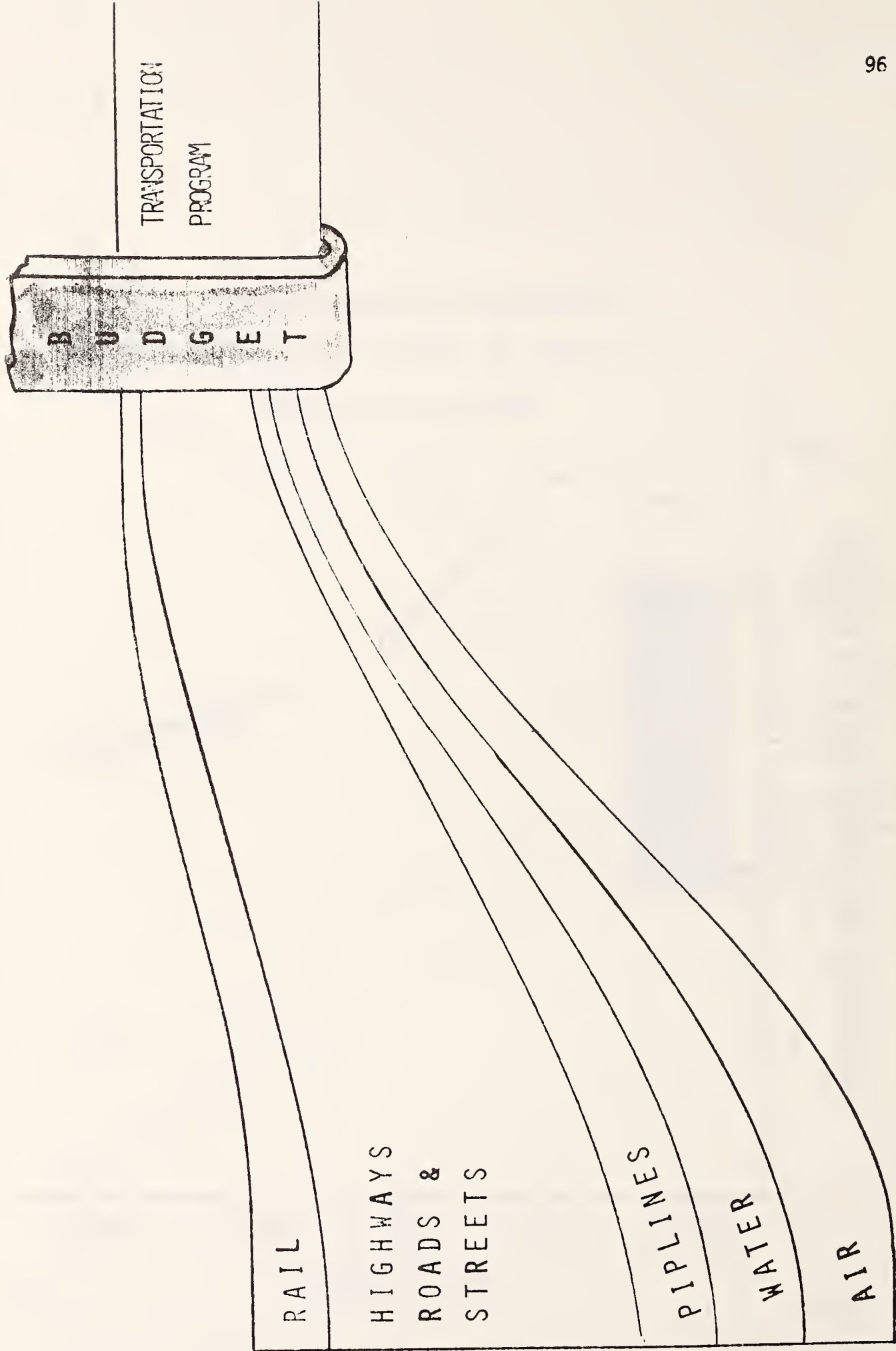


76 - 77 Bienn

TRANSPORTATION EXPENDITURES
AS A PERCENT OF TOTAL STATE EXPENDITURES
DURING FIVE BIENNIA



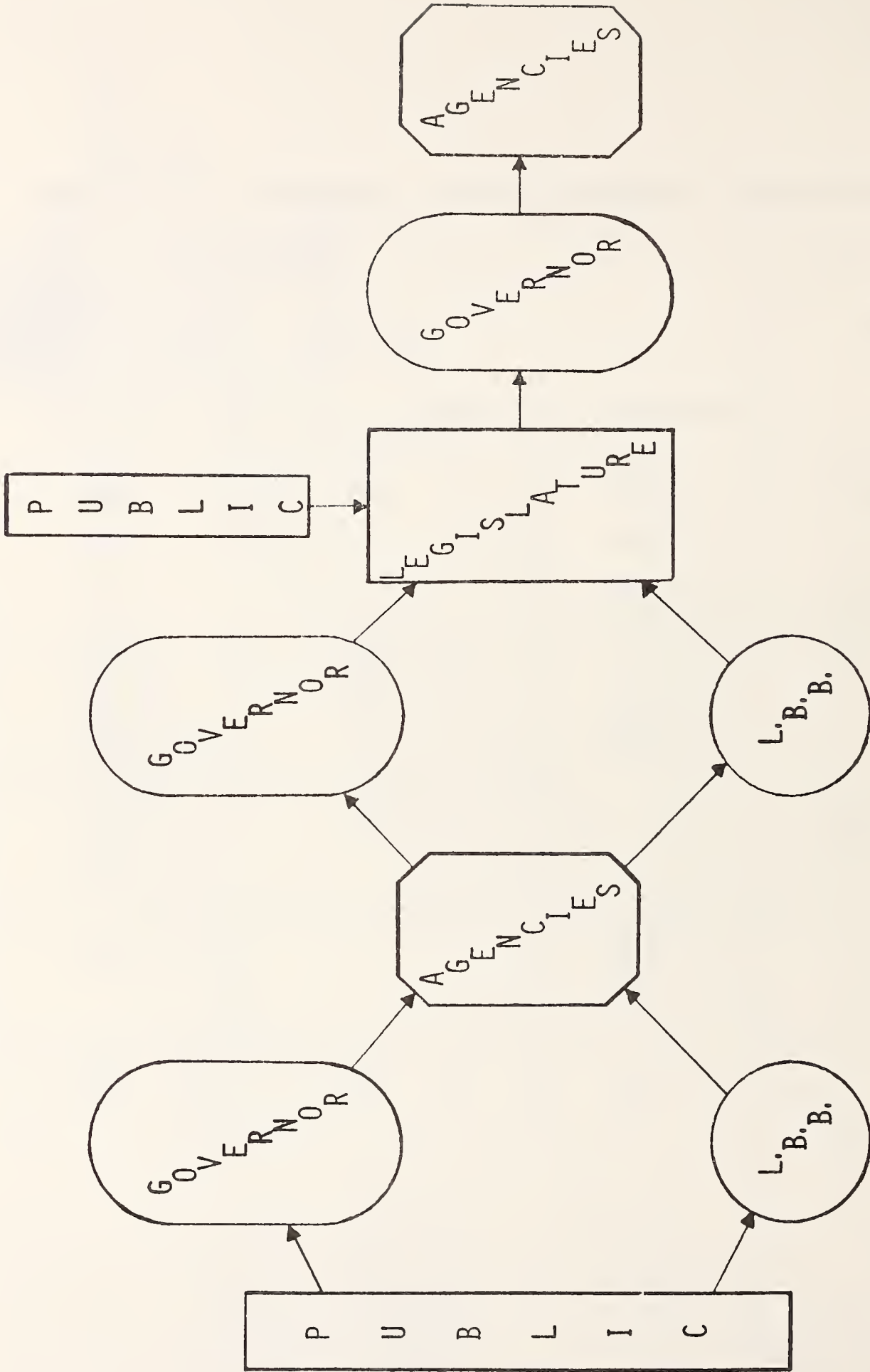
TRANS.	1.1	1.7
TOTAL	4.9	12.1



STATE AGENCY RESPONSIBILITY FOR TRANSPORTATION IN TEXAS

MODE	CATEGORY		
	PROMOTION	REGULATION	ENFORCEMENT
HIGHWAYS & STREETS	1. SDHPT 2. TTA 3. BCDRI	1. TRC	1. DPS 2. TRC
RAIL	1. TRC 2. BMTSR	1. TRC	1. DPS 2. TRC
PIPELINES		1. TRC	1. DPS 2. TRC
WATER	1. SDHPT 2. TCMC		1. DPS
AIR	1. TAC	1. TAC	1. DPS

DUAL BUDGET PROCESS



"ZERO BASED BUDGET"

OR

PROGRAM BUDGETING

	<u>90 % OF</u>	<u>1977</u>	<u>110 % OF</u>	<u>1977</u>	<u>NEED</u>
<u>PROGRAM #1</u>					
AMOUNT	\$ 90	\$ 100	\$ 110	\$ 200	
MEASURE #1 PASSENGER MILES	23	25	27	45	
MEASURE #2 VEHICLE MILES	4.5	5.0	5.7	13.0	
MEASURE #3 AVG. PASSENGER/VEHICLE	5.1	5.0	4.7	3.5	

PROGRAM #2

AMOUNT
MEASURE #1

and local governments.



Dr. Michael J. Rabins, director of the Office of University Research in the U.S. Department of Transportation, listens as representatives from various agencies discuss transportation research and funding priorities.



Conference director, Naomi W. Lede' of Texas Southern University listens as William M. Wood, FHWA in DOT and Sid Davis of Atlanta University discuss some budget issues raised in the presentation by Donald E. Harley.

MASS TRANSIT POLICY PLANNING
AND THE
URBAN DISADVANTAGED

by
William J. Murin
Associate Dean and
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In attempting to provide some insight into the relationship between the Urban Transportation Planning Process (UTPP) and the transportation needs and demands of the urban poor, it seems appropriate to re-state the general question of the Conference: "to what extent is the planning process working sufficiently well to incorporate the needs and demands of low-income transit dependents?" The facile, simple answer is "not very well." I am not sure, however, that such an answer is accurate or appropriate. Two aphorisms seem to apply in trying to develop some realistic assessment of the compatibility between the UTPP and the needs and demands of low-income transit dependents. A wise person once said that "there is no simple answers, only intelligent choices." Beyond that, a politically wise person acknowledged that "where you stand depends on where you sit." What I am getting at is that the villain, if there is one, may not be the UTPP, with all its problems and faults, but the transportation system itself. The wisest, most democratic, open, humane, and participatory planning process may not do much to ease the transportation burdens of the urban poor, if the range of mode choices available are not capable of providing the transportation services needed or demanded. For the simple fact of life is that there is increasing awareness that conventional public or mass transit technologies may not be capable of providing the transit dependent with the access and mobility needed to permit full enjoyment of the benefits of life in a modern metropolitan society. While I intend to give full discussion to the UTPP and ways that it might be improved, I also want to make some com-

ments on the intended consequences of a better planning process--the provision of better transportation services, and the changing nature of life in contemporary Metro America.

The Nature of Contemporary Urban/Metropolitan America and Urban Transportation

While it is obviously and sometimes painfully true that the nature of urban life has changed from the time when the UTPP was concerned with merely a matter of extending the horse-drawn streetcar out another half mile or so to a newly developed residential area, or building a new highway to allow residents of the newest suburb to get to their CBD jobs, often we seem to forget that the policies and practices designed for the 1900's or 1950's just do not seem to work well in the American urban place of the late 1970's. The language we use to describe urban life has changed to the changes in the style and quality of life we now experience on a daily basis. Once we spoke of "city life", "urban life", "a metropolitan lifestyle", then "megalopolis" entered the vocabulary. Now we seriously discuss the possibility of an "urban civilization without cities." These vocabulary distinctions are more than merely ivory-tower academics waxing philosophic about contemporary life. In a very real sense they point up the difficulties faced by planners and decision-makers when they try to serve the needs of today's citizenry while planning for the future. Yet most of our conceptual approaches, models, and theoretical designs continue to reflect the values and goals that existed in the urban place of fifty or seventy-five years ago. So, for most Americans, enjoying the benefits of urban transportation services is assumed to be a simple matter of walking out of their suburban home, getting into their automobile, and driving where they want to go with minimal delays caused by congestion or other problems. Yet, the past decade and a half has seen a realization on the part of many segments of society that public transportation in the contemporary metropolis must be more than auto-mobility. Beginning in 1962 with the late President

Kennedy's Transportation Message to Congress¹ in which he called for a system of good urban transportation, balanced between the use of private automobiles and modern mass transportation to "... conserve and enhance values in existing urban areas..." and "... to promote economic efficiency and livability..."² in urban America, the nation has experienced an explosion of interest in and the building of new systems of public transportation unseen during the previous half century. Public awareness of the need for public transportation was further heightened by the reports of the McCone Commission³ on the Watts riots and the Kerner Commission⁴ on the causes of civil disorders in many large United States cities in the summers of the mid-1960's. Both reports concluded that the lack of mobility of inner-city residents to jobs and other urban needs was an important cause of the trouble that plagued Los Angeles, Newark, Detroit, and a host of other urban places. The result of these statements was the passage of legislation at the federal and state levels all designed to improve public transportation for Americans, especially those too poor, too young, too old or physically handicapped to own or use an automobile.⁵

These legislative efforts were the results of a growing awareness on the part of public officials and policy makers that the phenomena of suburbanization and increased automobile ownership and usage had caused significant changes in urban development and lifestyles in the United States. While these "discoveries" took place in the 1960's in many of the larger urban areas, increasing suburbanization of residence and employment resulting in higher ownership and usage of automobiles had been taking place since the 1920's. City residents working in the central business district and using public transportation to get to work fell from 66 per cent in 1900 to 29.7 per cent in 1960 and to 22 per cent in 1970.⁶

Conventional wisdom places the entire blame for the declining state of public transportation on the automobile. But as all segments of society now know, or will soon understand, there is no simple cause and effect relationship

between auto usage and the present state of public transportation. The real nature of the problems affecting public transportation today is part and parcel of an overwhelmingly complex array of decisions and non-decisions affecting land use, residential and employment location, views about the good life, economic subsidy to some forms of transportation and not others, the failure to assign to each mode of transportation its full social and economic costs, the preference for a suburban lifestyle, and a host of other factors. The private automobile is not the only, or even primary, villain to be identified when we try and sort out why public transportation continues to lose riders even after billions of federal, state, and local dollars are invested in improving public transportation service.

The primary cause of the inability of public transportation to attract and hold riders is suburbanization that brings with it major changes in land use and development patterns resulting in dispersed residential patterns and employment sites; and dispersed travel patterns that make it increasingly difficult for traditional fixed-route, fixed-schedule, downtown-oriented, public transportation systems to compete with the private automobile. Fifty years ago when the most common journey-to-work was a relatively short trip from a central city neighborhood to a central business district (CBD) location, the bulk of all such trips were made on public transportation. Today with CBD oriented trips making up an increasingly smaller fraction of overall metropolitan area travel and with suburb to suburb travel and central city to suburb travel making up an increasingly larger proportion of metropolitan travel, central business district oriented public transportation systems are no longer able to serve the bulk of travel desires in most large metropolitan areas.⁷

Beyond the seemingly simple change in travel origins and destinations is another factor leading to the declining use of public transportation, one that does not bode well for the future of public transportation. Not only have

the locations of where people are and where they want to go changed dramatically, the entire contemporary metropolitan lifestyle is more diverse and multi-faceted than was the urban lifestyle of half a century ago. In addition, transportation and communication technologies now make it possible to increase the distances between residence, work, school, recreation, shopping, medical services, and other metropolitan activities to a degree that was not even remotely possible in the urban America of the early 1900's. What this means is that with the possible exception of the automobile or some new technology that is not yet economically, politically, or technically feasible, traditional public transportation is not able to serve the diverse travel patterns of contemporary metropolitan dwellers in any effective way.

Central city decentralization is so powerful a force that transportation systems can only serve, and not reverse those forces. As the importance of the central business district declines in the entire metropolitan scheme, transportation systems that continue to focus on downtown become less important, patronage on these systems declines, and the demand for more and better roads on which to travel in an automobile increases.⁸ The best that might be hoped for in any realistic view of the future is that public transportation systems might be able to serve new travel demands and might be able to direct the pattern of development into ways that are socially, politically, economically, and aesthetically acceptable to the society. It should be noted at this point, that transportation of any kind is never an end or goal in itself, but merely a means for achieving some other or greater goals. It can be argued (although not effectively or with much result) that future metropolitan development ought to be controlled and directed so that certain forms of transportation, most notably expensive, fixed-rail mass transit systems, can achieve the high operating efficiencies and patronage levels which they are capable of. On the other hand, a more realistic and achievable goal is to place the provision

of public transportation services into a context of serving societal, community, and individual goals. Not only is this approach more politically and socially desirable, it has the added advantage of allowing decisions about the provision of critical urban services. Urban public transportation is somewhat unique in that while it is a means to an end--home, work, school, medical services, recreation, etc.,--we tend to measure its effectiveness and efficiency as though it were an end in itself. Therefore the most commonly used yardsticks of transportation effectiveness and efficiency are economic criteria emphasizing cost-benefit analysis, the number of riders carried per miles traveled, and the number of riders that can be carried in a given travel corridor per hour of travel time. But the thrust of the Kennedy, McCone, and Kerner statements noted earlier, and the implications of many of the studies and demonstration projects over the past fifteen years clearly show that the benefits of public transportation are external to the transportation systems and flow to society.⁹

When public transportation is advocated as a means of bringing inner-city unemployed to suburban job sites, or public transportation is heralded as the savior of the aesthetic quality of an urban area, or is used to revitalize a central business district, or is recommended as an energy conservation device; then it becomes difficult to trace the specific outputs or benefits of any transportation decision.¹⁰ This does not mean that we should treat public transportation only as a social good and not be concerned with its costs or efficiency, but it does mean that public transportation must be viewed as a public service and not as a profitmaking venture.¹¹ As was noted in a report to the President of the United States in 1962 by the Secretary of Commerce and the Administrator of the Housing and Home Finance Agency (later to become H.U.D.) "...the price to the community and the Nation of inadequate mass transportation can be uneconomic uses of land and higher than necessary costs of public facilities, excessive travel, and increasingly aggravated congestion at peak hours."¹² This

same philosophy is a common theme in an attempt to justify operating capital, or developmental subsidies for mass transportation on grounds other than economic efficiency. One of the more recent attempts at such justification concludes that were economic efficiency to be the sole criterion on which to base a decision whether or not to have public transportation in most metropolitan areas, public transportation could not survive such a comparison with its natural rival, the automobile. Yet public transportation cannot be abandoned without serious social consequences.¹³

The Planning and Design of Transportation Systems

In any public works undertaking as complex as the planning and design of a mass transit system it should not be too surprising that Murphy's Law (If anything can go wrong, it will) tends to rule the day. From the time that the first traffic engineer, city councilperson, frustrated auto commuter, group of CBD business people, chamber of commerce, or city beautiful people get the idea that the ideal solution to a host of troubles affecting the city is to build a system of rapid transportation, to the day that the first rider boards a vehicle, thousands of decisions will have been made affecting all manner of individuals, groups, and interests and the resulting planning and design process will be one of the most complex undertakings ever engaged in by human beings.

From a purely technical and professional standpoint, the design and building of transportation systems is not particularly complex. The clients are supposed to make the decisions about the nature and frequency of service that they would like for a given cost, and the engineers and planners are charged with implementing that wish. In reality, though, this simplistic model never exists because it assumes that all interested individuals and actors possess the same amount and quality of information, share the same goals and values, and desire the same outcomes. Nothing could be further from the truth. While any good traffic engineer or transportation planner can tell his client the levels of

patronage that are necessary to highways, express buses, or rail systems profitable, political, economic, aesthetic, and other considerations are more likely to weigh more heavily on the minds of public officials charged with making decisions.

Any good transportation planner can tell a client that the higher the densities of homes and workplaces, the easier it is to design inexpensive, high quality mass transportation systems. Yet the suburbanization phenomenon has scattered homes and workplaces over metropolitan areas that stretch for hundreds of square miles, thus making convention transportation technologies inadequate for the task of moving people from place to place. Finally, any good transportation planner can tell his clients about the shortcomings inherent in the choice of any particular mode of travel. Highways, buses, and rail systems all do some things very well and are incapable of doing other things. For example, automobiles are excellent transportation choices in low density areas, such as moving an individual from a suburban housing development to a suburban industrial park. Yet they perform very poorly in high density areas such as central business districts of large cities. Yet, planners seem to be reluctant to tell their clients these simple facts of life or else their advice, if offered, goes unheeded.

In essence each mode of travel has its proponents and detractors and everyone involved in the issue thinks that he has the best solution to urban transportation problems. In reality, though, no such simple solution exists. The issue is much too complex and too many non-transportation considerations come into play. The consumer wants to be able to select any travel mode at any time of day and get the same results. The "best" systems of transportation is that which enables you to travel the way you want to get you where you want to go at any given time.¹⁴ The result of all of this confusion about which mode is best is that factors external to the provision of transportation services, factors that are political, social, environmental, and redistributive in nature tend to be prescriptive in the choice of new transportation facilities.¹⁵

For their part the transportation planners and engineers have not been entirely without responsibility either. For decades this group of professionals have said that their work was entirely apolitical, that their plans and designs were technically correct and that it was up to public officials and decision-makers to choose from among existing alternatives. They assumed, incorrectly, that elected officials had some unique ability to determine the content of the public interest with respect to the building of new transportation systems. Public officials, on the other hand, assumed that the technical superiority of one system over another made the choice of mode a clear-cut, non-controversial decision. History has shown that both assumptions are incorrect.

The operating ethos has been that it is possible for a competent decision-maker to find a valuable premise in any situation that uniquely determines the content of the public interest. If several technically correct, equally desirable courses of action presented themselves for implementation, some process, arbitrary or otherwise, would have to be found to arrive at the correct decision. In all such situations, it is assumed that our competent, well-intentioned decision-maker can find some value or premise that ought to rule. The problem for democratic government is to see to it that people are in office who will seek the public interest and will employ it when it is found.¹⁶ But as Edward Banfield pointed out a decade and a half ago, this presumption is completely incorrect:

No matter how competent and well-intentioned, a decision-maker can never make an important decision on grounds that are not in some degree arbitrary or non-logical. He must select from among incompatible alternatives each of which is preferable in terms of a different but defensible view of the public interest.¹⁷

What this tells us about transportation planning is that the elaborate mathematical and computer-based models used to determine the need for new facilities, the type of facilities to be built, and the level of services to be provided, are not the precise, scientific, apolitical creatures they have been purported to be. Even though Banfield's admonition is more than fifteen years old, it is only very recently that such warnings have been given any credence by the people

who are responsible for the design and building of transportation systems. In the case of the BART system, its planners were handicapped because the state of the art about why people choose automobiles over rapid transportation was so inadequate so as to make it impossible to predict with any accuracy what would happen if BART were built. It was impossible to predict with any level of confidence what patronage or revenue levels would result from the investment of two billion dollars in a new rail rapid transit system.¹⁸ Yet such projections were made, and they were accepted by public decision-makers as though they were incontrovertibly accurate. As one critic of transportation planning has noted, the science of transportation planning has been too inadequate to warrant the levels of confidence that has accompanied most projects.¹⁹

The Role of Citizen Participation in Transportation Planning

Throughout our discussion of mass transportation services thus far we have mentioned many of the interests and actors involved in the transportation planning process. At no time, however, has the role of citizen participation in that process been discussed. While it is much too simplistic to assert that the sad state of mass transportation service in the nation today is a direct result of the failure to involve the average citizen in the planning process, there is an increasing realization that failure to involve significant portions of citizens who are supposed to benefit from improved services will have disastrous consequences.

Historically, it has been the case that individual citizens or groups of citizens have had little involvement or influence in decisions relating to the design, implementation, delivery, and evaluation of urban public services. It is also historically true that people do not become much interested or involved in transportation issues unless they perceive that some particular project or problem will have a direct effect on their daily lives. Those who do tend to participate in transportation issues are those who are inherently more likely to get

involved across a wide range of public issues; the affluent, better-educated, and more influential.²⁰ Even on those rare occasions citizen involvement has taken place, such input is often ignored by the professional analyst or political decision-maker.²¹

Today, we see more and more interests being involved in planning processes of all kinds, and there is no reason to believe that such demand for participatory rights will decrease. Government and citizens alike are rapidly reaching the conclusion that decisions reached without meaningful citizen involvement are not legitimate.²²

The advent of the War on Poverty with its citizen participation requirement increased the demands for greater involvement of average citizens in governmental decisions that would affect their lives. Perhaps as a reaction to the realization that policy decisions were increasingly being made by oligarchies that did not represent common interests, perhaps as a reaction to the forces that led to Watergate and the increasing isolation of the common people from their government, increasing pressure has been felt at all levels to more meaningfully and actively involve citizens in the transportation planning process.

As in any number of service provision areas that real question is probably not whether there should be citizen participation in the planning process but how such participation might be best realized. Unlike some governmental services, education being a primary example, where many citizens perceive a real stake in the outcome of the decisions, areas like transportation tend not to arouse too much citizen interest until plans are drawn and decisions reached about the location of a new freeway, or bus line, or whether and where to build a new rapid transit system. Issues like transportation, with their technical and engineering complexity, tend to mitigate against active involvement by the untrained, average citizen. While a citizen group may advise and agitate for the placement of a transit line in a particular location, there may be sound economic and engineering reasons for placing that line in a different location.

A cursory examination of such an issue would lead one to believe that citizen input was being ignored whereas a more careful examination of the issue would indicate that legitimate reasons precluded accepting the wishes of the citizens on this particular issue.

In order to improve the quality and the quantity of citizen participation in transportation decisions a number of steps need to be taken, none of them particularly easy or inexpensive.

Initially, some individual or group must decide which citizens will participate on any given issue. If we accept the premise that those who pay would have the participation rights, then our decision tends to preclude the poor, the non-white, and the powerless from participation. If on the other hand, those who benefit from the improved services are to be afforded participation rights, then who is to speak for those taxpayers who will pay the costs of the improvement and yet are not likely to be the direct beneficiaries of the services? If the deletion of bus service to certain suburban areas is proposed, which groups of citizens ought to be involved in making that decision? If we confine participation to suburban residents, who are probably paying for that service, then we are likely to omit from participation inner-city residents who might well use that service as a way of obtaining access to suburban jobs. The alert reader who might suggest that participation be afforded all potentially affected groups should realize that simply providing more participation does not necessarily improve on the quality of the advice presented. Instead, the short history of citizen involvement in transportation planning tends to suggest that such a strategy will lead to different citizen groups providing the planners and public decision-makers with technically or economically incompatible advice, thus leading those who traditionally have made such decisions the ability to choose whatever course of action best suits their own purposes.

At a minimum, if citizen participation is to meaningfully affect trans-

portation planning and decision-making, the professionals need to develop a set of relatively simple models for the average citizen to be able to understand and respond to.²³ It certainly does little good, symbolically or substantively, for a group of transportation professionals to loudly proclaim its commitment to active citizen participation and then expect those citizens to respond to alternatives couched in the latest professional language and jargon. Citizens have a right and need to know about costs, frequency of service, the effect on property taxes of several different courses of action, the possible negative effects if particular transportation improvements are not made, etc. What they do not need, nor can they meaningfully deal with, are recommendations and alternatives displayed in terms of modal-split analysis, gravity flow models, the economic efficiency of various modes of transportation operating at peak efficiency, and the like.

An implicit assumption in much of the foregoing is that average citizens do have something substantive to contribute to the transportation decision-making process. Certainly it can be argued that a major goal of increased citizen participation is to simply democratize a decision-making process that has traditionally been closed and autocratic. Increased citizen participation can lead to increased confidence by the citizenry that government and its decision-makers are open and responsive to the needs of the people.²⁴ In the post-Watergate era with citizen confidence and trust in government extremely low, that is not an undesirable goal. But beyond simply increasing the openness of government and thereby improving upon its acceptability and legitimacy, what is there of a more technical and substantive nature that citizens can add to the transportation decision-making process? Unfortunately, there are too few examples of significant citizen involvement in transportation planning to be able to reach any concrete conclusions. Several of the concrete cases that are available come from the BART and METRO examples and they tend to show what an aroused citizenry can do when announced plans fail to take into account community interests.

In its most essential form the problem associated with increased citizen involvement in the UTPP can be summarized as follows: When transportation officials are planning seriously, local government officials and citizens tend to be listening carelessly; when the latter are finally ready to take a serious look at the plans, planners argue that they have progressed too far in the engineering, planning, and finance phases of the project to make many of the changes that the local citizens want.²⁵ This problem is not confined to the UTPP exclusively, but is a recurrent theme that faces almost every government agency whether the project be a mass transit system, highway, school, or urban renewal project. The inevitable suggestions, criticisms, and complaints seldom focus until construction is ready to begin.

In San Francisco there was a belated realization of what was happening in terms of station placement and design, and resulted in increased costs in both dollars and time. When BART went to the voters in 1962 with its \$792 million bond issue, plans called for the location of three stations along Market Street in downtown San Francisco. The plans had previously been presented to the public and approved by the Boards of Supervisors in the three counties involved in the BART project. Once the digging began, businessmen and politicians examined the plans more carefully and discovered that the last station in San Francisco before the system dived under the Bay was to be at Montgomery Street, about a half a mile from the waterfront. They concluded that a recent surge in office building construction near the waterfront called for an additional station. BART's Directors, however, felt that they did not have enough money to make the change, and they opposed it. Finally, the businessmen raised \$450,000 to plan the station and the city of San Francisco floated an additional \$23 million bond issue to pay for the new station.

Across the Bay in Berkeley, a similar battle was being fought when city officials and area residents discovered that two miles of track in that

city would be on an elevated structure. Here, too, plans had already been approved and system officials concluded that they simply did not have the money to make the changes. The track is now underground but only because Berkeley residents raised the necessary \$20 million to put it there.²⁶

The Washington, D.C. example had the opposite results for the community people and it is highly illustrative of the relative powerlessness of a group of central city, poor, black people when aligned against the combined forces of the transportation professionals and Congress.

In the summer of 1965, Congress had approved, but had not appropriated any funds for, the construction of a twenty-five mile subway primarily within the District of Columbia. Between 1965 and the approval of a regional system in 1967, several changes in routing occurred. The most important was the elimination of a branch line serving that part of north central Washington, D.C. known as Cardozo-Shaw. This part of the system, known as the Columbia line, was found to be the weakest of all lines in the subway system in terms of peak hour patronage, generating only 3,100 passengers^{per} hour instead of the 6,700 per hour originally forecast for it. According to system planners, this reduction in estimated patronage made the line uneconomical and its elimination was recommended.²⁷

The only real opposition to the elimination of the Columbia Heights line came from citizens and business groups of that area. Representatives of the Columbia Heights Businessmen's Association, the 18th Street and Columbia Road Business Association, and CHANGE, Inc., (Columbia Heights Association for Growth and Enrichment), Columbia Heights Citizens' Association, and the Adams-Morgan Association, all opposed the elimination of the subway line. Their argument was that by eliminating rail service to north central Washington, D.C., an area having one of the most densely populated, lowest incomes, and lowest automobile ownership rates in the city, inner-city residents would be denied access to jobs and other urban benefits. In addition, deletion of the line would destroy

the potential 20,000 jobs forecast for the area under the 1985 comprehensive plan for the National Capital Region. To the residents of the area, the elimination of rail service would result in north central Washington, D.C. becoming a slum.²⁸

The residents of the area initiated a three-pronged attack on the plan to eliminate the Columbia Heights line. They attacked the planning assumptions that the line was uneconomical, they challenged the basic planning analysis which recommended the elimination of the line, and they pleaded with the decision-makers against isolating central city residents from jobs and other opportunities lest another Watts type situation be created. In documenting their case, supporters of the Columbia Heights line pointed to a study done by the National Capital Transit Authority (NCTA) showing that in low income areas, 88 per cent of all travelers would use transit where travel times between auto and rail were equal. Beyond that, they pointed to another conclusion of the study that showed that even when auto travel was six times faster than rail transit, 76 per cent of the low income group would still use the subway.²⁹

To further support their case, they pointed to a poll taken by the Cardozo business community which showed that at least 74 per cent of those polled would use the Columbia Heights line at least five times a week and only five per cent said that they would never use the subway.³⁰ According to supporters of the Columbia Heights line, these two findings cast significant doubt on the validity of the NCTA's claim that the line would not generate sufficient patronage to be economically justifiable and the area residents would receive adequate transportation from the existing bus lines.

Area residents also pointed to the findings of the McCone Commission as to the causes of the Watts riots and were prompted to ask:

will despair and frustration lead to rioting in the District of Columbia when the ghetto residents ... see with their own eyes the plush, air-conditioned subways ... for commuters to commute once into and once out of the city every day, while they themselves have not one subway line to serve all their transportation needs throughout the day.³¹

The position of the Columbia Heights groups can best be summarized by the following testimony by Chauncey Thomas of Change, Inc.:

It seems clear to us that your entire planning staff is incompetent, or your junking of our subway line was done for political reasons that are not justified in terms of planning for the general public and the interests of the public.

Traditionally, the use of public funds for a transportation system has been justified on the grounds that mass transit benefits blue-collared groups who otherwise could not afford transportation to employment or shopping centers. This is especially valid in this area, where racial segregation in housing prohibits many workers from living near their jobs. The decision to drop the Columbia Heights line ... is surely an attempt to misuse public funds by suggesting a subway to benefit white suburbanites who can afford other means of transportation while leaving blue-collar Negroes and Spanish residents of upper Cardozo to the mercy of inadequate, inconvenient, and expensive bus service.³²

Richard Severo, author of "Potomac Watch" in the Washington Post put all the argument together in delivering a blast at the plan to eliminate the Columbia Heights line. His column noted:

If the poor people who live in rundown areas of center-city Washington are waiting for a subway system to whisk them to jobs downtown or in suburbia, someone ought to tell them that the wait may be a long one. For the bitter truth of the matter is, there is nothing planned for them in the immediate future. Later on, maybe, but not now. The first subway line, it has been decided, has to be out mostly white Connecticut Avenue. Not 14th Street. Not 7th Street. Not Georgia Avenue. Some of the people connected with the National Capital Transportation Agency are known to feel that they never could have got Congress to go along with the subway system, if they had insisted that initial digging start where it is needed most--in predominately Negroe areas of Washington

While the statistics presented by the Washington Metropolitan Area Transit Authority in support of its proposal seems persuasive, the fact remains that there will now be no subway route servicing the low-income inner-city area. In this time of urban discontent, when one of the chief problems is unemployment among ghetto residents, the unavailability of cheap, convenient mass transportation only aggravates the problem. It seems an inappropriate and impolitic moment to eliminate the one subway line which would serve these people.³⁵

This episode points up a number of realities in the mass transportation planning process and of the effectiveness of citizen involvement in that process. As presented to the public, the Columbia Heights issue was one of

eliminating an uneconomic part of the system in order to provide more highly utilized and more profitable service on the rest of the system. While it is technically correct that the Columbia Heights line was probably uneconomic in cost-benefit terms, the techniques used by the Columbia Heights people to save their subway line are equally significant. The issue here is similar to an issue facing every planning body involved in large scale public works projects. Public interest in a project, and the resulting criticisms and suggestions offered by the citizenry, seldom focuses and becomes identifiable until a critical decision is reached. In the BART example the issue was station location and whether tracks would be elevated or underground. In Washington, D.C., residents of the Columbia Heights area were generally indifferent towards the subway until service to their part of the city was about to be eliminated. Throughout the preliminary planning and early hearings on the proposed system, Columbia Heights residents did not provide any kind of positive pressure on the planners and politicians to keep their subway line. Thus, when the proposal was made to improve the economic profitability of the system by eliminating the Columbia Heights line, it was already too late to gear up to fight the proposed change.

Whether or not the elimination of the service to Columbia Heights could have been prevented (or would have ever been proposed) by the residents of the area, white and middle class, is not entirely clear. The evidence available from the Berkeley example indicates that a different racial and socio-economic group using different tactics and strategies might have been successful. Given the requirement that METRO pay for itself out of the farebox, hindsight seems to suggest that Columbia Heights residents chose the wrong strategy. A more rewarding approach might have been to attempt to document the economic and social benefits to be gained from maintaining the Columbia Heights service. Then Congress would have had to choose between competing "expert" findings, a

situation in which north central Washington residents would have had a better chance of success. As it was, their appeal was based mainly on social welfare and other "need" arguments, a strategy not calculated to be successful, given the other orientations of the system.

Beyond these two cases one other example is particularly relevant here. In seeking to go beyond the abstraction of "what is", and "what should be" in citizen participation, Onibokun and Curry sought to examine the extent to which the role that citizens played in the transportation planning process was consistent with the role that they sought to play, and the extent to which citizens and planners had compatible views about the proper role of citizen participation in the transportation planning process.³⁶ Their general conclusion was that citizens who were more involved in the planning process felt that there was considerable compatibility between the actual role and their expected role. Beyond that, Onibokun and Curry found that in general there was a high degree of agreement between citizens and planners as to the appropriate role for citizens to play in the planning process.³⁷ However, citizens and professionals tended to differ on the difference between participation and influence. The professional planners tended to see influence in the context of the entire planning process while citizens seemed to see influence in a more narrowly defined operational context.³⁸

What is particularly interesting from the Seattle study, is that the degree of citizen satisfaction with the participatory role was a function of their knowledge and expertise of the issues involved, the degree to which the professionals made the citizens feel that their participation was important, and the degree of prior involvement in previous community issues.³⁹ From this perspective it certainly seems that the outcome of the Columbia Heights citizens' battle to maintain their subway line was preordained to fail, whereas the middle and upper class citizens of the Berkeley area had more of the requisite

skills and abilities needed to improve the chances of their being successful. While this conclusion is entirely consistent with our earlier conclusion that the minority and poor members of society have had little influence in any public policy decision-making, it also points out the need to further refine the entire concept of exactly what citizen participation in transportation, and other kinds of planning, ought to be.

UTPP: Some New Perspectives

The past several years have seen numerous attempts to make the UTPP more "relevant" and "responsive" to the demands for increased participation by traditionally ignored groups. Many of these newer efforts share a set of common values and premises. Basically, they all seek to reinforce the current UTPP process by improving the data base upon which transportation decisions are based and to help planners feel that they better reflect the values of the citizens and communities being affected by the decisions.⁴⁰ In essence these newer techniques are what one writer calls "rational decision-making techniques for transportation planning"⁴¹ as they all seem to derive from the following classical or rational decision-making typology:

- (1) faced with a particular problem;
- (2) a rational man first clarifies his goals, values, or objectives, and then ranks them in some preference order;
- (3) he then lists all the important ways (policies for) achieving his goals;
- (4) and investigates all the important consequences that would follow from each of the alternatives and policies;
- (5) at which point he is in a position to compare the consequences of each policy with his goals;
- (6) and so choose the policy with consequences most nearly matching his goals.⁴²

So, for instance, one writer argues that "the planner must consider all effects of each alternative of the overall community system ... differences in points of view must be reconciled ... persons familiar with the value systems of the various interest groups in a community may gain insight into

reasons for controversies ..."⁴³

Another such approach has been termed "goal achievement analysis" and is said to be an expanded form of traditional cost-benefit analysis which provides decision-makers with a tool for evaluating tangible and non-tangible impacts related to a specific project.⁴⁴ Thus to engage in goal achievement analysis, one must:

- (1) Identify all community goals to be achieved through transportation investments.
- (2) Translate the goals into specific achievable objectives.
- (3) Weight each goal thereby creating a hierarchy of goals which is politically acceptable and realistic in terms of priority and urgency.
- (4) Determine the benefits, dis-benefits, and costs resulting from a program's impact on the objective.
- (5) The minimum level of benefits or maximum allowable level of costs or dis-benefits pertaining to each objective must be established.
- (6) Because, benefits, dis-benefits, and costs from taking a specific course of action accrue at different times, the measurement of the consequences must be to the cost equivalents to a common point in time.
- (7) When the goal-achievement evaluation information is assembled into a format, the benefits, dis-benefits, and costs expressed as common units are totaled.⁴⁵

Another transportation planner has worked with a device called the "planning balance sheet" which is supposed to "... provide for the evaluation and rating of project alternatives according to the weighted objectives of local major interest groups, including public agencies and community groups or "publics" interested in or directly affected by the outcome of a planning process."⁴⁶

The Planning Balance Sheet process requires that:

- (1) All interest groups interested in, or potentially affected by, a proposed project are to be identified and asked to define their objectives and concerns with respect to that project.
- (2) Determine the relative importance of each interest group.

- (3) Requests the interest groups to assign weights indicating the importance of each of their objectives.
- (4) Evaluate and rate the alternatives according to the objectives of the interest groups.
- (5) Multiply the weight by the rating to obtain the value for every objective.
- (6) Add all of the values for each interest group to obtain⁴⁷ total comparative values for the alternatives by group.

A different approach, but one which yields the same positive efforts, has been termed the "open study." An open study requires that participants have a wide breadth of experience so that important perspectives on the project or problem can be reasonably exhausted; intervention by an authority prepared to make a decision at the proper time; a means for evaluating the contributions of a transportation alternatives must be provided; macro and micro impacts must be considered since the former tend to show the positive results of the project while the latter tend to show most of the disadvantages; project methodology must be explained to the participants so that their capability to judge the results is enhanced and not limited; the external impacts of transportation decisions must be considered; and the decisions reached must reflect current concerns and commitments and also the long-term consequences of the decision.⁴⁸

A final new approach to the UTPP acknowledges that the history of increased citizen involvement has been most ad hoc and opportunistic while the UTPP itself needs dynamic, subjective, impact information in order to properly assess transportation decisions. This approach calls for increased participation to provide a key role as information supplier in the planning process. This proposal sees a need for a monitoring or surveillance systems to continually assess the impact of transportation decision, to evaluate the impact of transportation decisions, and to use this information to update the UTPP data base. This approach differs from the others described here primarily in that it requires citizen involvement to occur on a continuous basis and not as a one time effort.⁴⁹

What seems to distinguish this approach from the others is that it views increased community participation as an integral part of overall goal achievement, and not merely as a device to democratize the UTPP or stabilize its legitimacy among the affected publics.⁵⁰

Unfortunately, citizen participation in the urban transportation planning process is likely to remain haphazard and ad hoc until a sound theoretical base for improving overall goal achievement determination is established and decision-makers stop using citizen participation only as a symbol of a more democratized process that has no substantive reality attached to it.

Increased Participation in the UTPP: Some Words of Caution⁵¹

It should be obvious to all that there can be no returning to the "good old days" when UTPP was the sole province of the professionals and experts who had managed to gain membership in the secret society known as "transportation planners." The nature of modern metropolitan society with all its ills and benefits and the increased demand for participation by all segments of that society, especially by those who have been traditionally excluded, requires that we approach the issue of increased participation in an experimental, eclectic manner. Whether the belief that the transportation dependent really have something to add to the process or that increased participation is good because it reinforces the legitimacy of decisions reached by public officials, increased participation is a fact of modern life that must be honestly addressed. Again, a note of caution and warning seem to be in order before we all charge off and throw open the doors and let the sunshine in. Any new UTPP that is heavily participative in nature is more than an incremental change from tradition. In many ways we are beginning all over again and the implicit assumptions about efficiency, economy, cost-benefit ratios, and the like will have to be modified to meet the new social and political realities that a modern UTPP will bring.

In many ways the new reality brings the planners and professionals face to face with the puzzle of modern planning: "How do you get everybody in on the act and still get some action?" Openness and participation are the buzz-words of contemporary society. When compared to ten or twenty years ago, most public officials now tend to ask themselves, before acting, can they justify their actions before a television camera or in the late edition of the local newspaper. While Watergate and Viet-Nam may have taught us our lesson about the need for openness in public decision-making, there are costs associated in greater openness and participation. The greater the participation, the greater the likelihood that the simple solution, the least common denominator, will be chosen over the more complicated one. In addition, the heterogeneity of actors and interests often leads to inaction and stalemated and nothing gets done.

At some point then in our rush to react to the valid criticisms levied at our traditional closed and oligarchial decision-making process we must ask: "How much is enough?" Without trying to become a heretic, at some point we must face the reality that too much participation may be just as bad as not enough. Non-decisions can replace inadequate ones, and we all suffer as a result. In your experience you have noticed that seldom is your position or decision attacked because it is substantively wrong. More often the complaint is that you failed to follow the proper procedure, you did not consult that relevant group(s), or if you did such consultation it was meaningless and perfunctory. While such objections often have some truth in them, they are clamorous for any plan of action. Too much consultation, too much participation takes us one step further down the road to what one critic has called "participatory mediocrity."

The warning then is a simple one: The great and good benefits of openness and wide participation have a flaw in them, not the least of which is that too much participation favors the status-quo and discourages innovation and

creativity. Unfortunately common knowledge and myth has it the other way around. More openness and participation in decision-making leads to radical results; yet the multiplication of actors seems to derail radical reform. Any proposal for action, especially if it is new and unfamiliar, will seem to be threatening, and therefore ought to be delayed. The principle is clear and uncomplicated: for the modern decision-maker neither secrecy nor wide-open referendum is a viable policy.

What then can we do? How can we make the UTPP more participative and yet still allow decisions to be made? Again, there are no simple solutions, only intelligent choices. It seems to me that we are faced with a situation for which the time-honored remedies are inadequate. In addition to whatever else we may do, it is clear that we must be open to innovation, experimentation, and creative problem-solving. We cannot be afraid to entertain novel approaches because they are untried or that they conflict with ideas of professional competence, non-partisanship, the best technical solutions, equal treatment of like cases, or the like. It is difficult to precisely suggest what the new form of participation in UTPP ought to be, especially if transportation solutions are themselves inadequate to provide the quality of mobility needed to survive in the modern metropolitan society. The who, what, and how of participation must vary with the city, and the particular issued involved. But the point is simply that we cannot cling to the past. Change is upon us and if we are unwilling or unable to take the lead in responding to that change, there are others who will.

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CITIZENS, POLITICIANS, AND DECISIONMAKERS:
A HELIX GAME FOR TRANSPORTATION PLANNING

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Introduction

Citizen involvement in the transportation planning process is a topic currently receiving a great deal of attention. It is apparent that the construction of a transportation network is not merely a technical feat, but involves far reaching social, economic, and environmental considerations. Thus the trend is toward public participation in a field once dominated by the engineering profession. A number of questions must be raised in relation to this development. First, what types of citizen involvement will achieve the most effective planning mechanism? Second, what kind of technical process is required to produce the most effective and responsive transportation planning? Third, given the existing federal guidelines, what additional planning requirements should be imposed?

With these considerations in mind, a game simulating the transportation planning process incorporating federal planning guidelines and criteria has been developed. The game has two basic goals: to educate its participants in the planning process and politics and to cause its participants to contemplate improvements in the process. In thinking about the process, participants may be able to shed some light on the three questions presented earlier. By immersing the players in a specific highway planning decision, they will be exposed to the general procedures and major regulations involved. Based on their ex-

periences and possible frustrations, criticisms and suggestions for positive change will hopefully be brought out as feedback occurs. Thus the game is intended to benefit both the players, through their increased knowledge, and the transportation planning process itself. This situation of starting with a small base -- the game -- and leading, hopefully, to education of the players and improvement of the planning process may be described as an upward spiral or helix; thus the derivation of the term "a helix game."

The first section of the paper presents an overview of games and simulations in general. An outline of the social, economic and environmental aspects of Louisiana's transportation planning process follows, with emphasis on provisions for citizen participation. The third section describes the basic objectives and mechanics of the helix game, and the last section presents helix game analysis and comments based on trial play.

Games and Simulation

The terms "gaming" and "simulation" are often used interchangeably in this context, but a distinction should be made between them. In the broadest sense, a simulation is a representation or imitation of some situation, pattern or interaction which occurs in the real world. It is a model, an analogue. The phenomenon is necessarily abstracted and condensed into manageable terms, but it still maintains the basic elements of reality. A major potential of the simulation is the portrayal of a wholistic and interrelated process in simplified terms. The representation may be achieved through the use of verbal, mathematical, diagrammatic, analog, or digital models, or any combination of these (Shubik, 1975: 181).

Gaming, in general terms, is a contest which involves goals and rules. Games usually require some type of human input or interaction. While a game may be a simulation of some real world phenomenon, it is not necessarily so. A game may rely heavily on role playing, but the pursual of defined objectives

and the development of strategies separates it from mere role playing (Garvey, 1971: 208). In addition to entertainment, a game may serve such purposes as teaching, training, research, or therapy (Shubik, 1975: 3). "Gaming" should not be confused with "game theory", which is part of a larger body of theory concerning decision making. The latter is a technique for describing the conscious decision making process involving more than one individual. It is useful in the construction and analysis of gaming exercises (Shubik, 1975: 13-14). (See Baumol, 1965; Tuce and Raiffa, 1957; Miller, 1972; and vonNeumann and Morgonstern 1964).

Simulations may be divided into two broad categories: social and mechanical. The mechanical type generally involve the use of computers, and are not considered "games" in the conventional sense. The focus is often on the end result, not the process by which it is achieved. Examples of this sort of simulation are (Shubik, 1975: 12-13): Monte Carlo methods, where random number generation represents the effects of chance over time (See Hagerstrand, 1968; McCracken, 1958); tactical simulation, or mathematical modeling of patterns such as traffic or production line scheduling (see Goode and Wright, 1956; Rowe and Jackson, 1956); exploratory or strategic simulation, the logical testing of large scale models such as the Brookings econometric (see Shubik, 1959; Chamberlin, 1962); and artificial intelligence, the patterning of cognition, learning, and other such processes.

The major concern here is with social simulation, involving human interaction. This is the type of simulation generally considered as gaming. A distinction may be made between operational or environment rich models and those that are non-operational or environment poor (Shubik, 1975: 3-4). The latter deal with a limited number of variables, have simple and clearly defined rules, and portray only a narrow aspect of reality. Examples are the mathematical games of game theory and the one person mind teasers. The operational models, aiming at an accurate portrayal of reality, are far more complex and interactive.

Most of these operational models fall somewhere along a continuum with "role playing" at one extreme and "systemic" at the other. In the former, the basic components of the game are particular real world positions and their inter-relationships. The critical factor is not the roles themselves, but the specification of the relationships between them. The systemic simulations, in contrast, focus on the relationships and dependencies among components of social, economic, or political systems. The specific tasks demanded of an individual are relatively undefined, and role behavior evolves according to the situations developed during play (Feldt, 1972: 1-3). A simplified and stylized operational simulation is presented in popular board games such as Chess or Monopoly, which make no pretense at achieving true analogs of the situations they represent. The types of games useful for educational and research purposes are necessarily for more complex.

Simulations in general may vary on a number of additional characteristics. A major variable is the degree of structure or role formality, whether the course of play is strictly prescribed or subject to a wide range of variation. A closely related factor is the extent to which the outcome is pre-determined. The nature of the input, that is, the relative mix of facts and hard data as opposed to human decision and chance, is the major determinant of these traits. Games may also be classified as zero sum or fully competitive, or non-zero sum, where the winnings of one player do not necessarily result from the losses of another. The nature of the solution - cooperative or non-cooperative - is an important consideration in the latter model (Feldt, 1972: 1-5; Shubik, 1975; IX-XI, 3-4, 34).

The transportation planning helix game may be classified as a social simulation of the operational type. It is basically role playing in nature, but as it depicts the planning milieu, contains some strong systemic elements. It is structured to some extent, yet quite flexible. That is, movement is guided around a board and role activities are specified, but the elements of chance and individual choice play a major part. As a result, the outcome is completely

undetermined. Cooperation and coalition formation are the keys to success in the game. With regard to winning, the game may be classified as non-zero sum.

Although the use of simulations in a teaching capacity is a relatively recent development, the "game" itself dates from ancient times. The predecessor of modern operational models is the war game. The Chinese "Wei-hai", meaning encirclement, is estimated to have been played as early as 3000 B.C. It is only within the past twenty years, however, beginning with the advent of the business game, that operational social simulations have been widely employed for educational purposes. In 1957, the American Management Association developed "Top Management Simulation", and the use of games as teaching tools quickly became popular. The early applications in the social sciences were in the area of political or crisis gaming. The first sophisticated model of this type was "Inter Nation Simulation" (INS), developed by Harold Guetzkow et al. in 1959 (Taylor and Walford, 1972: 20-25). The field has expanded rapidly, and models have been developed simulating many aspects of the urban community. One sub-field focuses on topics of urban geography such as town location, patterns of settlement distribution, urban growth, land use, and transportation (Walford, 1971: 46-47). Another popular subject involves the urban political arena and decision making processes, with the emphasis on conflict, power, and interest groups. Several of the more sophisticated games combine these two themes to provide the players with a valuable insight into the urban planning process.

The most comprehensive and advanced of the urban operational social simulations focus on land use patterns. These include: "CLUG, Community Land Use Game", (Feldt, 1965); "METRO or Metropolis", (Duke, 1964); "POGE, Planning Operational Gaming Experiment", (North Carolina Chapter of the American Institute of Planners, 1960); and "LUGS", an English adaptation of "CLUG", (Taylor and Maddison, 1968; Walford, 1971: 50-51). Other commercially available games deal with a broad range of more specific urban topics. The geographic approach is taken in such models as "Portsville" (MacMillan Co.), "New Town" (Cornell

University) and the "Urban Growth Model" (Gowing and Jones). A wide variety of games deal with the topic of community organization and interest group politics: "Simsoc" (Free Press), "Sitte" and "Metropolitics" (Simile), "The Cities Game" (Psychology Today Games), "Ghetto" (Western Publishing Co.), and "Inner City Planning" (MacMillan Co.). The simulations dealing with transportation tend to be highly technical mechanical models, or if dealing with topics relating to planning, to be non-role playing in nature (such as PPOS, Mumphrey and Seley, 1973). A relatively obscure group of operational games is based on locational conflict -- "Spring Green Motorway" (Community Service Volunteers, London), "Yes, But Not Here" (MacMillan Co.), and "Participation" (Mumphrey and Seley, 1973) -- but only the last deals with transportation decisions.¹ Given the abundance of urban game simulations, there is a serious lack of models explicitly depicting the planning process, and almost none that portray the process as it relates to transportation planning. This is the aim of the helix game presented here.

Transportation Planning Process

In recent years there has been an increasing emphasis on the necessity for resolving potential conflicts between social, economic, and environmental concerns and the need for effective highway transportation services. This is evidenced in a series of legislation regarding various aspects of the dilemma (State of Louisiana, 1976: 1-1 - 1-2). The 1950 Federal Aid Highway Act created the requirement for public hearings in order to inform citizens of intended projects and receive their comments. The 1962 Federal Aid Highway Act established the "3C process" that is, continuing, comprehensive and cooperative

¹For a comprehensive listing of commercially available games see: Taylor and Walford, 1972: 147-172; Unwin, 1971: 247-262; Boocock, 1968: 269-279; Adams, 1973: 39-63; Heyman, 1975: 33-42.

transportation planning in urban areas. In 1966, a provision (Section 4 (f)) was incorporated into the above act requiring special studies if the land of parks, recreational areas, wildlife areas, or sites of historical significance is to be taken for highway use. The National Environmental Policy Act of 1969 required that an evaluation of environmental impacts be circulated to the public and other agencies, and that a systematic multidisciplinary approach be utilized in project development and analysis. Section 136 (b) of the 1970 Federal Aid Act (later designated Section 109 (h), 23 U.S.C.) required the U.S. Secretary of Transportation to assist the states in developing procedures to ensure that decisions be made in the best overall public interest, with the minimization of adverse social, economic and environmental effects as a major consideration. These requirements are to be carried out through the issuance of "process guidelines", requiring each state to describe the procedures (Action Plan) to be used in giving proper consideration to highway impacts. Finally, Title VI of the Civil Rights Act of 1964 and subsequent legislation forbid discrimination on the grounds of race, color, creed, or national origin in federally assisted projects, and the Federal Aid Highway Act of 1973 extended this philosophy to cover discrimination based on sex.

The State of Louisiana has developed an Action Plan, similar to that of other states, to describe the procedures to be followed in order to comply with the requirements of Section 109 (h), 23 U.S.C. (State of Louisiana, 1976). It assumes a "process approach", establishing a general framework without detailing specific activities or methodologies. It seeks to accomplish four basic objectives:

1. Identification of potential social, economic, and environmental effects, both beneficial and adverse, early enough to influence studies and decisions.
2. Establishment of an interdisciplinary approach which utilizes other expertise, in addition to engineering, to assist in evaluating social, economic, and environmental effects.

3. Involvement of other agencies and the public throughout the planning and development levels.
4. Consideration of alternative courses of action (including the "no-build" option) and evaluation of the advantages and disadvantages of each (State of Louisiana, 1976: 1-2 - 1-3).

As a component of its Action Plan, the Louisiana Department of Transportation has established a Public Involvement Program in order to "maximize" citizen participation in the Transportation planning process (State of Louisiana, 1976: 3-1 - 3-5). The four most frequently used methods for seeking public involvement are solicitation of views, public meetings, requests for public comments on environmental documents, and public hearings. The purpose of the solicitation of views is early identification of any social, economic, or environmental effects which should be given consideration. As early as possible in project development, requests for comment are to be sent to organizations, groups, and individuals included on a list maintained by the Department. The public meetings are intended to advise the community of the Department's activities and obtain the views of the people in the area. These are informal in nature, advertised and held when deemed beneficial during the corridor planning or design stages. The comments on environmental documents provide feedback information to aid in "optimal" development of the project. Both the draft and final versions of Negative Declarations and Environmental Impact Statements (as discussed below) are made available to the public. A public hearing is a formal meeting making available the following information: pertinent location and design information for all alternatives, environmental documents, the State-Federal financing relationship, explanation of the relocation assistance program, and the description of provisions for the submission of written statements to the Department. Upon appearance of a Notice of Opportunity in local newspapers (a mandatory requirement during both the corridor planning and design stages), requests may be made for a hearing. When a hearing is to be held, two notifications containing all pertinent information must be placed in local

newspapers.

Social, economic and environmental considerations are relevant to each of the five levels of the planning and development process (system planning, corridor planning, project design, construction, and operations). Two major components of the environment must be considered: human and natural. The following areas must be analyzed under the former: sociological, including the effects of displacement on individuals and general community cohesion; economic, including an inventory of existing factors, displacements, and effects on employment, taxes, property values, and economic growth; safety, or accident information; aesthetic, both the view from the road and of the road; cultural, or adverse impact on objects of significant value; and land use. The elements of the natural component are: land resources, including soil, minerals, and areal significance; water resources, both ground and surface; ecological, or the flows of energy, water, and nutrients through the natural system; air quality, the effect of projects on pollution; and noise.

Corridor planning, particularly the route location phase, is the planning level which has the most significant impact on the individual citizen. The Action Plan requires that possible adverse effects be adequately considered, and provides for public participation in the selection process. This is the stage which incorporates the majority of the elements of the Public Involvement Program. Reconnaissance studies are conducted as an initial measure, defining the basic scope of the project, and identifying potential social, economic, and environmental impacts. A Reconnaissance Evaluation Meeting is subsequently held to outline project development, establishing both a systematic interdisciplinary approach and a specific public involvement program. A project is classified as either major (that is, involving a large and important highway section on which planned activities will entail significant changes in the area's social, economic, or environmental patterns), or non-major. A non-major project does not generally involve solicitation of views

or public meetings, and only occasionally requires a hearing. For major projects, route location studies must be performed, analyzing such factors as transportation system and land use plans, traffic surveys, design standards, sufficiency ratings and safety studies. A number of reasonable alternatives, including the "no-build" option, are developed in depth. The information from these studies is used to determine whether a proposed project will have a significant impact on the quality of the human environment. If the impacts are judged to be minimal, a Negative Declaration may be issued to this effect. Otherwise, a detailed Environmental Impact Statement must be prepared. This evaluation must take place within the established framework for public involvement, as discussed above. Based on the output of public meetings and hearings, and on engineering considerations, the Chief Engineer selects the alignment which optimizes the relationships between costs, social, economic, and environmental effects, and achievement of route objectives. Upon approval of a Final Environmental Impact Statement, the project progresses to the Design stage.

While the main input from the public occurs during corridor planning, provisions for citizen participation are included at each stage to minimize adverse social, economic, and environmental effects. During the initial system (rather than specific route) planning phase, citizen advisory committees may be formed. The provisions of the corridor planning stage were discussed above. An opportunity for a public hearing, as well as for additional meetings must again be provided at the project design level. The public has the right at this time to review right-of-way plans and to receive relocation information. During the stages of construction and operation, citizen involvement is primarily in the form of inquiries and complaints. This, then, describes public participation in the transportation planning process. Many elements of the process are included in the game to be presented in the next section.

The Helix Game²

The game to be played represents the route selection phase of the decision-making process. It resembles a traditional game in that a group of players throw dice to determine movement around a board (Figure 1), draw cards of various types, and accumulate points in order to win. The players are presented with the following situation. A small city must choose between two possible alignments for an interstate highway route. Each location would affect the interests of the individual players, some favorably, others adversely. If public sentiment is sufficiently strong, mass transportation may be included through the optional concession of a city-wide transit system. Thus, there are four possible outcomes: the selection of Route A, Route A with mass transit, Route B, or Route B with transit. (See Figure 2.)

The game is designed for eleven players. Three of these are policy makers: the Mayor, the Director of the State Highway Department, and the Director of City Planning. The other eight are citizens representing such diverse interests as an ecology group, real estate investments, a local industrial plant, and the community college. Each player is given a role scenario which explains his or her position and guides him or her in choosing the alternative to support. For example:

Percival Picket has been instrumental in organizing the citizens of Area 3, who are largely black and underprivileged, into a Neighborhood Improvement Association. A former activist in the civil rights movement, this vocal young man now directs his attention mainly to local issues. His latest campaign focuses on the serious lack of mass transit services in his area. He says, "What we need here is improved bus service, not a highway to disrupt our homes and community. Unless this city offers us substantially improved transit, we will fight a highway through this area with everything we've got."

²For complete rules and game materials, authors should be contacted.

FIGURE 1

THE GAME BOARD

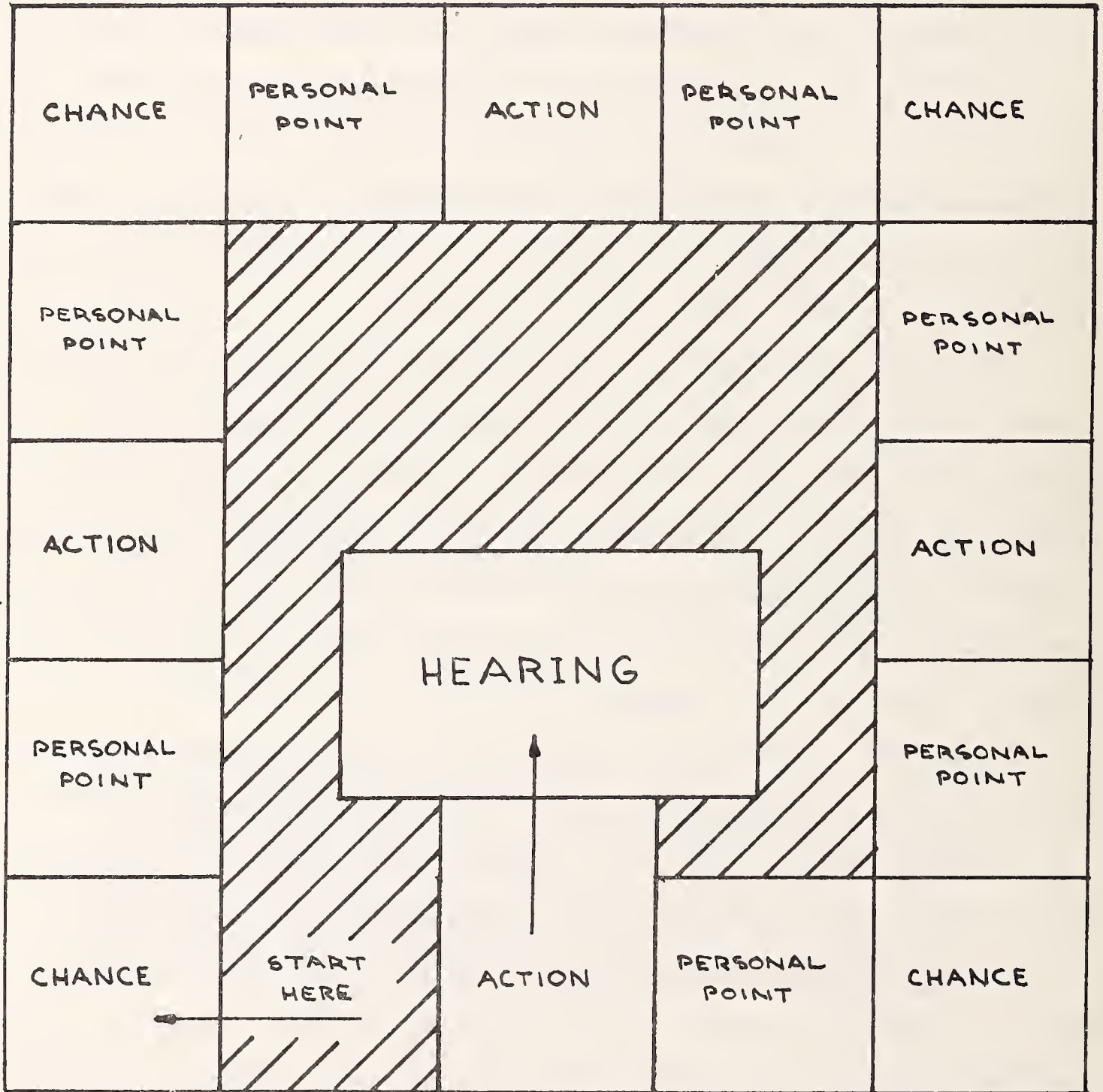
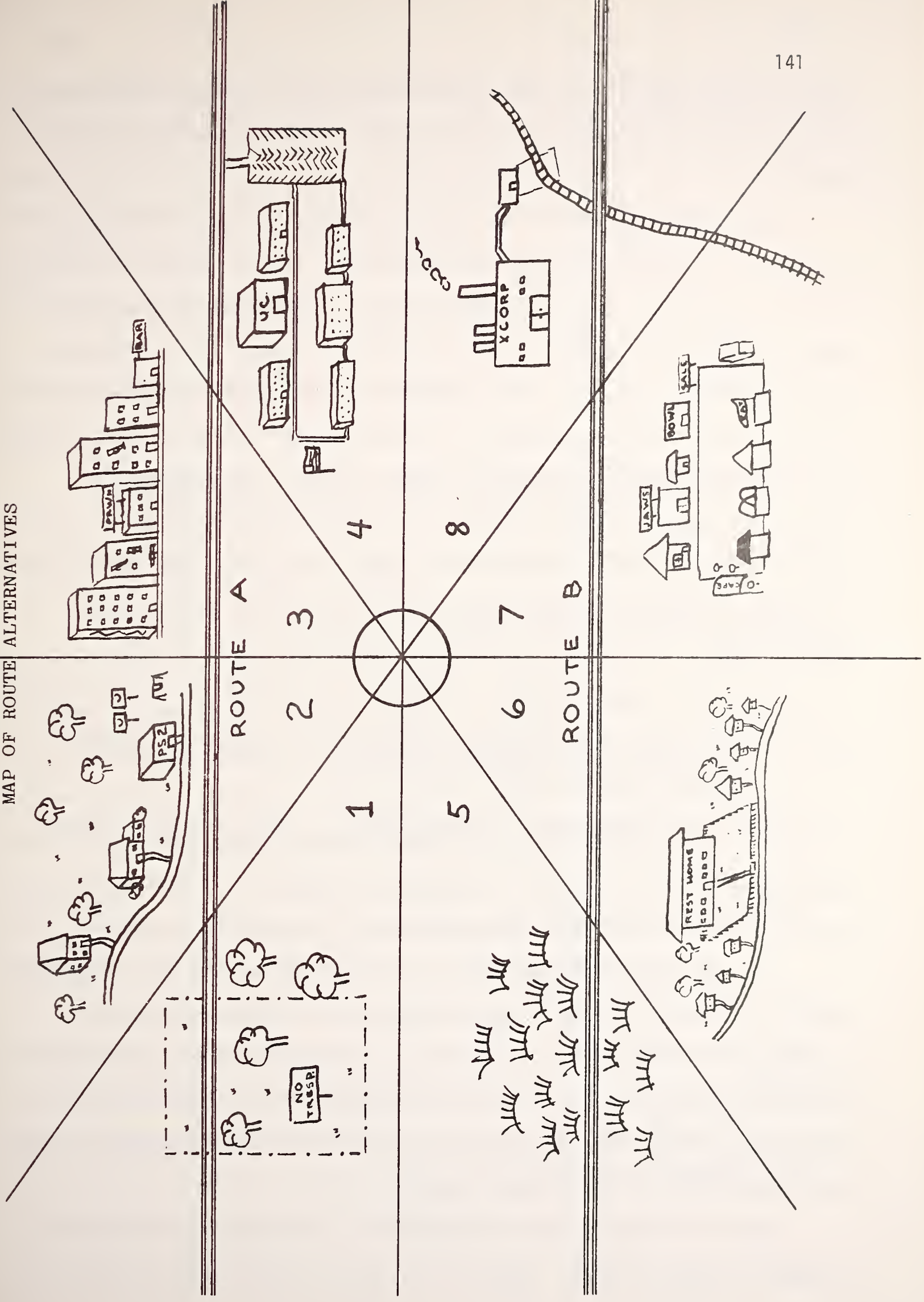


FIGURE 2
MAP OF ROUTE ALTERNATIVES



Taken in conjunction with the map (Figure 2) provided of the area, the scenario gives sufficient information to choose a stance on route location and transit needs.

The various elements of the game are designed to represent aspects of the real world transportation planning environment. One basic premise is that in order to affect the decision-making process, an individual must have some degree of power or influence. This may result from community or professional status, individual activities and accomplishments, or energies directed toward a specific goal. In the game, power is represented by Personal Points. Policy makers begin the game with a specified number of points to designate their initial advantage in influencing events. Upon landing on an appropriate marked space on the game board, a player draws a Personal Point card from those provided to determine the gain or loss of points. For example, the following cards might be drawn:

Housewife: Gain 20 points -- Reelected to a second term as PTA President

Social Worker: Gain 30 points - Lose 1 turn -- Extensive research on new federal laws concerning provision of transit services for elderly and handicapped

Real Estate Entrepreneur: Lose 20 points -- Weekly newspaper prints expose of land speculation scheme involving state politicians

Thus, each player has the power to accumulate a number of Personal Points, or ability to influence the decision-making process, throughout the game.

Personal points, however, only represent potential influence. A player must utilize individual power to gather support for a preferred alternative. Such support is designated by Route Points. In other words, Personal Points amassed by an individual may be converted into Route Points, which accrue to a particular alternative. Only the totalled route points are considered in the final determination of the highway location.

Each of the players has the potential of influencing route selection by means of several tactics. These are listed on an Action card provided with

each role packet, along with the corresponding number of personal points necessary to take such action. When a player lands on an Action square, has the necessary number of personal points, and deems it to be the proper strategy at that time, he or she may choose to exercise one of the action alternatives. The Action process varies for different categories of players. Successful actions lead to route points for a player's favored route.

Each citizen has three possible courses of action, in the form of lawsuits, lobbying action, financial contributions and the like. These strategies, for example, are open to the following players:

Environmentalism: Initiates action to have wetlands area declared as wildlife refuge, through which highway can be built only if no feasible alternative (23 U.S.C., Section 138)

Student Body President: Leads student delegation to state legislature to lobby on behalf of Route A

Entrepreneur: Offers to contribute land adjacent to proposed Route A for bike trail development (Federal Aid Highway Act of 1973, Section 217)

If an opponent possesses a specified number of Personal Points, he or she may attempt to veto the action. A die would be thrown to determine success or failure, with two schedules reflecting success probabilities. The lower probability schedule reflects an attempted veto of the Action. If the Action is successful, a specified number of Route Points are awarded. Thus, the Action alternatives of the citizens illustrate a diverse assortment of strategies which opponents and proponents may utilize to influence the decision-making process.

The potential actions of the Highway and Planning Directors are in the form of offering concessions to specific players. In other words, their goal is not specifically to accrue Route Points, but to win the support of players who might oppose their preferred route alternative. As with the citizens, the exercise of an Action by a Director requires an expenditure of personal points. These are some of the possible alternatives:

Highway Director: Concession to Social Worker: Will apply for HUD funding to construct a P.U.D. specifically designed for the elderly, eliminating need for significant amount of outside travel

Planning Director: Concession to Housewife: New park and recreational facility will be developed adjacent to the Interstate in Area 2, including pool, tennis courts, ball fields, and recreational center (IM 21-2-69)

Both Directors: General Concession: Will apply for Highway Trust funds to develop a city wide transit system (Federal-Aid Highway Act of 1973, Section 142)

The player to whom the offer is extended decides whether the concession is worth the adverse impact of a highway.

Note that both of the directors, while their role scenarios indicate negative transit sympathies, have the option of offering as a concession a city wide transit service. Until this offer is made, Route Points accrued toward transit alternatives represent public pressure for alternate modes. A Director may choose to extend this concession at any time (assuming sufficient personal points) the compromise is judged necessary to win over other players to his or her preferred route, but it must be extended if a specified number of transit points are amassed. Thus, the director's Action concessions illustrate the trade-offs involved in the decision making process. Once the transit concession is made, route points (including previous ones) accumulate toward a specific route with transit.

A crucial fact written into the mayor's scenario is that the office is shortly up for reelection. From the viewpoint of political survival, his or her basic goal in the game is to end up in support of the winning alternative. The Action alternative for this role, therefore, is the change of route allegiance. Similarly, this may be done only upon landing on a marked Action square, and with sufficient personal points. The mayor's behavior is meant to represent one aspect of political influence on the decision-making process. The mayor's support of an alternative brings route points with it.

Chance events, as opposed to those calculated actions by the participants of the planning process, may also be significant in the determination of final outcome. These could take the form of endorsements by extraneous persons and sources, precedents and decisions in neighboring areas, developments in fields related to transportation, and the like. Upon landing on a Chance square, a player picks a card from a common pile. One of the following might be drawn:

Wetlands highway route approved in a neighboring state

Morning Sentinel editorial supports Route B

Local gas prices rise 5¢ per gallon

The appropriate alternative would gain or lose in Route Points. The Chance events represent influencing factors over which the participants of the planning controversy have no immediate control.

A basic characteristic of any decision process is that the ordinary citizen, acting alone, generally can exert little influence. Far greater impact can be achieved if citizens with common goals and objectives group together. They can thus pool their resources and energies, and launch a comprehensive campaign to achieve their desires. A major focus of the Game is the formation of coalitions along the lines of Route Support, Transit Support, or a combination of both. The players continue to move as individuals, but Personal Points and Action alternatives become common property, to be utilized with majority approval. Players may enter into, exit from (with a penalty), or merge coalitions at any time after the first round of play is completed.

Players move around the game board, land on one of the three types of squares -- Personal Point, Action, or Chance -- and follow the rules for that particular square. Bargaining and negotiations continue informally throughout the playing period. Play stops when the majority (6) of the players reach the square marked "Hearing." This represents the corridor public hearing, one of two required by FHWA regulations. At this time, a final chance influence is randomly determined, the Route Points are totalled, and an alternative with the

largest number of route points is selected. A player is considered a "winner" not on the basis of his coalition affiliation, but insofar as his individual route and transit preferences, as dictated by his role scenario, have been realized.

Observations from Trial Play

The game has been played on several occasions with different groups of urban planning students and faculty. Approximately half the players were moderately knowledgeable and the other half totally unfamiliar with the field of transportation planning. Each time, the rules were briefly explained by the moderator, and players were able to refer to a more detailed list of regulations. It was emphasized that winning was not merely a matter of being associated with the group accumulating the most points, but of achieving the goals suggested by the role scenario. The selected roles were read aloud, and play began.

One of the major observations was the influence of individual personality on the course of events. This is quite consistent with the real world situation. In any type of endeavor requiring organization and coordination, those individuals who possess the necessary abilities and motivations will most likely assume major roles. While the game is to some degree determined by chance, there is a great deal of room for individual initiative and choice, especially with regard to coalition formation and the exercise of actions. Thus, the degree to which players are leaders or followers is a significant factor in determining the evolution of the game. There seemed to be two different components of leadership, not necessarily co-existing in the same player: aggressiveness and analytical ability. During the coalition formation stage, certain individuals emerged as dynamic organizers, highly persuasive and aggressive in convincing others to support their cause. As the game progressed, however, a more analytical approach was needed, capable of determining the costs and benefits of an action and making the proper choice. The personalities of the followers were also a significant factor influence whether they simply went along with the

first appeal, or held out to get what they really wanted. The faculty members, partly due to their recognized status as "leaders", seemed to have the greatest influence in determining the course of events.

A second important factor concerns rationality; that is, the degree to which players made choices logically consistent with their roles as opposed to merely playing to win. This seemed to be related to some degree to the individual personalities. All in all, the trial plays proceeded quite reasonably.

On the first run through there were a number of complicating factors: a confusion as to rules on the part of some players; structural role contradictions due to some unanticipated "irrational" developments; and the rapid escalation of events by two highly aggressive players. These led to several inconsistencies; for example, a player entering a coalition diametrically opposed to his personal goals. The problems were ironed out, however, and the second trial with a different group of players proceeded quite smoothly.

In each play, the participants quickly realized that if any significant results were to be achieved they must pool their resources and form coalitions. This is possibly the most important lesson to be learned from the game. One interesting phenomena was the analytical process which players used to decide their affiliations. Several of the roles are supportive of both a certain highway route and of mass transit but to different degrees. Depending on the relative importance perceived, a player could choose to quickly join a route-supporting coalition, or stubbornly hold out to also achieve his transit goals. Personality differences seemed to be a major factor in determining the choice. In another interesting situation, one player repeatedly refused to join a coalition, despite several logical alternatives.

The players seemed to truly enjoy the game, an important factor if worthwhile benefits are to be obtained. The play was quite spirited, with the

individuals enthusiastically assuming their specified roles. In fact, coalition negotiations became so involved that a rule had to be introduced limiting their time. The possibility of quick turn of events also kept the excitement at a high level. For example, one coalition trailed badly for the entire game, but pulled ahead in the final moves. Proper caution must be taken, however, to insure that the excitement of competition does not interfere with the educational goal. As involvement deepened, the players tended to be concerned only with the number of points an event brought, not with the reason for the points. There was also a tendency in the final stages to ignore the logic of actions and concentrate chiefly on winning.

Feedback from players during the game is probably the most important from an educational viewpoint. During the testing stages, feedback was necessarily of a technical nature; that is, reactions to specific features of the game, suggestions for rule clarification, and the like. The developments were also analyzed from a logical angle, and inconsistencies pointed out. In future plays, the emphasis will be on the transportation planning process itself. Players will be able to express their reactions to specific regulations and procedures, and to suggest alternatives which they feel would increase their ability to participate and influence decisions. Hopefully their experience with the planning process will evoke some concrete suggestions which can be incorporated to better achieve the objective of citizen participation.



Dr. Anthony J. Mumphrey Jr. (left) of the University of New Orleans and Dr. Paul Geisel of UTA (right) served as moderators for the Workshop Sessions.

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WORKSHOP SESSION B: "PLANNING FOR PUBLIC SERVICE DELIVERY
AND TECHNIQUES FOR CITIZEN INVOLVEMENT"

Moderator: David Chen
(Panel I) Transportation Institute
North Carolina A & T University

Panelists: Alice E. Kidder
Acting Director
Transportation Institute
North Carolina A & T University

Arthur Saltzman, Director
Transportation Studies Institute
North Carolina A & T University
(On leave 1976-77 University of California)

Donald R. Deskins, Chairman
Department of Urban Geography
University of Michigan

Moderator: Robert E. Paaswell
(Panel II) Office of University Research
U. S. Department of Transportation
Washington, D. C.

Panelists: Sid Davis
Urban Transportation and Urban Affairs Project
School of Business Administration
Atlanta University

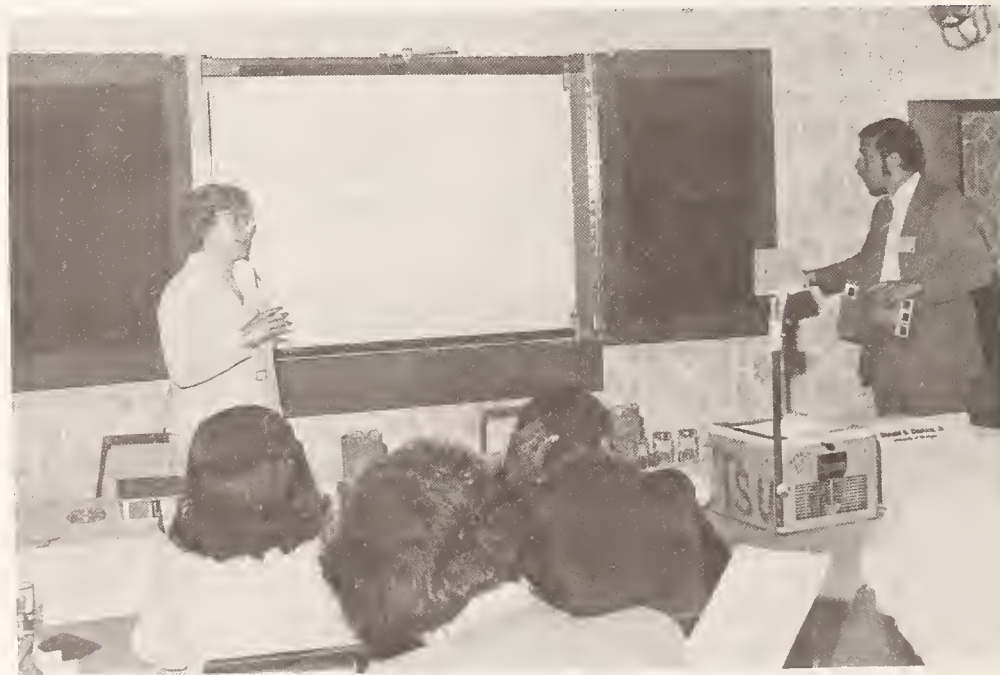
Richard Stanger, Senior Planner
Metropolitan Atlanta Rapid Transit Authority (MARTA)
City of Atlanta, Georgia

Daniel M. Schores, Jr., Associate Professor
Department of Sociology
Austin College

John Shanahan, Associate Professor
School of Public Affairs
Texas Southern University

DAVID CHEN: We have three papers to be presented during this afternoon's first session. We're going according to the order of the agenda. I would like for you to hold all the questions until the end of the session. At that time the audience will be welcome to open up any

questions. When you raise questions please identify yourself and your affiliation either before or after the question is raised. It is indeed a pleasure to serve in this capacity in this first session. The first speaker in this workshop is Dr. Alice Kidder and her paper is addressing "Cost of Transportation Systems for the Elderly and Handicapped: The Benefits of Consolidated Programs." Dr. Kidder is Acting Director of the Transportation Institute at North Carolina A & T University. She is a graduate of MIT at Boston and worked at Atlanta University and at North Carolina A & T. Her work is extensively published in various journals in transportation area. She is currently during research related with handicapped and elderly also with different program evaluations. Ladies and Gentlemen, may I present Dr. Alice Kidder.



Dr. Alice E. Kidder and Arthur Saltzman present their views on the cost of transportation systems and the special provisions for low income, elderly, and handicapped transit dependents.

COST OF TRANSPORTATION SYSTEMS FOR THE ELDERLY AND
HANDICAPPED: THE BENEFITS OF CONSOLIDATED PROGRAMS*

by

Alice E. Kidder

The Transportation Institute
North Carolina A&T State University

The data which I am distributing report the results of a study to enumerate the costs of providing specialized transportation services for the elderly and handicapped. Eighteen systems were selected on the basis of operations existing for six months or more, a variety of population densities, and operations with a variety of organizational forms. Data were collected on the real inputs (manhours, depreciation, insurance, etc.) costed at current market prices, regardless of whether the system had to pay for the resource or had a donation. Thus the data should be comparable across systems, following a standard format, and the data computed on costs, passenger miles produced and other data were checked and verified with the agency before proceeding with this analysis. Table I presents the raw data which forms the basis of the discussion.

It was of interest to the researchers to note the wide variations in cost per passenger mile derived from the study, ranging from a low of .13 in the Merritt Island CATS to a high of \$5.79 for the Smithville, Texas system. This paper examines some of the correlates of high and low costs. The subsequent discussion divides the group of eighteen systems into high, medium and low unit cost systems. Unit costs are measured as total costs (capital depreciation and operating costs) divided by total number of passenger

* The information presented was produced as part of a program of Research and Training in Urban Transportation, sponsored by the Urban Mass Transportation Administration of the U.S. Department of Transportation. The results and views expressed are the independent product of university research and not necessarily concurred with by the Urban Mass Transportation Administration.

miles per annum. Low cost systems are those whose average annual passenger mile cost falls in the range of \$.50 or less. Medium costs are those in the range \$.51 to \$1.25. High cost systems constitute the balance. As Table II shows, there are six systems to be found in the low cost examples, eight medium cost systems, and four high cost programs. Low cost systems exhibit somewhat lower proportions of total budget going to management and overhead (capital).

Level of Service and Cost-Control

The literature on costs of transit is replete with illustrations which tell of the trade-offs between cost-control and level of service. It is commonly believed that demand-responsive systems will experience higher per unit costs than fixed route, that high-cost specialized systems for the elderly and handicapped may be explained in terms of the more personalized attention from aides, or specialized equipment, and that large, lower cost systems may suffer from a lack of specialized concern for the welfare of riders. Interestingly, the data from the current study show considerable cost variability within system types; not all demand-responsive service is high-cost as measured on a unit basis of output. For example from Table III it can be seen that the range of per passenger mile costs for fixed route systems runs from 25¢ to \$1.35 whereas the demand responsive services range from a low of 17¢ to \$5.79. The two taxi systems studied show costs between 42¢ and 69¢. The lowest cost system in the study, Merritt Island, Florida, offers a combination of fixed route and demand responsive service.

The conventional view expressed by transit operators that demand responsive systems are very expensive appears partially belied by these data. The median cost per passenger mile on fixed route systems for elderly and handicapped, 56¢ per passenger mile, is only slightly below the corresponding 70¢ figure for demand responsive systems. Further, the lowest cost DAR system

SELECTED CHARACTERISTICS OF SAMPLE SYSTEMS, COSTS OF TRANSPORTATION FOR ELDERLY AND HANDICAPPED

Location System Name	1970 Population	Service Type	Organizational Form	Annual Passenger Trips	Annual Passenger Miles	Number of Vehicles In Service	Total Vehicles Miles	System Seating Capacity	Total Annual Cost	Cost Passenger Mile	Cost Vehicle Mile	Cost Passenger Trip
Connecticut Derby, et'al Vally Transit	73,700	Demand Responsive Fix.route	Public Non-Profit	124,800	137,280	18	145,000	156	308,800	2.24	2.12	2.47
Delaware Authority For Special Transportation	548,000	Demand Responsive	Public Non-Profit	152,000	1,520,000	26	845,000	245	413,401	.27	.49	2.72
Florida Broward County	62,010	Fix.Sched. Fix.route	Cooperative Public, Priv. Non-Profit	56,400	676,800	10	251,880	60	187,092	.28	.74	3.32
Florida Merritt Island Consolidated Agency Transportation	29,200	Demand Responsive Fix.route	Public Non-Profit	195,100	1,951,000	17	451,181	180	280,000	.14	.62	1.44
Louisiana Baton Rouge Metro	165,900	Demand Responsive	Public Non-Profit	54,200	217,000	6	120,000	122	122,350	.56	1.02	2.26
New York Syracuse	197,300	Fix.route Route Dev*	Non-Profit	73,700	361,359	29	168,472	NA	427,600	.64	2.54	5.80
Michigan Traverse City	18,048	Demand Responsive	Private Taxi	161,112	322,224	6	136,608	66	175,000	1.09	1.28	1.08
*Deviation												

Source: Transportation Institute, North Carolina A & T State University, Greensboro, North Carolina 27411
(919) 379-7745

Table 1 cont.

Selected Characteristics of Sample Systems, Costs of Transportation for Elderly and Handicapped

Location System Name	1970 Population	Service Type	Organizational Form	Annual Passenger Trip	Annual Passenger Miles	Number of Vehicles In Service	Total Miles In Vehicles	System Seating Capacity	Total Annual Cost	Cost Passenger Mile	Cost Vehicle Mile	Cost Passenger Trip
New York Hicksville Orange & White	NA	Demand Responsive All	Private Non-Profit	2,400,000	4,800,000	120	5,247,500	650	2,018,838	.42	.38	.84
New York Rochester Pert	296,200	Demand Responsive	Public Non-Profit	208,800	624,000	13	460,000	NA	991,800	1.59	2.16	4.77
New York Rochester Medical Motors	296,200	Demand Responsive	Private Non-Profit	45,600	208,400	12	208,168	95	252,475	1.21	1.21	5.54
Rhode Island Senior Citizen	949,700	Demand Responsive	Private Non-Profit	360,000	900,000	34	840,000	414	474,700	.53	.57	1.32
Wisconsin Merrill-Go Round	9,502	Route Dev.	Public Non-Profit	65,500	130,000	3	98,800	60	66,049	.51	.67	1.04
Indiana Logansport	19,255	Demand Responsive	Private Non-Profit	21,120	274,560	10	180,800	120	115,725	1.50	1.55	5.48
Michigan Ludington	9,021	Demand Responsive Route Dev.	Public Non-Profit	37,000	86,767	4	84,862	42	120,704	1.39	1.42	3.26
North Carolina Winston-Salem	133,683	Fix. Sched	Public	35,316	211,896	2	27,760	90	136,593	.64	4.92	3.88
Illinois Maywood	291,019	Demand Responsive	Private Non-Profit	15,134	115,670	4	127,000	72	90,680	.78	.71	1.92

Table II

Service Characteristics of High Medium and Low-Cost Systems
 Providing Transportation to the Elderly and Handicapped:

Selected Characteristic	High Cost (Over \$1.25) N = 4	Medium Cost (\$\$.51 to \$1.25) N = 8	Low Cost (\$\$.50 or Less) N = 6
Demand Responsive (Many origins to many destinations?)			
Yes	75	87	67
No	<u>25</u>	<u>13</u>	<u>33</u>
Total	100	100	100
Aides Available?			
Yes	0	25	33
No	<u>100</u>	<u>75</u>	<u>67</u>
Total	100	100	100
System has more than one vehicle equipped with lift?			
Yes	0	38	83
No	<u>100</u>	<u>62</u>	<u>17</u>
Total	100	100	100
Wheelchair capacity greater than four?			
Yes	25	25	50
No	<u>75</u>	<u>75</u>	<u>50</u>
Total	100	100	100
Weekdays Only?			
Yes	50	50	67
No	<u>50</u>	<u>50</u>	<u>33</u>
Total	100	100	100
Service available during "peak"?			
Yes	75	87	33
No	<u>25</u>	<u>13</u>	<u>67</u>
Total	100	100	100

(Table II Continued)

	<u>High Cost</u> <u>(Over \$1.25)</u>	<u>Medium Cost</u> <u>(\$.51 to \$1.25)</u>	<u>Low Cost</u> <u>(\$.50 or Less)</u>
System open only to elderly or handicapped?			
Yes	25	63	83
No	<u>75</u>	<u>37</u>	<u>17</u>
Total	100	100	100

is cheaper than the lowest cost fixed route system. See Table III. The following discussion explores possible explanations for these unexpected results.

Special Service for Elderly and Handicapped and Cost

Some high productivity systems which take advantage of the economies of scale may operate with considerable flexibility of routes and schedules. Following this theme, it is interesting to note that the probability that a system will have specialized equipment to handle non-ambulatory is actually greater among low-cost than among high-cost systems. This result is a statistical accident resulting from the fact that there appears to be minimum critical mass in scope of the transit operation before the system reaches out for these accessories, and as noted above large scale is also associated with lower cost.

Thus, from Table III, it is apparent that low cost systems are only slightly less likely than high cost systems to operate demand-responsive service. Low cost systems are more likely to have aides available, more likely to have lifts, and more likely to have a larger wheelchair capacity.

Age of Project and Costs of Start-Up

Data were collected from systems which had operated for at least six months and had cost records. The planning costs were obtained but only for a few systems. The costs for planning were not included in the cost analysis. It was expected that newer systems would have higher costs than systems two years or older. However, no particular pattern of cost by age is evident. In Table IV three of the four highest cost systems have had more than two years of operation.

Table III

Costs and Selected Characteristics
By System Type

	Number of Passenger Miles Per Annum	Cost of Passenger Mile	Name of Low-Cost System
Fixed Route Systems with Special Service to Elderly & Handicapped	Range: 212,000 to 677,000 Mean: 417,000 Median: 361,000	Range: \$.25 to \$1.35 Mean: \$.72 Median: \$.56	Broward County, Florida
Demand-Responsive Other than Taxi	Range: 9,900 to 1,520,000 Mean: 485,000 Median: 280,000	Range: \$.17 to \$5.79 Mean: \$1.19 Median: \$.70	Logansport, Indiana
Taxi	Range: 161,112 to 4,800,000 Mean: ----- Median: -----	Range: \$.42 to \$.69 Mean: ----- Median: -----	Hicksville, New York
Mixed Demand/Responsive And Fixed Route	Range: 1,951,000 Mean: ----- Median: -----	Range: ----- Mean: ----- Median: \$.13	Merritt Island, Florida

Management Overhead and Cost Variations

It is interesting to observe that the percentage of costs going to management overhead is considerable, and somewhat uncorrelated either with cost or with scale of output. For example, the average percentage of total cost going to fixed labor (management, secretarial) is 41.8%. The correlation of this figure with cost per passenger mile is .07 and with scale in passenger miles is .14. See Table V. In general the negative signs suggest that there is some cost-saving in the spreading of costs for "fixed" staff over larger and larger scale of operation. Management cost appears sensitive to the availability of funding for the project, and suggests that rigorous attempts to impose limits on the growth of administrative staff are worth the effort.

Management Form and Costs

Unit costs appear to be independent of management for public-versus-private, but it is reported as expected that the for-profit firms are experiencing lower unit costs than non-profit enterprises. See Table VI. Again this matter is related to the economies of scale issue, since the non-profits (particularly social service agencies whose mission includes much more than transportation) may consider themselves restricted to a limited geographic jurisdiction. This attitude is injurious to maximum efficiency in delivery of the transportation services, but the goal of transportation optimization may not be important in the scale of values of the social organizations.

Table IV

Age of Transportation Service to Elderly,
by Cost of Program

	<u>High Cost</u> <u>(Over \$1.25)</u>	<u>Medium Cost</u> <u>(\$.51 to \$1.25)</u>	<u>Low Cost</u> <u>(\$.50 or Less)</u>
More than two years:	Number: 3 Percent: 75	Number: 4 Percent: 50	Number: 4 Percent: 67
Two years or Less:	Number: 1 <u>Percent: 25</u>	Number: 4 <u>Percent: 50</u>	Number: 2 <u>Percent: 33</u>
TOTAL:	Number: 4 Percent: 100	Number: 8 Percent: 100	Number: 6 Percent: 100

Table V

Correlations Between Cost Per Passenger Mile and Percentage
Share of Cost Components,
18 Transportation Systems for the Elderly and Handicapped, 1975

<u>Cost Share Percentage</u>	<u>Correlation</u>		<u>Mean Value</u>
	With Cost	With Scale	
Management Cost	-.07	-.14	41.8
Variable Labor Cost	-.05	-.00	55.2
Fixed Non-Labor	-.11	-.15	3.6
Capital & Maintenance	+.12	+.34	13.0
Variable Non-Labor	+.02	+.10	10.3

Table VI
Costs Per Passenger Mile by System Type

	<u>Public Non-Profit</u>	<u>Private Non-Profit</u>	<u>Private Profit</u>
Costs per passenger mile			
0 - .50	Number: 3 Percent: 25.0	Number: 2 Percent: 40.0	Number: 1 Percent: 100.0
.51 - 1.25	Number: 5 Percent: 41.7	Number: 3 Percent: 60.0	Number: 0 Percent: 0.0
Over- 1.25	Number: 4 Percent: <u>33.3</u>	Number: 0 Percent: <u>0.0</u>	Number: 0 Percent: <u>0.0</u>
TOTAL:	Number: 12 Percent: 100.0	Number: 5 Percent: 100.0	Number: 1 Percent: 100.0

Table VII

Correlations Between Cost Per Passenger
Mile and Selected Characteristics

	<u>Correlation</u>	<u>Mean Value</u>
Load Factor*	-.14	.05
Trip Length	-.46	5.10
Total vehicle Seating Capacity	-.15	175.44
Total wheelchair seating capacity	-.22	7.72

*Total passenger miles delivered per annum divided by seat capacity times vehicle miles traveled.

Capacity, Capacity Utilization and Unit Costs

From Table VII it is evident that unit costs decrease as the trip lengthens. It is well to recall here that the definition of output includes a measure of trip length. Once passengers are boarded, unit costs decrease as existing capacity is used with greater intensity. The average load factor is only five percent, but as it increases unit costs drop. Reasons for the apparently low performance on load factor should be explained in subsequent follow-up studies. If use of existing capacity could be increased, costs per passenger mile on all systems could be expected to drop significantly, even on small scale systems.

Conclusion

One may conclude that internal adjustments made by sound management and planning can lower unit cost somewhat, but the overriding consideration appears to be the capturing of economies of scale. The latter can be accomplished by widening the service area, increasing ridership volumes and trip lengths, and increasing the utilization of existing capacity by attracting customers through agency referrals.

Once a broad base of operation has been achieved, management can develop a higher level of service: offering demand-responsive/fixed route combinations, acquiring vehicles with lifts and wheelchair capacity, hiring aides or using volunteers effectively. The management share in total cost drops slightly with higher levels of scale. Capital and maintenance take on added relative weight in total costs, and reflect improved quality of equipment offered.

DAVID CHEN: Our next speaker is Arthur Saltzman. Professor Saltzman is a graduate of MIT and he has spent three years in the Aerospace Industry and helped develop the innovation in the transit industry while at the Urban Systems Laboratory. Professor Saltzman is responsible for implementing a transportation curriculum at North Carolina A & T State University. This is one of several major programs in the nation. Professor Saltzman will speak on "Special Provisions for Low Income, Elderly, and Handicapped Transit Dependents." Arthur Saltzman.



Some of the attendees at the First National Transportation Conference on "Strengthening Organizational Capabilities for Transportation Planning," held in Houston, Texas.

SPECIAL PROVISIONS FOR LOW INCOME,
ELDERLY AND HANDICAPPED TRANSIT DEPENDENTS
by

Arthur Saltzman
Director, Transportation Institute
North Carolina A&T State University

Introduction

At some time in this life virtually everyone has been transportation disadvantaged. The most common occurrence that restricts mobility is when a person temporarily does not have an automobile available to make a trip. A good example is when the one family auto needs repairs and is out of commission or temporarily being used by another member of the family. This is usually a temporary situation and the simple solution to this mobility problem is to wait for the auto to return home or get it repaired.

Certainly a more serious problem occurs when a person is unable to drive an automobile or not sufficiently wealthy to purchase and maintain one. It is this group that is generally defined as "the transportation disadvantaged."

Practically all of the research, demonstration and legislation concerning persons who could be considered transportation disadvantaged have focused on three sub-sets of this group. Namely elderly persons, persons who are physically or mentally handicapped, and poor persons. These groups are by no means small. Various estimates indicate that in the United States between 70 million¹ and 100 million² are either elderly, handicapped or poor. This wide numerical range is indicative of the definitional problems inherent in trying to count the number of persons who are transportation disadvantaged. For example, the definition of who is elderly is somewhat arbitrary. Usually persons above 65 years are considered elderly by Federal and State agencies, but some local social service programs are extended to all those over 55. A

more serious issue is that not all persons over 65 have severe mobility problems. Equating age with being immobile is a gross oversimplification.

Defining all persons who are physically or mentally handicapped as transportation disadvantaged, also poses some definitional problems. First, who is handicapped and then do all handicapped persons have severe transportation problems?

The problem with classifying poor persons is one that has vexed every agency that has tried to deal with low-income individuals. What should be the measure of poverty? It is generally accepted that household income is a reasonable measure of wealth and the ability to purchase adequate transportation is directly dependent on income level, as will be seen in another portion of this paper.

Travel Needs

The introductory statement defined the transportation disadvantaged as those who have no access to an automobile. While this is a useful statement for general descriptive purposes, a more precise and analytical definition is necessary in considering this group's travel needs, as well as proposed solutions.³

More precision can be achieved by using a measure that can be compared among each of the disadvantaged groups. Thus for describing the degree of disadvantagedness, data on trip frequency per person will be the prime determinate. A transportation disadvantaged person is defined as one who takes fewer trips per person per day than one who is not disadvantaged. This procedure is modified from one used by researchers on a detailed study on the urban transportation disadvantaged.⁴ Some caution is necessary in using this measure. Although the relative degree of transportation disadvantaged can be indicated by comparing trip rates among groups it should not be assumed that the transportation dis-

advantaged "need" or will demand as many daily trips as the general population. This fallacy has been pointed out here to prevent planners from using this gap analysis technique as a way of predicting, for example, the additional trips a group of elderly persons will take if an innovative transit system is provided. Even when provided with vastly improved transit, few among the disadvantaged will take the number of trips per day of the non-disadvantaged population.

Trip rates do, however, provide one measure of transportation disadvantagedness. In the following sections the trip rates, major travel problem and characteristics of each of the prime groups identified as being transportation disadvantaged, will be discussed.

The Poor

The poor are one of the most readily identifiable groups of the transportation disadvantaged. They are, because of a lack of sufficient income, unable to conveniently meet their travel needs and desires. Low incomes result in low trip making rates as indicated in Table I. The household trip rates for those with annual incomes over \$4,000 is much higher than those with lower incomes. Many trips desired by the poor are not being made. Of course, the intervening variable between incomes and trip rates is auto ownership. Data from 1971 show that while only 20% of all U.S. households were without an auto, 46% of households with under \$3,000 annual earnings did not own an auto.⁵ Furthermore, since many of the autos owned by the poor are old and not in good operating condition, the mere availability of an auto does not necessarily guarantee mobility.

If income is held constant, members of carless households seem to take about one trip less per person per day than did people from one car households. The difference in the total number of trips is much greater, however, between zero and one car households than between one and two car households.⁴

The location of carless individuals also has a considerable effect on available transportation alternatives and, therefore, on trip making.

Table 1

Annual passenger car trip rates, vehicle-miles of travel per household, and average trip length by household income

Annual Household Income	Trip Rate per household	Vehicle-miles per household	Average Trip Length
Dollars	Number	Number	Miles
Under 4,000	580	4,708	8.1
4,000 - 9,999	1,433	12,262	8.6
10,000 -14,999	1,949	17,497	9.0
15,000 and over	2,525	24,410	9.7

Source: Report No. 7 of the National Personal Transportation Survey. "Household Travel in the United States," Federal Highway Administration, Washington, D.C., December 1972.

In the larger cities where public transportation is more available, the trip frequency gap between individuals with and without auto is reduced. In these cities, transit is used for a much larger percentage of trips taken by carless individuals. This is quite different from what occurs in sparsely populated areas. In smaller cities, ride sharing and car borrowing by carless households exist to a much greater degree.⁶ These informal methods, however, do not allow poor residents of smaller cities the mobility afforded them by the better transit systems of the larger cities.

Inner City Poor and Non-Whites

There are special transportation problems associated with the poor and non-whites, including Blacks, Puerto Ricans, Chicanos, Orientals and American Indians, who tend to live in inner cities of major metropolitan areas.

The lack of adequate area-wide coverage by many inner city public transit systems has been, in part, responsible for the lack of accessibility to jobs, and very critical services. More specifically, the decentralization of jobs and services as a result of suburban growth, has not been followed by the development of a convenient transit system that inner city residents can use to reach de-

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sired work and non-work destinations.

The relationship between race and transportation is also an important issue because even when income is held constant, minority group members across the nation take from .4 to .9 fewer non-work trips per person per day than do whites.⁴ Non-whites are most disadvantaged, when compared with whites, in their trip rates to social/recreational activities and in the frequency with which they shop.

Mode choice data are also revealing. When comparing the percent of public transportation used by both inner city whites and non-whites, it was found that non-whites were more dependent on public transportation than whites. This relationship was true within each income group of inner city residents.

Finally, many of the trips made by the non-whites and the poor are walking trips, partly because of the dense neighborhoods in which many of them live. This larger number of walking trips, however, does not change the fact that the poor and non-whites make considerably fewer trips than higher income persons.⁴

The Elderly

One group of the transportation disadvantaged which has received considerable attention from researchers in recent years has been the elderly of our society.

The elderly are a significant portion of our population and will continue to increase as a proportion of our total population. In 1970, there were 20 million Americans over age 65, of which about 65% lived in urban or suburban areas. It is estimated that there will be 28 million by the year 2000.⁸

There are two major factors associated with the elderly's transportation problems. The first is that many have limited income and are not able to pay for automobile or taxi expenses. The second factor relates to the physical health condition of the elderly as an obstacle in operating an automobile, as well as in riding conventional transit systems. Auditory and visual problems

of many senior citizens considerably reduce their ability to safely operate an automobile. The elderly are inhibited by a number of problems in using conventional public transportation. The design related problems such as high entrance steps, overhead grips, and fast-acting doors act to their disadvantage. In addition, other problems occur when too many transfers are required, and long waits are necessary at stops. An elderly person, who is subjected to these discomforts and inconveniences, is discouraged from using public transportation.

Some of the effects of not being able to afford an auto and the barriers to using public transit are evident in Table II. The average number of trips per person per day, by income, age, and trip purposes, are given for SMSA residents. Because of the aforementioned factors, the trip making rate for the elderly is considerably lower than that of the non-elderly within each income group.

The effect of income on trip making rates for the elderly is also shown in Table II. As income increases, the elderly take more trips for both work and non-work purposes.

Mode choice data indicate that although the elderly are described as 'captive riders,' they do not use transit for a large number of their trips. In fact, they tend to use transit for a smaller proportion of their total trips than the non-elderly, according to nationwide data on the elderly within SMSA's.

No description of the transportation characteristics of the elderly would be complete without some mention of the importance of transportation used solely as an activity for many of the elderly. "Transportation for the elderly needs to be provided not purely for getting from 'here to there' but also as an 'antidote' for the entire process of aging."⁹

Handicapped Persons

The major transportation problem of the handicapped, like the elderly, lies in their inability to find a convenient mode of transportation which does not cause them serious discomforts. Of all the handicapped persons in the United

Table II

Average Number of Trips Per Person Per Day by Income, By Age And Trip Purposes for SMSA Residents

Household Income and Age

Trip Purpose	Poverty \$0 - 4,000		Low \$4 - 6,000		Middle \$6 - 10,000		High \$10,000 +	
	Elderly	Non-Elderly	Elderly	Non-Elderly	Elderly	Non-Elderly	Elderly	Non-Elderly
Work	.11	.38	.19	.48	.39	.56	.37	.59
Shopping	.29	.24	.27	.28	.24	.42	.27	.44
Social/ Recreational	.38	.46	.41	.42	.49	.72	.29	.74
Personal Business	.10	.22	.24	.31	.24	.41	.20	.41
Other	.62	.77	.52	.76	1.07	.63	.69	.67
Total Non-Work	1.39	1.69	1.44	1.77	2.04	2.18	1.45	2.26
Total	1.50	2.07	1.63	2.25	2.43	2.74	1.82	2.85

Sample Size: 5,187 persons

Source: Nationwide Personal Transportation Survey, 1969-70 as reported in ABT Associates, Transportation Needs of the Handicapped.

States, the Department of Transportation has calculated the total number which cannot use transit or who use transit with difficulty.¹⁰ A list of the dysfunctions of the transportation handicapped is shown in Table III. The first interesting fact that is apparent from this table is that 53% of the handicapped are elderly persons. As discussed in the previous section, the problems of the elderly in driving and riding conventional modes of transportation are, to a large extent, associated with the physical impairment of persons 65 and over.

Their difficulties in getting to the bus stop, boarding high entrance steps, safely riding buses, and getting to their destinations mean that the handicapped only ride public transit when absolutely necessary.⁸ Their attempts to use inadequate public transit result in both physical endangerment and psychological frustrations.

The travel patterns of the handicapped, as a result of some of the above mentioned impediments, result in a large gap between the trip frequency of the handicapped and the non-handicapped. Data from a study in Boston showed that the handicapped took 1.13 trips per day compared to an average 2.23 trips per day by the general population.¹¹

Finally, referring to the modal split of the handicapped shows that a significant number of trips by the handicapped are taken by taxi. The handicapped, for example, take 15% of their trips by taxi compared with two percent of the non-handicapped. Although the handicapped are generally less able to afford the taxi fare, they have need for the door-to-door taxi service.¹¹

Finding Solutions - Conventional Transit

Adequate public transportation would seem to be one solution for these persons. In fact the literature often refers to these groups as "captive riders or transit dependents." But there are many indications that current transit systems are quite far from being adequate. Both rail rapid transit lines and fixed-route bus operations do offer a solution to some transportation demands,

Table III

THE NATIONAL NUMBERS OF HANDICAPPED WITH TRANSPORTATION DYSFUNCTIONS*			
Handicap Class	Elderly Handicapped	Non-Elderly Handicapped	Total Handicapped
Non-Institutional			
Chronic Conditions			
Visually Impaired	1,460,000	510,000	1,970,000
Deaf	140,000	190,000	330,000
Uses Wheelchair	230,000	200,000	430,000
Uses Walker	350,000	60,000	410,000
Uses Other Special Aids	2,290,000	3,180,000	5,470,000
Other Mobility Limitations	1,540,000	1,770,000	3,310,000
Acute Conditions	90,000	400,000	490,000
Institutionalized	930,000	30,000	960,000
TOTALS	7,030,000	6,340,000	13,370,000
Sources: HEW National Center for Health Statistics 1960 and 1970 Census of Population in The Handicapped and Elderly Market for Urban Mass Transit prepared by the Transportation Systems Center for the Urban Mass Transportation Administration, October 1973.			
*1970 Estimate, who can't use transit or who use transit with difficulty			

but the services they offer are not sufficient to serve all the needs of those with mobility problems. Barriers to the use of conventional mass transit include ones which are physical, and others which are operational. For example, the difficulty a handicapped person would have in negotiating a high step on a bus is a physical barrier, while insufficient route coverage resulting in long walks to bus stops would be an operational barrier for many of the elderly. In addition to these physical and operational are psychological barriers, such as fear of assault which can affect any potential rider. Finally, there is the standard transit fare which can be an economic barrier to the poor.

Perhaps the overriding barrier in conventional public transportation is that it does not take people to where they want to go. Transit is still radically oriented and does not usually allow for good service unless the destination or origin of travel is the central business district. With respect to convenience, conventional transit cannot provide door-to-door service.

Moreover the transit industry has, until recently, paid very little attention to the mobility needs of the transportation disadvantaged. It is extremely costly to provide the specialized transportation needed by this group. In an era of declining patronage, most operators have been concerned with cutting costs rather than with trying to expand services for any special sub-groups. Thus, providing special services for elderly, handicapped and poor persons has been a low priority item for transit operators.

There have been a few isolated cases of innovation by the transit operator but this has usually occurred when general services were being substantially improved as a result of a newly implemented dial-a-ride system, as, for example, in Rochester, New York. Other times innovation has occurred has been when a public planning agency has made and implemented a specific policy on serving elderly and handicapped persons. For example, Regional Transit District in Denver decided to provide a special service for elderly and handicapped persons and im-

plemented an effective but rather costly system. Few have followed Denver's commitment to a substantial effort to serve the transportation disadvantaged. However, as a result of recent legislation and rules promulgated by UMTA, which would deny them federal funds unless they include transportation disadvantaged in their planning, virtually every transit system in the country now has the transportation disadvantaged as one of their priorities. A more extensive discussion of the transit operators role in providing special services is in a subsequent section of this paper.

Health and Social Service Agency Response

A plethora of social service and health agencies have responded to the lack of adequate transit for their clients by initiating their own transit systems. These systems range in size from single vehicles that provide monthly trips to large 300 vehicles statewide coordinated systems. In Delaware, for example, a coordinated network serves eligible persons in every county of the state. In many other cases, small, local units such as Community Mental Health Centers have purchased one or two vans to provide mobility for their clients. These para-transit options are usually more demand-responsive than the conventional fixed-route, fixed-schedule transit. Vehicles are dispatched only when some demand has been established. Operations are personalized, and frequently provide door-to-door service in small vehicles.

These systems were not initiated by transportation planners. Agency directors who perceived mobility needs among many of their clients decided to start a system to handle their needs. This is a significant fact and should not be overlooked in the future planning of transit for the transportation disadvantaged. The persons who developed these systems usually had no technical expertise. They simply recognized the problem and went at it the best way they knew how.

Fortunately, few of them were aware of the "urban transportation planning process" and did not use sophisticated models to develop their systems. Using a "seat of the pants" approach, they identified the location of their clients and tried to provide door-to-door service to meet their most critical transportation needs.

Various government surplus vehicles were acquired and elderly or unemployed drivers were often hired to drive the vehicles. Sometimes repairs were being done by local garages that were not able to keep the vehicles running reliably. In most cases a preventive maintenance schedule did not exist.

It is very easy to be critical of the poor planning and management exhibited by most of these systems. They are also fragmented and costly per passenger trip. But these operations have provided a service that has significant positive impact on their passengers.

Funding Estimates

Substantial amounts of public funds are being spent on these systems. I recently estimated that in the United States, over \$500 million annually was expended in providing special transit services for all human services agencies.¹²

There are many human service agencies involved in transportation. A study by Briggs,¹³ included a comprehensive survey of "semi-public" transportation in two areas of Texas. He reported 53 human services provide some form of para-transit for their clients. There were 1900 human service agencies in the San Francisco Bay area which were enumerated by Crain.¹⁴ A survey of a sample of 81 agencies from this group found that 62% of them stated that transportation was a serious agency problem. Approximately one-half of all the human service agencies provided some transportation service according to this study.¹⁴

The aggregate of expenditures is large because there are many agencies and also because the client transportation expenditures of each is often a large part of the total agency budget. Some smaller, local agencies in New York State,

for example, used up to 30% of their total annual budget for client transportation, according to a survey of public agencies in that state by Politano, et al.¹⁵

Expenditures on agency client transportation appear to be increasing. There is recognition among agency directors that better transportation can result in more comprehensive area coverage and better facility utilization. Increased transportation budgets and a growing fleet size are indicated by Mouchahoir¹⁶ who reports that the transportation unit of the Southside Community Health center was allocated \$65,513 in 1971 and \$82,017 in 1972. Crain¹⁴ and the Metropolitan Transportation Commission¹⁷ indicate that from 1974 to 1976 there was a dramatic increase in vehicles owned and used by human service agencies in the San Francisco Bay Area.

The future of funding sources for social transportation services New York State were unsure in 1973.¹⁵ But, if they followed the national trends, they would have a 13-18% annual growth in expenditures until 1978 and an 8% growth rate thereafter.¹²

Organizing for Better Efficiency and Effectiveness

There is clear evidence that the various social service agencies consider the current systems they are operating far less than adequate in solving the transportation problems. This theme is echoed by agency officials at various conferences on the transportation disadvantaged and has also been substantiated in local planning studies. For example, a study in St. Louis¹⁸ indicated that almost two-thirds of the agencies surveyed felt their current solution was not solving their transportation problems. Most agencies indicated they could have a substantial increase in the clients it served if it provided better transportation services. If they had better transportation facilities they could provide more services and more activities to more people.

Everyone seems to agree that having small uncoordinated systems is inefficient but there is little unanimity on the best solution. The major factor

that took various agencies into the transportation business is one that some argue should keep them in operation. That is that they are most sensitive to the needs of their clients. But one study suggested that agencies would not opt for operating their own system if a suitable substitute could be found.¹⁴

Consolidation of all special services within a given area has been a suggested solution and in fact is being attempted in some areas. The 40 service providers in Chattanooga, Tennessee have managed to substantially lower their cost per client mile by pooling their resources¹⁹ into a single radio dispatched pick up system which was operated by a coordinating agency. Whereas before consolidation it was costing an average of \$2.93 per passenger mile, the single provider technique offered an improved service at a cost of \$.61 per passenger mile.

The Delaware Authority for Special Transportation (DAST) has pioneered a statewide approach to consolidated transportation services. The Delaware legislature created an authority that could provide transportation services to a wide range of client agencies under purchase-of-service contracts. Local county governments, the United Fund of Delaware and numerous private agencies now contract with DAST to provide transportation for their clients. In almost every case the cost to the agency is less than was previously the case.

DAST has also recently become the first special service transportation agency to receive UMTA funds.

But there are still many agencies who would rather continue to operate their own vehicles. They fear the loss of control and potential loss of accountability to their various funding agencies. Local agencies are loath to give up the vehicles which provide a visible indication that they are using their public funds to provide services to the community. For these reasons efforts at consolidation of vehicles are going to be less than 100% effective. However there is a clear trend toward larger systems which are operated by an

entity created especially to provide special transportation services for human service agencies.

Conventional Transit Operators as Service Providers

Whether it is advisable or possible for the transit operator to provide special services to human service agency clients is a subject being discussed by many transportation planning agencies. This is an issue that must be resolved by every urban area that will receive UMTA funds. The planning requirements promulgated by UMTA in the Federal Register of April 30, 1976 indicate that special attention must be given to the transportation needs of elderly and handicapped persons. Projects designed to benefit elderly and handicapped persons are required from each urban area as a condition for receiving UMTA capital or operating assistance. The Transportation Improvement Programs (TIP) submitted to UMTA after September 30, 1976 must include these projects as part of the program's annual elements.

Many planners want the local mass transit operator to assume total responsibility for providing special services. They most often suggest that a subsidiary or special division would be operated by the transit system which would be devoted to the provision of special services. It is argued that the transit operators have the operating experience and capability to provide efficient services. A major concern among social service agencies who would be contracting for the services is the responsiveness of the transit operator to their needs. Studies by Kidder²⁰ and Crane¹⁴ note that most agencies doubt that the transit operator could ever be adequately responsive or sensitive to their clients.

The transit operators in general have not been aggressively pursuing the special service market. They point out that these services are extremely expensive to provide when compared with conventional transit on a per passenger trip basis. Even with the recent influx of large amounts of federal funds the

transit industry still has financial woes. Escalating operating expenses make operators unwilling to assume additional service responsibilities unless they receive additional funds to completely pay for the new services.

Although few transit operators initiate marketing efforts with social service agencies, some have been responsive to requests for services. Once contacted by the agencies some operators have developed and implemented innovative approaches to providing special services. One study²⁰ reports that none of the ten small urban area transit operators surveyed took the lead in marketing their services with the local human service agencies. However, four of them did respond positively to initiatives from the agencies. They joined with the agencies to request and receive outside funding for special services. It was always clear that without the influx of new funds the operators would be unwilling to provide the high cost of special services.

Even when funds can be channelled to the transit operator and they are willing to provide the service there are many agencies who remain opposed to that arrangement. As previously indicated, they argue that the mass transit operator will not be responsive to their clients' needs. Fewer than half the agencies polled in a study conducted in the San Francisco Bay area wanted the transit operator to be the service provider.¹⁴ They doubted that the transit operator would be sufficiently sensitive to the individual trip making needs of their clients.

An additional deterrent to the provision of special services by the transit operator is their high labor cost. Transit bus drivers earn substantially more per hour than drivers of special service vehicles. If the transit operator provided these services then it is likely that drivers of the special service vehicles would be elevated to higher transit wages. Even if these services were provided by a separate division of the transit operator these higher wages might be incurred. Thus it could be argued that the cost to the agencies

will be higher even though the transit operator has the technical ability to provide services more efficiently than agency operated systems.



Workshop Session



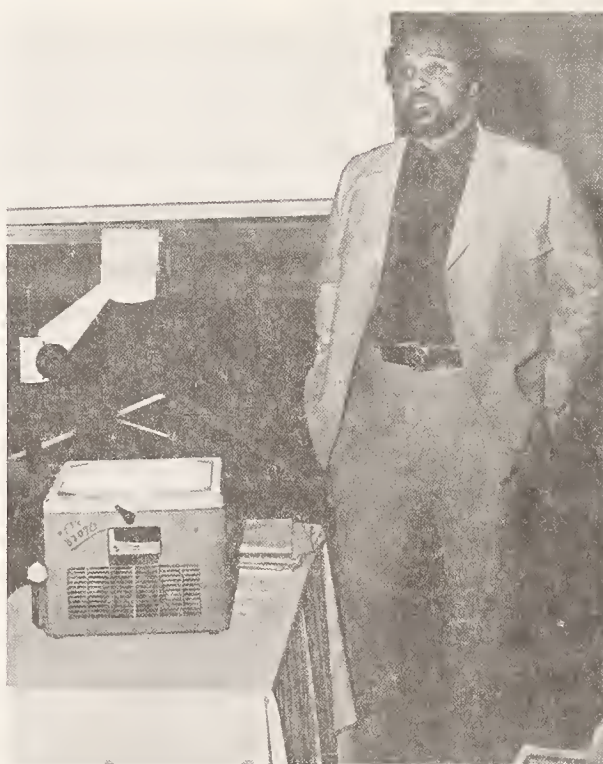
William V. Ward, Engineer-Manager of Houston Urban Project Office of the State Department of Highways and Public Transportation talks with Bruce McDowell of NACIR and Ernest Clouser of the Houston Citizen's Chamber of Commerce.

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DAVID CHEN: Our last speaker is Professor Donald R. Deskins. Dr. Deskins is the Chairman of the Department of Urban Geography at the University of Michigan. He received his B.A., M.A. and Ph.D. Degrees from the University of Michigan. Dr. Deskins has had varied and wide experiences in government agencies, university professorialships and many community services. Professor Deskins has wide interest in many activities including transportation. He has published 22 articles, books, papers and other publications. In 1973 his study, "Residence-Workplace Interaction Vectors for the Detroit Metropolitan Area" was published by Northwestern University. He will address us on the topic of "Intraurban Mobility of the Aged". Dr. Deskins.



Dr. Donald R. Deskins, Chairman of the Department of Urban Geography in the University of Michigan, presents the findings of his study on "Intraurban Mobility and the Aged."

INTRAURBAN MOBILITY OF THE AGED

by

Donald R. Deskins, Jr.

and

Joseph S. Lau

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The University of Michigan

Introduction

The extent to which the characteristics of existing transportation systems effect the intraurban mobility of the elderly is largely unknown.¹ This lack of knowledge is partially due to the fact that, spatially, not much is known about the urban aged beyond their residential locations. Perhaps this void in knowledge is one of the reasons why the planning of transportation for the elderly has been so meager.

A widely advanced hypothesis among gerontologists is that public transportation systems do not adequately serve the elderly. This notion which is commonly held has seldom been rigorously examined although recently there have been surveys conducted on this issue by the U.S. Department of Transportation.² In this study this hypothesis will once again be addressed principally by employing a graphical-analytical technique. By examining the residential patterns of the aged relative to the location of various service facilities much can be learned about the effectiveness of public transportation systems. The results of such an examination should lead to a clearer understanding of the elderly's transportation needs.

Some Basic Considerations

Consensus among gerontologists is that the real problem in transportation for the elderly is that the general modes of transportation are not made available for them.³ This problem becomes more acute for

the elderly because this group's mobility is largely dependent on public transportation for the obvious economic and physiological reasons. Present demographic trends provide evidence that the magnitude of this problem is increasing as the proportion of aged in the total population steadily grows. By 1970, twenty million people were reported to be over the age of sixty five, which accounted for nearly ten percent of the nation's total population.⁴ Population estimates indicate that this population sub-group will double by the year 2050.⁵ Although the age sixty-five does not necessarily have any clear implication about the characteristics of the individuals in that group, this arbitrary retirement age nevertheless is a convenient threshold by which to identify the group. The unprecedented increase in older people results from the fact that medical improvements have drastically reduced the mortality rate, thus leaving a much larger population base to reach old age than ever before.⁶

It would be a gross error to assume that all older people are likely to be decrepit, doddering and useless. In fact, only 30 percent of the elderly have significant limits on their activities due to chronic illness.⁷ On the other hand, there are certain medical and physiological characteristics associated with aging which have to be recognized. For example, older people normally experience a slight loss of periphery vision, develop presbyopia (far sightedness), undergo some hearing difficulties, experience a decrease in their locomotive system and speed of reaction, and are dependent on medications more frequently than other segments of the population. The elderly comprise only fourteen percent of the nation's licensed drivers.⁸ Although they account for only ten percent of the total population, twenty five percent of the nation's pedestrian accidents involve persons over sixty five. Perhaps this statistic is partially reflective of physiological changes associated with normal aging.

Contrary to some stereotypes, the elderly is a growing segment of the population which is mostly ambulatory and is in fact part of the normal community. At the same time, owing to certain physiological or biological changes, the elderly are less automobile oriented and tend to rely more heavily on community services and are especially dependent on public transportation when mobility is of concern.

To complicate the physiological problems associated with aging, most elderly have to deal with economic problems. Among the twenty million elderly Americans, approximately one in four classify among the nation's poverty stricken--with an average income which is almost half that of their younger counterparts.⁹ Obviously, with less income, the spending habits of older consumers differs greatly from those of younger consumers in amount and type of expenditures. The elderly spend most of their resources on essentials, a pattern quite different from that of younger consumers. It follows then that much less money would be available to the aged for transportation. This intricate relationship between the elderly, the poor and the total population is perhaps best expressed in Figure 1.

Public Transportation and the Aged

There are basically two major problems associated with public transportation and the elderly. One problem is specifically related to hardware, or the physical structure and design of the transportation modes. The design of buses used in intraurban service particularly exemplifies this problem. The facts that the buses used in intraurban service are designed with high steps and have abrupt braking systems tend to create problems for the older ridership. Studies verifying that hardware design creates special problems for the elderly have been extensive and need not be further emphasized here.¹⁰ The second basic problem deals with the question of accessibility which is central to the present study.

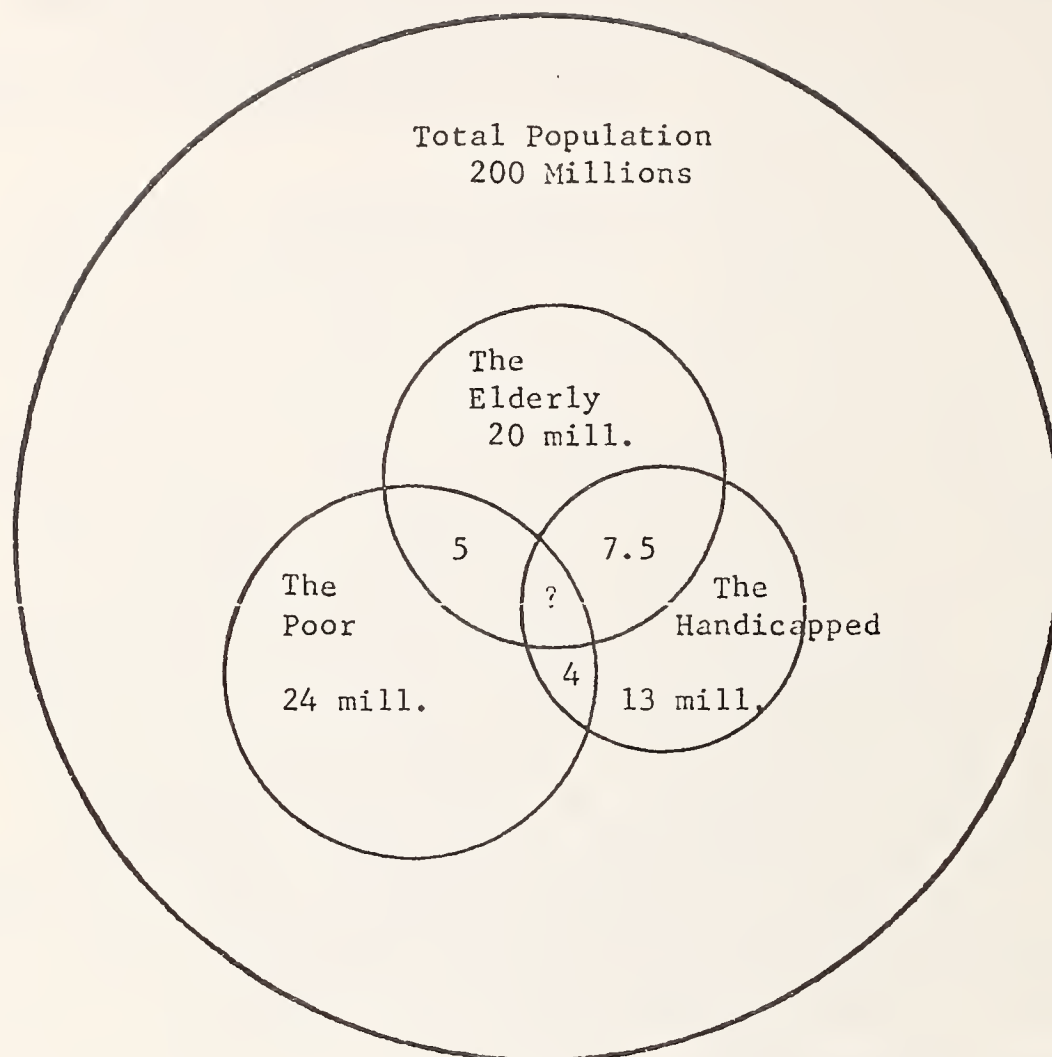


Figure 1

RELATIVE PROPORTIONS OF THE DISADVANTAGED
(Diagram proportional to actual size)

The economic status of most handicapped are not known. About one-third of them, however, are employed. It would seem reasonable to assume that a larger proportion of them would fall into the "poor" category contrasted to the size shown above.

Source: Falcocchio and Cantilli, 1975.

Accessibility in the case of the elderly is defined here in terms of how easy (or difficult) it is for a senior citizen to get to (and from) their residence to a destination. Since the aged form a sub-population which relies minimally on automobiles for movement, public transportation, in particular buses, are the principal mode of transportation to be considered. To state the problem another way is to pose the question: how available are bus services to the elderly? In a geographical sense, physical distance is usually deemed more important, or at least more interesting, and therefore will be dealt with in greater detail in this study than the frequency of operation. It is true that frequency measures can be used as a multiplier to index the potential availability of public transportation, but a counter argument against its use can also be advanced. Basically, if the transportation service is out of the consumers' reach, no matter how frequent the service is being offered, it is in affect not available to these individuals. Thus, accessibility in terms of distance is treated with priority in this study.

An associated problem to be considered in relation to physical distance and accessibility is the "vulnerability" of the elderly to external interferences as they move about. It has been already mentioned that twenty five percent of the nation's pedestrian accidents involve the elderly. Moreover, a longer walking distance to the transportation route would increase the elderly exposure to the hazard of pedestrian accident and in some instances crime. Cases where the elderly are victims of crime are also quite common. In this same light, exposure to severe weather conditions have to also be taken into account. In a sense, then, the problem can be viewed as a maximization-minimization problem. The objective is to maximize the availability of public transportation services for the aged while minimizing the effort expended by this group to reach the transportation source.

Study Area and Design

The urban area of metropolitan Toledo was chosen as the study area. In 1970, it had a population of approximately 550,000, ten percent of which are elderly. The area was chosen because of its moderate size, the availability of data and because it does not have the tradition of being a retirement community similar to the large concentrations of elderly which have resettled in warmer parts of the nation where over half of the population is elderly. Retirement centers of this kind, those in Arizona and Florida, do not fit into the scheme of this study since these elderly are among the more privileged, where the focus here is on the average senior citizen who generally cannot afford to relocate in the sun belt. By selecting Toledo as the study site the possibility of obtaining a biased result stemming from an atypical population is partially eliminated.

For the purpose of comparison, a population map is included to show the distribution of Toledo's total population (Figure 2) in contrast to that of the elderly (Figure 3). Census data by blocks are used to compile the respective maps showing distribution of the city's total and elderly populations. Block data were chosen to attain a fine resolution of these respective locational patterns. However, block statistics use the age sixty two as the lower classification limit for the elderly instead of sixty five years which is typical of tract data. Hence in this study, the elderly are comprised of those individuals who are sixty two and over. In comparing the distribution of the elderly (Figure 3) with that of the general population (Figure 2) it is apparent that the elderly are distributed similar to that of the population at large. No distinct clustering or heavy concentrations among Toledo's elderly was observed in another study where the researchers employed segregation indices for this purpose.¹¹

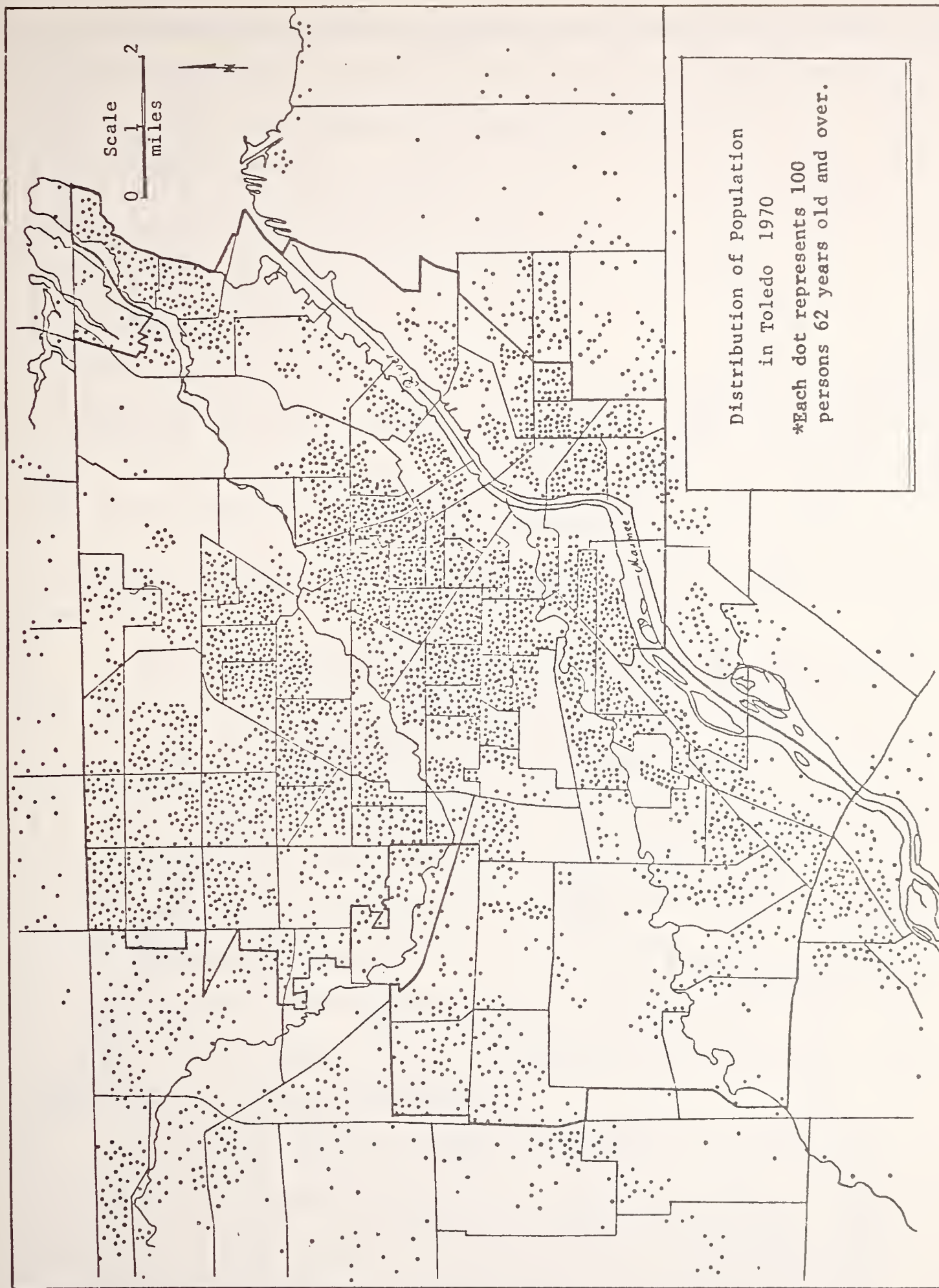


Figure 2

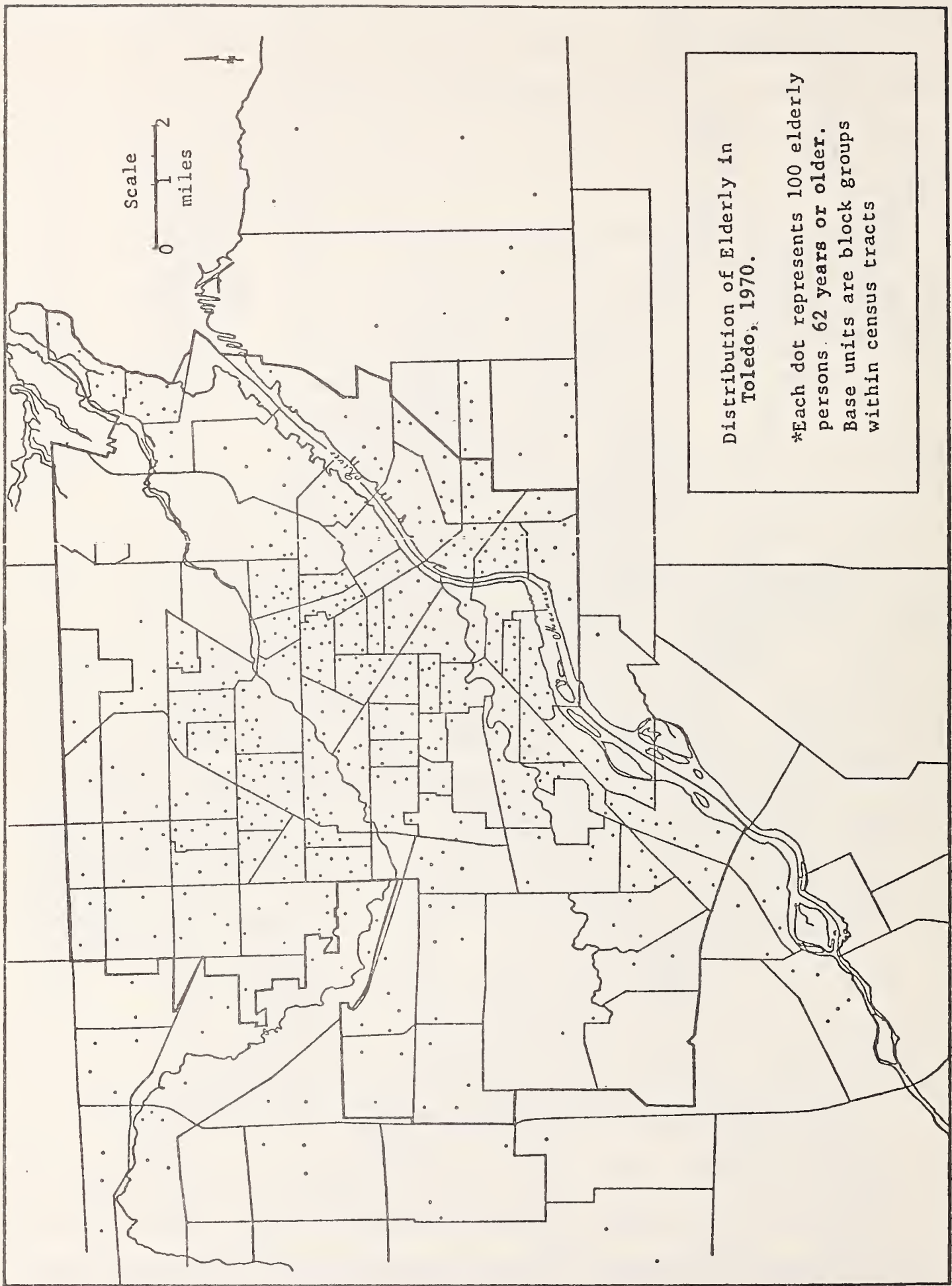


Figure 3

A series of maps are also compiled showing respectively: the distribution of grocery stores, clinics and hospitals, retail centers as well as the bus routes comprising the public transportation system. These maps provide the information necessary to test the hypothesis that public transportation systems in terms of accessibility do not adequately serve the elderly. To test this hypothesis requires an examination of the relationship which exists between the distribution of the elderly and the transportation network. It appears that this can be accomplished by establishing and measuring the distance between these phenomena. These maps which are generalized statistical surfaces are assumed appropriate data for this test for it would be very difficult to measure the exact travel distance between each individual elderly citizen's residence and the nearest bus route.

To represent the elderly population, a dot map is employed with each dot on the map having a value of one hundred people (Figure 3). In cases where blocks contain less than one hundred elderly inhabitants a block grouping method is utilized. This grouping is facilitated by the census data format where blocks are arranged in block groups. Blocks are combined into groups according to their sequential order when required so that the aggregate elderly population totals one hundred. This method of grouping appears to be appropriate for this purpose. The logical implication for this grouping is that on a generalized surface, the dot would approximate the notion of a neighborhood.

A method was adopted to determine the distance that the elderly are from the transportation system which is efficient in terms of time required and preserves accuracy. This method involves the establishment of selective distance parameters, based on walking distance from the bus route. The parameters of one, two and three blocks are used to delineate areal units along the bus lines (Figure 4). By transforming a network

pattern into an areal pattern, it is possible to measure the distance between these phenomena (distribution of the elderly and transportation routes) by simply counting dots. A count of the points which fall within the various "zones" defined by block parameters generates data on the proportion of the elderly population located within various walking distances from the bus route network. Such a method, though simple, proved efficient by providing the quantitative information desired.

Mobility Patterns

To assume that spatial patterns which overlap necessarily yield causal relationships is naive. However, when spatial patterns are contrasted this way, they do provide information which otherwise may not be easily discernible. In order to better understand the elderly's accessibility to public transportation, it is necessary to have knowledge of their travel patterns. Results from past surveys tend to agree on the elderly's trip patterns.¹² In descending order the most frequently made trips are: (1) visit friends and relatives, (2) doctors, (3) grocery stores, (4) non-food shopping facilities, and (5) churches.

Social Visits

It is nearly impossible to map the visiting patterns of each aged person in Metropolitan Toledo since there are over 55,000 elderly in the area. In a survey conducted in San Antonio, Texas, forth percent of the elderly located there reported they never visited a friend.¹³ On the other hand, however, ten percent said they habitually made one or more social visits daily. Those who made frequent visits relied heavily on automobiles, either as a driver or as a passenger. This study may indeed indicate that most elderly are restricted to their locales, not because they do not desire to go out, but because there is no transportation readily available to them. Only those who have access to automobiles either as drivers or pas-

sengers are active in this type of social travel. There is good reason to believe that once transportation is available to the rest of the elderly population, their social visiting trips should increase considerably.

To understand this relationship, it might be enlightening to construct a "visit" matrix, assuming that these visits have to be made by buses (Figure 5).

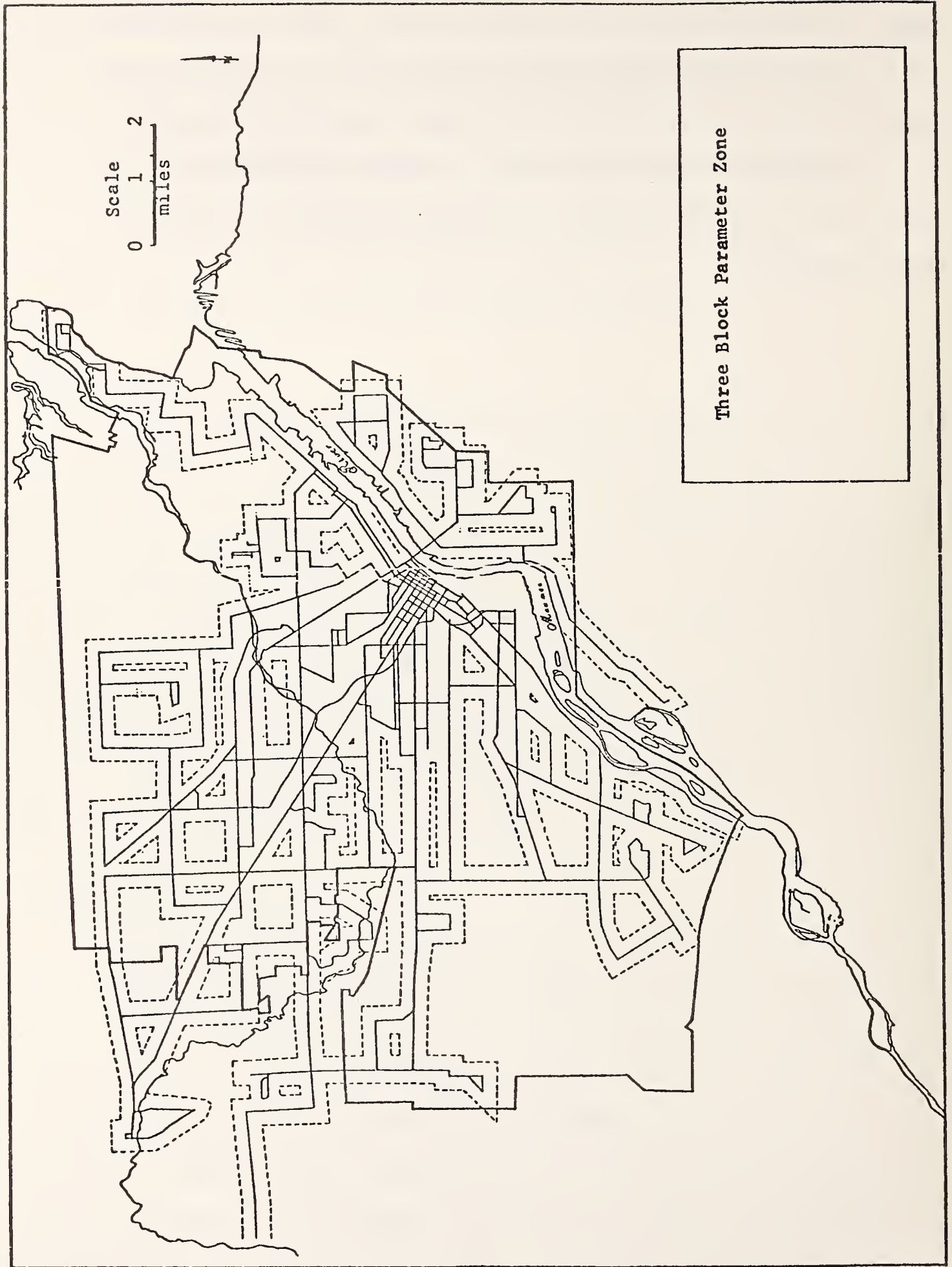


Figure 4

Figure 5

One Way Distances From Bus Route

Blocks	0	1	2	3	3+
0	1	1+	2+	3+	4
1	1+	1-2	2-3	3-4	4+
2	2+	2-3	3-4	4-5	5+
3	3+	3-4	4-5	5-6	6+
3+	4	4-5	5-6	6-7	7

numbers in the matrix represent walking distances away from bus routes in a one-way trip.

The matrix (V_{ij}) shows the walking distances a typical social trip would involve for an elderly person located at respective distances from a bus route. For example, an aged person whose residence is one block from a bus stop chooses to visit a friend who lives two blocks from the closest bus route would involve a total one way walking distance of three blocks. Realizing that the elderly are not likely to go for long walks even to get to a bus route, the dashed line and the solid line therefore represents the limits.

Church

Church visits are even more difficult to assess because simply there is no easily available geographical knowledge of an elderly person's church attendance. It is conceivable that a senior citizen would probably visit a church in his or her own denomination which is located nearest. Data on walking distances to churches are not available so that this type of travel can not be addressed in this study. Other studies, however, have indicated that more elderly would go to church more frequently if better transportation were provided for them.¹⁴

Retail Centers

Shopping trips rank quite highly in the elderly's activity list. In order to establish the relative distances between the elderly consumers and retail shopping centers, it is necessary to identify and classify these centers. This task was accomplished in a recent study which established the hierarchical structure of retail centers in Toledo.¹⁵ First it must be assumed that two regional centers, Westgate and downtown Toledo share an equal size service area (Figure 6). This assumption is advanced in order to avoid arguments to the affect that one of the two centers would exert a much stronger pull in terms of attractiveness, thus creating a problem for the analysis to be undertaken. Secondly, it is assumed that customers will choose to go to a retail center which is nearest to them. However, this assumption is not all that unrealistic because Toledo is an intermediate size city and therefore, a great regional difference in intracity consumer product distributions is not very likely.

Accepting these two assumptions, it is possible to calculate the average distance elderly consumers have to travel for their retail purchases. By extending lines from each point (100 persons) to its closest retail center, and aggregating the distances, a distance index is generated. Graphically, the results of this procedure are shown in Figure 7. In cases where a consumer's residential location is equidistant to a regional center and a neighborhood center, it is assumed that the consumer would choose to go to the higher order center because it would have more to offer. Circles around the various centers were constructed in order to facilitate the measuring procedure.

After tabulating the results, the average distance traveled for shopping purposes were found to be quite high--slightly over 1.2 miles, a distance difficult for the elderly to negotiate by walking. With this distance to be travelled, unless automobiles were made available to the elderly

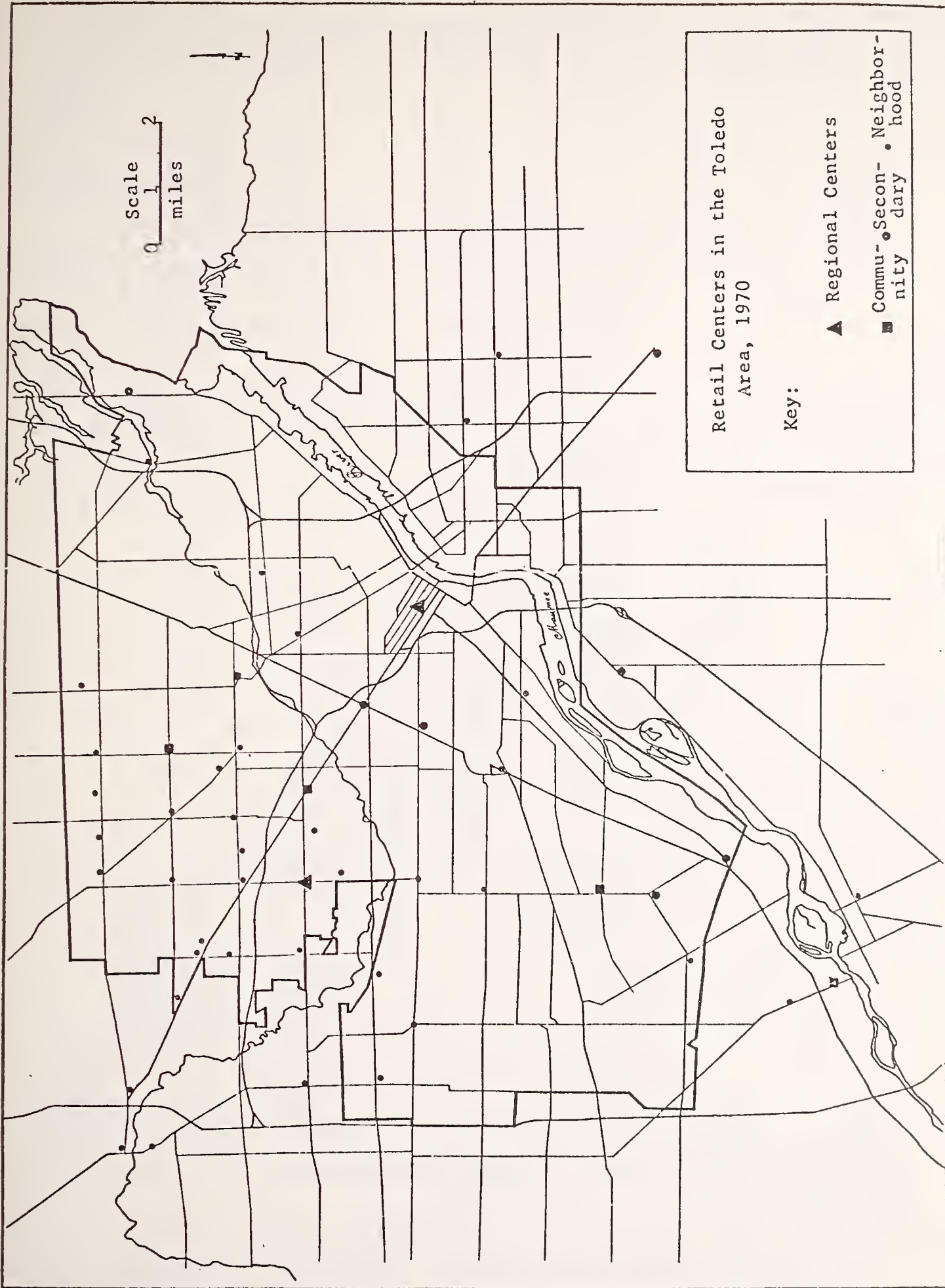


Figure 6

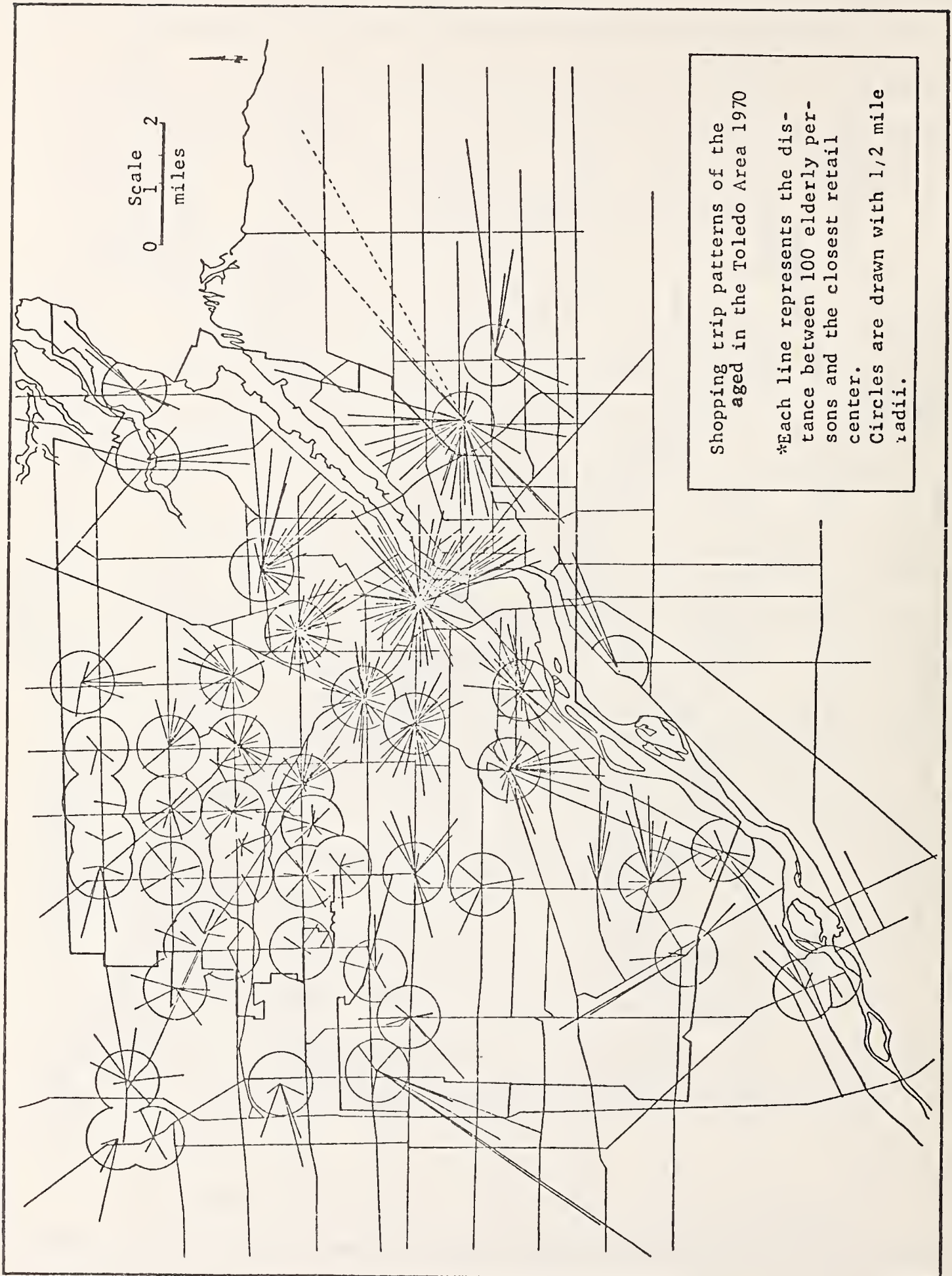


Figure 7

it would be correct to assume that bus services are the only logical transportation mode that remains to satisfy elderly travel needs for this trip purpose.

Grocery Shopping

Grocery shopping usually results in a different travel pattern from that of the non-food shopping trip. The reason is that groceries are extremely heavy and difficult to carry for extended distances, particularly considering the reduced physical capacity of the aged. In other words, grocery shopping trips need to be much shorter in terms of distance travelled. Unfortunately, grocery stores (more accurately supermarkets) tend to take on a spatial pattern very similar to that of retail shopping centers, and are also automobile-oriented. In Figure 8, the major supermarkets of the Toledo area are identified. This distribution obviously does not include all the grocery stores in Toledo. Supermarkets were chosen with the particular intention to illustrate the fact that they tend to appeal to a wider market area than an independent neighborhood market. In other words, they are more regional than local. It is apparent from Figure 8 that nearly all the supermarkets are located at or close to the major transportation lines.

A two-block parameter was established for each supermarket. A point counting procedure quickly reveals that very few of the elderly population fall within the immediate vicinity of supermarkets. This two-block parameter was chosen arbitrarily, but it seems quite reasonable to assume that two blocks is the upper limit of walking distance for an elderly person on his grocery shopping trips. It would also seem unlikely that most elderly persons would use public transportation, especially buses, for their grocery shopping trips for this would create additional problems to be coped with other than the groceries itself. For those elderly who are not near supermarkets it is very likely that they would turn to the neigh-

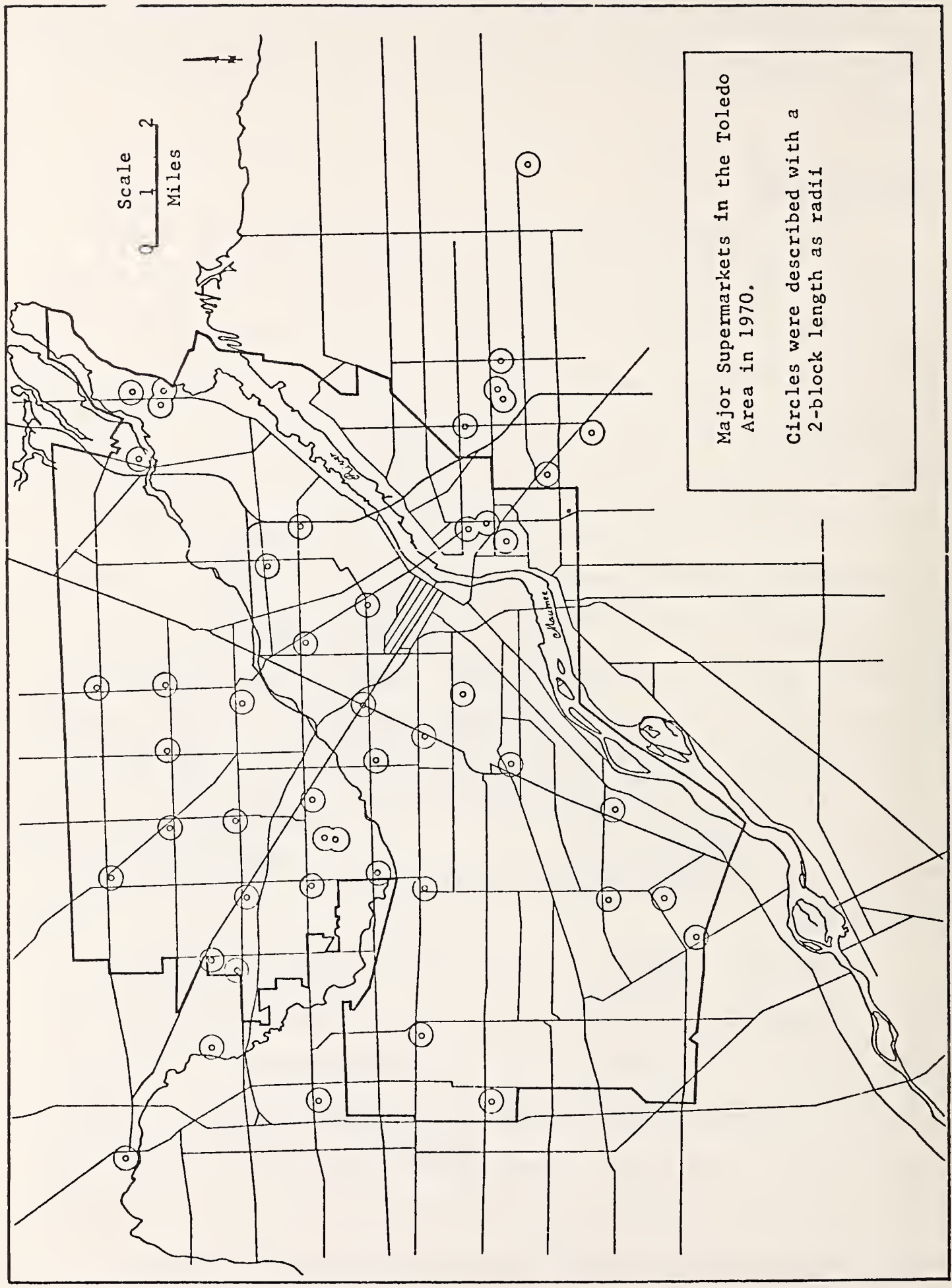


Figure 8

neighborhood grocery stores for their food purchases which generally have higher prices than supermarkets. To map these neighborhood stores would perhaps reveal a much fuller picture, but it was considered too time consuming to be carried out at this time.

Clinics and Hospitals

Large numbers of the elderly make frequent visits to clinics and hospitals. It was also noted earlier that the elderly tend to rely more frequently on medications than their younger counterparts. Figure 9 illustrates the locations of the major clinics and hospitals found in Toledo. Unlike the distribution of grocery stores, the hospitals and clinics tend to cluster. For example, the Lucas County Infirmary, the State Hospital, and the Medical College of Ohio at Toledo are all located in the same vicinity near Airport Highway and Arlington Avenue. Mercy Hospital, Parview Hospital and other clinics are located near the downtown area. This clustering may be due specifically to a planning agglomeration so that the sharing of facilities and personnel among the hospitals is possible.

A crude measurement was taken to generate a general distance index of these facilities relative to the distribution of the elderly population. Radii were established from the centers of each cluster at different distance intervals determined by size of the respective facility. By counting the number of elderly residing in these respective radii about the hospitals and clinics the following data are generated:

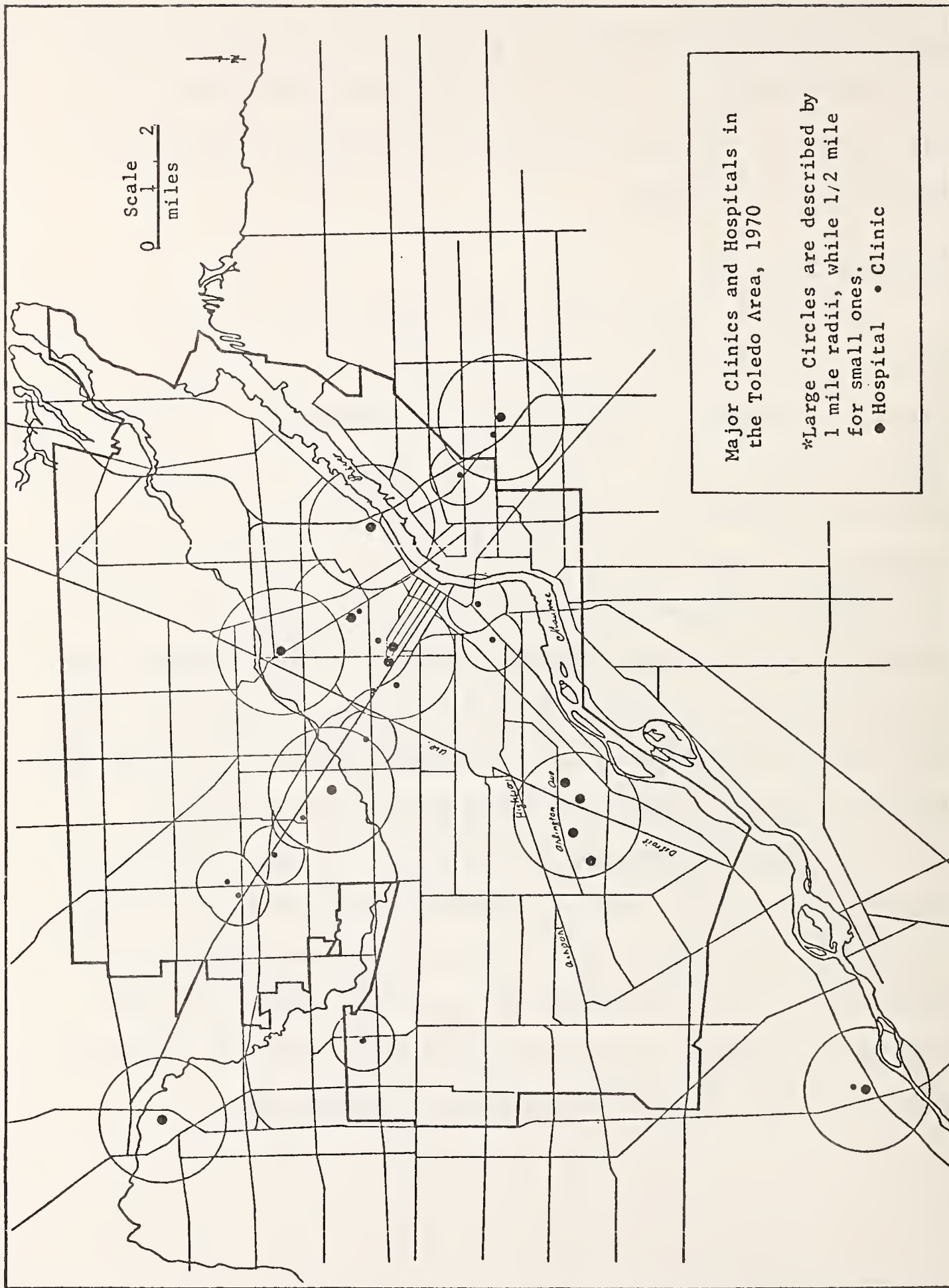


Figure 9

Table 1
Distance to Medical Facilities

Percent of aged Population	Distance
28%	Within one mile of hospital
10%	Within a half mile of a clinic
34%	Within one mile of a hospital or a half mile of a clinic
28%	Farther than a mile from a clinic or a hospital

Bus System and its Reachability

The previous discussion serves to illustrate how facilities are located relative to the distribution of the elderly. In this section, the discussion centers on the bus system and its reachability. By reachability, it is taken to mean how easy a bus line can be reached by the elderly. Thirty four bus routes were identified operating in the Toledo area. These bus routes are plotted on the city's base map, with three different block distance parameters, i.e., one, two, and three-blocks. Figure 4 shows the bus route network and the three block distance parameters. By overlaying route maps with the elderly population it is possible to count the actual number of elderly residing within the block "zones" described. When an elderly point falls on a zone boundary one half of the population represented by that point is allocated in the zone and other outside.

The results of this point counting procedure are tabulated and are on Figure 10. According to this illustration, twenty percent of the aged reside within one block of a bus route with an additional thirty percent located within the one to two block zone. Between two to three block

zones are found another 29 percent with 17 percent of the city's elderly living in areas that are more than three blocks from a public transportation route.

The results can be compared to block travel distances recommended in a survey conducted at one hundred seventeen publicly supported or subsidized housing projects built for elderly persons in urban areas.¹⁶ According to this study the critical and recommended distances that facilities should be located from the elderly are (Table 2):

Table 2
Critical And Recommended Distances
Between Facilities and the Aged

Facility	Rank of Importance	Critical Distance	Recommended Distance
Grocery Store	1	2-3 blocks	1 block
Bus Stop	2	1-2 blocks	adjacent to site
House of Worship	3	$\frac{1}{4}$ - $\frac{1}{2}$ mile	$\frac{1}{2}$ mile
Drug Store	4	3 blocks	1 block
Clinic or Hospital	5	$\frac{1}{4}$ - $\frac{1}{2}$ mile	1 mile

The concept of "critical distance" cited in this survey are defined in terms of the elderly's expressed amount of apparent dissatisfaction with the distance travelled between their residence and the several types of facilities. It is clear that the degree of dissatisfaction varied with different facilities. If one to two blocks are accepted as the critical distance between residence and bus stop, then the findings obtained in this study should be reasonable since the distance zones selected are within the critical distances cited above.

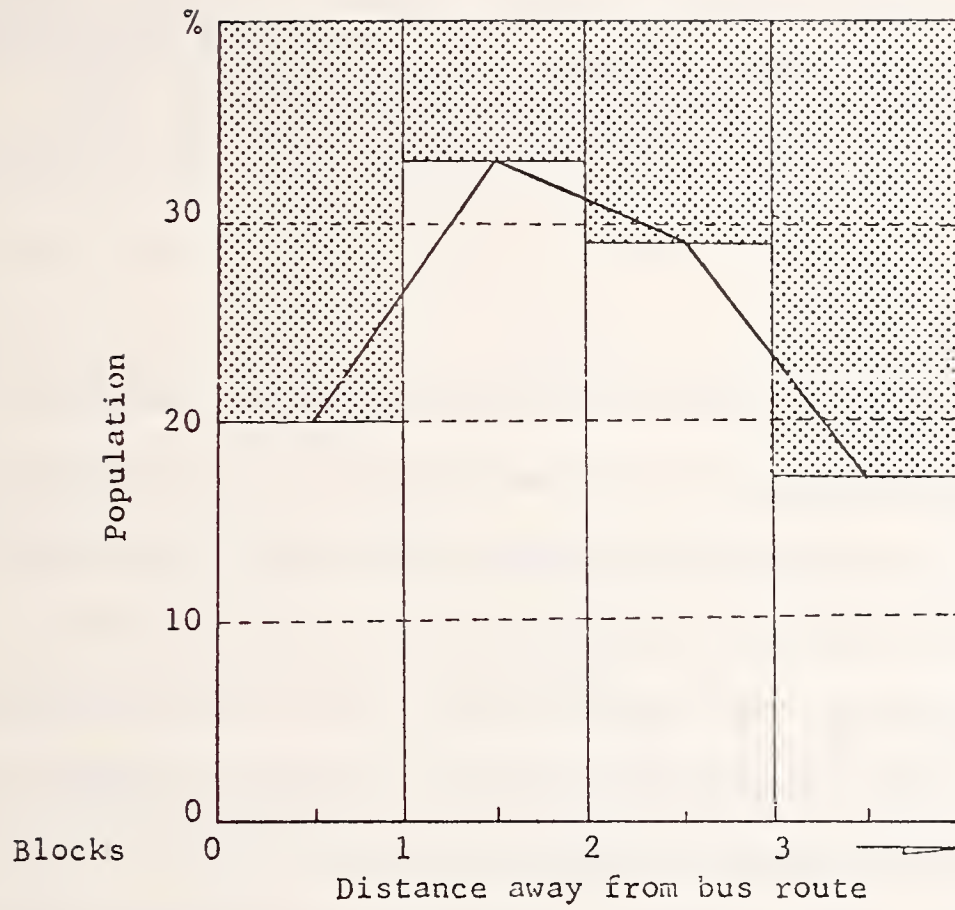


Figure 10

LOCATION OF THE AGED
RELATIVE TO BUS ROUTES

Findings

About half of the aged residing in Toledo were found to reside farther than two blocks from the nearest bus route. Perhaps a more accurate result would have emerged if information concerning ownership of automobiles, by age were available. However these data are not easily available. The results of the elderly's residential location relative to existing bus routes identified in this study strongly suggest that public transportation is not easily reachable by Toledo's senior citizens. The results further suggest that action needs to be taken to resolve this situation and made public transportation more widely accessible to the city's elderly.

Some Directions for Planning

The mobility or activity space of the aged can only be extended through improvement of the physical facilities according to this group's specific needs. Various innovations have to be widely introduced in order to extend the mobility thresholds of the aged. To this end buses need to be structurally redesigned and the location of bus stops be made with particular consideration of the elderly's residential locations and needs. In many parts of the nation, reduced bus fares are available to senior citizens through various subsidy programs. In the City of Toledo, a free dial-a-ride service for the elderly is presently operated under the management of E.O.P.A. (Economic Opportunity Planning Association). These kinds of improvements and programs hopefully, would help to expand the mobility range of the elderly component of our society.

Some might argue that the elderly may not choose to become more mobile. This comment may indeed only reflect the views of some elderly who are "conditioned" to being housebound and are unwilling to become active outside of their home because they realize that adequate transportation is not readily available to them. Optimistically, this situation

can be modified and overcome when constructive improvements are implemented within the present public transportation system. The major obstacles to overcome seem to be largely centered on the issue of reachability/accessibility. If the problem of accessibility can be solved then many of the problems, particularly the sense of isolation experienced by the aged can be resolved.

Concluding Remarks

This inquiry has only scratched the surface of one aspect of the complex public transportation elderly question. For the most part, this paper has only considered the elderly's accessibility to the public transportation network. The frequency of service as it affects accessibility is not accounted for, an aspect which deserves equal attention. Numerous associated problems were also briefly touched upon but not fully explored which indicates that much remains to be done.

If this study has accomplished anything at all, it has identified a problem to which social scientists can make a valuable contribution. Certainly this problem can be approached from other perspectives using different techniques. Graphic analysis is but one of many tools available with which to examine this problem. It is not difficult to conceive that with better information and improved techniques the results could have been greatly enhanced and further insights gained.

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QUESTIONS AND ANSWERS

Questions: Basically, what are some of the limitations and problems relative to the movement of people, etc? What are some benefits? How do you plan comprehensive systems?

Answer: ALICE KIDDER. I think that there is reason to think that transportation should not only be limited to the movement of people out. I don't think that those vectors were necessarily in one direction or another. I think that one of the things that we should be concerned about is the movement of goods within. It seems to me quite clear that our planning in terms of HUD has its programs and its plans and it seems, up to now, a housing conglomeration. The pollution issues are handled by EPA. We have manpower programs in DOL. We are not looking at the issue of activities, where they want to be held, and what the flow should be aimed at in the activities.

I would like to follow up on what we are saying here. I think that the universities that are represented here can assist the planners in getting some survey data. This is not a very big difficult task. You go out and talk with a sample of 400 people and find out where they are and what issues they are concerned about and how they travel. In Greensboro, they don't go by bus, even the low income, even the carless, they don't go by bus. They ride with someone else. There really is not some big payoff in terms of better job opportunity, if a bus goes by. That means even the low income are not pushing for these things. Therefore, I would say that the universities here ought to mount an effort to collect data on where the people want to go, what services they want to have come to them and what services. Do they want to go out, do they want the goods and services to move into them

or do they want to have the housing dispersed? You can't generalize from one community to another. It's impossible to generalize, but it is easy to get answers if you just mount an effort. There are a lot of students out there that are learning to get some answers on these questions. I found that few places, in Worcester, Massachusetts, for instance, they have a whole lot of students answering these problems. Some findings affected an administration on Aging Grant which created one of the most interesting coordinated systems where the transit planner became the operator in the bus company. It all grew out of a college study. I would be glad to talk with anyone who would like to get some sample questionnaires. Let's get out and find some answers.

Comments: ARTHUR SALTZMAN: Let me make three very good points.

First, don't ever let the City Council get you into the closed benefits bag when they are trying to . . . (inaudible). What benefits are you getting for the \$5.00 per trip that you are providing the human services agency clients. That's a losing battle. The question has to be shot right back to them, what benefits are you getting out of it? You just can't ever get out of it. I don't know how to measure those benefits and no one else does.

The second thing is that in terms of efficiency like consolidation, for example in Chattanooga they are running at over \$2.00 vehicle mile. They are under \$.70 a mile via consolidation. Those are important consolidation benefits.

Lastly, for those of you who want to plan these systems that are in social service agencies, an excellent planning document has come out from the Institute of Public Administration. It's called "Planning

Specialized Transportation Services for Elderly Persons," and it's of course applicable to any group. I think it's available through the administration of the agency. It's an excellent document. It gives you the nuts and bolts of how to go about doing the actual planning for specialized users of public transportation.

DAVID CHEN: I'm sorry but we have run out of time. If you have any more questions you can address them to the individual speakers. Thank you very much.



Richard Stanger, MARTA of City of Atlanta, Georgia listens as Workshop speakers are introduced for Panel II of Workshop B.

WORKSHOP B Continued
Panel II

ROBERT E. PAASWELL: We want to do something a little bit different, and, in addition to what's on the program. You have heard a lot of provocative talk for today. Some of the panelists will be referring not only to the actual topic that they have written down but will be responding to what some of us think are, in a traditional sense, a little bit of garden path arguments that have been used for the transportation planning process by one speaker, or a comment on lifestyle by another speaker, the various comments that not all planners agree with, or not all people involved in transportation agree with. To get things started right off, each of our speakers are going to speak for around 10-15 minutes. Then we will throw the floor open for questions and discussion. I think that we can have another interesting go around, and we will start right out with Sid Davis whose sign says that he is from Atlanta University .



Issues relating to economic factors in transit planning, fares, leisure-time activity considerations, and certain policy aspects were discussed by Panel II. Dr. Robert E. Paaswell, Office of University Research in DOT served as moderator. Speakers included Richard E. Stanger of MARTA and Sid Davis of Atlanta University. Not shown are Daniel M. Schores of Austin College (Sherman, Texas), and John Shanahan of Texas Southern University.

INFLUENCE OF ECONOMIC FACTORS
ON TRANSIT PLANNING FOR LOW INCOME GROUPS
by

Sid Davis
Urban Transportation & Urban Affairs Project
School of Business Administration
Atlanta University
Atlanta, Georgia

There are political as well as technical aspects to the transportation planning process, which after all, is in part simply an attempt to reflect a community's understanding of the travel behavior of its residents and others who look to the community for accommodation of their mobility needs.

Imbedded in this process are allocation issues which are fundamentally economic in nature. How much of the resources available to a community, for example, should be used for transportation and how much for schools, health care or for other identified needs. Once that question is dealt with (and that is by no means easy), it is necessary to allocate those resources committed to transportation to satisfy a wide variety of competing demands for mobility service. Persons who travel by auto may want improved access by road, transit riders may demand more and improved service levels. There is also a spatial aspect to these demands. Businessmen downtown may want both improved road and transit access to the CBD, while residents of a suburban neighborhood might desire service improvements to other suburban travel destinations.

It is safe to say that identified demand will exceed the resources available and that attempting to simultaneously respond to the needs of several groups may result in all persons not being made as well of as they anticipated. Transit improvements may help the transit dependent, but parallel efforts to accommodate auto demand by highway construction,

can stimulate further dispersal of activity. Improving bus service in one part of the community may imply relatively less service in other parts of the community.

Choices like these are constantly being put to us. The political process, for better or worse, ultimately reflects the choices we ultimately make.

If we understand the process we are examining essentially to be one that deals with resource allocation for a particular kind of public good-- in this instance transit service, then we can comfortably proceed to the next step in this discussion which sketches out significant economic factors are particularized with respect to the mobility needs of people who have low incomes. Remember that we are now concerned with technical aspects of demand estimation not the political aspects of the planning process, which has its own set of economic factors which influence allocations.

First, let us recast our concern for economic factors just a bit and ask how household income influences certain crucial variables which are important in transportation planning: trip origin, destination, and frequency and mode choice.

First of all household income influences where people live. Since a relatively greater amount of depreciated housing is located in the center city than the suburbs, poor folks have a greater likelihood of living close-in. Low incomes also imply that smaller amounts of household funds can be devoted to transportation limiting both the number of trips that can be taken, given the existing transportation system, as well as constraining trip lengths, especially for the journey to work. Low incomes clearly limit the range of job opportunities available within reasonable travel time and distance. Finally, low-incomes imply a higher degree of reliance on transit because autos are less readily available for trip-making. It

should also be noted that the tendency for low-income households to locate centrally is reinforced by their relatively greater dependence on publicly provided services which are usually more available within the center city, and the possibility of shorter job tenures which may mean that a person works in the southwest section of town for a brief period and then northeast. Since transit service is generally best, the closer one moves to the center of town the better the travel flexibility a person has in case of a job change.

All of the factors we have noted so far are ones which influence demand. One of the responsibilities of planning is to help shape supply to meet this demand which is estimated by the technical process.

Let us assume for the moment that technical aspects of the planning process deal explicitly with trip origin, destinations, frequency and mode choice. It is important to recognize that unless that planning becomes even more detail and either stratifies by income or accounts for the significant differences in activity locational choice and travel behavior that is associated with income, then there is a danger that such differences will get submerged in a highly aggregated planning approach. Conversely when planning is disaggregated, it is possible to focus attention on some of the unique travel demand aspects of households and individuals with low incomes.

What does this imply about public participation in the transportation planning process, especially by transit dependent persons? In the first instance it means that the process must be carefully monitored and effort must be made to have the results of the process explicitly account for impact on citizens with low incomes. Remember that it is not sufficient to note that transit improves absolutely: it is possible that the greatest portion of the benefits can accrue to the suburban non-poor or may occur

at the same time as highway improvements are made, offsetting the potential access gain that the transit might provide.

There are a number of ways that public participation in the process takes place. It can occur by having citizens provide direct input into the technical process helping shape its outcome. This may mean participation on citizens committees formed to provide guidance and advice to the process. It also may mean organizing so that it is possible to directly influence decision-makers if the technical process is inadequate or if that route fails, to seek higher level administrative relief. I should note, however, that based on my own experiences, the kind of transportation planning that takes place within area-wide agencies where much basic transit planning is done, is influenced by citizen groups representing middle and upper income class interests operating through the formal advisory committee structures. This doesn't mean that planning agencies do not get information from other sources. It just means that formal advisory groups, in my experience, do not directly represent the interests of the poor (or minorities).

Equity considerations do not come easily into the planning process. This is especially evident when expansion of transit services focus on generating a mode shift by affluent suburban residents. This is no doubt a desirable goal, but may be very expensive both in terms of initial capital outlays and future operating costs. We should remember for example, that while a subsidized fare may help make the poor more mobile, it subsidizes the affluent as well -- and the net results of that subsidy may make the poor relatively less well off.

Fortunately federal policy calls for benefit-cost studies which help clarify and establish the relative merits of alternative transportation proposals, and an assessment of benefit-cost incidence which asks the question:

who specifically enjoys the benefits and who bears the costs. I suggest that the evaluation process go one step further. It should recognize that prior transportation planning and project implementation has absolutely and relatively reduced the mobility of citizens with low incomes and that new plans should not only improve absolutely their mobility but should also redress prior inequitable resource allocations which have impaired their mobility.

ROBERT PAASWELL: Thanks Sid. We can take a few minutes for questions on this paper before we go on.

Comment: Just one or two comments. A study has been performed in Philadelphia similar to what you have described. I just wanted to mention that it's true that the low income groups do gravitate their housing toward the depreciated housing units and so forth. But the problem with mobility in a city like Philadelphia which has an excellent transit system, is the vital link between the home to work trip for these inner city residents. The inner city resident has good transit to the central business district, good rapid transit to suburban area, but lack the vital link from the suburban station to the industrial park where jobs were available. After studying this problem, that was certainly the weak link, they found out that in several demonstration programs whereby feeder buses were funded for that vital link that there was more mobility from the suburban stations to the industrial park but unfortunately it was a dynamic situation. Once the people got jobs, with an increase in income, the first thing they bought were cars.

PAASWELL: That's a healthy process.

Comment: Yes, so mobility is dynamic. The second point I would like to make is in regards to citizen's participation. You mentioned that middle and upper income groups definitely participate quite a bit. Surprisingly in the Philadelphia area one of the groups that participate more than anyone else is the senior citizens. So when you go to a citizen's participation meeting you will find out that you are often out numbered.

PAASWELL: Any other comments?

Comment: Yes, I have one comment. Because he said something about enjoying benefits of transportation and who pays the cost. He mentioned that as soon as the people got a good job, they bought a car. But in the inner city, where the poor lives, it did not benefit them to buy the car, because the streets are so bad that by the time you get out of the inner city to the suburbs to your jobs, you keep your car in the shop. Therefore, you are really paying more for transportation. You are paying more for everything else because you might have an accident in this old beat up car because you did not know that there were so many chuck holes here in the roads in Houston. I would also like to mention that the suburban people that live out, the middle class, that have the good jobs working for the city downtown, they have all this traffic coming into and taking the biggest tax dollars back to the suburbs. Mayor Daley said that if you work with the city, then you move into the inner city or let the people in the inner city have those jobs and you keep your jobs out in the suburbs where you live.

PAASWELL: That's a very good point and that is something that some cities are looking at. We want to get to the next speaker. Let's just underline one word that sums up Sid's talk that word is equity and we will come back to that later. That is one major problem, who benefits and who pays. I think your comments really underline the ability to travel and the ability to make the trip between routes. It's the quality of the trip and the relative cost that we are concerned about.

The next speaker is Richard Stanger, Manager of Urban Design and former Senior Planner of Metropolitan Atlanta Rapid Transit Authority, (MARTA), Atlanta, Georgia. He is going to speak on "No Barrier Fare Collection: A Study in Honesty."

THE CASE FOR NO-BARRIER FARE COLLECTION
by
Richard M. Stanger
Manager of Urban Design
Metropolitan Atlanta Rapid Transit Authority

Purpose and Theme

This paper has both a purpose and a theme. The purpose is to discuss no-barrier fare collection. Although secondary in emphasis, it will take up its bulk. More important to the objective of this conference is its theme: what must change most if public groups are to be properly heard in the transportation planning process and the institutional attitudes toward them.

The Metropolitan Atlanta Rapid Transit Authority (MARTA) as part of a larger conceptual study to develop a fare collection system for its future integrated bus/rail system looked into no-barrier fare collection. The result was reported to the Transportation Research Board in January, 1976. This presentation will cover much of the same material. There are two reasons for presenting it here: to stress certain points relevant to the objectives of this conference, and to emphasize the manner by which the problem was attacked.

No-Barrier Fare Collection

Definition:

The principal characteristic of a no-barrier fare collection system is the absence of fare gates for control of entry/exit. Control of fare payment is shifted instead to roving inspectors who asked passengers to show proof of payment. Only a percentage of passengers are checked, and a penalty fare (or superfare) is levied on those found to have evaded payment.

Fare inspectors operate individually or in teams of up to six persons. Occasionally, a selected rapid transit station may be checked intensively by up to 40 inspectors. Inspectors may be uniformed or not, depending on the property. Women are quite often employed for this work, and it is generally felt that their presence tends to minimize confrontation and to maximize positive responses to enforcement.

An individual found without a valid receipt of fare payment has two options. He may accept his guilt and pay the superfare to the inspector, or he may wish to challenge. The alleged defrauder gives his name and address and is typically asked to go to a central point to discuss his case. Should he not appear, or should disagreement still exist, it is turned over to the courts. Their record of enforcement is ultimately the key to the effectiveness of the overall self-service concept. There are variations in this pattern of processing, but in all cases an individual retains his right to due process. In European experience, however, guilt is generally accepted in the majority of cases and the evader simply pays the superfare on the spot.

The rate of checking is low, rarely above 5% of daily passengers. Superfares are generally 20 times the base fare. But on the other hand, detected fraud is similarly low, averaging less than 1% of riders on most systems. A study by R.A.T.P. (Paris), however, showed that there at least, actual fraud could be twice that of detected fraud. Officials of other transit agencies do not consider this discrepancy unreasonable in spite of random checking procedures. Realizing that actual fraud may be higher than detected fraud, the analysis in this paper is nevertheless based on the latter.

The resulting fare collection equipment requirements are far less than those needed for barrier systems. Obviously fare gates are eliminated, although some aisle dividers may be used to clarify the free/paid boundary

within stations. Transfer vendors are not needed because the ticket serves as the payment receipt for the entire trip. Bus and train fare collection equipment is similar to existing operations in the United States, but generally also includes in-vehicle validation of multi-ride tickets. Ticket vendors are obviously needed and come in all shapes and sizes. They are found in stations, and in some properties, on the vehicles or at bus/train stops.

Study Methodology:

Will no-barrier fare collection work in North America? No city has tried it in this hemisphere although it is used extensively throughout Eastern and Western Europe. No city until Atlanta had even looked at the possibility of using the concept. The problem facing MARTA was how to determine the rate of fraud to be expected.

The MARTA decision to study the no-barrier concept of fare collection was made by its Board in October 1972 following a request for its consideration by former Atlanta Mayor Sam Massell. Rather than be studied in isolation, it was incorporated into a comprehensive fare collection study as one alternative. This larger study was logically separated into two parts. The first analyzed the economic implications of selected fare system alternatives. The second focused on the problem of estimating the level of fraud to be expected under a no-barrier fare system.

It was known from the start that an estimation of fraud would be difficult. No such study had previously been done; it was unclear what factors needed to be considered, or what the general methodology for the study should be. Obtaining adequate useful data, especially from Europe, promised to be difficult. Since the feasibility of the no-barrier concept was strongly tied to the level of fraud, the estimate of that level needed to come from a credible source. A team was formed of MARTA planning staff, psychologists, sociologists, and specialists in quantitative methods. Each

member analyzed those aspects of the problem related to his field. Results were circulated among the group, and a consensus was developed on the rate of fraud expected.

I strongly recommend this type of methodology for research in the socio-economic areas of transit. The operating authority at little expense obtains a great deal of expertise. It also receives a biased advocate for the conclusion should its defense be necessary. Several opinions merged together also buttress the findings much more successfully than would the staff alone or a consulting firm. (and at less expense. A consulting firm was initially contracted to perform the study at \$30,000.00; as good if not better a product was obtained for \$7,800 using the seven individual consultants). The staff manager of the study team must specify his problem carefully in terms familiar to the student of another discipline; he must allow creativity, yet constrain the tendency to wander; and he must be able to assimilate the diverse subjects and jargon into the required frame of reference. But this is what planning is all about.

It was decided to concentrate on five main areas in attacking this subject:

1. European experience with no-barrier fare collection.
2. Quantitative comparisons of European and American factors.
3. Analogous self-service experience.
4. Sociological factors related to fraud.
5. Psychological factors related to fraud.

Following are summaries of the work done in each area.

European Experience with No-Barrier Fare Collection

Self-service fare collection has been in use less than 20 years. The experience leading up to its implementation were, and still are, common. Typically, fares prior to World War II were flat within a city and vehicles

used two-man crews. After the war labor availability in the transit industry began to decline, the result of both an economic boom in the private sector with its higher paying jobs and the lack of operating subsidies for higher wages. Distance-based fare structures were instituted to raise revenues, still with two-man crews. By the early 1960's, however, labor shortages were acute and it was obvious that the number of operating personnel had to be reduced.

At that time, still not even today, the state-of-the-art of fare collection equipment could not handle the collection of fares over all mode within an integrated regional transit network especially with fares based on distance. There was only one choice available: the use of self-service equipment by the passengers policed randomly by inspectors.

Since the first conversion to self-service operation in Hamburg, acceptance of the no-barrier concept has been rapidly expanding throughout western Europe. Self-service fare collection is also used extensively in Eastern Europe and Russia. Reasons given for initiating no-barrier fare collection vary but can be roughly grouped into several factors the predominant ones being: financial savings, easing of employee work loads, and overcoming staff shortages.

While the experience with no-barrier operation varies from city to city, and detailed information on it is limited, the following generalization can be made:

*Self-service concepts appear successful once inaugurated. It is important to note that not one city which initiated self-service operation has reversed its decision; fraud rates have been found to be acceptable. The concept, moreover, is now used to some extent in almost every European country and under a wide range of cultural backgrounds. Table 1 summarizes the reported level of fraud for a selection of cities.

Table 1
Published Fraud Experience in European Transit Systems
(Typical Examples)

<u>City</u>	<u>% Defrauders</u>	<u>% of Passengers Checked</u>	<u>Amount of Fine (DM)</u>
Cologne	1.6	5.0	10
Dusseldorf	0.43	2.2	20
Frankfurt	3.06	0.8	20
Hannover	0.3	3.5	20
Stuttgart	1.05	3.6	10
Vienna	0.25	2.2	14
Antwerp	0.01	1.47	7
Brussels	0.05	1.4	7
Grenoble	0.13	2.5	7.5
Paris	1.12	1.66	13.0
Milan	0.52	2.82	11
Rome	1.00	0.09	2
Utrecht	0.15	2.5	2
Basel	0.3	10.0	4
Geneva	0.75	2.3	25
Lausanne	0.35	5.0	4
Zurich	0.48	9.0	4

Source: International Union of Public Transport (3,4)

*The range of cultures which successfully utilize no-barrier fare collection -- without a significant deviation in the level of fraud -- would indicate that the influence of cultural differences on the rate of fraud is not particularly significant.

*The amount of fraud experience varies by mode, with the least expected on the bus, the most on rapid transit.

*Fraud does not appear to vary significantly by basic socio-economic group. Experience shows very little variance by income, section of the city, or cultural background. Students and tourists are slightly more troublesome.

*Fare evasion occurs for a number of reasons and can by no means be completely attributable to willful violation.

Quantitative Analysis of European No-Barrier Experience:

This task was designed to develop a quantitative explanation of the European fraud levels (especially German) in order to be able to develop a numerical estimate of the expected rate of fraud in Atlanta. The basic assumption in this effort was that European and American/Atlantan cultural differences were non-existent. Obviously debatable, this assumption was used because, a) it would probably provide what most people would agree to be minimum best guess, and b) it is necessary for any such quantitative analysis since the cultural and traditional influences are too intangible to quantify numerically.

Available socio-economic data on European cities is quite limited. A series of indirect transit related factors, however, were determined for a host of cities. It was felt that statistical relationships (not necessarily causal) which could be used to develop a manner of estimating fraud may exist among the factors that define characteristics of these transit systems. In order to give some structure to the statistical analysis, a speculative model was constructed of those factors which might provide some motivation to defraud. These factors included, among others, the following:

1. Economic Incentive: A high fare, a low superfare, and a low rate of enforcement will all give an economic incentive to defraud.
2. Embarrassment: People will be less inclined to defraud when the transportation mode brings them in a relationship of "intimacy" with strangers on low volume modes such as a bus, as opposed to their relationship with "total strangers" as on a high volume mode such as rapid transit.
3. Proximity to Operating Personnel: People will be less inclined to defraud when the mode puts them in a close physical relationship with the operator (as on a bus).
4. Familiarity with system: Fraud may be more likely to be committed out of confusion when the system is patronized by occasional riders or others who for some reason do not understand its operation.
5. Complexity of System: This is somewhat related to the familiarity factor. There is a greater propensity to cheat if the system is complex in terms of fare structure, collection devices, etc.
6. Exposure to checking: people will be less likely to cheat if they have a higher exposure to being checked.
7. Quality of the System: There may be an inverse relationship between the inclination to commit fraud and the perception of the quality of the system.

Briefly, the major results were:

- the intensity of checking may in fact respond to, and not result in, a certain level of fraud;
- there is a positive relationship between size of city and rate of fraud;
- rate of fraud is higher for cities with rapid transit systems;
- complexity of fare structure does not appear to significantly affect the rate of fraud.

The predicted fraud rate for Atlanta, based on this model is: 3.48 ± 2.98 or .50% to 6.47% (95% C.I.).

While this exercise was less than conclusive, it did point out the apparent importance of intangible, non-quantitative factors. It was used as one element in the overall fraud determination process.

Analogous Self-Service Experience

A number of instances in the United States can be found in which success of an operation relies on the assumption that the user is basically honest. These may be used as proxies to develop a broad picture on the apparent propensity to defraud by Americans. None are directly equivalent to no-barrier fare collection; nevertheless, what is important is that there are common elements in these very diverse experiences, which allow us to derive some useful conclusions. In seven examples of this type of operation, mostly in the Atlanta area, the experience has been briefly as follows:

Self-service gas stations: Revenue loss from "drive aways" is far less than one percent on a typical purchase of \$5.00 - \$8.00. They appear to be an equal problem in both regular and self-service operation.

Telephone fraud: Excluding electronic means of committing fraud there are several means of acting dishonorably: a) direct distance dialing giving an erroneous origin number, b) disassociation with a call upon billing, c) credit card misuse, d) third party billing to a false number, e) false pay phone problems, and f) coded messages through operator. The combined loss of revenue from these frauds is far less than 1% of gross revenues, according to Southern Bell.

There seems to be no correlation between income and fraud; affluent persons appear to cheat as much as low income persons. However, select groups, noticeably students/young people, military personnel, and truck drivers

(coded messages), display a higher incidence of attempted fraud. The apparent effect on enforcement is difficult to ascertain. Ultimately it resides in the threat of the loss of one's phone.

Newspaper vendor: The present system of locked boxes used by the Atlanta Journal-Constitution yields about 99% revenues. Less than one-half of 1% of newspapers sold through locked boxes are reported stolen. For example, out of 12,000 papers distributed during a typical weekday, only 26 were stolen, and on Sunday 40 out of 2000 were taken. Enforcement procedures used to combat fraud are weak. Persons taken to court are usually dismissed. No fines are usually collected in court.

Tollway facilities: The following fraud rates include nonpayment due to jammed machines, leaving before the red-to-green light changes, etc. Fraud rates at automatic lanes typically are under 1% with a maximum of about 2.0%. There is some indication that variances exist among cities. Because these lanes are next to manned lanes, they are usually if not constantly, monitored. Fraud rates at remote lanes are higher because of the very low supervision given them. These lanes are very close to true honor situations. Rates are typically 5% - 10%. Roughly one-quarter to one-third of the fraud appears to result from lack of correct change.

Central stall box honor parking: There are several central stall box lots in Atlanta which utilize an "honor" approach. In these lots a locked rack of boxes is provided, each with a coin size slit and a number which corresponds to a parking space. A patron is expected to deposit the parking fee in the box corresponding to the space the car is parked in. The system is used mostly off-peak, nights, weekends, and holidays and in lots which do not bring in enough revenue to support a full time attendant. Patrolling varies from twice a night to almost hourly. The rate of fraud is 10% or less. Much of this fraud appears to be related to the predominantly off-peak nature of the operation and the possible confusion over whether

payment is necessary.

Shoplifting: The basic philosophy of department store operation self-service underlies an assumption of trust. Recently, it appears, shoplifting has increased to the extent that retail establishments have had to put in measures to counter the abuse of this trust. A recent study by the National Retail Merchants Association placed the revenue loss from all sources at 8.7% of sales. Yet, only 30-40% of this loss is attributed to the public, including professional thieves. Other studies show shoplifters accounting for about 1% of sales revenue losses, as high as 2.0%. The remaining 5.2-6.1% in the NRMA study is attributed to employee theft and bookkeeping error. This 2 to 1 split is confirmed by other studies. Naturally strict criminal penalties are the risk involved.

Barrier transit systems: Several of the new rapid transit systems operate stations with few or no personnel. In spite of obvious physical barriers in the form of fare gates both entering and exiting, there are elements of an honor approach involved. Fraud rates for barrier transit systems appear to range from less than 0.5% to 2% at times even higher. This range does not seem to vary much between the simple turnstile fare gate system and the more sophisticated systems. Moreover, no system contacted said that there was any noticeable variation in the rate of fraud between income groups. Two conclusions can be drawn from an analysis of analogous honor situations.

- The level of fraud is always fairly low, never larger than 10%, generally less than 2-3%. This alone is important no matter what factors lay behind the differences within this 0-10% range.
- There are no factors which appear to explain with any confidence in a quantitative sense the reason behind the rate of fraud. Image of the group against which the fraud is being committed and level

of enforcement are the closest explanatory variables but even they are of only limited use.

Sociological Factors Related To Fraud Estimation:

The next two sections discuss sociological and psychological factors that may help us understand why and how people confront the possibility of committing fraud. The low rate of fraud with European no-barrier fare collection under so many different cultural conditions, and the low rate of fraud under a wide range of analogous self-service operations in the United States seem to indicate that the basic sociological or psychological factors exist which may transcend cultural differences.

There is no direct information that allows us to give a very precise answer to the question of what percent of the general population can be expected to commit fraud. The most important single conclusion from the data is that "normal" respectable people can and do engage in systematic criminality. It would seem fair to conclude that over half of the general population has some experience and propensity to engage in petty theft and fraudulent behavior given the opportunity on a routine basis.

The important point to remember, however, is that while most of us at some time commit illegal acts -- be it parking without feeding the meter, or bus transfer abuse, or employee theft, -- it is safe to say that far fewer of us do so regularly. Probably less than 1% of us either are inveterate cheaters or are incorruptibly honest. On a day-to-day basis, therefore, it is inappropriate to assume that over 50% of all transit users, or even close to that figure, will evade the payment of fares.

There does not appear to be any basis for concluding that any groups or minority will commit substantially less or more fare evasion than others. But some groups are known to be more prone to commit fraud. The only groups of relevance to transit usage are adolescents and students. They invariably commit more small crimes in just about any area and in just

about any country than does the public-at-large.

Psychological Factors Related to Fraud Estimation

A priori, one would assume that the more checking, the less fraud. But studies show that this may not be the case. Constant, persistent monitoring probably causes people to feel too self-conscious and consequently leads to irritation and annoyance. There is a tendency of the public to counteract all attempts by public officials to design public facilities that appear impregnable. Such facilities provoke, rather than discourage the public. The result is simply that more ingenious ways would be devised by the public to commit theft, vandalism, etc. Similarly, excessive checking or a very high level of superfare may lead to even more fraud as a form of rebellion.

The penalty for fraud is theoretically a product of the risk of being caught and the size of the sanction if one is caught. Objectively the sanction is the superfare and the risk is the check rate, but there are subjective aspects. Subjective sanctions include the embarrassment at being caught in front of other riders. Embarrassment should be greater when a person is caught in front of acquaintances, making the sanction greater in a bus where commuters get to know one another than on a more anonymous train. The perceived risk of being caught probably also depends upon the number of others around. A rider could feel greater risk on, say, a bus with 50 passengers than on a train with 500, regardless of the objective risk. These factors could explain why fraud is lower on buses than on trains. It is important to realize that public transit passengers, especially in buses and surface vehicles are not anonymous. People ride the same route every day and know other passengers by sight. The passengers are "intimate strangers" who never speak on the bus but who would greet one another if they met elsewhere.

What happens when a person is caught in the act of doing something wrong? Experiments have shown that when a person is confronted by a person against whom he has transgressed, he may:

(a) very likely attempt to alleviate his shame as well as to appease the latter by complying, or (b) try to maintain a positive self-image by supposing that the person he harmed deserved to be harmed.

These reactions are typical reactions of no-barrier enforcement in Europe. Many persons quickly pay the superfare to minimize embarrassment and shame, often to the extent of having the fine amount readily available for payment at all times. Some, however, argue over the payment. Standard practice in these cases is to separate the defrauder from the others (by getting off with him at the next stop, for instance). Quite often this alone results in quick payment. The threat of police arrest is a secondary and very effective next resort. Moreover, if the representative is seen as doing a legitimate job, he would be unlikely to arouse personal animosity. If he is seen as overstepping his bounds or acting in a personal rather than a professional manner, he might be more likely to trigger antagonism. Europe finds that women are very effective inspectors and it may be well for transit agencies here to make effective use of them in this capacity.

If all other things are held constant, fraud will be expected to increase as the fare increases for the simply economic reason that people will be less able to pay the fare; and the effect is not likely to be a smooth one. People have notions that certain amounts of money are appropriate for certain things. In addition to the economic reason, there is evidence that if a situation progressively becomes more adverse until it reaches a certain point, people resent it more than they would have if the situation had initially been as adverse as it eventually becomes. This is because the resentment is compounded by a sense of loss. The same

response may result from increased transit fares.

The Estimate of Fraud

The estimated rate of fraud developed in this study is derived from the following arguments:

- assuming complete identity between European and American culture, one would expect a range of fraud between 0.5% (the average of the 28 city sample) and 2.0% (a figure approaching the upper limit of fraud, even for large cities).
- Although it is difficult to explain, most Americans feel uncomfortable in assuming they are as honest as Europeans. However, it is quite doubtful that Americans are many times more dishonest. The low rate of fraud over so wide a range of cultures discussed above is a positive indication of this belief. So is the apparent universality of the psychological "embarrassment factor."
- The experience with analogous honor situations in the United States, although varied and not directly related, does show a general level of fraud below 5%. The few cases above 5% is typically due to an absence of enforcement (e.g., isolated toll ramps). It could also be assumed that the minimum level of fraud is established by the rate at which people cheat in existing, barrier systems in the United States (approx. 1%).
- The quantitative estimate of fraud, although based on a model with obvious limitations, results in a range of fraud expected between 0.5% and 6.5%.

The consensus among the working group is: Provided that the no-barrier system employed is approached in a manner discussed below, the expected rate of fraud will most probably be 3% - 5% of daily ridership. This estimate of fraud would assume:

- The attitude by MARTA, reflected in the implementation of such a system, that the no-barrier concept works best not through strict punitive measures and high enforcement but because its patrons react positively toward positive incentives.
- The maximum utilization of prepaid passes the sales of which are well marketed, and which would offer readily apparent conveniences.
- A checking and enforcement policy which is fair, impartially administered, and is explained in detail and in advance to all riders.

The Potential for No-Barrier Fare Collection in the United States:

Presently there are no self-service systems in operation in the United States and perhaps this is the single major obstacle facing the implementation of this concept. On the plus side, this concept offers the following:

1. Flexibility: No barrier fare collection is adaptable to any conceivable fare structure and mode. It is especially suited to multi-mode, complex zone or graduated fare structures, beyond the state-of-the-art of fare collection hardware.
2. Passenger Appeal: The simplicity and convenience of the no-barrier system is very attractive to system users. First, of course, it dispenses with barriers which is psychologically attractive in a world already overly protected. Second, the ticket or pass is used throughout the trip; separate transfers for mode changes are not needed. Third, the presence of inspectors gives the system both a more human touch and a greater perception of security. And finally, no-barrier fare collection, allowing for multi-door loading of buses or light rail, speeds up the service offered and reduces the cost of operations.

The no-barrier concept presents some disadvantages:

1. Wages: This system is more labor intensive since it relies on teams of inspectors as a means of control. In the United States, without the labor shortages which have prevailed in Europe recently, the self-service operation could produce a built-in, excessive dependence on labor with its attendant wage escalation, rules, etc.
2. Legalities: It is unclear what legal problems are involved in on-the-spot penalty procedures. It is a general misconception, for instance, that one's right to due process is seriously compromised by the on-the-spot penalty in Europe. Yet, until legal issues involved are researched and some actual experience is gained, the entire area will be one of conjecture.

Nevertheless, any fare collection study in the United States should consider the no-barrier concept as a serious alternative. In the right circumstances it will be of obvious superiority and could be the only feasible alternative. Special attention should be paid to these applications.

1. Zone-fare rapid transit with integrated bus service: The capital cost savings on sophisticated equipment is substantial in such a situation. While operating costs may be higher (not necessarily true under a distance-based fare structure), no-barrier fare collection offers such substantial benefits in the areas of passenger appeal, convenience, fare policy flexibility, public relations, and possibly security that it must be given serious considerations.
2. Light rail networks: Unlike rapid transit, light rail does not operate within a completely private right-of-way. Access control through barriers becomes impossible. Compounding the "problem", the vehicle is too large to have front door, single-aisle loading which forces the multidoor vehicle to be operated inefficiently. In transit, it is grossly inefficient to have an operator in the car only to collect

fares. No-barrier fare collection is a must for light rail systems.

3. Bus systems (especially with distance-based fare structures):

Controlling zone fare structures in a bus is an annoying problem, either because it requires payment at exiting only (at front door) or the stopping of the bus at the zone boundary to collect the surcharge. Graduated fare structures are almost impossible with conventional bus fare collection practices.

Almost as a prerequisite for no-barrier fare collection is the extensive use of passes or prepaid trip options. They lessen fraud and at the same time provide conveniences to both the users and the operators.

Conclusion

This paper has tried to shed some light on an aspect of transit operations which has found almost universal success in Europe, but remains in darkness in the United States. Although not a panacea by any means, no-barrier fare collections may be a very attractive alternative to fare collection problems arising from the increased integration of modes, greater emphasis of transit market differentiation, and the potential growth of light rail systems.

The fraud estimation study performed by MARTA, rough as it may have been, did not reveal any propensity to large-scale rampant cheating. This issue has unrealistically dominated discussions of the no-barrier concepts and overwhelmed any rational analysis of its benefits. It appears unwarranted, although some doubt will remain until the first no-barrier system is attempted in the United States.

The Urban Mass Transportation Administration should encourage and underwrite studies on the no-barrier concept, especially the legal issues involved and should fund at least one well-planned demonstration of such a fare collection concept. European experience points up a great lagging on our part of an improvement to transit which appears well worth considering.

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PAASWELL: Our next speaker is Daniel M. Schores, Jr., Associate Professor, Department of Sociology, Austin College. He will speak on "Latent-Demand Groups and Their Leisure."



Dr. Charles Hunter, Professor of Sociology and Urban Affairs in Bishop College, Dallas, Texas, takes careful notes during workshop session.



Dr. Daniel M. Schores, Jr., Department of Sociology, Austin College, Sherman, Texas, talks with Richard Stanger during brief coffee break. He later discussed some policy recommendations concerning the involvement of low income transit dependent groups in transportation planning.

LATENT-DEMAND GROUPS AND THEIR LEISURE

by
Daniel M. Schores
Department of Sociology
Austin College

A retired gentleman of 71 years who retains much of his earlier vigor desires to take advantage of his city's offer of small garden plots at the city's edge. However, since no public transportation is available, he must let the opportunity pass unused.

A low-income black family with three small children can't visit the municipal zoo, park or museum on weekends as they would like because city buses do not operate except on "work days."

An elderly woman wants very much to visit her bereaved friend across town, yet no transportation goes within eight blocks of her friend's home and at 80 you hesitate to walk that far in a strange neighborhood.

Neal is a brilliant nine-year old student but he can't get to the main public library in inclement weather since public transportation doesn't run near his public housing project and his family cannot afford an automobile.

Two young deaf children in Selma, Alabama are unable to take advantage of the new school for the handicapped in their community as they live beyond the range of the school's buses and no other economical transit exists.¹

On and on the examples go. Too often "you can't get there from here." That low-income, transit-dependent groups have unmet needs because of their lack of mobility is not news! Yet too often the dimensions of their problem are not fully seen. I would like to speak to some of these unrecognized dimensions, namely those related to human leisure.

The Problem

From policy decisions made by government agencies, one would think that low-income transit-dependent groups only need to shop for groceries or visit the doctor. These needs are what we hear talked about! A full, meaningful contemporary lifestyle, however, includes far more than these basic physical needs. The human psyche must have opportunities to engage in leisure-related activities and to do so necessitates adequate means of transportation. This paper addresses itself to two aspects of this problem: (1) The unmet need for leisure-activity transportation; and (2) the lack of participation by transit-dependent groups in the planning process for promoting such mobility.

First, let us define a couple terms. "Leisure-activities" will be used in its broadest sense in "any free choice activity which makes life worth living." This includes the customary entertainment cluster which involves such diverse time usages as attending a free concert in the park to window-shopping along a downtown avenue, from participating in a chess club to listening to a political candidate's rally, from a quiet evening with a friend to a movie. It also includes opportunities for recreation such as a minority-group teenager skating at a municipal rink, an elderly couple walking their mile-a-day in the protection of an enclosed shopping mall, persons securing the necessary supplies for their favorite hobby or meeting with others who share the same interests. It also includes riding for sightseeing as well as a visit to an art gallery or bowling alley. Leisure related activities may also be education: the planetarium or historical museum for the school child, civic meetings on medicare for the elderly, music lessons or evening classes at a community college. In most cases this requires some form of public transit. Though often overlooked, leisure may also take the form of political activity, especially necessary for fair representation by the population group under discussion;

these might include organizing food or drug coops, monitoring the courts, using the grievance procedures available to tenant organizations, checking on one's Social Security, participating in a political party, or getting out to vote. Repeating, leisure activities are those free-time choices which make life worth living. They are not "extra" or "non-essential"; they are very meaningful to the personality of man whether one is middle-class or low-income, young or elderly.

The term "transit-dependent" will be used to refer to those persons with limited or no personal means of transportation. With the rising price of gasoline this category may include an increasing number of low-income Americans. It also includes those with moderate incomes who for other reasons cannot use a private automobile...the physically handicapped, the near-blind, the too-young or the emotionally unstable. One common justification for retirement is that it gives one freedom to travel (note the popularity of group tours for senior citizens), yet society has often conspired to limit a person's mobility if personally owned transportation is not had.

The Case for Mobility for Leisure

In this age of decreasing hours of employment and lengthening life span, it should not be necessary to argue in behalf of every citizen's right to pursue a choice of free-time activities. Especially are the young and older Americans in need of mobility for leisure. Before the years of formal schooling and work, and after retirement is our greatest source of free-choice time. The average citizen today has twenty-two years more free time during his life than did his grandparents: he starts to work later, following additional schooling, lives longer and retires earlier. Presently 75 percent of this free time is spent at home, but the trend is toward special interest groups and commercial establishments drawing

individuals outside their formerly circumscribed territory. Even while children are in school or the employed person in the labor force, an amazing amount of free choice time exists. The average U.S. worker on a typical forty-hour week has 3700 free time hours annually beyond work and sleep. This is equivalent to 230 days of sixteen hours each per year which must be filled with activity. Even allowing for leisurely baths and meals, just plain "goofing-off" and the ever-present television set, people still must make choices as to how best to use this extra time. If a person is mobile the range of alternatives increases vastly.

Arguments in behalf of mobility for total leisure activities include:

(A) Better physical health---It perhaps goes without saying that a person who remains active physically retains better health and lengthens his life span. Since much of urban living is in residential areas often removed from environments conducive to physical exercise, some form of transit is needed...to the basketball court or baseball diamond for the youngster, to locations where one can stroll quietly amid trees or where one can safely bicycle. Through zoning laws, most commercial recreational facilities are not located in apartment or single family residential centers. In fact, increasingly we find large "sports parks" or multi-use complexes which can provide a variety of physical recreation, but these tend to be located on the city's edge. Picnics and day-trips to the out-of-doors can be enjoyed at low cost if one can get there and back. It is recognized that the problem is not solely one of transportation since motivation to engage in healthful exercise is essential, though the lack of readily available, low-cost transit does much to frustrate and motivate changes in one's sedentary habits.

(B) Improved Mental Health -- Whether it be engagement in one's hobbies, associating with other persons socially, or being reassured at the county court house that you qualify for tax relief, the elderly person's mental health is improved. Social isolation of both the older citizen and the lower-income housewife is a problem of major proportions. Ruth Bennett, research scientist in gerontology with the New York Department of Mental Hygiene and professor at Columbia University, sums up available research data on social isolation as follows: "We are convinced...that social isolation has a negative impact on the aged; it desocializes them, hampers social adjustment, and seems to reduce independence." While she does not claim that isolation is synonymous with mental problems, it can set the stage for such disorders leading to "serious, and possibly irreversible impairments--cognitive and other." Hopefully, she concludes, "Unlike senile mental disorders, the effects of isolation may be reversible through resocialization programs."²

In addition to lack of mobility, it has been found that inefficient mass transit does more to people than slow them down. Psychiatrists in Sao Paulo, Brazil "blamed a growing number of mental ailments on frustrations of traffic tie-ups," some of which slowed traffic down to two miles per hour.³

(C) Increased Citizen Participation -- So much of a low-income person's world is narrowly provincial due to geographical immobility, fear of venturing into strange new activities, or because of cost factors that it behooves government and private agencies to foster as many ways as possible to encourage civic participation. Voter registration and polling places may appear convenient to middle-class citizens with their personal autos, but a walk of half-mile to two-miles for the disabled or elderly is an impossibility. Public forums which normally hold evening meetings may unintentionally eliminate the presence of the older citizen if they must re-

sort of infrequent public transit back home after dark...assuming that such transportation is even available. Even desirable senior citizen activities often require car pools or mass transit, yet many persons living alone hesitate to depend upon others time and time again. Walking is an alternative pattern for mobility, but security problems, uneven sidewalks, poor lighting and busy streets are usually mentioned as significant barriers. A Minneapolis Housing and Redevelopment Authority study discovered that 45 percent of those interviewed in the housing complex engaged in social visiting several times per week, but that "when transportation is provided, more people attend organized activities."⁴ The same study showed that while over half rode a city bus every week or oftener, more would have except for their inability to step aboard or tolerate long standing waits.

Language barriers, somewhat indirectly related to transportation, should be mentioned. When bus and taxi operators are not bilingual in areas where a second-language is widely used, many low-income individuals may not be able to use existing transit services with any confidence. With Spanish-speaking persons as numerous as they are in metropolitan areas, some simple instructions in giving directions or answering questions concerning fares might be given the drivers.

The editors of the National Retired Teacher's Association Journal listed in their "Declaration of Aging Rights" the "right to move about freely, reasonably and conveniently."⁵ The fulfillment of this would certainly permit more effective participation in their community.

(D) Mutual Benefits of Friendships -- While Rosow discovered in a 1967 study that middle-class persons have significantly more friends than do those in the working class, these working class individuals have a greater local dependency for their friendships.⁶ Their social ties appear to be both within neighborhoods (possibly within walking distance) and the specific

metropolitan area (definitely requiring transportation). Other research indicates that people with friends cope with crisis better than those who are loners. Dr. Marjorie Lowenthal's mental health study states, "In analyzing life histories...we were struck by the fact that the happiest and healthiest among them often seemed to be people who were, or had been, involved in one or more personal relationships."⁷ Through becoming involved in new friendships or social organizations, elderly persons can compensate for the loss of their loved ones and friends. Yet when your legs are not as "good as they used to be" for walking, taxis are expensive, poor eyesight does not permit driving yourself, then one is thrown back upon mass public transit.

Family contacts are often primary sources of emotional support for older persons. Interestingly, though 70-80 percent of the Black elderly can be classed as in or near the poverty level they have been found to be less isolated from their families than are whites.⁸ Thus it is important to remember that all elderly be considered in terms of transit needs and not minority groups alone. Another significant study found that lower income individuals take a greater number of social trips for the purpose of visiting friends, neighbors and relatives than do higher income groups, possibly because this form of leisure involves little or no cost in contrast to other more commercial forms of leisure.⁹

(E) Economic Advantage to Community -- Even though the population group under discussion in this paper is marked by low income, they nevertheless form a sizeable economic consumer group by their sheer numbers. The total economy of a metropolitan area would benefit from their being able to travel more widely in relation to leisure activities. If adequate transit also meant the possibility of supplementing incomes, their purchasing power would rise accordingly. Thus the economic market would be one beneficiary from a proper system of mass transit.

At present an undue proportion of income is spent in high-priced neighborhood stores, short-changing the needy in terms of the amount and quality of goods purchased or for inefficient forms of transportation. For example, take the case of an elderly black couple in a new high rise subsidized housing project in a southern urban center who walk a mile to a supermarket, then must take an expensive taxi home with their load of groceries, "so the driver can help carry." This couple has never taken a trip out of town or had a vacation in the man's 73 years. A rare outing to a small fishing lake is their only opportunity to leave the two mile walking-radius around their apartment.¹⁰ Even with adequate incomes some physically handicapped persons cannot get out into the community for leisure activities, thus depriving both themselves and the marketplaces of their purchasing power.

(F) More Varied Activities -- A final argument in our case for providing leisure activities open to all citizens, including the low-income, transit-dependent group in question, is that their participation in the larger community will assist other citizens through their latent leadership skills and special interests. Many craft or hobby enthusiasts are forced to drop their interests just at the point in their life when time to pursue life-long hobbies is most available. Financial limitations account for some of this withdrawal, but lack of a way to get to club meetings or to meet with others with common interests account for a great deal more. Likewise, such leisure activities as ethnic festivals, volunteer service organizations, or special interest associations for the elderly (like Golden Age clubs or a sidewalk domino clique) depend on the ability of their constituents to be reasonably mobile. Bernard Nash of the American Association of Retired Persons has called the low participation of the elderly in community activities a problem of "poverty of meaning." These are the activities and events which enrich one's life by keeping them involved socially. The fact of participation

by these often excluded persons might be the very thing needed to maintain the special interest groups which, in turn, can be beneficial to the larger society.

In a study of voluntary participation, Stephen J. Cutler of Oberlin College found that the availability of mass transportation was directly related to higher levels of voluntary participation among the aged. "The role of transportation as an explanatory variable," he claims, "is greater both as distance of residence from the sites of association increases and as the analytical focus shifts from the number of memberships to the frequency of attendance at association meetings."¹¹ Also he discovered that lower levels of participation exist when environmental obstacles (distance, dangerous crossings, broken or nonexistent sidewalks) makes walking more problematic.

Another desire often expressed by the elderly is to return to their childhood environments or places of pleasant memories. Transit difficulties often hinder the fulfillment of these dreams and make both the elderly person and others who might share these memories poorer as a result.

PROPOSED ALTERNATIVES

Numerous suggestions have been advanced for the purpose of providing needed transportation for latent-demand groups. I would like to review some of the serious proposals, judging them as to their fitness with regard to meeting the leisure needs of citizens as a whole. Each will be judged from a perspective of positive benefits, then an honest look at their negative aspects. It is recognized that specific evaluations are conditioned by both personal objectives and social goals.

Alternative 1 -- Provide a wider range of leisure activities in local neighborhoods. This has been the approach of many municipal recreation departments, senior citizen centers, local churches, and other voluntary organizations. If meaningful, creative activities can be provided within

walking distance of a sizeable number of transit-dependent groups this becomes a feasible alternative. Where there is a concentration of elderly, low-income households or elementary age children it is economically possible to provide varied forms of physical recreation, special interest group or club activities.

Problems arise when these user groups are scattered geographically as is often the case in metropolitan areas. Walking more than a half-mile is difficult for both the very young or the elderly and is ruled out completely in many neighborhoods after dark. As expressed by Wilfred Owen in his book, The Accessible City, a Brookings Institution publication:

The trouble is that walking is breaking down, like public transit, because no one cares enough about it to make it work. The pedestrian is forced to use sidewalks that parallel the streets and maximize the fumes, noise, unsightliness, and danger. In the city, walking for pleasure is a contradiction.¹²

At times walk-ways which are pleasant can be made available through parks or along floodplains, but this often requires public transit to go to and from such locations and the user's home. As has been shown above the lack of efficient mass transit will exclude many potential participants in organized leisure pursuits.

Where mobility is essential for engaging in leisure activities, it may be necessary to "reorder the environment," another suggestion from Wilfred Owen who feels that an auto-centered life-style, encouraged by federal highway funds, has created problems which can be compensated for only by "efforts to design a more satisfying urban environment."¹³ Through redesigning the older portions of the city and better long-range planning of its newer sections pedestrian malls, wider sidewalks, possible bicycle paths, rest areas for walkers, and aesthetically pleasant mini-environments could be created. More effective use of human energy in lieu of the current energy crisis argues against such technological innovations as

moving sidewalks or personalized people movers for short distances.

Yet another aspect of providing a variety of activities without dependency upon public or private transit might be an expanded use of telecommunications. Television has certainly provided alternative forms of low-cost entertainment during the past quarter century. With current plans for computerized banking, futuristic television sales displays for shopping, and telephone ordering, one's imagination can consider nearly endless possibilities for specialized leisure pursuits. However, this medium eliminates the social interaction advantage of getting out into the city, one of the principal mental health needs among the elderly.

The major weakness of the proposal to provide neighborhood level activities is that the unique special interests of some individuals cannot often be served. Such hobbies as coin or stamp collection, for instance, demand that persons be brought together from fairly widespread areas. Unusual sport interests or those requiring extensive facilities cannot be economically feasible for specific neighborhoods. Fine arts such as concerts or artistic showings likewise tend to be city-wide. Such leisure time activities as civic gatherings, attendance at a zoning commission, use of a public library or evening adult education courses can only rarely be located conveniently to more than a fraction of the city's population. Thus, though certain activities can and should be based in the neighborhood of potential clients, most will still require mass transit to deliver the user to them.

Alternate 2 -- Wider availability of private transit. The automobile was originally designed for recreational purposes; only later was its use for commercial purposes seen. Henry Ford's famous statement: "I will build a motor car for the great multitude...so low in price that no man... will be unable to own one and enjoy with his family the blessings of hours of pleasure in God's great open spaces"¹⁴ never quite included the poor,

the elderly, or the handicapped. Thus pleasure travel and sightseeing are not an open option for many, not to mention even easily justified trips to store, doctor, a movie or to a sick friend. Yet it has been proposed by some free enterprise enthusiasts that the way to solve our national transit problems is to subsidize the individual, private automobile. In fact, this has been public policy in the United States since the 1920's if the amount of federal tax monies which have gone into highway construction is any indication. Cities have contributed their share to private auto usage through parking lot or parking garage funding. Now there are those who suggest small automated personal transit vehicles, something which has proved less than financially feasible in pilot projects such as that at West Virginia University's Morgantown campus.

Even if privately owned transportation were economically feasible and socially desirable, there are still numerous groups of citizens who cannot operate their own automobile. Blindness, many physical handicaps, some emotional problems or too young an age limit persons. Most persons under discussion in this paper would remain transit-dependent groups.

Some have suggested a wider spread use of volunteers to furnish transportation for those citizens who lack their own forms of mobility and cannot secure adequate public transit. In numerous cities this has proven a short-term blessing, however, the interest of volunteers tends to be of limited time span. The problem thus is only temporarily solved. With energy conservation becoming more a high priority item the wider use of private automobiles by volunteers is less realistic than in the past.

Alternative 3 -- Specialized transit for different groups. Increasingly metropolitan communities of varying sizes have turned to specialized forms of transportation aimed, especially, at providing for the elderly. Typical of most small cities are plans of several East Texas communities to

use federally funded "minibuses." Yet the availability of this service is justified only to "take any person over 60 to doctor's offices or to attend business."¹⁵ Leisure-related needs are often ignored. Baytown, Texas began a prescheduled transportation system in 1974 under contract with the local ambulance service, using federal funds available through revenue sharing, though again this announcement indicated that only "the most essential needs should be provided."¹⁶

While these various forms of specialized transit are meeting certain needs in a positive manner, three major problems exist: (a) the cost to the taxpayer who directly or indirectly pays the bill; (b) the segregation of the elderly (or other unique clients) from interaction with others; and (c) unmet transit needs of other groups such as children or the handicapped. It is impossible to furnish individualized forms of transportation for each special segment of society. The unhealthy aspects of social isolation through an exclusive mode of transport were called to the attention of the public by several citizen groups in a series of regional meetings prior to the 1971 White House Conference on Aging.¹⁷

Alternative 4 -- Subsidize private mass transit sector. This proposal relates to currently available or technologically ready means for privately owned transit, such as stockholder owned though publically regulated companies, and would encourage our free enterprise system to provide better service. It might take the form of a revival of the "jitney" or small taxi-bus combination often seen in developing countries or in the U.S. before the 1920's. Mini-buses, vans, or converted pick-ups have been used in addition to standard taxi-cabs at various times and locations. Such a vehicle, radio-controlled, would pick up passengers at designated points, delivering them to their doorstep in the most convenient geographical order. In some communities this may be called the "dial-a-ride" system. The NRTA Journal last

fall described this mode as "the most promising innovation in demand-responsive transportation, wherein vehicles can provide shared-occupancy, door-to-door personalized transportation on demand and at modest fares."¹⁸

Shared rides in private taxis is another approach. Private commercial bus lines, however, have not proven economically feasible in recent years as the public demand for mass transit has given way to the private auto. There is perhaps a future potential for subscription bus service and there remains a demand for intercity bus transit. Any or all of these privately owned systems might receive subsidies for provision of services to low-income, elderly or other citizens deserving of public assistance. Where such private systems are now operating, this approach might well be considered, but it would seem unwise to have the public underwrite both the capitalization of a private company for their purchase of original equipment and also to subsidize fares.

Alternative 5 -- Municipally-owned, fare-subsidized transit. Rather than one of the many proposals for specialized forms of transit or public donations to individual, private transportation whether in the form of direct subsidies or indirectly through highway building, an increasing number of voices are being raised in behalf of strengthening existing forms of transportation. Wilfred Owen, Senior Fellow at Brookings Institution, states that the best low-cost option in rapid transit is the "better use of existing systems."¹⁹ Science advisor to the Chicago Transit Authority, Daphne Christensen, said last November that public transit using subsidized fares makes more sense than ever before, citing the Hertz Corporation figures that auto travel costs are now 23.5 cents per mile, up from 14.7 cents two years ago.²⁰ The U.S. Conference of Mayors, meeting with President Ford in 1974, presented a strong case that urban mass transit subsidies were actually more economical for the federal government than the inflationary costs of a fare raise with

its consequent effect of raising wages and products purchased by the federal government.²¹

One proposal is that we eliminate fares altogether, subsidizing public transportation as a citizen's right to safe, predictable, economic transit. It has been figured that Washington, D.C. could accomplish free public transit for an estimated \$37 million per year, a figure equal to the cost of running the city's police force. Business and the commuting public have experimented with free or discount passes for the elderly at off-peak hours and found this to be expedient. Selected cities are reviving the electric trolley, once the mainstay of urban transit until replaced by noise-creating, air-polluting buses in the 1930's and the private auto especially since World War II. The trolley represents low-cost, dependable as well as nostalgic transportation, though may require buses in the less congested areas. Interurban service between cities may again be feasible if done by regional governmental units and compared fiscally with the costs of new interstate-type highway construction.

Alternative forms of mass transit would seem to be innovative fixed right-of-way systems such as monorails, subways or short-distance "people-movers" all of which would require tremendous capital costs plus have the disadvantage of inflexibility. The San Francisco Bay area's BART has proven thus far to be a financial loser with its \$1.6 billion cost; its current passenger load could be carried by a fleet of new buses at 2.5 percent of the cost of BART, according to Melvin W. Webber in a University of California's two-year evaluation of the BART system. Time may prove the high-speed rail system beneficial, but at present it appears to be a mixed blessing.

Another example should serve to adequately illustrate the financial problem with special roadbed transit systems: The "personal rapid transit system" partially completed for West Virginia University in Morgantown has cost

the U.S. taxpayer \$63 million rather than the originally proposed \$18 million yet doesn't extend to all three campuses as contemplated; in fact, is only approximately one-half completed. So trouble-prone, there is serious consideration to tearing the whole system down at an additional cost of \$7 million. I estimate that the money spent in this project would provide free bus rides for every citizen in the community on a daily basis for the next twenty years.

Since "mass transit is estimated to lose 23 cents for every dollar it collects"²³ William Ronan, President of the Institute for Rapid Transit, claims that only federal subsidy can keep fares low enough to compete with automobiles whose highways are already subsidized. Many others seem to agree.

POLICY RECOMMENDATIONS

No specific transit modes are likely to advance beyond the level of imagination unless public groups discuss and act upon concrete proposals. Below are four policy recommendations based on the information gathered for this paper. They might serve as springboards for discussion for citizen's groups or governmental agencies around the country.

(A) Strengthen existing forms of transit through fare subsidy on public owned transportation systems. Municipal or regional bus lines, the electric trolley or subway, and suburban mini-bus routes can operate efficiently and with fiscal responsibility if they have an adequate number of passengers. Through discounted fares (even free passes with payment made to the transit line to cover approximate use) low-income, transit-dependent groups would benefit while maintaining these forms of public transit for the larger community. Certainly, both original installation and operating expenses are lower for nearly all existing forms than has yet proven true for experimental modes of moving masses of people within the metropolitan area.

(B) Create citizen advisory groups for private and public transit agencies. Neighborhood as well as city-wide advisory committees should include elderly, low-income and physically handicapped persons in addition to the usual technical consultants. Such groups would both sense the pulse of now unreached citizens and make specific recommendations concerning transportation needs. Likewise, all decisions should be given full public hearings prior to final consideration by those responsible for transit services. A new Department of Transportation report on "Effective Citizen Participation in Transportation Planning" is now available from the U.S. Government Printing Office²⁴ with suggestions as to organizing citizen groups and relating them to the sequential planning steps involved.

(C) Place voting representatives of transit-dependent groups on public decision-making bodies concerned with transportation. In addition to using citizens as advisors, a limited number of transit-dependent clientele should be part of the planning and decision-making process in order that all policy makers have the benefit of insights gained from actual experience of these special groups.

(D) Long-range recommendation: That consideration be given to the total metropolitan environment when planning any urban-oriented program or service. Because of the interrelatedness of transportation and the totality of urban activities, a reordering of the complete environment is necessary to adequately provide citizen access in this time of energy shortage. For example: closer proximity of housing and neighborhood shopping centers would encourage walking; mini-centers for medical or welfare services would reduce the lengthy travel distances now often needed by recipients of such services; careful planning of recreation facilities or other municipal services along existing transportation routes could revitalize mass transit systems in which the community has a major investment; and the creation of mini-parks, walking or bicycle paths when redesigning urban thoroughfares could lower our depen-

dence on the automobile.

Cities of the future will be in need of the clearest thinking of which we are capable. Citizens of those cities will be especially appreciative of our attention to their transportation needs for leisure activities. Let's leave them a vital heritage!



Dr. William J. Murin of the University of Wisconsin (Parkside) spoke on "Mass Transit Policy Planning and the Urban Disadvantaged." With him is Dr. Sindwani of the Sociology Department in TSU.

FOOTNOTES

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16. Baytown, Texas SUN, n.d.
17. The specific policy proposal of the North Central Texas meeting, for instance, was: "We recommend that transportation systems for both long distance and local travel be developed for users of all ages and that greater cognizance of the special needs of the elderly should be taken. This will not only be economically more feasible, but also will not segregate the elderly from the rest of the population as exclusive transportation would."

18. "Moving' On," NRTA Journal, November-December 1976, p. 5.
19. Wilfred Owen, Transportation for Cities, op. cit., p. 31.
20. "Autos and Mass Transit: Paradox and Confusion," Vital Speeches, November 15, 1976, 43:77ff.
21. Ibid., p. 80.
22. Wilfred Owen, The Accessible City, op. cit., p. 47.
23. William J. Ronan, "We Must Subsidize Mass Transit," The Reader's Digest,
24. Vol. I, No. 050-001-00118-7, \$ 2.50 and Vol. II, No. 050-001-00119-5, \$4.10.

POLICY ASPECTS OF TRANSPORTATION PLANNING AND LAND USE PLANNING

by

John Shanahan
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For perspective on some remarks related to land use planning and transportation planning, I would begin by stating that this is Texas Independence Day. That's probably an unrelated observation, but I will attempt to draw the relevancy. Sam Houston was an important figure in the Texas struggle for independence. It has been said of Sam Houston in his bibliographies that he was a man of exceptional vision, a man who could see the long run. Therefore, I somewhat belatedly initiate Sam into the city planning profession, in which I teach and practice. I congratulate my students for having turned out so well for this afternoon's discussion.

Some thirty-five years ago here in Houston, Will Hogg stood before a meeting of the downtown rotary and said "City planning is needed in Houston" and went on to talk about the growth and development of this city, the development of its major parkways and thoroughfares, and its planning for its parksites. He envisioned the marvelous community that Houston would become and observed at that time that Houston gravely needed to undertake a serious program to plan and manage its land uses.

I recall a few years back the well known architect, Phillip Townsend, coming to Houston at the first gathering of this kind today, and saying that Houston is a "spaghetitized city", a city in which we could only hope to one day be able to walk on the tops of automobiles, because that would be the only means of mobility left.

Well, we've talked a lot in the last eleven or twelve years since Phillip Townsend came to Houston, about how to improve the mobility systems in this community; and whether we should plan in Houston or not, and if so how? If we manage to do any of this at all, how should we relate that planning process to the way in which we provide transit services to the citizens of this community, particularly those groups or individuals who are the most transit dependents, i.e. the low income groups, the poor, the minorities and so on.

As a proper beginning of this conversation, let me suggest that I will be both commentator and advocate. I will offer some comments that will suggest a relationship between land use planning and transportation planning which I believe in some ways have been neglected. I will conclude by advocating a rediscovery, a renewal of, and a redirection of our interests in and activities on behalf of, where I think Dan Schores left off. We shall continue to focus on the consideration of a larger metropolitan problem, that problem being the form and direction of our urban growth. How we shall consciously shape the way in which our cities and the communities within them function and indeed how we determine where cities will be located within our regions are important issues. We shall also look at what is the specific function and responsibility of state government. I think this is an essential aspect of the process. State Government, an institution which I have served and in which I believe -- from an understanding of its constitutional powers and its legislative background--plays a key role in transportation planning at the local and regional levels.

We'll talk a bit about land use controls and land use control law and relate it specifically to the question of: "Now that we know something about it, what are the implications for transportation planning?" First thing I'm going to say is that for those of you who are new to Houston, it is a city which in some quarters

prides itself on absence of regulatory measures for planning and land use management. Houston does not have a zoning ordinance, although many other cities in this state have, and zoning is the conventional land use control mechanism. Houston not only does not have zoning, it does not have a subdivision ordinance. Houston has informal policies with regard to the way in which the municipal government permits or directs local land uses. Houston puts the burden of land use management on the private sector, and I think that this is an important point. Local private organizations such as civic clubs, acting entirely outside of equity courts and municipal government infrastructure, make decisions with regard to permissibility of land usage. I served, for example, as President of the Southwest Civic Club here in Houston. This civic club encompasses about 25 hundred households to the immediate west and south of this Shamrock Hotel and it is this civic club which in monthly meetings of its Architectural Control Committee sits and functions just like a planning and zoning commission would in Austin, San Antonio, Dallas, Fort Worth, etc. Such an organization constitutes an extraordinary exercise of land use management authority by private contract, the private contract being the deed restriction. The City has in its wisdom and with the blessing of the Texas Legislature opted for participation in deed restriction lawsuits, although I must tell you that participation is minimum. At any rate the point is that it is not the municipal government that is in the land use management business in the initial and most customary sense. In other senses, of course, it is. The municipal government is in the land use management business with respect to its decisions to locate capital improvements to its decision as Bob Moore observed a short while ago this afternoon in his decision to issue sewer permit and to later withdraw that sewer permit with respect to the location of low-income. Therefore, the granting or the withdrawing of the sewer permit plays a major role in land use decisions in Houston.

The authorization to grant a building permit is essentially a land use management tool. The decision to pave a major thoroughfare, to extend a major thoroughfare or to neglect to make that decision, to provide no major thoroughfare, all constitute major land use policy decisions. The decisions are wrapped up in a proposed 1.03 billion dollar capital improvement program for Houston currently under consideration by the city council. Such decisions which may have far reaching effects on the structure of our neighborhoods and on the functioning of our urban transportation system are separated from our discussion about urban transportation and I think not wisely so. There is, then, a sort of "layer cake" of land use management policies within the municipal government here in the city of Houston. Of course, in a more conventional form of municipal administration and more conventional form of land use management in other cities, the more traditional form such as subdivision controls, subdivision ordinance, zoning ordinances, and the like are simply one more layer in the land use management "layer cake".

Well, I said that I would be not only commentator but advocate. Let's look at the structure of regional planning activity and regional implications for land use decisions. Let's look at them at the state level and let me advocate some things. We see within this region currently, (this region being thirteen counties surrounding Houston) major decisions affected by state government, by the federal government, by the municipal government and by the county government in Harris County. But outside of all of those places that will shape population migration, for example, it is clear that the Southwest Freeway continues to cause growth to migrate to the southwest. And we have extended our urban core southwest into the inevitability of the flood plain in Brazoria and Fort Bend counties in our desire to build new houses, to fulfill the exploding population needs of Houston. Today's Houston Business Journal, Chronicle carries front

page coverage on the explosion of residential construction on the west and southwest part of the city. Look at what happens when we get to Fort Bend and Brazoria County, we run into the flood plain. We can't build houses in the flood plain, so we create an entity called the levy district. And, we essentially, through special district legislation, authorized by the Texas Water Rights Commission, and the Texas Legislature, enable ourselves to build in unique circumstances in the flood plain in which we build a levy all around the sub-area to be subdivided. They took that area out of the flood plain; thereby permitting the federal insurance administration to certify that the mortgages are insurable for homes in the flood plain and thus construction can commence and in fact it has already done so. Houses will be available in the hundred year flood plain in the levy district for sale by a particular corporation this spring.

The development of the Southwest Freeway have had far-reaching impacts on the way in which we locate the freeways and transit systems. So at the regional level we have a variety of location activities. We have a superport, we have a nuclear power plant, we have suburbanizing housing and suburbanizing jobs. We are seeing basic changes in the kinds of industries that are locating in the Houston metropolitan area. As a result of that our transportation and mobility systems and patterns, I submit, will have to undergo changes. Some of the changes are not being understood at this time because we are still planning. I submit, we're still planning for an urban form and structure which is already outdated. Without question, land use patterns in the metropolitan area of this city, as they are in other cities experiencing some growth, are changing.

At the state level we find new state interest in areas such as coastal zone management, in river basin and environmental legislation, to insure that land uses are restricted or prohibited in some way respond to areas of critical environmental concern in the coastal zone. The state wants to insure that environmental degradation with respect to air quality and water quality does not take place in not only the urban areas but also in the suburban areas. We see for example limitations on growth in certain environmentally sensitive areas. And, the same is true in the immediate southeast industrial area of Houston with limitation on ground water withdrawal. There has been an attempt to check the extensive rate of subsidence that has occurred over some period of years in that area. So, we begin to see that the federally mandated initiatives within state government can function as land use management programs at the state level. Beyond the urban centers in the regions and at the state level, we see a "layer cake" of growth management, land use management (not called that; not described as that) perhaps in some sense not understood as that; but in a very real sense functioning as a means of control.

SPECIAL DINNER MEETING

Wednesday, March 2, 1977

7:00 P.M.

Presiding, NAOMI W. LEDE: I would like to present to you a very distinguished person, Dr. Granville Sawyer, President of Texas Southern University. He will bring greetings from the University and the Houston community.

DR. GRANVILLE SAWYER: Thank you very much Mrs. Ledé. I know that I should make very careful note that many of you are still enjoying your meal and that I should say nothing or do anything that would interfere with that. So having said that I will interrupt your meal. I would like for everybody to stand and join with me in singing "Happy Birthday." Don't worry about who it is for, just say Happy Birthday and I'll tell you later. I really would like to interrupt you. This is Mike Rabins' idea incidently (Audience sings "Happy Birthday"). Now you can resume your meal. You have just gone on record as the first group to officially wish a Happy Birthday to Texas Southern University (laughter and applause), that will be 30 years old as of tomorrow. More substantively you are the first to go on record for wishing Happy Birthday to Texas Southern as Houston's Junior College for Negroes going back to 1927 and 50 years old on tomorrow, March 3rd .

Mrs. Ledé, distinguished guests, participants, and observers associated with this transportation conference, ladies and gentlemen. I am pleased to add my sincere greetings to those of the administrators of Texas Southern University to those which have been extended to you earlier today. We certainly welcome your presence at this joint venture between

Texas Southern and several public service agencies. We know that your contributions to mutual understanding of the special transportation problems and solutions of the present considerations will be significant to us as sponsors of the conference and hopefully to you as interested friends who share our common concerns.

In a very real and tangible way, the series of transportation conferences in which Texas Southern University's Urban Resources Center has been a co-sponsor, with other entities, it is something of the index to the historical and color commitment of this university. Certainly the conference emphasis on human considerations and human values is central to the philosophy and purposes of Texas Southern. We find it necessary at various times to point out to our several constituencies, the fact that Texas Southern is a comparatively young institution as a state assisted enterprise in higher education. And, that the institution is yet to be fully established in line with the official obligations which the State of Texas assumes in creating a minority-oriented university in 1947. We have to point this out sometimes because we present ourselves to the academic, social, economic, political and cultural communities as a force of growing importance in higher education ventures in Texas and the Southwest Regional, in particular, and on the national and international scenes in a more general way. It may be of special interest to those of you who are participating in this particular conference that Texas Southern has been officially designated by the Texas Legislature as quote "A Special Purpose Institution of Higher Education for Urban Programming." You have already heard a great deal about our Urban Resources Center to be sure. But we take some pride in our decision to establish a School of Public Affairs and a School of Communications, both within the past three years. It turns out happily

enough that we have been rather specifically on target as we have undertaken special programs in small business developments, preventive and clinic law and pharmacy, in banking and finance with special application to minority affairs, and international education. We document the fact that our institutional momentum has long been forward and progressive and that fact is reflected in our increases in student population by 101% in the last decade, our gradual attraction of increased support from local, regional sponsors, and in the quality and range of our academic service programs. This is why we take particular interest in and give special attention to this conference and to our other joint endeavors to local, state, federal, private and public agencies in cooperative approaches to common and pressing urban problems. We have reason to be relatively appreciative for and responsive to such opportunities as this one, linking our interests to those of the State Department of Highways and Public Transportation to the Federal Department of Transportation, to our institutional colleagues in and out of the state and to interested citizens and citizens groups and in frontal consideration of vital societal problems. This conference and others like it speaks to university involvement in what may broadly be called the urban community. Meaning not Houston and its metropolitan area but whatever places and wherever peoples may meet with the common objective of understanding and solving their problems under the impact of urbanization. Some of you might have noticed that I put an "s" on people. So you must know that we are recognizing the validity of some group integrity even as we give our full attention to the "general welfare." Let me end these formal greetings then, by extending my own congratulations to those of Texas Southern University to you and by assuring you of the gratitude of all citizens for your willingness to give of your time and intelligence of a conscientious assess-

ment of the transportation problems which we are all facing. We already have logged a very busy conference schedule and the best is yet to come. As in today's proceedings, hopefully, you will discuss solutions to transportation problems in your subsequent sessions. So, welcome again in the name of Texas Southern University, 30 years young and thriving. Thank you.

NAOMI W. LEDE': Our main speaker for this evening is Dr. Michael J. Rabins, Director of the Office of University Research, Office of the Secretary, U.S. Department of Transportation. Dr. Rabins' qualifications and academic credentials have been included in a special dinner covering. But I would like to add a few remarks concerning his influence and work with the U.S. Department of Transportation. Dr. Rabins succeeded Dr. Sheila Widnall who formerly held the position. She was a participant in Transportation Forum II, sponsored by the Urban Resources Center at Texas Southern University. As Director of the DOT's Office of University Research, Dr. Rabins makes decisions regarding the awarding of contracts for transportation research projects for colleges and universities throughout the nation with cost-sharing funds provided by the universities and local cooperatives in industry and government. The programs are designed to use the highly developed problem solving capabilities and motivation of university faculty and students to deal with transportation. I have known Dr. Rabins now for almost a year and during that time I have gained a high degree of respect for his capabilities as an administrator and an educator interested in improving the quality of life and preparing individuals for technical fields. Prior to his current position, he was Professor of Systems Engineering and Director of the Systems Engineering Program at the Polytechnic Institute of New York in Brooklyn.

He also served as an associate and assistant professor of mechanical engineering at New York University where he taught undergraduate and graduate engineering courses and supervised research and design projects. Through his efforts as Director of the Office of University Research, Dr. Rabins has demonstrated through his work and that of his staff that resources of the higher education community, indeed; minority group institutions, can be brought to bear on transportation problems and, in particular, on those problems related to national transportation policy. This conference is one of many activities sponsored by the Office of University Research. Dr. Rabins has demonstrated his unique leadership capacity to bring together individuals with varied backgrounds to study the nation's transportation problems. The thrust of the DOT program of University Research is to bring the unique capabilities of the university in both the soft and hard sciences to bear on transportation problems throughout the nation. We are pleased to have the individual responsible for assisting in carrying out the goals of the DOT research program as our speaker. I asked him to assist us in examining problems relative to organizational resources and needs unique to low income transit dependent groups. He was kind enough to say yes and I am pleased to present to you now our speaker for this evening, Dr. Michael J. Rabins, Director of the Office of University Research. (Applause)

TOWARD A MORE EFFECTIVE PARTNERSHIP: CITIZEN
PARTICIPATION IN TRANSPORTATION PLANNING

by

Michael J. Rabins, Director
Office of University Research
Office of the Secretary
U.S. Department of Transportation
Washington, D.C.

Good evening! Thank you for that introduction, Naomi. Let me correct one small point. Before anyone has their expectations raised too high and tries to tackle me in the hallway or the elevator -- I don't make the funding decisions. I just manage the decision process. I'd love to talk to you about your research interests and would love to have conversations with you, but I am not the decision maker. I promise to try to be brief, but sometimes I get carried away and Naomi has promised to pull on my jacket when I start getting too far into our after dinner entertainment.

I think it is appropriate, before I get into the subject for this evening, to give you a warning by sharing with you a wonderful anecdote I just heard; and to remind you that you are listening to an academic professor. The story that I just heard is about a scholar who has led an exemplary life and passes away into the afterlife. He is asked what would he like to do most? He says I would like to meet my old professor, my mentor, who taught me everything in life I know. He is ushered into a plush room, and there is his old professor with gray hair, bent over, sitting behind a desk and on his lap is an absolutely stunning blonde. He looks at his professor and he said, "Professor, I never imagined heaven had such rewards." The professor looked at him with disgust and said, "You always were a terrible student and you never did get anything right. First of all this is hell -- not heaven.

Second of all, she's not my reward -- I'm her punishment." In some sense, I think that I am your punishment for this evening.

I am delighted to be here to share with you my thoughts on this conference in general and on the portions I had the opportunity to sit-in today. It is my pleasure to let you know that the Department of Transportation is, indeed, deeply committed to the problem of citizen participation.

And, I think there are several pieces of evidence that bear this out -- by actions and not by words. Let me point to several of these bits of evidence: First, there is a committee, that many of you perhaps know about, called the Citizen Participation Committee of the Transportation Research Board (TRB) in Washington. There are 10 members of the Department of Transportation out of the thirty (30) total members on that committee who are active. The past chairman, Leroy Johnson, of the Office of the Secretary, has been most vocal and most active in leading that committee at TRB. I will not take the time now to give you their names or office affiliations within DOT, but if any of you want that information, I have it available. But it's worth noting that they come from all over the Department of Transportation -- from the operating administrations responsible for rail, for highway, for urban mass transit, for federal aviation and each one of these people is active in the field of citizen participation.

Within DOT there is a group of seven that was formed a number of years ago called "The Consumer Affairs Committee," and the chairman of that committee is Antonina P. Uccello who is director of the Office of Consumer Affairs in the Office of the Secretary of Transportation. The other six members, come from around the Department of Transportation and they address the departmental concerns for participation and consumer affairs. This committee has been

active for a number of years. The Department is not giving lip service to this question. We are actively involved in the research and operational aspects of citizen participation.

Now, where do we fit in, the Office of University Research? Why should Universities be involved in citizen participation at all? Let me make a brief case. What does a University do in research? Several things: it develops a knowledge base; it develops a data base, and it tests the validity of concepts under investigation. That is what we're all about in Universities-- that is what research is striving for; and it's all leading eventually toward problem-solving. This particular case that we are talking about tonight is problem-solving in citizen planning and citizen participation.

The Office of University Research has recognized the importance of the problem of citizen participation. There is documentation on the activities of the Office in this sphere that you may find in the summary of Awards booklet that the Office of University Research publishes annually. In the four years of the program there have been 147 contracts initiated at different universities around the country. Of those 147, approximately one-fourth have been involved, one way or another, with the citizen participation plan and approach.

Fundamental Research

Out on the table, in the plenary session room, you will find a stack of documents I just referred to called A Summary of Awards Booklet. We invite you to pick one up and glance through it. In that "Summary of Awards Document," you will find pages with a box title at the top of each page, citing the research that was undertaken; under it the name of the principal investigator, and the name of the person that was in the Department of Transportation who directed that research; next an abstract of the research; then a status report --

where it is right now; next an application report--who has been using the results; then a list of publications; and finally a telephone number of who to contact with the Department or who to contact within the University to get further information.

Now, just to cite five specific examples very rapidly and very briefly of the kind of work that we've undertaken. There are about five people on your program today and tomorrow who have been funded for research by our office in the area of citizen participation. I'm going to read to you the titles of their research just to give a perspective on the kind of work that has been undertaken. Now, I'm not going to say more about any of these projects other than their titles. First of all, if anything I would probably get it wrong if I went into detail and you're better off getting it straight from them. Secondly, I think the titles speak eloquently for themselves.

First, Robert E. (Buzz) Passwell, who is sitting at the end of the table and who moderated a session today, and who will be talking to you tomorrow -- was contracted to study "The Problem of the Carless." Art Saltzman of North Carolina A & T has been active in rural transportation feasibility studies, and, as a matter of fact, he established at North Carolina A & T, (a minority school} without a graduate school) the center of excellence in the U.S. for rural transportation research. That is an amazing accomplishment. Jim Schuster, who will be on the program tomorrow, has been funded on "An Optimization of Citizen Participation in the Transportation Planning Process." Sid Davis from Atlanta University has been funded on "Transportation Policy and Program Impact Analysis." And last but certainly not least, Naomi W. Lede', has been funded on organizing this conference entitled "Strengthening Organizational Capability and Techniques for Comprehensive Transportation Planning." We think

Now, that's just a sampling, because as I mentioned earlier, about one quarter of the contracts we funded, one way or another, was involved with citizen planning, consumer affairs, and citizen participation. And, again I will not take the time to bore you with the details. If I read the list of schools funded, it would look like the "Who's Who in American Colleges in the United States."

Now, I think I would like to look at one particular research contract in a little bit of detail to let you know the kind of things that a university can do and how it can contribute to this problem. I picked one in which the Principal Investigator, unfortunately, could not make it, so he's not represented here. I'm going to read you the abstract that was written by the Principal Investigator to describe his work. This is work done by Dr. Roosevelt Steptoe, who is the Director of Economic Research at the Transportation Center of Southern University, a minority school in Louisiana. I might mention that this research has captured a great deal of attention. It is highly regarded and highly respected research. The title of his research is "A Measurement of Highway Induced Changes in Land Use Population Density and Minority Recreational Opportunities." Let me take a moment to read just one paragraph of the abstract.

"The construction of transportation facilities induces change in community land use through population shifts, a redistribution of business opportunities, and the alteration of recreation space. The objective of this research is to measure the changes in land use that are attributable to the location and operation of an interstate highway in Scotlandville, Louisiana, and particularly to determine the degree to which low-income or minority communities experience unique impacts. A case by case analysis of land use change will permit an assessment of the highway impacts on business enterprises, traffic circulation, population and residential density and recreation space."

Specifically, the goals of the study are to determine (1) the redevelopment effects on congestion; minority housing space; business; land use; and recrea-

tion; and (2) what changes in future planning efforts such as increased minority community input may overtake the negative effects and increase beneficial impacts. I think that's what this conference is all about -- research of that kind. I believe that we can do no better out of our office than to continue to fund research of that nature to address the problem that you are coping with.

All too often, as I was telling President Sawyer, citizen participation in planning comes too late, in too strident a tone, and is too militant to have an effective impact. I believe, we who are supposed to be the purveyors of rationality should be offering to the transportation community means and mechanisms whereby the citizens can participate more effectively, and that we can develop more intelligent approaches, and get more data so that we can understand the problems better. This is a challenge to all of us in the academic community.

Now let me say just a few words about the role of the Office of University Research in the Department of Transportation. This will help you to understand why we take positions on issues such as this one. We operate mainly through an annual solicitation to the University community for proposals to a Program of University Research. Proposals are reviewed, then contracts are initiated and awarded; the research is monitored, and the results are disseminated. This is a modest program. It is not a multi-billion dollar governmental monster. It has had a few million dollars of funding per year, and we feel that it is enough to keep us all busy just at the size it is right now.

We view ourselves fundamentally as a two-way channel of communication: between the Department (DOT) and the academic community. On the one hand, we ought to be flowing money--that's a channel--to the universities to under-

take the kinds of research I have been talking about. And, we ought to be letting the university community know what are the needs in transportation as perceived by the professionals with DOT. On the other hand--the channel of communication back in, we ought to be representing the academic community within DOT and bringing to the professionals within the Department who are responsible for policy-making, the kinds of research and results that are becoming available from the work of people like Dr. Roosevelt Steptoe. We take this responsibility very seriously--the two-way channel. That is where we in the office spend all of our energy.

There is one other thing that we do that we think is important. We have in our office a minority University program. We initiated this about a year and a half ago. There is one person, more than anyone else in the Department of Transportation, who has been instrumental in bringing the minority Universities into the fold and helping to make them competitive. This is not a social give-a-way program. I am talking about being actually competitive with the big-time universities so that they can win proposals on their own merit, such as Naomi W. Lede' did, to undertake research and sponsor state-of-the-art conferences. The one man in the office who has been instrumental in furthering the development of this program; who is fantastically energetic and committed to the program is Wilbur Williams. He has, more than anyone else, gotten the minority program going.

When we act as a channel of communication, and when we develop the data base, when we study the problems, models, and causalities, one thing we have to make sure we are doing is that we are as correct as we possibly can be.

Now I would not like to leave you on such a somber and serious note. I would like to share another anecdote with you, except this one is true.

This is a story about the early days of the space program. Before people were put into rockets and shot off into space, they were very much concerned about the effects on the human body of high acceleration and deceleration. So, an animal test was undertaken. About 20 years ago some of you may remember seeing in Newsreels and on TV pictures of sleds going at high speed on the ground, with rockets behind them and chimpanzees' in the sleds. Well, so the story goes, and I am sure that it is true, one of their sleds with a chimp in it was on a mesa in the west. The idea was that they would get this rocket going on the track up to high speed and they they would push an eject button so that the seat and the chimpanzee would go up in the air and a parachute would open and fall on the bottom side of the mesa and then they would collect the chimpanzee and debrief him. One chimpanzee they put on the sled with his helmet and instruments, was handed a banana just before they closed the cockpit canopy. Then, they hit the rocket button and started him down the tract, and then pushed the eject button. The seat went up in the air and with arms and legs flailing the monkey was parachuted onto the bottom of the mesa. A group of men in white lab coats went running up to the chimpanzee, and the first thing they did to calm him down was to hand him a banana. He looked at that banana for a second and threw it away as far as he could. They claim they have pictures of this incident.

Now, when we start studying problems of what causes what; of what models we should be using to understand transportation planning and transit problems, we must be very careful not to throw away the wrong banana.

I think the kind of conference you are holding here now; the kind of research you are talking about--the papers you are presenting--will act as a catalyst for the future development of policy statements. I believe it will influence change, and will contribute to planning knowledge at the local as

well as national level. I congratulate you on an excellent conference.

Thank you!



Dr. Michael J. Rabins, director of the Office of University Research at DOT, delivers an address at a Dinner Meeting.



Harris County Judge & Mrs. Jon Lindsay attended the dinner meeting. They are talking with Phillip Wilson and Bill McClure of the Texas Department of Highways and Public Transportation.



Regional and National government officials attended the Dinner Meeting. Glen Ford, Regional Director of the Urban Mass Transportation Authority talks with Carole Keck of the New York State Department of Transportation and Dr. Robert Gallamore, associate administrator for Transportation Planning, UMTA, Washington, D.C.



Dr. Rabins, director, Office of University Research in DOT confers with Dr. Granville Sawyer, President of Texas Southern University (Houston, Texas).

Thursday, March 3, 1977

GENERAL ASSEMBLY

THEME: PLANNING AND IMPLEMENTING POLICIES AND PROGRAMS
(A FUNCTIONAL FOCUS)

Presiding: Phillip Wilson

Greetings: Henry Dittman(For County Judge Jon Lindsay)

Keynote Speakers: Glen Ford, Regional Director
Urban Mass Transportation Administration
Fort Worth, Texas

Robert E. Gallamore, Associate Administrator
for Transportation Planning
Urban Mass Transportation Administration
Washington, D. C.

Linda Cherrington, Assistant Administrator
Public Transportation
City of Houston

Carole Keck, Planning Division
New York State Department of Transportation

E. C. Powell, Chairman
Department of Sociology
Texas Southern University
Houston, Texas

C. Howard McCann, Planning Engineer
Department of Civil Engineering
Texas A & M University
College Station, Texas

Robert E. Paaswell
Office of University Reserach
U. S. Department of Transportation
Washington, D. C.

HENRY DITTMAN: Thank you. The Judge says come out to say greetings.
Well, Greetings. But I as an Aggie, say, Howdy. Wait a minute now, you are

supposed to be real alert. I learned to say "Howdy" when I went to A & M in 1935. That was the first thing they told me. When you get on that campus boy, you introduce yourself and shake hands and say Howdy, and don't forget your name and don't forget theirs, or you will get it spelled out for you. Well I was real happy and showed my appreciation and enjoyed saying Howdy to everybody. Everybody said howdy to you and made you feel at home. Let'd do it again! Howdy! (Audience responded "Howdy!"). That's not very good. Let's do it one more time, Howdy! (Audience responded Howdy!). That's better. That's great!

I want to make a couple of comments about transportation. The County Judge is interested in the guy with the blue collar, white collar, and the guy without a collar. And the county has some great problems. This morning we are going to have the attention of people who are on the street and talking to him about it. One lady broke an axel out there. Another lost four hubcaps in a hole. Another guy had to have a wrecker to get his Volkswagen out of a hole. The streets and the roads in the county need an awful lot of work. That's what they plan on doing. The bond money is slowly going. Some of us are hollering about not getting enough money from the State. We should and we need more and more help. Many of you who ride the freeways, coming in on Gulf Freeway or coming in on I-10 to Houston know exactly what I mean. It's rubble. It is really something horrible. Coming in during the morning you might have an accident and traffic will be backed up for three miles. Some of you might see the people going out in the mornings to Baytown, one of the largest areas of industrial expansion in the country. We are paying a lot of tax money and we ought to be getting our share back. There's

only one way to handle that thing - and that is to talk up about it and get people to help us. We had better learn to talk. We had better be contacting a lot of people. We better voice our comments about what's happening right now in the State Legislature and the Senate. House Bill Number 3 is bogged down. Now, I don't care if it is political reasons or not. I am not a politician but a taxpayer. I want them to get off of dead center. Now the only way that you can get them to get off of dead center is that each and every one of you contact your legislature and legislators, representatives, your company presidents and let them know up there that we want some action. We want some decent highways, and its going to continue to deteriorate with each rain and freeze, and all you are going to get out of it is more excuses. The message from the County Judge's office is let's get off dead center. Let's contact these gentlemen and ask them not to quibble anymore, worrying about who's going to get the big part of the fine. All we in Harris County want is our share of our tax dollar that is going to Austin. We don't care about them getting pay raises or anybody else. And another thing, we heard the General say the other night that we had better stop worrying about what kind of help that we can get from the Federal government, because the federal bureaucracy is bogging you down in more and more reasons why you have to ask more and more people how you can do something and less and less action and more input that amounts to nothing. So from the County Judge, Jon Lindsay, and he's a hell of a fine guy, despite the fact that he's an ex Aggie. Let's get behind those people down there and let's let everybody know that we want our fair share, that we want good highways in this part of the state, we'd like to have them all over the state. We're not being selfish, we're just being frank.

We want our share in Harris County. So help your county commissioners. Greetings from the Judge's office. So one more time, "Howdy." (Audience responded "Howdy"). Thank you!

PHILLIP WILSON: Thank you, Colonel, and thank you for the words on House Bill 3. We need all the help that we can get, and you need all the help you can get.

If you will note in your program, the theme this morning is "Planning and Implementing Policies and Programs (A Functional Focus)." I think that yesterday the same theme ran throughout most of the presentations. Rather than just plan you've got to also implement, you've got to create something from what you have sketched. I recall an anecdote about three individuals who were ship-wrecked on a deserted island. One was an engineer, one was an architect, and one was a planner. They got to casting around and inventoried the supplies that they had managed to get on shore with and they found that they had plenty of matches, a few clothes, one can of beans and nothing else. They got to meditating about how in the world they could open this can of beans and use it for their first nourishment on the island, while they look for something else to eat. The engineer, of course being a forthright and no nonsense type of individual said, well, we will build a fire and we will put that can of beans on the middle of the fire and when it heats up the pressure inside gets to be unbearable, then it will split the can and blow the beans out. The three of them thought about that for a while and the architect said that's great we can do that but we will lose all the beans. They will all go out into the sand and we will have to sift them and pick them out of the sand. As an architect, I think that I can design from some of these palm fronds and some of the

branches a covering over the fireplace so that whenever the can blows up we can wipe all of the beans off of the inside of the covering and then we can eat them that way. So they thought about that for a while. Finally, they turned to the planner and said what would you suggest? Well, the first thing that I would do is that I would assume a can opener. (laughter)

So, with that introduction, I would like to bring up Glen Ford to tell us what he is going to assume (laughter). Our next gentleman up here at the roster is not the well-known movie actor Glen Ford, he is the well-known and renown man who gives money to needy state agencies and public transit companies. He is the Regional Director for the Urban Mass Transportation Administration in Fort Worth. He used to be the Regional Chief but I think that he got his title changed. Glen is a good man. I don't have a lot of sophisticated information to give you on Glen. He worked with the Texas Highway Department for many years and then dropped out and became very successful working with the federal government. Every now and then when we get out the flag and wave it at him and appeal to his sentimentality to try to talk him out of either a little more money or try to convince him that what we want to do is maybe the right way after all. He is a very easy individual to work with. I know that most of you have worked with Glen. I know that we are lucky to have him in Texas. Without any further ado, I will give you Glen Ford, Regional Director from UMTA, Glen. (Applause)

GLEN FORD: Howdy! I was reminded of Howdy Week. And those of you who have been there know what it is like. And there was a saying, Bill, I think you probably had something similar out there in Mexico. But we hesitate to cogitate for fear of deviation from the true facts of

recitation, Sir. And those of us who did deviate were often brought back into line at the school.

It is my pleasure to introduce our Associate Administrator for Transportation Planning to you. But before I do, not usually passing any opportunity to make a little plug for UMTA, I want to take an opportunity here to say to each of you that I feel you are to be commended for being interested enough in the overall transportation issues in your particular area to come here and participate in this forum, to get ideas and to exchange ideas that will assist you in your further considerations of local transportation issues. It sort of reminds me of the story that some of you may have heard me tell before. Of the chicken and the hog, who wanted to do something nice for the farmer on his birthday. The chicken suggested that they prepare for him a breakfast of ham and eggs. The hog's response was that it showed definite interest on the part of the chicken but total commitment for him. Now, some of us are interested in transportation issues and some of us have commitments to get involved with positive results to make mobility a realization for our strangled and strangling transportation system. I wouldn't say for sure that Bob in his involvement is a total situation as the hog in our story might be, but for a moment let's take a look at his commitment to transportation. First, he had a good start, coming from Nebraska. Bob, I might say that I had the pleasure last year of introducing to this forum your good friend and former governor, Norbert Tiemann. This may indicate that Nebraska folks are pretty well accepted here with us. So we are glad to have you from that area. Bob attended Wesleyan University, and then Harvard University obtaining his doctorate degree from Harvard in 1968.

He indicated an interest in transportation during his Harvard time by virtue of his dissertation on railroad mergers. He has since occupied several positions within the Department (DOT) and has written several articles that have been published dealing with transportation issues. One of the things that I think you ought to know about Bob is that he not only writes about railroads but he actually operates trains, presumably to test his theories. These are model trains, of course. Maybe we can get him to begin to operate model buses and test some more theories. Bob is responsible for the statutorily established urban transportation planning process which is prerequisite to every UMTA capital and/or operating ground. Without further ado, I would like to present to you Dr. Bob Gallamore. (Applause)



Dr. Ronald W. Holder of Texas A&M University, Tom Niskala of HOUTRAN, and G. Sadler Bridges of Texas A&M University wait for opening of Conference for second day.

Dr. Gallamore of UMTA delivered the keynote address.

REGULATIONS ISSUED JOINTLY BY UMTA AND FHWA
by
Robert E. Gallamore
Associate Administrator for Transportation Planning
Urban Mass Transportation Administration

I've been asked to speak on the general subject of "The Urban Mass Transportation and Federal Highway Administration's Joint Planning Regulations", and their role in strengthening planning and planning organizations primarily for the benefit of low-income groups. This is a tough assignment.

In the first place, the regulations are complex. They are designed to achieve diverse objectives in what we all know is a highly charged environment. There are multiple federal, state and local agencies involved, each with different viewpoints. There are highway and transit interests that are sometimes competitive. There are differences between planners and operators, and there are differences between attempts to discover what unmet transportation needs exist vs. attempts to deal optimally with existing services.

Secondly, we lack some crucial base information on transit socio-economic impacts that is useful in discovering the right policies and planning our program more adequately. I would say that there are five major gaps in our information base, and I would like to list those at the outset so that you will hopefully understand better how difficult it is for me to address this subject.

- (1) Who are the elderly and the handicapped and what are their transportation needs?
- (2) What are the travel needs of minorities and persons with low incomes and what are the income redistributive effects of the transit program?

- (3) What are the best approaches to implementing transportation systems management requirements and are we getting all we can out of this policy?
- (4) What are the longer term relationships, investments and land use patterns?
- (5) What energy supplies will be available 20 to 30 years from now and what technologies will exist to reduce transportation energy consumption?

These five information gaps bear importantly on our discussions here today. My point is, if I knew the answer to these questions, I could more adequately address the subject at hand. I hope you aren't thinking that I really have those answers. What I would like to cover then, instead of just providing those answers quickly and easily, are the statutes, the underlying legislative basis for the Urban Mass Transportation Program, the regulations themselves--the joint planning regulations. Then, I would like to offer a few comments on planning for low income or transit dependent persons and conclude with some observations on where I think we are going.

With respect to the statutory base, there are four or five different provisions I think bear importantly on the topic we are discussing today. With respect to planning first, the Urban Mass Transportation Act requires that before UMTA may make grants for facilities or equipment, it must determine that the funds are necessary for carrying out a program of unified, coordinated, or efficiently coordinated transportation systems, as a part of a comprehensively planned development of an urban area. This is very complex language, but it comes home to roost in our certification findings--our planning evaluations.

Second, with respect to efficiency, one of the traditional purposes for the use of planning funds is improved operation of mass transportation

facilities and equipment. That is in Section 9 of the Act. In order to strengthen this requirement, Congress in 1974 authorized the Secretary to issue whatever regulations he deemed necessary, including requirements for improving the efficiency of transit service. The TSM requirement which I will talk about later is a direct outgrowth of this mandate.

Third, with respect to socio-economic impacts, both Sections 3 and 5 of the Act require a public hearing prior to the approval of a grant. In that hearing, the economic and social effects of projects are considered. Furthermore, Congress, in passing the National Mass Transportation Act of 1974, found that the termination of service or the continued increase in its cost to users is undesirable and may have a particularly serious adverse affect upon the welfare of a substantial number of lower income persons. Congress at the time, however, did not mandate a specific remedial action for this problem as it later did with the elderly and the handicapped.

The fourth area is the elderly and the handicapped. In 1970, Congress declared it to be the national policy that elderly and handicapped persons had the same rights as other persons to utilize mass transportation facilities and services, and called for special efforts to plan and design facilities and services to meet that objective.

In addition, Congress provided for grants and loans to be made to achieve this purpose, including grants to private, non-profit corporations and associations. This policy was incorporated into UMTA's elderly and handicapped regulations issued April 30, 1976. Congress also has mandated that rates charged to elderly and handicapped persons during non-peak hours will not exceed one-half of the rates generally applicable to people riding during the peak hour.

Fifth, non-discrimination. Title VI of the Civil Rights Act of 1964,

which was later incorporated into the Urban Mass Transportation Act, specifically provides that no persons be excluded on the grounds of race, color or national origin, from participation in, be denied the benefits of or be subjected to discrimination under any program which receives federal financial assistance. A later provision added sex discrimination to this prohibition.

Finally, urban development is an area in which you may not immediately see the relevance to low-income persons. But, I think many of us are concerned with the survival of our cities and hope to see persons of low-income or minority groups fully participating in any urban development activity that comes about as a result of the transit program.

Scattered throughout the mass transportation act is the requirement that any project funded under the program be necessary for a sound economic and desirable development of an area, and that plans for such projects be formulated with due considerations to their probable effect on future development. Congress later added a specific provision, commonly called the Young Amendment, which allows some anticipated grants and loans for the establishment of public or quasi-public agencies to assist urban development activities of that type.

So, in summary, the Urban Mass Transportation Act has various provisions and varying degrees of specificity that bear on the planning and operations of transit services for low-income persons.

I would like to come back to describe what the joint regulations are and what we are trying to accomplish with them. I think the approval and implementation of these regulations is the single most important urban transportation event of the 1970's. I think this is a particularly important subject to address in view of the commentary earlier about federal rules and regulations. You very kindly avoided the words "red tape".

The UMTA/FHWA Joint Regulations require that the metropolitan area planning process produce a number of elements. A good friend of mine, Marvin Mannheim of MIT has summarized these in a particularly useful way in a paper presented to the Transportation Research Board (TRB), and I'm going to follow Marvin's approach; he in turn has followed the regulations quite closely.

First is the transportation plan, which consists of the Transportation System Management element and a long-range element. A long-range plan identifies new transportation policies and transportation facilities or major changes to those facilities that meet long-range needs. The transportation plan is to be consistent with the area's comprehensive urban development plan and overall socio-economic environmental goals.

Second, the transportation system management element itself, commonly called TSM, provides for short-range transportation needs in urbanized areas by making efficient use of existing transportation resources and providing for the movement of people in an efficient manner. The TSM identifies traffic engineering, public transportation, regulatory, pricing, management, operational and other improvements to the existing system, not including major new investments.

Third, the regulations require the development of a transportation improvement program. I'll refer to that as a TIP, and the TIP will have an annual element, an AE. So, in the joint regulations you will have a TSM with some of its actions included in the TIP and AE. The TIP is a staged multi-year program of transportation improvements which are recommended for the system (TSM) and long-range elements of the transportation plan. The TIP covers the period of three, five or even more years. It identifies transportation improvements recommended for advancement during the program period. It indicates the area's priorities for these improvements. It groups

improvements of similar urgency and anticipated staging into an appropriate staging period. It estimates total cost and revenues for the program period, and includes a discussion of how improvements recommended from the long-range plan and TSM plan are put together in a recommended program. If there is a pothole problem on the local freeway, for example, the local area authorities would advance remedial actions, and hope to see them included in the transportation improvement plan. If those are proposed to be programmed within the coming year, they would be included in the annual element of the TIP, as part of the list of those improvement projects that are going to be implemented in the first year of the program.

The fourth general area is the planning document. The regulations require a unified planning work program and a prospectus. The prospectus establishes a multi-year framework for planning and improves a summary discussion of the important transportation issues facing the area. A general description of the status and anticipated accomplishments of the various planning activities and a description of the functional responsibilities of each agency that participates in the project is included. A unified planning work program describes the urban transportation and transportation-related planning activity anticipated to be undertaken within the next year or two. That unified planning work program is funded by a variety of sources including Section 9 planning funds from the Urban Mass Transportation Administration which Glen Ford (UMTA's Region VI Director) and I administer.

In addition to these particular requirements of the joint planning regulations, there are various other documents and procedures that relate to specific projects that UMTA will from time to time require. They are (1) the project application itself; (2) technical documents supporting the draft or final environmental impact statement, and (3) major transportation investments and alternatives analysis, and finally, a requirement of Title VI of the Civil Rights Act of 1964 to make a non-discrimination finding.

This last area deserves brief additional discussion. Revised procedures under the Title VI findings are now in preparation. These will focus on an areawide review at the TIP stage. In other words, when the local authorities are putting together their program of projects for the upcoming year, UMTA would like to make a Title VI determination at that point rather than on a project-by-project basis. The Department of Justice has only this past Decemeber issued revised regulations for administration of the Title VI requirement agency by agency. They have required in those new regulations a strengthening of the pre-award and post-award reviews. UMTA has begun changing its procedures to make sure that they are in full compliance with those regulations.

Well, why is all of this good, and good for you? I would put it this way. For the first time, local officials must bring together in one place all the competing transportation projects for an urbanized area. Some of these are highways, some transit, some are capital investments and others are operating grants. Some are broad, but thin in scope, and others are narrow but deep in scope. This allows for an area-wide review of priorities and trade-offs. It focuses citizens' comments and participation in determining priorities, and allows for a more meaningful review such as Civil Rights or special efforts for the elderly and the handicapped, or the adequacy of the TSM implementation. This is the culmination of an orderly planning process that is required by the statute. It is the missing link between planning and project implementation. Previously, there had been many efforts to plan activities which never saw fruition and many projects were fruitless without adequate planning. This is the link that pulls them together.

As I've said before, planning without implementation is a desert, but implementation without planning is a jungle. And neither one is a very good place to be. The really important thing is that the TIP process required by

the joint planning regulation is working. The extensive urban system study required by the Federal Highway Act of 1976 is carried out jointly by FHWA and UMTA. I have uncovered many problems, such as how do you define the MPO and its makeup? How do you set the goals of the institutional actors, the MPO, local mayors, state highway officials or state transportation department, the governor, and so on? And, there's the matter of the use of the funds under the Federal-Aid to Urban Systems Program. All of these things are discussed in detail in the urban system study. But what I would regard as the most important conclusion of that study is its reaffirmation of the joint planning regulation and the TIP process. The study found that the functions set forth in the regulations are being carried out responsibly by participants in the local planning process. Staff capability to carry out these activities is rarely an issue, and the distribution of the responsibility among the various actors usually reflects available expertise. It is working reasonably well.

Still there is much to be done. There is too much piecemeal planning development and piecemeal implementation, particularly with respect to TSM and the elderly and handicapped projects. Good trade-off studies are rare. Post-project monitoring is usually inadequate. Metropolitan planning organizations (MPO's), made up substantially of representatives of local elected officials charged with the endorsement of TIP, need to be strengthened. They need to be strengthened particularly in order to bridge the gap between planning and implementation.

More resources need to go into short-range planning, and special efforts with the elderly and the handicapped should be made.

Finally, the Urban Mass Transportation Administration and Federal Highway Department need to provide clearer guidance on the adequacy of planning and programming under these related regulations.

I would like now to make a few points on planning for transit dependent, low-income groups and specialized groups such as the elderly and the handicapped.

The joint planning regulations do not require explicit or separate treatment for the transit dependent, except for the elderly and the handicapped. Nevertheless, good planning requires the tailoring of transit services to demands, including the travel demands of persons who are captive of transit because of economic considerations. UMTA's planning reviews can and should assure that urbanized areas have considered the socio-economic factors in preparing the TIP.

I referred earlier to the data and methodological problem concerning service for the transit dependents. Demand instruments are needed for the design and evaluation of service changes and improvements. Without them, there is no basis for making trade-offs. How do we estimate the demands, realistically?

One useful approach would be to ask that transit planning include periodic mobility studies for areas of low automobile ownership or other ways of identifying low-income and minority groups that are being poorly serviced. Such studies would not have to be wide-ranging, extensive efforts. They would seek, however, to assure cost-effective transit service for realistic travel demands of low-income persons, while at the same time continuing their research activities to develop, prepare, and disseminate techniques that local planning groups can use.

In regard to the elderly and handicapped, we are about to list four or five items we think planning organizations ought to be carrying out. I mentioned that the 1970 act included special references to the elderly and handicapped. It specifically mandated special efforts to plan and design services for them. The guidelines we are about to send out include:

- (1) Activities to identify the elderly and the handicapped. This includes self-identification techniques specifically for those who are in wheelchairs or who are semi-ambulatory. We are asking that personal data questions be included in the unified work program to assist that aspect.
- (2) Activities to estimate the unmet transit needs or travel needs of the elderly and handicapped. Each unified work program should contain planning activities to determine what those needs are. That will be important later on when we monitor activities on behalf of the elderly and the handicapped.
- (3) Activities in support of a specific project evaluation. A trade-off study would determine whether we are using the best techniques and the best available procedures to provide services for this mandate. The project range evaluation studies would consider a range of alternatives, and the relationship of short-range activities to long-range plans. It should ensure that the existing services already provided by social agencies and private non-profit organizations are coordinated.

These activities would then be summarized into a comprehensive elderly and handicapped element or part of the region's plan specifically directed to service for the elderly and the handicapped.

The process ought to allow for consumer representation not only in self-identification techniques, but more specifically, the process of involvement of that group in the decisions made. It not only involves finding out who the elderly and the handicapped are, but also actively includes them in the decisions made on their behalf.

Coming back to the point about inadequate post-project monitoring or evaluation, we would like to see specific tasks included in the unified work program to assess the performance of the area in meeting the requirements for the elderly and handicapped.

In conclusion, I would like to reflect just for a moment on what I perceive as a major change in the basic orientation and rationale of the transit program. The Mass Transportation Program started out as a reaction to the "highway only" planning approach of the previous decades. Interstate highway programs were in place. The Highway Trust Fund with 90-10 financing for the interstate system was in place. Then along came an alternative transportation program, mass transit. At first, it was a capital investment program only, and discretionary as well as opposed to the Federal Highway Administration's allocation and entitlement approach. It was set up in a separate agency, UMTA, rather than in the Federal Highway Administration. UMTA's dealings were primarily with the local officials rather than state officials. As you well know, most of the highway program administration is carried on through state, rather than local agencies.

The sharp dichotomy between the two programs has begun to change, though, and there are a number of reasons for that. First, the institutional base of the transit program has shifted with the 1968 Intergovernmental Corporation Act. In general, this made the role for the metropolitan planning organizations more important and gave more visibility to area-wide governmental structures in general. In 1970, the Federal-Aid Urban System Highway Program (FAUS) came along, and it allowed for local project initiation in contrast to state project initiation.

In 1973, the Highway Act was changed in a rather dramatic way to permit local officials to withdraw Interstate highway segments and substitute transit

proposals for them. That gave additional flexibility at the local level. In 1975, the UMTA and FHWA planning regulations were issued jointly rather than separately. As I mentioned, I thought that was one of the significant accomplishments of the 1970's.

Finally, in 1976, the new Highway Act stated that highway, as well as transit projects, could be built with funds from the interstate withdrawal funds. So that provided even more flexibility at the local level.

All of these were institutional and legislative changes, but some things have been happening in the economic environment in which all of this takes place. The cost of transit construction has gone out of sight. The crushing burden of operating deficits as well as the capital investments of transit have been burgeoning; that's with bus systems as well as rail systems. UMTA has rediscovered that transit ridership is keyed importantly to the areas that transit serves. Our knowledge has been reinforced by such things as the BART (Bay Area Rapid Transit) impact study in the San Francisco area. Land use planning has finally begun to be taken more seriously, and we now see fruits from the comprehensive planning that has been going on for the last 15 or 20 years. We have better understanding of what happens in this interaction between land use and transportation investments. Environmental issues have awakened in this period. A number of people have come back from trips to Europe and have noticed the vital city environments that have been created around transportation systems in Europe.

What has come about is a shift in our focus and thinking from seeing transit as competitive to highways; instead, we are seeing both highways and transit as part of the cause, and potentially part of the cure for urban sprawl, center city decay, and the like. Transit and highway improvements, particularly

through the TSM activities, are now being seen as an antidote to sprawl and decay.

What will be the outcome of all of this? First, I think there will be further integration of UMTA and Federal Highway programs. A starting place is the institutional arrangement I've described today, which helps make transportation planning relevant to investment and implementation decisions.

Second, I think there will be a retention of the discretionary transit program in keeping with the fact that there still is much to be said for a compensatory transit program.

Third, there is encouraging progress in TSM and in planning and implementation for the elderly and handicapped through bus systems and so on. I think there will be further efforts to direct our planning funds into these shorter range efforts.

Fourth, efforts will be made to gain a better understanding of some of the questions I raised at the beginning of my talk, such as: What are the redistributive income effects of the transit program? What are the needs of the elderly and the handicapped and low-income groups? What are the important relationships between transportation planning and land uses?

I think the future is very bright indeed if we can continue to make the kind of progress that we have made in the last few years with respect to integrating transit and highway planning programs.

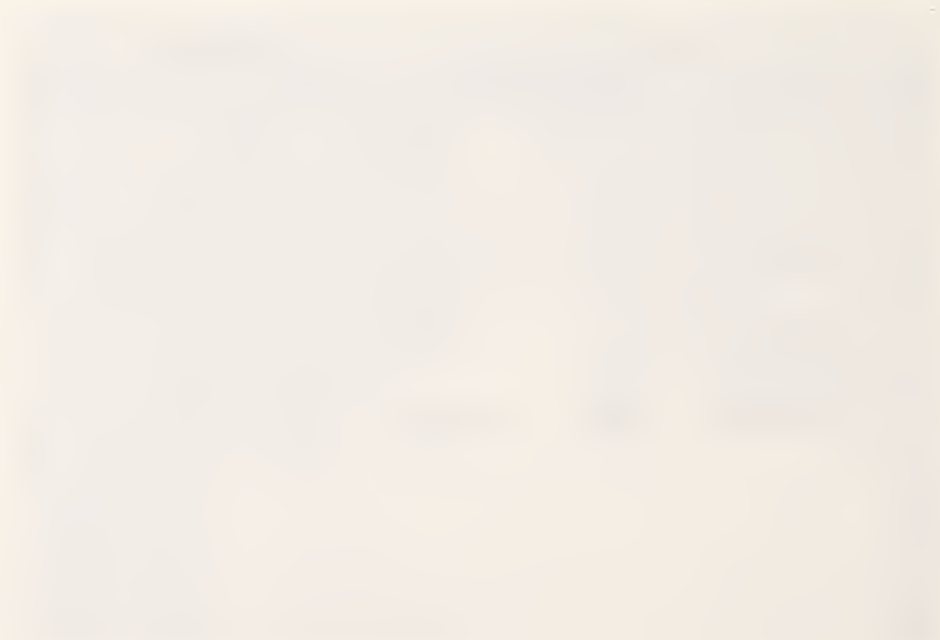
LINDA CHERRINGTON: Thank you. I was in San Francisco the last few days at an event particularly appropriate to this conference. I met with the Urban Consortium which consists of representatives from a group of cities from across the country. They were meeting to try to establish the most critical needs in the area of transportation for urban areas. The list was long, I think they had 282 possibilities for needs, though our task was to develop a list of approximately 10 of the most important needs. Of the top ten, three were directly related with our topic this morning. We discussed the improvement of communication and implementation of projects from the federal level down in transportation; and the speed of implementation and of interagency coordination. It's extremely gratifying to come back to Houston and realize that we are in fact taking some action. The very fact that we are here today discussing these types of projects indicates our recognition of the problem and the need to move. I think that Houston is especially critical because we are somewhat novices in this area. As you are all aware, the City of Houston only entered the arena of public transportation three years ago. The State only established the Department of Highways and Public Transportation two years ago. We have a great deal to do. The importance of cooperation and communication is critical, if we are to meet some of the tremendous needs of transportation in Houston. But, we are in a particularly appropriate position because we can learn a great deal from cities from across the country. Visiting the City of San Francisco gives us a chance to see the mass institutional problems that affect them because of the numbers of different agencies and jurisdictions. Houston is real fortunate to have an area-wide ability to coordinate on the county and the regional level as well as the state.

I think that it is important that we have the opportunity today to hear of an instance in which another community, New York, has actually handled interagency cooperation and has been successful. Carol Keck commented to me just before the meeting this morning that it was with great pleasure that she could comment on how the issues addressed in this conference were handled in New York and have been handled successfully. Carol Keck is a Research Analyst with the Planning Division of the New York Department of Transportation. She has had some six years of experience in dealing with the number of issues which were addressed this morning. Particularly with emphasis on state-wide planning coordination for transportation and emphasis on special services such as urban handicaps and social services. With the array of federal guidelines and programs put before us by Mr. Gallamore this morning somewhat in the great fear of the great federal reorganization that we all now operate, I think that it is important that we address ourselves to state and local coordination, and, hopefully we can learn something from New York. Let me introduce Carol Keck at this time. (Applause)



Linda Cherrington, Assistant director of office of Public Transportation, City of Houston, introduces Carole Keck of New York State Highway Department.

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THE NEED FOR INTERAGENCY COOPERATION
IN MEETING TRANSPORTATION PLANNING NEEDS
IN THE FUTURE

by
Carol A. Keck
New York State Department of Transportation

A broad, nearly all-encompassing concept -- interagency cooperation in meeting transportation planning needs in the future -- can, and must, be addressed at a variety of levels in the planning process before its full impact on the transportation disadvantaged can be fully realized. Thus, in general terms, the '3C' planning process itself requires such cooperation, as does the development of specific products such as Transportation Improvement Programs (TIP's), Transit Development Programs (TDP's), and Transportation Systems Management Elements (TSME's). To address existing planning requirements specifically referencing the elderly and handicapped portions of our population, cooperation is required among an even broader spectrum of groups, agencies and individuals. As the need for -- and pressure for -- addressing other transportation disadvantaged groups increases, the need for broader and more intense interagency cooperation will similarly increase.

The remainder of this paper will discuss some concerns with establishing and continuing interagency cooperation in a variety of transportation planning activities -- principally public transit -- which currently face us, as well as what those issues imply for the future. While not mutually-exclusive areas for discussion, the topics to be focused on will be: (1) Metropolitan Planning Organizations (MPO's); (2) Product Preparation -- TIP's, TDP's, TSME's; (3) Existing Elderly and Handicapped regulations; and (4) Potential needs for agency interaction.

Metropolitan Planning Organizations

The joint regulations of FHWA and UMTA require each urbanized area to establish a "forum for cooperative decisionmaking by principal elected officials of general purpose local government." This organization -- the MPO -- is specifically required to establish formal cooperative working agreements with the State, the areawide A95 agency (if different from the MPO), and regional public transportation agencies. While paper agreements do not assure that such cooperation actually exists, the Federal certification process results in stoppage of Federal aid payments should the planning process be found to be deficient.

In New York State this process has worked -- extremely well in most cases. The establishment of a common meeting ground for local, regional and state level representatives has resulted in significant cooperative efforts, problem identification and solution. The MPO has provided a forum for exchanging information, views and discussion of issues which, over time, has proved to be a valuable problem-solving resource. An example from our New York experiences will exemplify this: In the New York City metropolitan area the MPO was used as an important step in the analysis of New York State's own public transit operating assistance program. While various matters -- such as the existence of commuter rail and ferry operations -- are unique to the New York City area, others, such as a combination of publicly and privately owned and operated services, and multi-jurisdictional problems were common to the remainder of the State. Thus, as the MPO discussed these issues (and their relationship to the State's programs and policies), a basis for the development of a statewide approach to them was formed. Among the recommendations to come from these efforts were those to eliminate discrimination between public and private transit operations in the allocation of State funds; to devise allocation mechanism less dependent upon operating deficits than other criteria; to encourage

and/or permit local or regional decisions on the appropriate use of State funds. These resultant recommendations were discussed in other urbanized areas having used the New York City area to focus the issues of concern. Thus, the MPO can, and in many cases does, serve as a forum for statewide as well as regional issues.

As the need and desirability for locally-based transportation planning expertise increased, the MPO was chosen to focus these activities and central planning staffs were -- or are being -- established. Where an MPO has developed out of a previously recognized agency, this increased the availability of funds to them and placed additional responsibilities upon them. In other areas, however, where no regionally-representative group existed, the MPO had developed as an ad hoc group which met periodically to discuss issues and reach regional policy agreement. In these areas, the development of MPO central planning staffs has met with varying degrees of 'success.' Thus, active support and interest in the Niagara Frontier (Buffalo area) have led to the development of a broad and strong capability for completing necessary planning activities in that area. Conversely, in the Genesee-Finger Lakes Region (Rochester area), widely divergent views on many transportation, political and economic issues have led MPO members to take varying stands on the establishment and support of a central planning staff. In terms of impact, the experiences in these two instances have caused a large amount of effort to be expended in other areas of the State in order to assure that a feasible working arrangement is arrived at. The need for specific agreements among MPO members to support a local central planning staff or for a legally-recognized agency to be the MPO has become very apparent if long-range transportation planning is to be regionally based.

Product Preparation

The preparation of long and short range regional transportation plans

and programs required by current Federal regulations has begun to highlight the need for interagency coordination more than any other activity to date. When pressed to document regional transportation plans -- and particularly to relate them to anticipated funding -- potential conflicts of regional goals and objectives readily become apparent. Thus, while regional agreements could often be reached on large numbers of specific projects, the determination of priorities when faced with limited financial resources was not always an easy task. In some cases the issues would only be resolved by Federal actions on proposed projects; in others a multi-tiered priority was developed using different funding assumptions.

As funding levels and/or restrictions are changed in the future, the need for a forum in which to make similar priority decisions will become more important. If, for example, categorical programs are eliminated in favor of block grants, local priorities may experience a shift: long-range priorities made now can only be based on current assumptions and circumstances.

But even though long range programs had been worked out, this did not mean that short range activities were being advanced to foster those long range goals. Thus, in the development of TSME's there was some recognition of the fact that current, low-capital intensive efforts could alleviate pressures for long range capital projects. In many cases, however, TSME's reflected only current activities with little recognition of similar future activities or their impacts. It would appear that a reevaluation of both the short and long range programming now completed in each urbanized region, and integration of them, will provide valuable results in terms of identifying potential conflicts and/or supportive activities. In some cases this reevaluation will identify capital projects whose priority may be changed when the impact of various TSM activities are analyzed; in

other cases long-range issues may be raised when short-range activities are not found to address specific objectives.

In non-urbanized areas, where TDP development follows a somewhat less-formal process, similar issues can be raised. Often prepared to justify specific desires, TDP's may not adequately recognize alternative short or long range solutions to the problems at hand. Broad involvement in TDP preparation is a partial answer to this, but increased expertise made available in the preparation of these plans/programs is likely to provide incentive to assess alternative transportation arrangements. Often concerned groups at the local level, while interested and knowledgeable about local circumstances, do not have the specific transportation expertise necessary to assure that a coordinated/comprehensive approach is taken.

The initiation of a program to fund state-level activities through the UMTA Section 9 program has helped to alleviate the need for local transportation planning expertise outside urbanized areas. It has also provided the States with a great deal of latitude in the types of planning activities undertaken so that broad issues or specific-area transportation problems can be addressed. The willingness of UMTA to accept the States as coordinators and sources of administrative and technical expertise in these areas may grow into a recognition that they may play a similar role in the larger urban and urbanized areas as well.

In both urbanized and non-urbanized areas, product preparation required for Federal funding has thus provided some stimulus for interagency cooperation. In the future it is likely that issues which have been highlighted by these early efforts will provide an even greater impetus to cooperative activities. In all areas these efforts have pointed out the wide variety and large amounts of transportation facilities and resources currently available. If nothing else, a comprehensive look at regional transportation has shown that coordination of activities has a potential

for significant savings of resources and expansion of services. Similarly, coordination at the State level is important in any attempt to maximize the benefits to be accrued from planning activities. The elimination of duplicative efforts and assuring the transferability of results among areas can only be accomplished through a coordinated process above the local/regional level.

Preliminary efforts relative to specialized transportation have stressed this possibility and have resulted in additional requirements for coordination of specialized transportation needs.

Elderly and Handicapped Regulations

The joint UMTA/FHWA regulations require the urban transportation planning process to include special efforts to plan public mass transportation facilities and services that can effectively be utilized by elderly and handicapped persons. The details of the intent of this requirement show quite clearly who must be involved in this planning effort:

"...it is presumed to be unlikely that effective project development to meet the needs of these users can occur without the assistance and cooperation of such (elderly and handicapped) persons, including wheel chair users and semiambulatory persons, and of public and private health and welfare agencies and handicapped consumer groups."

While assuring that all affected parties are involved is in many cases unfeasible, assuring representation from these groups is not. Unfortunately, past transportation planning efforts had seldom, if ever, attracted the attention or comment of these groups, and thus a great deal of effort has been, and will continue to be, spent in providing these groups with the basic information and expertise necessary to be effective participants in the planning process. At the statewide level these efforts can be directed at a relatively small number of persons who represent a broad range of concerns. One such group recently established by the New

York State Department of Transportation, for example, has some 30 members, representing affected State programs, consumer groups, public transportation operators, taxi operators and the like. The urban planning process, however, requires that similar groups, including local and regional agencies, be established in each area seeking Federal funding.

The process, then, requires interaction at a local level of a variety of public transportation planners, providers and users. In fulfilling their specific charge to assure that transportation for elderly and handicapped persons is available, these groups are also charged to evaluate alternative means of assuring that those services are available. As resources -- primarily financial but facilities and personnel as well -- to provide specialized transportation are not unlimited, it very soon became apparent that the local agency interaction promoted through the planning process could be focused on what appears to be an extremely 'good' alternative: make better use of existing transportation through coordination/integration. A variety of activities -- not all at the local/regional level -- have thus been undertaken to identify the potential such schemes have in (1) meeting specialized transportation needs; (2) reducing or keeping to a minimum, the cost of such services; and (3) maintaining the viability of other existing public transportation services. Some of the works which have received considerable notice -- Lansing, Michigan; the State of Massachusetts; North Carolina Agricultural and Technical Institute; Naugatuck Valley, Connecticut; Delaware's DAST; and New York State's consolidation feasibility study -- continue to point out the potential for making better use of existing specialized transportation resources although significant barriers exist which prevent maximizing that potential. These same efforts, however, also point out that while there is some economy of scale to be gained, there is also a point of diminishing returns which can be quickly reached by expanding service expectations too quickly or too far.

Potential Needs for Agency Interaction

Existing regulations will require that reasonable progress in implementing previously programmed projects be demonstrated after September 30, 1977. This, in nearly all cases, will mean that some steps in coordinating/integrating/consolidating specialized transportation for elderly and handicapped persons will have to have been taken. The first step in this process is, of necessity, an inventory of existing services, usage and unmet needs. Strangely enough, a large number of areas have not looked beyond the inventory stage. Those that have, and they are relatively few if New York's experience can be used as a basis for such a judgment, have discovered a complex, time-consuming process ahead. Detailed data on all services; careful analysis of regulatory and legal restrictions; information on funding sources, restrictions and amounts; and lengthy discussions among service providers, users and supporters are the prime activities. The principal barriers to actually reaching an implementable coordinated/integrated/consolidated alternative, however, may not be identified until specific solutions are proposed and the impact of the "human factor" in the process can be seen. The unwillingness (rather than the inability) of one group to service another category of rider; the unwillingness (not the inability) of a group of riders to share a vehicle with another group; the unwillingness (not the inability) of a financial supporter to support services to a particular population group: These are the real barriers to effective coordination of transportation services. Laws and regulations can be changed in a matter of weeks (hours or even minutes if the need is critical); attitudes and habits take much longer, and are among those things most difficult to change. What needs to happen, as it has in Durango, Colorado; in the Naugatuck Valley; in Delaware; is for agencies to become aware of the benefits which can be gained from increased interaction. With considerable luck, and a lot of public and governmental pressure, those benefits can be

pointed out to a significant number of groups so that actual experiences will provide 'proof' of those benefits. It is gratifying to note that the U.S. Department of Health, Education and Welfare (HEW), so often shown to be among the proliferators of specialized transportation services through its myriad of programs, has taken the initiative in encouraging the coordination/integration of its programs supplying or using specialized services. The Office of Human Development's (OHD) demonstration program will test, in five areas, the potential of consolidated funding of specialized transportation services. To assure that all possible alternatives are considered, HEW has relaxed or removed all restrictions on funds provided for transportation purposes to those agencies in the program.

Of course, the OHD program is not the only attempt to test the benefits of consolidation/integration. Interagency cooperation has resulted in a wide variety of demonstrations or proposals for coordinated systems of specialized transportation. In the New York City area alone, there are two such proposals currently being considered for funding with four others already underway.

The experiences with elderly and handicapped transportation needs should provide a firm foundation for addressing other needs -- in urbanized, small urban and rural areas -- if full advantage is taken of the transferability of the process and results. This is to say that the existing elderly and handicapped regulations cover regular transit systems, the development of new ones to meet specific needs, and the coordination/integration of existing transportation provided by human service agencies. To address each of these areas, the planning process must, of necessity, include discussions and cooperative efforts among agencies, groups and individuals. If similar activities are undertaken in small urban and rural areas and are increased in urbanized areas, then long-range, as well as short-range, programs and plans for public transportation and highways can assure that

effective, efficient use is made of available resources.



Participants during coffee break.



Participants during coffee break.

PHILLIP WILSON: We are privileged to have with us this morning two speakers who will conclude the morning session. The gentleman who generally follows has an expertise that I would often times have something nasty to say about, but I found that anyone that knows anything about sociology that I say something bad about always has something bad to say about me. Not knowing Dr. Powell, I'm sure that he would be more polite than I would. However, I will constrain myself. I used to have an expression that if all Sociologists were laid end to end that it would be a good thing. So, I will let him meditate on that for a minute and I know that he will come up here and have something unkind to say about planning engineers. But in all seriousness, I think that we are very privileged to have with us this morning, Dr. E. C. Powell, who is the Chairman of the Department of Sociology at Texas Southern University. Dr. Powell draws a double assignment. He will be introducing both of the next two speakers on the program this morning. So, I give you Dr. Powell.
(Applause)

E. C. POWELL: Sociology is often confused. We don't often know where we are going because we do not usually plan very well. Some of us plan very well but we don't realize the nature of the changing environment and adjust our plans to suite the changing nature of the goals and missions of service. We are proud to be a part of this conference and to cooperate with the Urban Resources Center in helping to interface and improve the workings of our basic institutions. Planning in the area of transportation, in fact, planning in general is a rather old task of sociology. For a long time no one would listen. But now they are listening. One of the

things about a university is that we are generally wrapped up in departments that are too narrow in their perspectives. So it's about time that we reorganize our departments or redefine our roles as areas of study so that we more closely match the needs of our society. We are trying to do that at Texas Southern University. So Sociology is quite different. It's a long way from the just human relations angle that it used to be.

We are happy to have with us today and to share with you, some of the vital topics to be discussed. I won't take very much time on introductions because they are printed in your packet. What I would like to say is that C. Howard McCann is a Texan who is important in Texas, and around the world from the Middle East to the Far East. We get to be very well known for what we are doing including building new cities in Arabia and things of that nature. He is an instructor in the Texas A & M University's Civil Engineering Department, and has a very broad background, and a number of teaching experiences. And like most individuals, I think he has taken his major area as a focal point from which to operate and not a restriction as to what his activities might be. So he is involved in a wide range of activities including urban planning, research, and engineering education. So let's hear C. Howard McCann. (Applause)

OPTIONS FOR TRANSPORTATION SERVICE UTILIZATION
(With emphasis on Carsharing and Alternative Modes of Transportation)
by
C. Howard McCann
Planning Engineer
Department of Civil Engineering
Texas A&M University

I would like to say that I am a native of Texas, as a matter of fact, I am a native of Houston in the days before air-conditioning, which kind of makes me a veteran here. I would like to thank Dr. Powell and Naomi on behalf of Texas A&M. It is our pleasure to be here today. I would like to share a few thoughts on the transportation alternatives for the transportation disadvantaged and a few comments on transportation planning.

When I address these, I feel like Lyndon Johnson's comment was very appropriate. Lyndon Johnson said "sometimes it is much more difficult to know what is right than to do what is right". I think we really have a problem in knowing what is right in our field today. I think this implies that you must take your chances in a presentation like this, so I am taking mine. I feel like we are in a new era. We are in an era of energy shortages and research shortages. We are in an era of doing more and more with less and less. I feel that there are no easy answers or no overall easy solutions. I think that our success will come to be measured on two factors: (1) how well we involve the American people in our process and (2) how well we involve American private enterprise in our process. With that I would like to switch over to the slide presentation.

SLIDE PRESENTATION

Typically, the journey to work involves leaving your neighborhood, going down the street, going on to another hierarchy of streets and finally coming to a downtown area such as Houston. I think there are two things to notice about our system of automobiles and highways: (1) when we talk about what the government can do, we have to realize that government expenditures in this area are maybe ten percent of the total, most of this is in the private sector or the individual guy buying his car. The government highway program accounts for about ten percent of the total expenditures on this system. (2) If this is the American Dream, like I believe it is, riding the bus to work is not part of that dream. I think if we are really going to make transit be a successful thing, we will have to operate something with the accessibility that we have here today. There are several ways that this can be done. One of these is carpooling. Carpooling works very well from the standpoint of the employer. It is obvious that the advantages of taking the cars off the roads are many. Our car occupancy is very low, as illustrated in this chart, and we have many more seats going by on the road than we have people occupying them. You have anything from a manual matching for a carpool such as this to a very sophisticated data processing match. I would like to add that the City of Houston has a very excellent capability in all of these. If this one works, a man just calls in and finds out the people and where they live and they send you a carpool.

The IRS operation in Austin is a good example of what a group can do. I would like to also add that you do not really need to be involved in the planning process in order for this to work. The IRS did theirs entirely independent of everyone. They had a parking problem. They had seasonal employees that only come in during a certain time of the year. IRS was really going to have to spend a lot of money for parking lots. Rather than do this,

they said, "why don't we have an employer carpool. We will give the employees priority places to park right outside the entrance." So they did. Many people liked the idea. In fact, it worked so well that they thought it was stupid that a lot of people worked in southwest Austin and lived in north Austin. The idea of a park and ride bus system was developed from this idea. The bus came from IRS to a north Austin theatre parking lot. The theatre, of course being a private enterprise operation was not using their parking lot during the daylight hours. Therefore, the employees could park their cars at the theatre during the day and ride the IRS bus to work. Again, a good transportation system.

I think that van pooling can be looked at as the next hierarchy of what you can do. Van pooling was not initiated by the federal government. Van pooling was initiated in the early days of the 1920's for use in many private enterprise sectors. Private enterprise has to be congratulated again with this success. Van pooling is not generally for short range travel, we are talking about long range travel.

These are only some of the examples involved in "Options for Transportation Service Utilization" (With emphasis on Carsharing and Alternative Modes of Transportation).

(Concludes with Slide Presentation)

E. C. POWELL: This is what I choose to call "thinktactics." I combined two words, 'think' and 'action.' I will use his resume as a kind of model for our students who have to go through a process of mastering social technical processes, provide a schematic specialization, and then integrate its practical experience so that they can produce, therefore, providing thought and action.

Bob has had varied experiences. His home base is civil engineering. His home base for occupation is at the State University of Buffalo in New York. He is a faculty member on leave now in the Office of University Research. All of this is in your brochure. I wish that I had time to go over all of the activities that he manages to find time to get involved with. All of them seem to point to the fact that he has moved past civil engineering-- as making beautiful drawing of shamrocks or clovers from Ireland to not just beautiful things but things with a purpose. He has combined social considerations, so he knows what transportation systems are for, to help make society more effective. So, I would like to hear what he has to say.

(Applause)

COMMUNITY ORGANIZATIONAL TECHNIQUES AND PROVISIONS FOR
TRANSPORTATION SERVICE DELIVERY

(Introduction to the film: Not Just a Ride)

by

Robert E. Paaswell
Office of University Research
U.S. Department of Transportation
Washington, D.C.

Thank you, Dr. Powell. The first thing I want to say is this is the first time I have been to Houston and I have been having a terrific time since I have been here. It's a great place; especially being out of Buffalo for a year, it beats that too. I'm not going to read a long paper, though I'm sure you'd really like to hear a long paper read at this point in the morning. I'm going to tell a story, but it is a true story, it's a success story and it's a story with a little data thrown in; story with a little bit of people thrown in; a story with a little bit of community involvement thrown in; it's a story of a successful application of a lot of things we've been talking about and hearing about for the past few days. How can you find out what community values are? How can you find out what problems face a particular aspect of a community-- and this particular aspect and the group we are talking about of course--is a disadvantaged group. What kinds of solutions can we pose for them? How can we actually implement the solutions, this case of transportation solution to a problem that we've seen? And having implemented the solution what successes does that solution emit with? I am going to try to make my remarks as brief as possible, because what we've done is made a movie and to sort of telescope all things that I have first said.

We have made a movie of a free Dial-a-Bus service for the elderly in the model neighborhood in what was then the model neighborhood area in Buffalo, New York. The movie only runs 16 minutes and I think the movie has to be put

in a certain kind of context. You can look at the movie, and what you will get without knowing the context is a beautiful story of beautiful people who really have a feeling for their area, and even have a warm feeling for Buffalo, New York. You need warm feelings for Buffalo, because its cold there. But I really like to put the thing in more of a context because we are dealing with issues of planning and we want to know what we can do in a given area. I guess when we start out mentioning the Model Cities and the Model neighborhood program, we have to mention the name Lyndon Johnson, who I'm sure is well known to people in the Houston area and I guess in the State. But that was one of the really great programs in the late 60's and early 70's. And it was great because it was one of the programs that really gave money to the cities in a much different way than the later programs, in subsequent administrations. Money was provided to the cities for setting up in a demonstration way, some programs in the cities. They were saying we want the cities, in their small demonstration areas, to tell us what the particular needs are, to begin to experiment. That was the word that was used without any kinds of bad feelings in the late sixties and early seventies. The mandate was to experiment with some of the money, find those programs that work and if they do work, and unfortunately Johnson was not in office as long as he should have been, but if they do work, we'll begin to put a little more money into those programs that are successful and really build them up. Buffalo, New York was nominated as one of the cities to receive Model neighborhood funds and, unfortunately when you are close to downtown you are no longer close to the jobs that are attracted to that area. The people took the money and they said, how can we spend it, we can spend it in a variety of ways. There are so many things that this neighborhood is concerned with. The very small politically designated neighborhood area were concerned with the safety of its citizens, it's concerned with health, it is concerned with education.

It is concerned with transportation, and that is what I'll talk about, and a whole host of other things. They set up committees in the model neighborhood areas to deal with each of these subjects. Committees were made up of citizens within the area. The mayor at that time appointed a resident of the area as the Director of the Model Neighborhood Agency. The agency was responsible only to the mayor while theoretically it had to have its funds and expenditure funds approved by the City Council. There were lots of arguments in the City Council at that time. It was almost an autonomous agency, because it was dealing with funds that were designated for that given area, and that was probably a very healthy process. The whole process was regulated by citizens from given areas -- citizens who really just signed up on sheets when the Model Neighborhood Agency was formed and it had a staff structure to help implement the spending of the funds in all the community centers in the area. Sheets were put up, for people interested in working in education. Do you want to work in health? Do you want to work in transportation? Committees were formed and working chairmen of the committees were elected from the people who decided to actually take part in the committees.

Let us focus on the transportation aspect. People on the transportation committee said "we're going to have a certain portion of the (I think it was at that time just a few million dollars) money to spend on transportation. What should we do with it?" If you remember in the late 60's, early 70's, it was still a time when unemployment wasn't quite that high, but we were just sort of going through the usual recession. Unemployment, when you look at figures and you look at statistics and you look at averages for an area, unemployment in Buffalo was given as one of the highest in New York State, as it traditionally is. But, you begin to get to model neighborhood areas or inner city areas as I said as they are euphemistically called, the Black areas of the cities,

you begin to find that the average statistics have no meaning, because unemployment in those areas is much higher than the city average and unemployment rates among the males, and particularly the young or post school age males, are sky high. Still that represents a problem that really nobody has been able to come to grips with. So they said one of the transportation needs that exist is getting these people that have fewer cars than most people on the average in the area, getting some of these people to work, that is a problem area. Another problem was safe transport of children to school, especially in the winter months. Although this winter, kids didn't go to school because they couldn't even get out of their doors because of the snow. But, they also came up with another problem. They said that there is a problem with the elderly and this is before we had the elderly and handicapped requirements. The citizens were astute enough today "that knowing the regulations and knowing how to work in them and knowing how to get your grant applications and things in the right way"--were important things. You can really do benefits for your community.

But that aside, people on the model neighborhood committee said of all these priorities, getting people to work or school children or the elderly (the single priority that they felt had to be dealt with immediately) was the key issue. People were finding that the neighborhoods were changing, you know what suburbanization does. We're talking about a city with a high population density. The population density in the area (in which you will see in the movie in a few minutes) was fifteen thousand people a square mile. That is obviously a lot higher, that's probably three or four times the density you are used to here. Even in those areas of high density people have begun to find in their neighborhoods that stores had moved out of the area, neighborhood taverns

were closing, even some of the churches were closing. The elderly, whose whole life was sort of maintained on a daily activity schedule, had been adversely affected. Ten years prior to this movie, these same people could walk to these places. Later they found it was pretty hard to walk to things that didn't exist. We also found that public transit really does not serve too many of the non-work trips of people in an area like this. Public transit wasn't any good. People were getting to the welfare department or to a variety of programs. They could get to the hospital by using taxi companies and say "I am a welfare person and I need a taxi at a certain time and I will give you a chip for that" not really a process that makes you feel proud to be getting old. There were many reasons which justified the need for better public transit service. These people paid their dues and the community sort of owed something to them. Again, these are all feelings of the community. The community said "let's get something on the street right away for the elderly, not only get it on the streets, we are going to make it free, because we have the Model Neighborhood funds."

So in early 1970, the city purchased four ten passenger vans and set up one of the most successful (that I know about) transportation services for the elderly. It was a twenty-four hour "call-in" advance kind of service. You would call up the operator, the operator was a community run taxi cab corporation. The contract was given to a private corporation, but they had to set up a separate corporation to run what was known as the Model Cities Model Neighborhood Jitney Service. You would call up a day in advance and say I'd like to go from here to there tomorrow at a certain time and more likely than not they would try to call you back and get your number and where you wanted to go whether you were handicapped and needed any assistance, whether you were going by yourself.

They would take you anywhere you wanted to go, they would take you for nothing. The only restriction was that you had to be elderly, be over fifty-nine, this was the only time the City got into it outside the model neighborhood group. The Mayor obviously wanted a little publicity for it, so you had to belong to the Mayor's golden age club which is a nice thing. You had to get a card to ride it. You could get the card from a lot of local community areas or you could get the card on the bus the first time you used it. You show the card and say I want to take the bus from here to there, the only other requirement is that you had to live in the model neighborhood area. That led to a lot of confusion in the beginning because the model neighborhood area was in one of these nice planning boundaries that was drawn, and planning boundaries have to be drawn down streets. So it was drawn down the middle of a couple of major streets, people lived on one side of the street could use the service, people lived on the other side could not. That was really a problem because, by law, you had to restrict your ridership to this. It started out with service from eight in the morning to midnight, seven days a week. After a while, starting in the first few weeks, service started very slow-even with the four vehicles - nobody would believe that something free was actually being given to them. People really wouldn't call. But after a while, the community began to feel that this is community-owned, community-run, by the Model Neighborhood funds and so from early riderships of something like twenty or thirty or forty people a week in four vans, in a few months the riders began in an excess of a thousand. It did catch on and people began to ride. People used it for various activities. There were no restrictions. You didn't just have to go to the hospital to use it. It wasn't a medical program. You didn't have to use it for an emergency. It was an integral, social part of the neighborhood. After a few months, we did a lot of statistical analysis on it and we found that the predominant reason for using

it in the first five or six months of operation were for medical trips. A third of the trips were to go to the doctor and the clinic. A quarter of the trips were used for shopping. A lot of trips were used to go to church, not only for Sunday morning services but for social reasons; to the community centers. And after a while, a spirit grew in the community among the elderly - this is our service, we see our friends on the bus, it's ours, we take pride in it. It was a whole pride in operating the service. It is a pride that is a lot different than just stepping on your friendly neighborhood transit service bus, and not knowing who you're going to see on there. The elderly really took care of their buses. If somebody had ridden the bus a couple of times and you see somebody get on with a candy bar and throw a wrapper on the floor, some person would raise their umbrella and say "that wrapper doesn't belong on the floor." The wrapper would be picked up. The other thing that the service offered was a true quality of service. The bus drivers were all specially trained. If somebody needed help, they would be seen to the door; if they had packages, the bus driver would carry the packages to your door. The interesting thing is that you're dealing with a service for the elderly, while you're talking about a rush hour service for workers you certainly don't want to slow down to get people on and off. When you're dealing with a particular client who really wants the service of knowing they will be riding on a safe bus, that if you are going to go and cash your pension check on the 1st or 2nd of the month, the bus driver will actually be standing there by the bank when you walk in and out.

There was a quality of service that was rendered by the bus drivers. During the first few years of service it was considered to be one of the best model cities program in the area. As planners, we all know that the Model Cities funds died, the Model Neighborhood funds died, we began to get revenue sharing, community sharing, and a whole variety of other kinds of funding techniques.

Fortunately, in Buffalo, the money has run out. They are trying a whole host of other things. I think what you'll see in the film -- what doesn't exist anymore is a result of a process that evolved from the community; it evolved because the community was allowed to say how it wanted to spend its funds. You'll see meetings of how the funds were spent and you'll actually see a real pride in a service that comes out of this whole community planning process.

We'll show the movie and, as time permits, I'll be happy to answer any questions.

(SHOWING OF FILM: "NOT JUST A RIDE")

Thursday, March 3, 1977

LUNCHEON

Presiding: The Honorable Anthony Hall
 House of Representatives
 State of Texas

Speakers: Royal Hatch, Executive Director
 Houston-Galveston Area Council of Governments

 Willard E. Walbridge, Former Chairman
 Houston Chamber of Commerce and
 Senior Vice President for Corporate Affairs
 Capital-Cities Communications, Inc.

ANTHONY HALL: I am pleased to be invited to participate in what I think is a very significant endeavor. Those of us who are interested in progress in particularly urban communities have to be concerned about the question of Public Transportation. Because, the ability of our urban communities to commute, largely depends upon our ability to move in and between these communities. Increasingly, we are finding that there is a problem that needs to be addressed by all of us, as representatives who have the opportunity to impact public policy. I think that we are moving into the twentieth century in Texas with regard to our concern for public transportation. You know that two years ago, the State of Texas, for the first time, made monetary contributions to the solution of mass transportation progress by appropriating \$31 million dollars, over that two year period. I think that you will find that you will not have problems getting that same amount of money this time. We have to see some progress with that, though. Believe it or not, the City of Houston is the only city that

participated in that program who used all of the funding. Those of us who largely needed the funds found ourselves in somewhat an awkward position. At the time of reappropriations, when we were asking for the same 30 million dollars before. That is why we are advocating a small amendment that would allow us to use their money if they are not using it. What I'm trying to say is that all levels of government should work together towards solutions of what is increasingly becoming a problem for us. All of you have something to do with public policy. Mass transportation is a word that confuses a lot of us and I am going to tell you why in just a moment. I want to say this because it appears that we are talking about the same kind of mass transportation when we are talking about the bus. When we speak of mass transportation we are not speaking of any particular type of transportation. I think that the problem that has generated over the past few years is the questions of moving large numbers of people period. We, I think, are ingenious people. There may come a time when no longer will our attention turn to buses when we speak of mass transportation. I think now most of us recognize that - that is not the only type of solution to our problem.

I am not the speaker and I am not going to talk that long. I'm going to again, apologize to you for being late to this luncheon, and to assure you that I will not get up again until I have eaten my lunch that they have put on the table before me. It is now my extreme pleasure to bring before you the Executive Director of the Houston-Galveston Area Council of Governments. That's a long name; it represents an association of local governments that work together in an effort to provide common solutions to those problems such as transportation. A person who has enjoyed considerable success in our community, so if you would help me,

I ask you to welcome the Executive Director of the Houston-Galveston Area Council of Government, Royal Hatch. (Applause)

ROYAL HATCH: Thank you indeed for such applause and my compliments to Mrs. Ledé for an outstanding couple of days. Ladies and gentlemen, we are privileged today for our next speaker, one of the modern day giants of Houston. He is of course Willard E. Walbridge, Senior Vice President for Corporate Affairs, Capital-Cities Communications, Inc., with six television and fourteen radio stations, a newspaper, and a voice into what happens, and, information regarding developments in transportation.

Mr. Walbridge served two terms as Chairman of the Houston Chamber of Commerce and he speaks very often of the number one concern of the Houston Chamber these days. Mr. Walbridge handles government and broadcast industry liaison for Capital Cities in addition to such specializations as representation of the company on national boards, including the Chamber of Commerce of the United States, and the Board of Governors of the American National Red Cross. He is a graduate of the University of Michigan with a major in Journalism and Advertising and began a career in broadcasting in Detroit, Michigan. He came to Houston in 1954 as the founding Vice President and General Manager of KTRK-TV, which was acquired by Capital Cities in 1967. He assumed his present position for that company in 1970. It is with great pleasure that I present to you Mr. Willard E. Walbridge. (Applause)

LUNCHEON PRESENTATION
by
Willard E. Walbridge
Sr. Vice President for Corporate Affairs
Capital Cities Communications, Inc.
Houston, Texas

Several months ago, while I was still the Chairman of the Houston Chamber of Commerce, I was asked to be your luncheon speaker today. My experience with the larger issues and considerations of the whole complex transportation question is limited to volunteer work in that office and continuing work with the Chamber.

Since that time -- this Transportation Forum '77 has grown in both scope and dimension, and I would here congratulate the Urban Resources Center of Texas Southern University for hosting such a timely and important event, and for attracting here to our city the experts from all over the nation. Truly this becomes a major event of first rank with the potential of first rank results from your deliberations.

In such expert and august company....with my already admitted lack of expertise, I am reminded of the man who survived the Johnstown Flood....

So my comments today to all of you Noahs will of necessity be geared to the problems of the Houston area, but since transportation problems seem to be plaguing all of our nation's metropolitan areas perhaps they may be adaptable to other regions as well. A part of the whole process here must be to come to grips with the central theme...the mobility of people and goods in today's world--and tomorrow's.

In March of 1974, under the auspices of the Chamber, we held a conference that we called Houston Tomorrow. Out of it we visualized in this area a few decades from now a megalopolis, a vast urban organism spreading some 60 miles in all directions from central Houston. And first we asked the fundamental question...Is the city, the urban complex we know as a city...is it the invention of man -- a product of mankind? Or rather...are cities the mindless products of the dynamics of their own geography and resources and momentum beyond man's ken and control? And, we went on to say that if the city be the latter -- then we meet in vain... and it is cities that rule man, and not men that rule cities.

But we faced up to the uncertainties of the future with all the admittedly limited evidence we had at hand, and we said that the urban blight and decadence we saw in greater degree elsewhere, the caving in of the central cities, was not a valid part of an immutable, unalterable urban life cycle. These were not so much of man's doing, caught up in the thralldom of urban forces. They were rather products of what man was NOT doing.

And we came to realize that Houston's problems are the functions of the same force as is our progress. Both are the product of GROWTH... irresistible, immutable growth. Our growth in this area is dynamic...not static. That is to say...growth begets growth...as well as problems, and progress. Thus, the mission for you here today and for every other dynamic area of the nation must be, now and into the future, to plan for guided and disciplined and enlightened growth management.

While our conference considered a broad range of the city's problems and opportunities, our findings on area transportation should be of greater interest to you today. We recognized mobility as the fundamental ingredient to determine the size and the shape and the life style and

work style of future Houston. We said pragmatically -- let's do the do-able now....time is of the essence, but also -- we must be planning and working always concurrently upon the future needs. All modes of mobility were embraced along with perhaps new systems not yet invented.

And in the Spring of 1974 -- note the date -- we called for City purchase of the existing transit system, the establishing of a City Transportation Department, and some new approaches at State level. And we have declared along the way, as each of these recommendations became reality, that from a simple, social point of view, the provision of adequate public transportation is just as much a matter of local government responsibility as are the matters of water and sewage service, police and fire protection. If this strikes you as somewhat heretical from a group known for its constancy to the principles of private enterprise, regard it rather as an example of applying the principles of enlightened growth management to the complexities of the problem. The answer was inevitable and is now a firm part of our ongoing Chamber policy approach.

And also, back in 1974 we called for the building of a people mover in Downtown and at other congested high traffic centers such as the Medical Center. A year or more later, we joined with the City in applying for a federal grant for Downtown and as you know, Houston was awarded a \$34 million dollar grant recently and specifications are presently being drawn.

We had one final and as yet unsuccessful recommendation...an area-wide rapid transit system under a transportation authority that crossed other incorporated and county boundaries. We still believe that this must come...and in the whole urban organism, the coming megalopolis, all systems must be coordinated and compatible, from the city's central core outward to the farthest reaches. This is the ultimate solution to the challenges of our growth patterns....and the pressures of that growth will make it an idea that will find its time.

I have dwelt at some length on what just one entity in this community has been doing...the Houston Chamber of Commerce. The program clearly says that my topic is...Future Planning for Transportation: Challenge and Opportunity. But, if I have seemed to dwell on the past, it is only to establish the base...to identify it as a prelude to the future. Every step of the way we worked with other civic groups like the Houston Citizens Chamber of Commerce, the City and the County Governments...and at the State levels we made the call for action as concerned citizens trying to cope with present problems and alleviate them as we moved into the greater problems of the future. This spirit of cooperative approach and planning by local, state, and national governments and the citizen forces in the community, are the fundamental ingredients to solving the problems of transportation.

Certainly....that is why all of you are here as well....and I would urge you to note -- that as we set about doing the do-able immediately, and did accomplish considerable, we have only just begun the long search for transportation adequacy. This could be characterized as a policy of bandaids first.....but I also urge boldness to follow. The challenges ahead call for boldness and future thinking.

For example, I can't buy the idea that in this area we must rule out fixed rail above or below ground or both because present population density militates against it. Last year I visited Toronto and saw a wondrous thing. Out from the central city were many clusters of high-rise apartments and business centers rivaling the downtown in size and beauty. They were relatively new...and I was told that they sprang up in a few years on the radials at the transit system stops. Is this an answer here....that satellite cities within cities will spring up just as towns sprang up in the early days of our nation when the railroads went through. Clearly, it must not be discarded out of hand.

So...as you gather here, you of the academic world, and government, and of the expert disciplines in the areas of technology and societal problems implicit in our times...let me recommend a generous application of both bandaids and boldness as you hammer out the solutions to present conditions and future imperatives. The ways you find for us to move ourselves must be formed in the mold of the future. I know this is not a new idea, of course. I repeat it for emphasis -- and out of experience.

A final, and personal word. Understandably, the sub-title of your conference calls for an emphasis on considerations of minority, low-income transit dependent groups. Let us all resolve that this will be left behind as a part of the bandaid era solutions as we move into the future with boldness. I can't bring myself to plan into any future of this city or this nation that there will be pockets of disadvantaged, and minority ghettos. And part of the solution to eliminating them can well be a multi-modal, fast, efficient, low cost to the user, and universally attractive and appealing transportation system.

This would be my best hope....that in solving our problems of mobility we march in concert with solving the problems of society. This can be the ultimate challenge and opportunity as we plan for a city like the poet sang of....in America the Beautiful...

"Thine alabaster cities gleam...undimmed by human tears."



Speaker for the Luncheon meeting was Willard E. Walbridge, Senior Vice President for Corporate Affairs, Capital Cities Communications, Inc., and Former Chairman of the Houston Chamber of Commerce.

CONCURRENT WORKSHOP SESSIONS

AFTERNOON GENERAL ASSEMBLY

Thursday, March 3, 1977

PANEL DISCUSSION: "PLANNING AND IMPLEMENTING POLICIES AND PROGRAMS"

-
- Presiding: Phillip Wilson, State Planning Engineer
Transportation Planning Division
State Department of Highways and Public
Transportation of Texas
Austin, Texas
- Moderator:
(Panel I) Anthony J. Catanese
University of Wisconsin
- Panelists: William L. McClure, Administrative Engineer
Houston Urban Project Office
State Department of Highways and Public
Transportation
Houston, Texas
- William M. Wood
Federal Highway Administration
U. S. Department of Transportation
Washington, D. C.
- Donald R. Deskins, Chairman
Department of Urban Geography
University of Michigan
- Panelists:
(Panel II) William J. Murin, Associate Dean of Faculties
and Associate Professor of Public Administration
University of Wisconsin
- James J. Shuster
Institute for Transportation
Villanova University (PA)
- Richard Yukubousky
Department of Urban Planning
University of Washington
President, Yukubousky and Associates
Seattle, Washington

QUESTIONS AND ANSWERS

Question: BILL MCCLURE. How strong is the mandate that the efforts of the teams are adopted by the highway agency?

Answer: Of course everybody in the department, including the administrator to lowest person within it were all recommenders, because we are recommending to an official body namely either the Highway Commission or to a local agency or to a department or to the legislature. Of every team that we have had until the present time, the recommendation of the team has in fact been adopted by the Highway Commission. So we haven't had a team coming up so far and then having a gulf between the process if you will, and the actual implementation of the recommendation. Is that the point that you were getting at?

Question: BILL MCCLURE. Could the Highway Commission reject the team's recommendation if it so desires?

Answer: No, as far as the policy determining body itself, the administrators and the department wanted this. And I would like to inject something in here. This is not if you will, an administrator advocating his authority to somebody. Here is a process and the reason that the management wanted it so structured in this way is simply because you create a situation in which you have a number and a lot of involvement of the community. You are trying to find out what the needs and desires and values of the citizens are, you've got disciplines involved of various kinds. You've invested a great deal of study in planning. Now, no administrator, if he can avoid it, wants to have all this go on and then

come up to a certain level of the administration and then say that I find this unacceptable. So what this is trying to do is to create a process by which the administration as well as the various disciplines and the community, is feeding into the process so we are coming up with trying to mutually solve the problem. So it's not a matter of administratively moving without course. If conditions change and there were some situations that arose, which haven't at this time, I'm sure that we're not naive enough about the process to try to stand here and indicate to you that the administrator of the agency would of course then have to say that he could not agree with the recommendation of the team. I hope that I have not left that impression. It has not happened at this time and hopefully if the process works, it won't. However, that sort of thing could happen and that would be his prerogative to do so of course.

Question: I would like to address my question to Mr. Goodman. You mentioned about the rail system in your study and the density of the population. I was surprised that you did not mention the "People Mover" that has been planned for this city and various other cities. I was wondering if the operation would be on the ground level and what it is, since it takes in government funds and funds from the City of Houston?

Answer: GOODMAN: Sure. I would be happy to. When I discussed the earlier planning effort towards a full blown rail system, I didn't mean to leave the impression that we were abandoning the idea of selective implementation of rail. I think that because of the funding, because of the way Houston is geographically, its ability to annex territory, its ability to no natural boundaries, that a full blown rail system is really something something out of the question. However, it seems that some corridors of the city, very dense corridors, perhaps will be attractive to more sophisticated

forms of technology than buses as our planning process unfolds. I am using planning now as an excuse of not having to tell you exactly what the future may hold because we don't know. But it is clear that what we have to do is seize upon forms of technology more appropriate for the particular area of the city than we are looking at. It may be Park and Ride in one area, and if Park and Ride is a total failure in a particular area, it will change our thinking as to the future of that corridor for that part of the city for a more sophisticated form of transportation. The practical planning approach is perhaps most exemplified for Houston purposes in the recent award to Houston for the downtown people mover system and I'm sorry that I failed to mention it. It's just that so many things are going on that I didn't really focus on it. It was interesting that Houston as a city only a few years, less than three years into public transportation, should get awarded a sophisticated piece of technology of that type. Now how did that result? It did not result from an extensive sophisticated planning process. I shouldn't use the word sophisticated, I should use the word extensive planning process. In other words, the City did not spend a lot of money on the plan or the data that was gathered which helped us justify the "people mover" system. It, in fact, was justified primarily on the expenditure of about \$100,000 of gathering data downtown which indicated initially that some type of circulation system would be well utilized, and would aid mobility which would result in the implementation of the downtown minibus system. Then, we looked at the results of the minibus system, the growth of Houston, and the millions of square feet of additional office space which is now committed to downtown Houston. We would be happy to give you as many details concerning regional improvements and cost-benefit analysis on the

people mover if you contact the Office of Public Transportation. But just to give you some practical consideration that went into it, the "People Mover" system is pollution free. That's a very practical consideration when you look at some of the problems we have with the environment; air pollution and the concentration of traffic downtown is a contributor of that. The capacity of the system downtown to move people is many, many fold of the bus system. In fact, it could not be replaced by the bus system because we do not have the street capacity downtown to handle the number of buses that would be required in 1985-1990 to carry the people around downtown. But the most practical, important consideration of the people mover downtown is that it will in our estimation form a nucleus or focal point of a more extensive regional system. Whether we are talking about park and ride, or rail lines in a particular corridor like the southwest, or exclusive bus lanes, we now have a focal point downtown where those people can be oriented. In other words, the regional trips will drop people off at the major people mover terminals and they will be transferred to the people mover to distribute people around downtown or they may change to some other mode of transportation, such as taxi, or a bus. The people mover has now provided Houston a nucleus upon which our regional planning for transit improvement can take on a much more accurate rational optimistic prospective. The funding for the people mover is a special appropriation from Congress of \$220 million divided between four cities. It's a 80/20 program like most development capital plans are. We hope that we will be able to get some state discretionary money to fund the people mover which is estimated now to be around \$40 million. When you look at the benefits gained in pollution, in reduction of vehicle miles traveled, and in the reduction and saving of gasoline, the cost-benefit analysis comes out to something like 52-53 to 1 in saving of cost by the system. Just

one last comment to give you an idea, I'm using 1976 dollars because 1980-1985 we really don't know because of the rate of inflation what the cost of goods and services will be. But in 1976 dollars, the cost of carrying one person on a bus system is somewhere around 70¢ out of the taxpayers pockets whether it be federal dollars, state or local, it really doesn't make that much difference, we all share that burden equally. The cost of the same trip on the people mover system is 13¢. Now the question might be asked why don't we implement people mover systems all over the city. The answer is that a fixed system of the nature of the people mover is only appropriate in a certain context. The federal government has deemed downtown Houston as that context. It may very well be that we extend that system to other activity centers, like the Greenway, Galleria-Post Oak Area, University of Houston area, we don't know. We do know that for the time being based on existing technology, existing resources and the way Houston seems to be growing that the downtown people mover system will be a tremendous asset and part of a total system which will hopefully bring us greater mobility in the future.



State Representative Anthony Hall (Texas) presided at the luncheon meeting. Seated with Representative Hall are local, regional, and state officials, including Naomi W. Ledé, director of the Urban Resources Center in Texas Southern University, Robert E. Gallamore of UMTA (Fort Worth) and Phillip Wilson, State Planning Engineer, Texas Department of Highways and Public Transportation.

URBAN RELOCATION PROJECT: A COOPERATIVE EFFORT
by
William L. McClure
Administrative Engineer
Houston Urban Project Office
State Department of Highways and Public Transportation
Houston, Texas

The Gulf Freeway in Houston was the first freeway built in Texas. Traffic volume reached the design capacity 18 years early. It is now old, wearing out and still overcrowded. It is necessary to rebuild the pavement, modernize design features and add additional lanes. This proposed work requires acquisition of right of way along the freeway and the near-town part requires the removal of a number of homes in a low-income minority area.

The State Highway Department went through the usual public meeting and public hearing routines. By the time these were complete and the project approved, rumors and inaccurate information were being passed through the neighborhood. Anti-freeway groups were active.

It was decided that it would be desirable to establish a relocation office within the limits of the project. There were several reasons for this decision. Many of the residents of the neighborhood who would have to be displaced do not have access to transportation and would have difficulty traveling across town to discuss relocation matters with the Highway Department. Many of the residents are hesitant to use the telephone to call the State agencies. Some of them distrust agents of the State. The incorrect rumors about proposed activities had created an atmosphere that was unpleasant. It was necessary to get proper information disseminated within the community.

The primary function of the relocation office was to be a means of

communication. As such it would function better if it were available to the residents at times that fitted their own schedules. It was decided to have the office open in the afternoons and early evenings to meet this need. It was decided to work in cooperation with a local university in staffing the office. Graduate students who are known as urban interns were made available through the auspices of the Urban Resources Center at Texas Southern University. These interns were trained in our office to be able to answer questions about right of way acquisition and relocation activities of the State Highway Department. The salaries of the interns were paid by TSU through funds obtained from other sources.

The State bought a trailer, remodeled it into offices and moved it onto the project. News releases were made and fair coverage by the news media was given. The opening drew a number of residents from the neighborhood and it started a period of considerable activity at the office.

Shortly after the opening, the office was visited by Mr. William T. Coleman, Secretary of the U.S. Department of Transportation.

The rate of right of way acquisition has been slower than planned, primarily because of the rate of availability of replacement housing. The lack of construction funds has also kept us from trying to move any faster. Because of this rate the activity at the relocation office is not as heavy as it was in the beginning. However, it is still serving its primary function of communication within the neighborhood. As far as we can tell rumors have stopped and the anti-freeway groups appear to be inactive. Several families have been relocated with success. The image of the State Department of Highways and Public Transportation has been enhanced by the operation. The urban interns have benefited by having the opportunity to relate to people in the community on a face-to-face basis.

It is recommended that any time a public improvement involves the

relocation of a number of low-income minority families that an "on-going" relocation office should be established and arrangements made with a local university for staffing.

ANTHONY J. CATANESE: Our next speaker is William M. Wood. Bill is with the Federal Highway Administration at the U. S. Department of Transportation, Washington, D. C. His topic this afternoon is entitled: "Public Involvement Techniques Outlined in Highway Agency Action Plans." We are very glad to have you with us.



Royal Hatch, Executive Director of the Houston-Galveston Area Council talks with Dr. E.C. Powell of the Sociology Department at TSU, Harris County Judge Jon Lindsay and State Representative Anthony Hall.

PUBLIC INVOLVEMENT TECHNIQUES OUTLINED
IN HIGHWAY AGENCY ACTION PLANS

by
William M. Wood
Office of Environmental Policy
Federal Highway Administration

Introduction

The purpose of this paper is to analyze community involvement programs utilized by highway agencies in transportation planning. This report will define how different techniques and planning processes are utilized to produce effective citizen participation during project development and in the EIS review process. Background information was obtained from Action Plans--documents which describe the individual agencies' process for managing the development of Federal-aid highway projects, and from correspondence with the highway and transportation agencies.

Background

Action plans are documents which delineate the processes by which highway projects are developed and the opportunities which exist for the public to participate in this development. These documents were prepared by highway agencies in response to Section 136(b) of the 1970 Federal-Aid Highway Act and its provision, Section 109(h), which identified the need for assessing social, economic and environmental effects of Federal-aid highway projects. The Action Plans define, in general terms, the organizational arrangements, the assignment of responsibilities, and the procedures to be followed in developing projects, including the involvement of other agencies and the public in the planning, location, and design of highways.

Summaries which described public participation implemented under the Action Plans were prepared for each of the 50 States, Puerto Rico, the

District of Columbia, and the FHWA Offices of Federal Highway Projects. These summaries were circulated to FHWA field offices and State highway agencies to verify the accuracy of the information. In addition, reviewers were asked to identify individual techniques or basic participatory programs which had worked well in their application. Comments from respondents concerning the Action Plan summaries and correspondence highlighting techniques and programs were used to supplement information found in the Action Plan documents.

Analysis of the 53 Action Plans and the comments submitted by the highway agencies revealed approximately thirty separate techniques for involving and informing the public (see illustration 1). The techniques are divided equally among those used to involve publics and those used to inform them. Although information dissemination and communication are the objectives of all public involvement techniques, those techniques which involve one-way communication have been classified as "information" techniques, while those that utilize two-way communication and participation are "involvement" techniques.

STUDY FINDINGS

Intended Audiences for Techniques

These classifications of public involvement and public information techniques can be further subdivided based upon the size of the audience to which the technique is directed. Involvement programs which are open to participation and discussions with the population at-large include such techniques as public hearings, information meetings, pre-hearing and post-hearing meetings, public workshops, public forums, televised planning discussions, resource base analysis, and project field reviews with citizens. The aforementioned techniques are also time-specific in their application, that is, they occur at definite points in time during the project's development. The remaining public involvement techniques rely more upon the participation of individuals and generally occur over a time continuum. These involvement

techniques include citizens committees, speaking engagements with interested parties, conducting field surveys, personal interviews, project field offices, and telephone hotlines.

By determining which population segments they want to reach, highway agencies utilize information techniques to disseminate project-related materials or notices to a variety of audiences. Widespread exposure to a number of diverse publics may be achieved through techniques such as legal notices, mass media advertisements, news releases, publishing project development schedules, audio-visual presentations, mass mail-outs, and press conferences. Project-related announcements which may be directed at more well-defined community or neighborhood populations include billboard advertisements near the project, announcements on local bulletin boards, and public information displays. Notices of highway development activities and project data are often exchanged between highway agencies and specific individuals, groups, or institutions. These notices may be conveyed through mailing lists, circulating project reports, newsletters, response forms, citizen band radio announcements, and by other means. Techniques for informing the public may be implemented at virtually any time during the project development process. The variety of possibilities for their application emphasizes both the flexibility and the importance of maintaining open communication with the public.

Frequency With Which Participatory Techniques Are Used

The frequency with which the individual techniques are used is an important variable. As seen in illustration 2, there are some techniques which receive national use, some which are used by fewer States, and some which are implemented by only one State during one phase of highway development. The category of occasional use in illustration 2 includes those techniques mentioned in correspondence with highway agencies, but not referenced in the Action Plan documents.

The number of references to a technique during specific stages of highway development and through its occasional use ranges from 137 citations for public hearings to only one for press conferences, announcements on bulletin boards, and public information displays. It is worth restating here that Action Plans merely provide the framework for public involvement programs and the lack of reference to a technique in an Action Plan or in correspondence from a highway agency does not preclude its use by that agency. The frequency with which these techniques are mentioned does give insight into how the existing involvement programs are constructed and will provide a benchmark for future analysts who may wish to measure the rate of implementation of new techniques.

As displayed in illustration 2, the reference totals for a technique are cumulative through the three stages of planning and notations in highway agency correspondence; the documentation of a technique for one State may range from one to four separate references. Each highway agency utilizes an average of 7 or 8 different techniques in its planning process.

An interesting implication of the data displayed in illustration 2 is that grouping techniques according to frequency of use does not emphasize any particular stage of the highway development process. The number of references to different techniques is roughly equal across all three stages of development. The philosophy of implementing continuous and balanced public involvement programs during project development appears to be proven in practice. Although the concept of citizen participation in systems planning is relatively new, highway agencies apparently utilize many public involvement techniques during the systems planning phase which are similar to ones used during the corridor location and design phases.

Implementation of Participatory Techniques

Public involvement techniques should also be discussed in their situational context, which includes the personnel responsible for implementing the techniques and how the technique interrelates with other techniques to provide continuity in the public involvement program. The selection of appropriate techniques for a participatory program is dependent upon a variety of these situational variables. When the Process Guidelines calling for the development of Action Plans were officially issued on September 21, 1972, Highway agencies already possessed a highway development framework upon which public involvement programs could be structured.

Many of the techniques are modified by agencies to conform to their individual highway development program or to the needs of a particular project. Rather than discuss the diverse ways in which techniques were defined and implemented, this paper will attempt to provide a general perspective of why these techniques are used and what makes them effective.

Systems Planning Implementation

Working agreements between highway agencies and local municipalities are built, in part, upon Federal requirements known as the 3-C process. This process calls for continuous, cooperative and comprehensive planning activities between highway agencies and planning authorities in urban areas of over 50,000 population. A review of all existing economic, population, and land use studies is required to promote more effective transportation planning.

An analysis of Action Plans reveals that many of the community participation programs in the systems planning stage are the result of close working relationships between highway agencies, municipal governments, and local or State planning authorities. Opportunities for public involvement and public information are often jointly conducted and administered among the sponsoring governments and agencies. This operational arrangement has a number of advantages, not only from the standpoint of citizen involvement/

awareness as well. By stressing the continuing, cooperative, and comprehensive nature of planning agencies are able to discuss issues from a variety of perspectives and present current, accurate information to the public. Planning offices, local governments, and highway departments also minimize misunderstandings and outdated communications by this process.

Participatory techniques discussed in the systems planning sections of Action Plans give an indication of how citizens are involved. Information meetings were referenced in 49 Action Plans during the systems stage, partly in response to the call for public involvement in the 3-C planning directives. Information meetings is a general term for informal public gatherings where citizens and agency personnel discuss project related information. These meetings emphasize spontaneous, personal two-way communication between the public and the highway agency.

Information meetings are used to raise and clarify project issues and to discuss the planning operations of the highway agency. These meetings may focus on a specific audience such as private interest groups, public officials, or civic associations, or they may be open to attendance by all interested parties. Most informational meetings involve extensive interaction between agency personnel and the public through the use of question and answer periods.

Highway agencies also use the public forum as a technique to involve the public during systems planning. Public forums are essentially informal meetings where the public may bring any general highway-related issue to the attention of highway agency representatives. The public forum differs from informational meetings in the sense that informational meetings are mainly directed to a particular audience, concerning a particular project, and may involve prepared presentations. Public forums are open to attendance by all interested parties and topics of discussion may vary widely.

Public forums are most useful in the preliminary, information gathering stages of planning. Although much of the information obtained through the forums may not be directly applicable to a specific project, public comments may identify issues or problem areas which need to be considered in future planning. The open atmosphere of public forums may also elicit comments from people who might otherwise not participate in a formal meeting or public hearing.

Forty States utilize citizens advisory committees during systems planning to provide a consistent, well-informed body of people to serve as a liaison between the highway agency and the public. Citizens committees serve to advise highway agencies of the consequences of their programs from the viewpoint of the values and social structure of the communities from which the membership of these committees are drawn. Citizens committees serve in an advisory capacity to create an awareness among decision-makers for the unforeseen impacts that their decision might have. Citizen committees also serve to interpret and disseminate an agency's policies in the appropriate communities.

A major objective in selecting members for a citizens committee is to represent the major interest groups in the affected communities. Citizens committees may have additional credibility within local communities since their responses to highway proposals frequently reflect discussions they have had with other members of the community. Those agencies sponsoring citizens committees generally provide technical and staff assistance to the committees for their work.

Systems planning should include input from the public at large, and Action Plans reference techniques for accomplishing this through mailing newsletters. Newsletters can often give more detail to project developments than do ordinary news articles, and the information which is presented in them can become increasingly more technical as the audience's familiarity with the project grows. While the highway agency, or a designated representa-

tive is responsible for publishing the newsletter, its content often contains articles, letters or editorials written by the public.

Public interest in a project is partially revealed through the types of persons and organizations requesting copies and from their responses to the publication's contents. Newsletters provide information to a wider audience in smaller, more comprehensible segments than project status reports and also offer the opportunity to advertise upcoming events like public hearings or meetings.

From the previous discussion, it has been shown that public involvement during systems planning involves four categories of participants: the highway agency; planning authorities; governmental representatives; and the public. Considerable effort is made to provide a coordinated review of transportation systems. All levels of authority and representation are included to insure a well-integrated approach. Provisions for systems planning and public involvement which existed prior to the development of Action Plans have been clarified and supplemented since its inception.

The systems planning phase of project development marks the beginning of efforts to identify project impacts, compile inventories of affected agencies and publics, and determine the general scope of the public involvement program. A multi-faceted, open approach to defining important issues minimizes charges that the environmental analysis and project design reflected the perspective of the sponsoring agency and not that of the public. This approach also brings issues to the forefront so citizens have an opportunity to provide timely and effective input. As information concerning these issues is obtained, trends of thought may be identified which will influence the selection of public involvement techniques necessary in future stages of project development.

Public participation programs implemented during corridor planning emphasize slightly different techniques and involve a more narrowly defined set of participants. After the proposed project is established within the transportation plan, participation in corridor location development by the highway agency and the general public involves those individuals who are more directly associated with that particular project. The number of feasible project alternatives and their general consequences become more well-defined, thus allowing the process to focus on a more specific set of issues. As project development concentrates more heavily upon these issues, the importance of achieving informative discussions with a select group of participants requires a more extensive public involvement program.

The participatory techniques and the audiences they are intended to reach also reflect the increasing examination of possible corridor locations. Public workshops are an effective involvement technique for accumulating project related data.

Public workshops are meetings where citizens are provided with basic transportation requirements and constraints, and are then asked to offer a solution. Workshops are generally implemented after specific project issues have been identified in earlier meetings. A public workshop gives the public an opportunity to experience the complexities of transportation planning and provides the highway agency with the public's perception of areas sensitive to highway development. Public workshops often convey more than general impressions of public reaction to highway proposals--many times they contribute actual design characteristics which should be incorporated into the final planning.

The format of public workshops generally employs a variety of participatory and educational techniques such as brainstorming, role-playing, design-ins, and task forces. Highway agency personnel are available to assist the

public by answering questions or interpreting information. In most cases, the audience is divided into smaller groups of from 4 to 8 people to concentrate on a particular segment or aspect of the project.

Public hearings, pre-hearing and post-hearing meetings, and legal notices are frequently implemented at this stage. Public hearings are formal proceedings conducted by agencies to inform the public of proposed plans and to receive and document public reaction. They are both historically and currently the most commonly used method of public involvement. Although public hearings have obvious shortcomings as a participatory technique, they do perform essential functions through their legal documentation and serve as milestones in the planning process.

Public hearings are characterized by formal presentations by highway agency personnel, the availability of project information, comments or questions by the public to be answered by agency representatives, and transcripts of the hearing proceedings. Public hearings are scheduled at critical intervals in the planning schedule, prior to decision-making. Because of their formal, time-restricted characteristics, public hearings are often supplemented by more open, flexible public involvement techniques.

Referring to illustration 2, corridor location participation programs have more references (303) to more techniques (25 different techniques) than either the systems planning or design stages. This finding may be representative of the fact that development of corridor locations is an extremely sensitive stage in the planning process. Extensive studies of alignment and potential social, economic, and environmental impacts are initiated at this stage. Highway agencies place increasing reliance upon their field engineers, public involvement personnel, environmental analysts, and other project related specialists. Public involvement activities become increasingly important events whose occurrence and results reflect the progress of the highway development effort. The culmination of this effort produces

project related information which is incorporated into the environmental impact statement.

In the corridor location planning stage, Draft and Final Environmental Impact Statements must address technical issues which require a certain degree of design level information. The early involvement of the public will hopefully provide an opportunity to influence the design elements of a project. Most of the basic design characteristics (elevated versus depressed roadway, number of lanes, etc.) should be identified in the Draft EIS which is available for public review. After receiving citizens' input on the Draft EIS, the Final EIS should so adequately address their comments that new challenges from the public would ideally be eliminated.

Design Implementation

This stage represents the last period during the participatory process when the public has an opportunity to influence the design of the project. It is a time when all project information, including that derived from public involvement, is summarized before the decision to build, not build, or reconsider the project. Careful attention is given to details of design, to continued and more specific analysis of actions and their impacts, and to considerations of individually significant community or social problems. The finalization of the development process is shown in illustration 2, where the design stage has fewer references (268) to fewer techniques (20) when compared to the other two stages.

The public is informed of involvement activities and project developments primarily through legal notices, mass media advertisements, and mailing lists which receive extensive use during the design stage. A more specific segment of the public, those persons whose property will be taken or affected by the project, may be contacted directly by the high-

way agency. All persons and groups having final recommendations concerning the project submit them for consideration. Public hearings, pre-hearing and post-hearing meetings, and their associated legal notices mark the formal end of the public involvement process.

Post-Design (Construction) Implementation

Most highway agencies do not terminate the opportunity for public input on a project at the end of design planning. Relocation assistance programs, monitoring project construction for adverse effects, and unforeseen project developments may warrant additional contacts with the public. Citizen involvement at this stage is limited to specific issues affecting a particular segment of the population. Comments regarding these impacts will continue to be received even after the Final EIS is approved. This is a sensitive communication period, the importance of which should not be underestimated.

CONCLUSIONS

Some unexpected findings were encountered during the analysis of public involvement programs in highway planning. The large number of techniques and the frequency with which they were referenced was impressive. The utilization of citizen participation techniques in all stages of highway development was encouraging, especially in light of the importance of systems level involvement. Some States are traditionally considered as having conservative participation programs, but were found to utilize very innovative techniques.

Public involvement activities often reflect the strengths and weaknesses of the highway development process. Public hearings are similar to environmental impact statements in the sense that both are legally required, fairly inflexible, and often frustrating. The EIS, like the public hearing, provides a summary of the events, assessments, and conclusions

which transpired in the planning process. Public hearings and environmental documents represent requests for final input prior to making a decision of action to be taken on the project. If the public involvement prior to the public hearing and work on the EIS was comprehensive and well planned, then the final review should produce no surprises.

Public involvement and EIS's are dependent upon continuous and open communication with affected agencies and citizens. The development of the environmental assessment and participatory program is incremental, focusing attention on specific issues as they are reviewed by citizens and the sponsoring agency. And as a general rule, it is very difficult to have an acceptable end product (project approval) if either the public involvement or the EIS is deficient. They are mutually reinforcing.



Dr. Ronald W. Holder, Associate Research Engineer and Program Manager for TTI, Texas A&M University, discusses alternative approaches to Mass Transportation (focus on Houston) at the first luncheon meeting.

PHILLIP WILSON: Dr. William J. Murin is an Associate Professor of Public Administration at the University of Wisconsin at Parkside. If you will refer to the bio-data which is a part of your conference packet you will see that he has a rather mind boggling list of credits. It will suffice to say that he has worked at local, state, and federal levels in his chosen profession. He has a message to bring to us this afternoon, which I know all of you are eagerly awaiting. Dr. Murin. (Applause)



Participants discuss problems during a coffee-coke break. (At left) Robert E. Paaswell of the Office of University Research in DOT chats with John Calloway of the Texas State Department of Welfare. (At Right) William (Chip) Woods of FHWA in Washington responds to a question from Cindy Fromherz, graduate student in Urban and Regional Planning, University of New Orleans.

TRANSPORTATION PROBLEMS AND TRANSPORTATION PREFERENCES:
THE INNER CITY RESIDENT'S VIEW

by
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Introduction

Much of the current concern with the transportation needs of the inner city poor appears to be traceable to the McCone Commission Report on the Watts riots. In the Report, the Commission emphatically stated that:

...inadequate and costly public transportation currently existing throughout the Los Angeles area seriously restricts the residents of the disadvantaged areas....This lack of adequate transportation handicaps them in seeking and holding jobs, attending schools, shopping, and in fulfilling other needs. It has had a major influence in creating a sense of isolation, with its resultant frustrations, among the residents of south central Los Angeles....¹

Isolation in an urban setting is much more than a psychological state affecting a sense of community. Transportation resources have a major impact on job opportunities and on accessibility to those jobs.

In most urban areas the mobility problem of the poor is not due to the absence of public transportation. Rather, research to date directs our attention to the changing nature of the urban area in which the minority poor live and work. For the most part, the poor continue to live in centrally located areas that are reasonably well served by traditional public transportation to the central business district (CBD) where the highest density of jobs usually exists. To the extent that the jobs of the minority poor are centrally located, the poor are mobile, and public transportation adequately serves their travel demands. The problem for the inner-city resident arises when a centrally located firm decides to move its manufacturing, warehousing, or clerical activities from the central city to the suburbs. For the white

worker, the change in job location usually presents no problem. If he lives in the city he can either move closer to his relocated job site or use his automobile to commute to the new place of employment. If he already is a suburban resident, he may now be closer to his job and may no longer have to contend with morning and evening rush hours.²

For the minority inner-city resident however, all indications are that housing and transportation choices are more limited than they are for white workers. Housing market discrimination³ in most suburban communities has prevented the minority group member from following his job to the suburbs;⁴ and where adequate housing is available, it is usually priced above comparable housing for a white worker in the same income bracket.

It is now well established that old, large, industrial cities are declining as places of employment for the unskilled and semi-skilled. If central city employment is experiencing any growth at all, it tends to be in the white collar, professional and technical occupations. One observer has noted that:

...most central parts of metropolitan areas are losing employment to outlying areas, and that this process is, if anything, increasing. Slow growth, and not infrequent declines of central cities, have accumulated to the point where absolute declines in central city employment are now commonplace.⁶

What we are essentially faced with is the realization that blue-collar and semi-skilled jobs have decentralized far more rapidly than have housing opportunities for minority workers in those jobs.

Living in a central city neighborhood well-serviced by public transportation to the central business district is less of an advantage for lower income groups than it once was. Little public transit exists to get the inner-city resident to suburban jobs because traditional public transportation systems are not structured to provide adequate "reverse commuting" service.⁷ In addition, equipment on the typical public transit route is likely to be old, dirty, non air-conditioned, and generally in need of replacement. Trains

are as likely as not to be late, while buses may skip stops to make up lost time, or may not even come at all.

Except for the eight metropolitan areas that have a rail rapid transit system,⁸ practically all metropolitan areas depend entirely on their street systems to accommodate the movement of people. As has been pointed out in almost all of the literature on the commuter problem or the urban crisis, the problem is essentially one of public transit designed for the city of 1900 trying to serve the metropolitan area of 1970's and 1980's. Since the basic transportation systems of most urban areas were established, such areas have grown in population, undergone significant changes in land use and in the location of people and industry, and have grown in physical size as well.

For the most part, urban mass transit systems have not developed in response to these changing needs and conditions. Routes have remained constant despite population shifts and land use changes. Central city transit systems often stop for no other valid reason than having reached the city's political boundaries. When transit routes were first established few people lived outside of the city so there was no need to extend service beyond the city limits.

As suburbs grew, transit charters and legal restraints limited transit expansion that could have responded to the new growth. What in essence has happened is that traditional urban mass transit systems established to serve the downtown oriented city of the 1900's have not changed despite the growth and decentralization of people and jobs in the modern metropolitan area.

According to the 1960 Census, two-thirds of all employed persons living in metropolitan areas traveled to work in automobiles while only 19 per cent used public transportation. It is estimated that in every metropolitan area, more than 75 per cent of all trips are made by car, with 90

per cent or more the figure in some areas.⁹

Public Policy Implications

Ironically, metropolitan transportation systems too often leave unserved those who most need service: the poor, the handicapped, the old, and the young. Typically, the poorer people are the more they are dependent upon public transportation to get around the metropolis. Automobile ownership statistics document this situation dramatically. In 1967, 75 percent of those households with an annual income under \$1,000 owned no car; in the \$1000-1,999 group, the figure was 62 per cent; it was 47 per cent in the \$2,000-2,999 category; while only 5 per cent of all families in the \$10,000-14,999 category had no car.¹⁰

If a person cannot afford an automobile and public transit does not go where he needs to go or wants to go, if his job (or one he is qualified for) is in the suburbs, and if racial and economic discrimination in housing prevents him from moving closer to his job, then that person is effectively constrained from earning a living.

As more central business district jobs become white collar, and an increasing proportion of unskilled and semi-skilled jobs leave the city, poor people are more disadvantaged than ever by public transportation systems that focus on central business districts and stop at city limits.¹¹

Nearly one-third of the urban population suffers serious disadvantages from being inadequately or not served by the vast auto-based transportation systems on which we have come to depend.

To quote Alan Altshuler:

...in the course of opting for an automobile civilization, which provides unprecedented mobility for those who can take full advantage of it, the national majority has chosen to ignore the problems this civilization creates for those who cannot.

At this time when the central issue of American domestic politics is equality, public policy has massively reinforced the tendency of

consumer choice (in favor of the automobile) to open up an ever wide mobility gap between those who have and those who lack access to a car.¹²

These are the "captives" left to use public transit or go without transportation. If transit service continues to deteriorate or be eliminated, many of these carless households will be relegated to a more isolated and narrow world while automobile owners around them will enjoy the benefits of a society that caters to the car.

If society were willing or able to provide for the overnight redistribution of the entire population so that the mobility problems presented above would disappear, there would be no need to search for short range programs. But because of racial and economic bias in the housing market, discrimination will continue for some time,¹³ so short run solutions to long range problems must be sought. If so-called "ghetto-gilding"¹⁴ approaches are unacceptable on both moral and economic grounds, and if the ghetto leads to the social disintegration of its residents;¹⁵ then, why not invest in transit systems to take ghetto residents to jobs, shopping, medical care, and other urban public services.¹⁶

From the policy perspective, a major problem is that too little is known about the desired mobility of the inner-city resident.

What evidence exists is based on highway planning and land use studies, and these have dealt with the average behavior of a resident within a census tract or traffic zone. To date, urban transportation research has failed to consider the mobility characteristics of differing groups of people in any comprehensive sense.¹⁷ In addition, our knowledge of the priority that the poor accord their own immobility is extremely limited. Nor, do we know anything about the degree to which the poor would act differently if specific kinds of efforts were made to relieve their mobility problems.¹⁸

If we knew the mobility preferences of the poor, it might be relatively simple

to design public policy to achieve these preferences and correct present imbalances. Because that knowledge is lacking, urban mass transit decisions have acted to subsidize middle income families with transit systems designed to serve downtown and other white collar areas more often than industrial ones.

Although public policy is largely responsive to the known preferences and values of specific interests, the most vocal, articulate, and self-selected urban spokesmen have come from the middle or upper classes. The programs they have supported and succeeded in effectuating have not been advanced in their own self-interest, but have been advanced under the assumption that all people hold (or ought to hold) the same goals they do.¹⁹

Through the use of some recently acquired survey data for the Washington, D.C. metropolitan area,²⁰ it is now possible to take a first step towards answering Altshuler's questions "What are the transportation preferences of the poor?" "How much importance do the inner-city poor attach to transportation when compared to such other urban problems as crime, housing, education, and employment?"

John Howard of the Washington, D.C. NAACP in testifying before the Douglas Commission on urban problems pointed out:

.we have jobs out in the suburbs. We are getting slow action on suburban housing (so)...we need some transportation to be able to get to the suburbs, because that is where all the building is going on...

(Suburban jobs) are on the Beltway and places like that, but there's no transportation going out there. So you must be able to buy an automobile before you can go to work, and you know that is impossible.²¹

A recent survey of area adult Washington, D.C. residents points out that 48 per cent of all city residents drive to work or are in a carpool. But when the unemployed are controlled for, the automobile user group jumps to 60 per cent of all city residents.²² As might be expected, auto usage is closely tied to its availability. In the central city neighborhood, having the lowest car use for work, automobile ownership is lowest; 47.5 percent of the

respondents have no car at their disposal.

Table 1
SATISFACTION WITH WORK TRIP BY AREA, IN PER CENT

Convenience	Northern Anacostia	Southern Anacostia	Central City	TOTAL
Very Convenient	20.9 (9)	15.5 (16)	17.5 (14)	17.2 (39)
Convenient	44.2 (19)	35.9 (37)	46.2 (37)	41.2 (93)
Inconvenient	23.3 (10)	35.0 (36)	20.0 (16)	27.4 (62)
Very Inconvenient	7.0 (3)	8.7 (9)	10.0 (8)	08.09(20)
No Opinion	4.7 (2)	4.9 (5)	6.7 (5)	<u>05.3</u> (12)
TOTAL	17.5 (43)	41.9 (103)	32.5 (80)	100.0

As Table 1 indicates, better than half of all respondents in each of the neighborhoods surveyed have favorable comments to make about their present work trip. This rather favorable feeling towards transportation within these four neighborhoods shows that a majority of survey area respondents do not view transportation as a major or critical problem. Most are reasonably well satisfied although a large minority are critical of their present travel.

When satisfaction is measured by the specific kind of mode used to get to work, it becomes quite clear that the degree of satisfaction with the work trip is closely associated with the way people get to work. More than three-fourths of those who drive to work find their trip convenient or very convenient while only 42.8 per cent of the bus riders make similar comments. By neighborhood, southern Anacostia respondents exhibit the highest dissatisfaction with present travel, with bus service receiving most of the critical comments. But even with auto users, over one-fifth find their work trip inconvenient or very inconvenient.

Table 2

SATISFACTION WITH WORK TRIP BY MODE AND AREA
IN PER CENT AND BY MODE IN PER CENT

	Auto	Auto Passenger	Bus
Northern Anacostia			
Very Convenient	38.9 (7)	20.0 (1)	-- --
Convenient	33.6 (6)	40.0 (2)	57.9 (11)
Inconvenient	22.4 (4)	20.0 (1)	26.3 (5)
Very Inconvenient	-- --	20.0 (1)	10.5 (2)
No Opinion	5.6 (1)	-- --	5.3 (1)
Southern Anacostia			
Very Convenient	23.1 (9)	23.1 (3)	4.4 (2)
Convenient	51.3 (20)	15.4 (2)	26.7 (12)
Inconvenient	10.3 (4)	53.8 (7)	55.6 (25)
Very Inconvenient	12.8 (5)	-- -	8.9 (4)
No Opinion	2.6 (1)	7.7 (1)	4.4 (2)
Central City			
Very Convenient	21.7 (5)	-- (2)	8.3 (3)
Convenient	56.5 (13)	-- (4)	38.9 (14)
Inconvenient	13.0 (3)	-- -	33.3 (12)
Very Inconvenient	4.3 (1)	-- -	16.7 (6)
No Opinion	4.3 (1)	-- -	2.8 (1)
All Areas			
Very Convenient	26.1 (21)	32.1 (6)	4.9 (5)
Convenient	51.1 (39)	32.1 (8)	37.9 (37)
Inconvenient	12.0 (11)	28.6 (8)	41.7 (42)
Very Inconvenient	6.5 (6)	3.6 (1)	11.7 (12)
No Opinion	4.3 (4)	3.6 (1)	3.9 (4)

Table 2 also shows the 67.9 per cent of all unfavorable comments about the present work trip come from bus riders while this group accounts for only 38.2 per cent of all favorable comments. Automobile users are responsible for 49.9 per cent of all favorable responses and only 20.9 per cent of the unfavorable ones. These data further support the earlier conclusion that bus riders are considerably less satisfied with their present work trip than are people who drive to work.

Table 3

EXPECTED METRO UTILIZATION BY SATISFACTION
WITH PRESENT JOURNEY TO WORK, IN PER CENT

Will Use METRO	Rate Present Work Trip				TOTAL
	Very Convenient	Convenient	Inconvenient	Very Inconvenient	
Yes	28.9 (13)	33.3 (35)	49.2 (31)	55.0 (11)	37.4(92)
No	44.4 (20)	22.9 (24)	9.5 (6)	5.0 (1)	20.7(51)
Don't Know	26.7 (12)	42.9 (45)	38.1 (24)	40.0 (8)	36.6(90)
No Opinion	-- --	1.0 (1)	3.2 (2)	-- --	5.3(13)
Total	18.3 (45)	42.7 (105)	25.6 (63)	8.1 (20)	100.0(246)

The question now to be faced is how important present satisfaction is in determining potential METRO use.²³ It is reasonable to assume that dissatisfaction with one's present mode might lead to METRO utilization as a way to improve the work trip, and as we have just pointed out, bus users tend to be more dissatisfied than automobile users.

As we progress from those who find their work trip very convenient to those who find it very inconvenient, anticipated METRO use increases steadily from 28.9 per cent to 55 per cent.

What is quite disturbing, however, is the large proportion of survey area respondents who do not know if METRO will benefit them or not. Such a high proportion of uncertainty might be normal since completion of the entire regional system is still a number of years away, although parts of the system were scheduled to be operating by 1972. But in view of the large scale public

relations efforts to inform people of the system and its benefits, such uncertainty is not beneficial to the overall success of the system. This uncertainty is not beneficial to the overall success of the system. This uncertainty is not unique to inner-city residents. In his survey, Quayle found that 31 per cent of all adult Washington, D.C. residents were not sure of their use of METRO.²⁴

Because METRO, as designed, will serve downtown with greater frequency and more comprehensive service than the rest of the city or the suburbs, it seems relevant to inquire as to the work place of potential riders. The inquiry is not so much to discover the number of downtown versus suburban workers who will use METRO, but to determine if suburban workers feel that METRO will benefit them in their work trip.

Table 4

EXPECTED METRO USE IN THREE SELECTED NEIGHBORHOODS
BY PLACE OF WORK, IN PER CENT

Will use METRO	Place of Work		
	Washington, D.C.	Maryland Suburbs	Total
Yes	33.6 (40)	31.8 (7)	33.3 (47)
No	25.2 (30)	18.2 (4)	24.1 (34)
Don't Know	34.5 (41)	45.5 (10)	36.2 (51)
No Opinion	6.7 (8)	4.5 (1)	6.4 (9)
Total	82.6 (119)	15.3 (22)	97.9 (141) ^a

^a Remaining 2.1% work in northern Virginia.

As in our previous attempts to discover something about potential METRO patronage, the most prominent finding is that over one-third of the central city workers and almost one-half of the suburban workers do not know whether or not METRO will help them in their journey to work. It does not appear that lack of knowledge about the system is the reason for the uncertainty because

only 64 per cent of all respondents feel that they do not know enough about the system to commit themselves one way or the other. So a reason must be sought elsewhere. One possible explanation is that METRO is only one of several possible transportation improvements that can be accomplished, and not a very important one at that. In other words, freeways, buses, and better parking facilities might all be supported more by the general public than METRO.

As Table 5 indicates however, METRO is the most often mentioned transportation preference for the work trip, while commuter rail service ranks second. When the two rail solutions are combined, they account for 46.1 per cent of all transportation preferences. Auto oriented solutions, including more freeways and better streets, are supported by less than 15 per cent of the respondents. For non-work trips METRO falls to third place as a transit solution while commuter rail service and better downtown parking facilities rank higher.

When people are asked to generalize about improving transportation in the downtown area and in the suburbs, METRO does not dominate the list of possible solutions. For downtown travel in general, commuter rail service again is preferred most by the respondents, while park and ride lots (to be explained shortly) ranked second. For suburban travel, METRO ranks second to providing better parking facilities and not far above commuter rail service as a possible improvement over present conditions.

At this point it appears that METRO is the preferred alternative only for the work trip, and even in that category it is not an overwhelming choice. Several points must be made in reference to the specific kind of service that METRO is trying to provide.

In the first place, some of the solutions mentioned are directly related to the provision of rapid transit kinds of service. A park and ride lot is nothing more than a large parking lot at a rapid transit stop so that

Table 5

HOW CAN TRANSPORTATION BEST BE IMPROVED
FOR ONE'S SELF AND GENERALLY
(IN PER CENT)

Solutions	Self			General	
	Work	Other	Downtown	Suburbs	
Better Downtown Parking	17.1 (40)	19.0 (45)	12.1 (29)	25.6 (62) ^a	
Park and Ride Lots	12.4 (29)	12.7 (30)	23.4 (56)	2.9 (7)	
Better Local Streets and Roads	7.3 (17)	6.4 (15)	7.1 (17)	5.3 (13)	
More Freeways	7.3 (17)	3.0 (7)	4.2 (10)	7.9 (19)	
Better Bus System	9.0 (21)	11.0 (26)	3.8 (9)	15.7 (38)	
METRO	29.9 (70)	16.9 (40)	19.2 (46)	21.1 (51)	
Provide Commuter Rail Service	16.2 (38)	26.2 (62)	27.6 (66)	17.4 (42)	
Improve Taxi Service	0.9 (2)	5.1 (12)	2.5 (6)	4.1 (10)	
TOTAL	(234)	(237)	(239)	(242)	

^a Choice here is to provide more suburban parking facilities.

people can drive from home to a transit station and then take a rapid transit vehicle downtown. Whether the transit vehicle is a bus or some kind of rail vehicle, the essence of park and ride is that it permits people to use rapid transit for the most congested part of their work trip.

As for the large showing of commuter rail service for all types of travel, it is important to note that the differences between rail rapid transit (METRO) and commuter rail service may not be entirely clear to people who have had little or no experience with either form of travel. With less than one-half of a per cent of survey area respondents using a commuter rail system to get to work, it is entirely possible that at least part of the favorable attitude towards commuter rail service is attributable to METRO.

Another possible explanation for the failure of METRO to capture the imagination of more area residents is prompted by a Louis Harris nationwide survey taken in March, 1968, concerning problems facing the cities.

As is quite evident, transportation problems do not rank high on a list of possible urban problems. In the city, transportation difficulties rank seventh out of a possible nine problems. The lack of importance attributed to transportation in general is seen in that the next highest mentioned problem, the need for good middle income housing, received more than twice as many mentions as did the need for better public transportation. For suburban residents, transportation ranks even lower on the spectrum of urban problems.

Table 6

RELATIVE RANKING OF URBAN PROBLEMS BY PLACE
OF RESIDENCE, IN PER CENT

Problem	Suburbs		Central City	
	Per Cent	Rank	Per Cent	Rank
Slums	51	3	49	2
Racial Tension	53	2	47	3
Crime on the Streets	72	1	73	1
Lack of Good Middle- Income Housing	17	6	16	6
Need for Better City Officials	25	5	20	5
Riots	30	4	36	4
Lack of Good Public Transportation	11	8	6	7
Too Much Overcrowding	14	7	8	8
Too Much Noise	2	9	1	9

Question: "Now I want to give you this card with some problems people feel are now facing the cities. If you had to choose, which two or three of these problems do you feel are the most important to solve in the cities of America." (March, 1968)

Source: U.S. Department of Housing and Urban Development, A Profile of Suburbs and Central Cities in the United States, fifth draft (unpublished report, August 1968).

In response to the same kind of questions for our inner-city neighborhoods, crime is the most often cited problem while transportation is considered to be of much lesser consequence. Table 7 provides the relevant data. For respondents in each of the three neighborhoods, crime is by far the most often cited problem in the metropolitan area. Moreover, the range of opinion on this issue is quite close in all three areas, indicating a general consensus on the seriousness of the crime problem. After crime, agreement on area wide problems rapidly decreases to a point at which the second most mentioned problem, unemployment, receives only 10 per cent of all possible mentions.

There is agreement on transportation problems as it ranks last on the list of problems facing the metropolitan area, receiving less than 2 per cent of all responses.

When residents are asked to name the second most important problem facing the metropolitan area, the response pattern changes completely. Crime drops from first to last while transportation receives the greatest response rate of any specific problem selected. What is surprising is that 22.9 per cent of all respondents cannot mention a second specific problem facing the Washington, D.C. metropolitan area.

Conclusion

The data show that for most inner-city respondents, transportation is not a top priority concern, but that it is important especially to users of public transportation.

But the large percentage of "don't knows" when survey area respondents were asked if they thought they would patronize METRO for the work trip indicates that improvements in existing transportation facilities or wider automobile ownership might meet innercity travel needs better than METRO appears to meet them. At any rate, METRO is not a grass roots demand among the respondents of the inner-city Washington, D.C. neighborhoods used in this research.

The actual importance that inner-city residents attach to transportation or the anxiety with which they view their own immobility are less important from a long range perspective than is how well METRO will fit in with and is related to development in the National Capital Area. Metropolitan growth and development is generally taking place outside the central city. The central city as a place of employment is declining when compared to outside central city areas. Washington, D.C. has traditionally been a professional and service oriented city, and current trends indicate that this pattern will continue.

When compared to other urban problems, transportation fails to arouse much excitement among inner-city residents. Crime, education, housing, and employment are seen by inner-city residents as far more important to their well being than are transportation problems. Again, this does not mean that inner-city residents suffer from no transportation deprivations, or that their quality of life could not be improved by investments in transportation resources. It simply means transportation problems are not perceived by Washington, D.C. inner-city residents as being critical to their lives. And, since public policy is quite responsive to the known preferences, values, and demands of specific interests, it does not seem reasonable to expect a major policy shift towards solving the transportation problems of the inner-city resident.



Some attendees did not choose to leave seats for coffee break. They preferred to review transportation-related materials or reflect on issues already discussed.

FOOTNOTES

¹Violence in the City--An End or a Beginning, A Report by the Governor's Commission on the Los Angeles Riots, John A. McCone, Chairman (Los Angeles, California, December 2, 1965), p. 65.

²For a full statement on how industrial plant relocation affects commuting and residential patterns see Everett J. Burtt Jr., Plant Relocation and the Core City Worker (Washington, D.C.: U.S. Department of Housing and Urban Development, January, 1967).

³Even with the 1968 legislation barring racial discrimination in the sale or rental of housing, there does not seem to be much reason to expect that the housing patterns of minority group members will change greatly in the foreseeable future. Current research suggests that the decentralization of minority groups will occur only slowly, and probably only then by spreading out into older neighborhoods close to the center of the metropolitan area--Edgar M. Hoover and Raymond Vernon, Anatomy of a Metropolis (New York: Anchor Books, Doubleday and Company, 1962), pp. 215-229.

⁴John F. Kain and Joseph Persky, in "Alternatives to the Gilded Ghetto," The Public Interest, No. 14 (Winter, 1969), pp. 75-77, report that when Negro and white residential locations are compared for the suburbs of the ten largest metropolitan areas, whites at all income levels are much more suburbanized than are Negroes at the same income level.

⁵John R. Meyer, John F. Kain, and Martin Wohl, The Urban Transportation Problem (Cambridge, Mass.: Harvard University Press, 1965), p. 54.

⁶John F. Kain, "The Distribution and Movement of Jobs and Industry," in The Metropolitan Enigma: Inquiries Into the Nature and Dimensions of America's "Urban Crisis," ed. by James Q. Wilson (Washington, D.C.: U.S. Chamber of Commerce, 1967), p. 11.

⁷Sumner Myers, In "Personal Transportation for the Poor," Interrelationships of Transportation and Poverty: Summary of Conference on Transportation and Poverty (Brookline, Mass.: American Academy of Arts and Sciences, 1968), p. 9 argues that a "reverse" commuter relying on public transit can cover only one-third the distance he could cover by car in the same amount of time. This means that his potential labor market is one-ninth the size that it might otherwise be. Myers points out that a resident of southeast Washington, D.C. who can spend no more than one hour going to work by bus is limited to an area which provides 571,000 jobs. By car, he could reach any part of an area providing 865,000 jobs. Other things being equal, his job opportunities are half again as great by car as they are by bus. Other things are not equal however, as there are likely to be more of the inner-city resident's kinds of jobs outside of the one hour by bus area--the outer suburbs.

⁸New York, Chicago, Cleveland, Philadelphia, Boston, San Francisco, and the Washington, D.C. systems under construction in Atlanta.

⁹U.S. Department of Housing and Urban Development, Office of Metropolitan Development, Urban Transportation Administration, Tomorrow's Transportation, New Systems for the Urban Future (Washington, D.C.: U.S. Government Printing Office, 1968), p. 13.

¹⁰Automobile Manufacturing Association, 1968 Automobile Facts and Figures, p. 45.

¹¹HUD, Tomorrow's Transportation, p. 16.

¹²Alan Altshuler, "Transit Subsidies: By Whom, For Whom?" Journal of the American Institute of Planners, XXXV, No. 2 (March, 1969), 84.

¹³Anthony Downs in "Alternative Futures for the American Ghetto," Daedalus, XCVII, The Conscience of the City (Fall, 1968), 1333, notes that there is not a single significant government program aimed at altering the continued concentration of non-whites in the central city, nor is there likely to be any unintended results in this direction.

¹⁴Kain and Persky, "Alternatives to the Gilded Ghetto."

¹⁵Kenneth B. Clark, Dark Ghetto: Dilemmas of Social Power (New York: Harper & Row, 1965).

¹⁶Transportation Research Institute, Carnegie-Mellon University, Latent Demand for Urban Transportation (Washington, D.C.: U.S. Department of Housing and Urban Development, 1968), pp. 6364.

¹⁷Transportation Research Institute, Latent Demand, p. 10.

¹⁸Altshuler, "Transit Subsidies," 85.

¹⁹Meyerson, "Urban Policy: Reforming Reform," 1415.

²⁰The survey data employed is part of a 1968 home interview and mail-in survey of the Washington, D.C. metropolitan area conducted by the Metropolitan Washington Council of Governments. The sample used in the survey was 3.5 per cent sample of all the households in the Washington, D.C. metropolitan area, yielding a sample size of approximately 29,000 household units. Within a household, each individual over the age of five, who traveled on a specific day, was interviewed. For the neighborhoods used in this research a total of 246 interviews were recorded. The demographic profile of area respondents is shown below:

<u>Income</u>	District ^a of <u>Columbia</u>	<u>AREA</u>		
		<u>Northern Anacostia</u>	<u>Southern Anacostia</u>	<u>Central City</u>
\$ 0-2,999	1.3	2.9	----	2.7
\$ 3-5,999	23.1	34.3	19.6	28.0
\$ 6-9,999	44.9	40.0	46.4	53.3
\$10,000 & over	30.7	22.9	34.0	16.0
<u>Employed</u>				
Yes	81.7	85.0	83.0	75.0
No	18.3	15.0	17.0	25.0

<u>Occupation</u>				
Professional, Technical				
Managerial	20.7	28.9	16.9	18.6
White Collar ^b	33.2	34.2	32.6	32.9
Blue Collar ^c	46.5	36.9	50.6	47.5
<u>Employer</u>				
Fed'l Government	49.6	42.1	60.9	32.9
Manufacturing & Construction	8.8	2.6	8.8	10.5
Transportation, Utilities & F.I.R.E. ^d	8.8	10.5	5.4	13.1
Wholesale & Retail Trade	11.1	18.4	10.9	10.5
Professional & Personal Services	21.6	26.4	14.1	32.9
<u>Mode of Travel</u>				
Car	37.4	41.9	37.9	28.7
Bus	41.9	44.2	43.7	45.0
Taxi/Train	.8	--	1.0	1.2
Auto Passenger	11.4	11.6	12.6	7.5
<u>Number of Cars Available</u>				
None	36.2	25.6	38.8	47.5
1	50.4	58.1	49.5	40.0
2	9.3	11.6	7.8	10.0
3	4.1	4.7	3.9	2.4
<u>Race</u>				
White	17.1	21.4	12.6	20.0
Non-White	82.9	78.6	87.4	80.0
<u>Education</u>				
Elementary	13.4	14.0	1.9	26.2
High School	61.8	48.8	74.8	52.5
College	24.8	37.2	23.3	21.2

a. Summary of the three neighborhoods investigated.

b. Sales and clerical employees.

c. Skilled, semi-skilled, unskilled, and personal service employees.

d. Finance, insurance, and real estate.

²¹Hearings Before the National Commission on Urban Problems, Paul H. Douglas, Chairman, Vol. 5, Detroit, St. Louis, East St. Louis, Washington, D.C. (Washington, D.C.: Government Printing Office, 1967), p. 366.

²²Oliver Quayle, A Survey of Public Opinion In Washington, D.C. Regarding New Freeways, Compiled for the Committee on the District of Columbia, U.S. Senate, 91st Congress, 1st Session, p. 10.

²³The name for the new Washington, D.C. Rapid Rail Transit System.

²⁴Quayle, Public Opinion on New Freeways, p. 23.

PHILLIP WILSON: Thank you Bill. The next subject is "Citizens Involvement in the Transportation Planning Process." Dr. James J. Schuster will be addressing you on this topic. Dr. Schuster is the Director of the Institute for Transportation Studies, Villanova University, Villanova, Pennsylvania. I think it is remarkable that all three of these next speakers are Yankees. I figure that they came down to warm up and get away from some of their problems. He also serves as Professor of Civil Engineering at Villanova University. I think you will find that if you look at the bio-data, he brings a great deal of expertise to this program because he has also worked in the field of environmental impact, air quality analysis, noise evaluation, traffic impact, and traffic prediction techniques. So, he is an obviously well-rounded individual and I know that he brings us an important message. (Applause)



Dr. James J. Schuster of the Institute for Transportation Studies, Villanova University (PA) reviews some of his study's findings on "Citizen Involvement in the Transportation Planning Process."

CITIZEN INVOLVEMENT IN THE
TRANSPORTATION PLANNING PROCESS

by

James J. Schuster

Director

Institute for Transportation Studies

Villanova University

Villanova, Pennsylvania

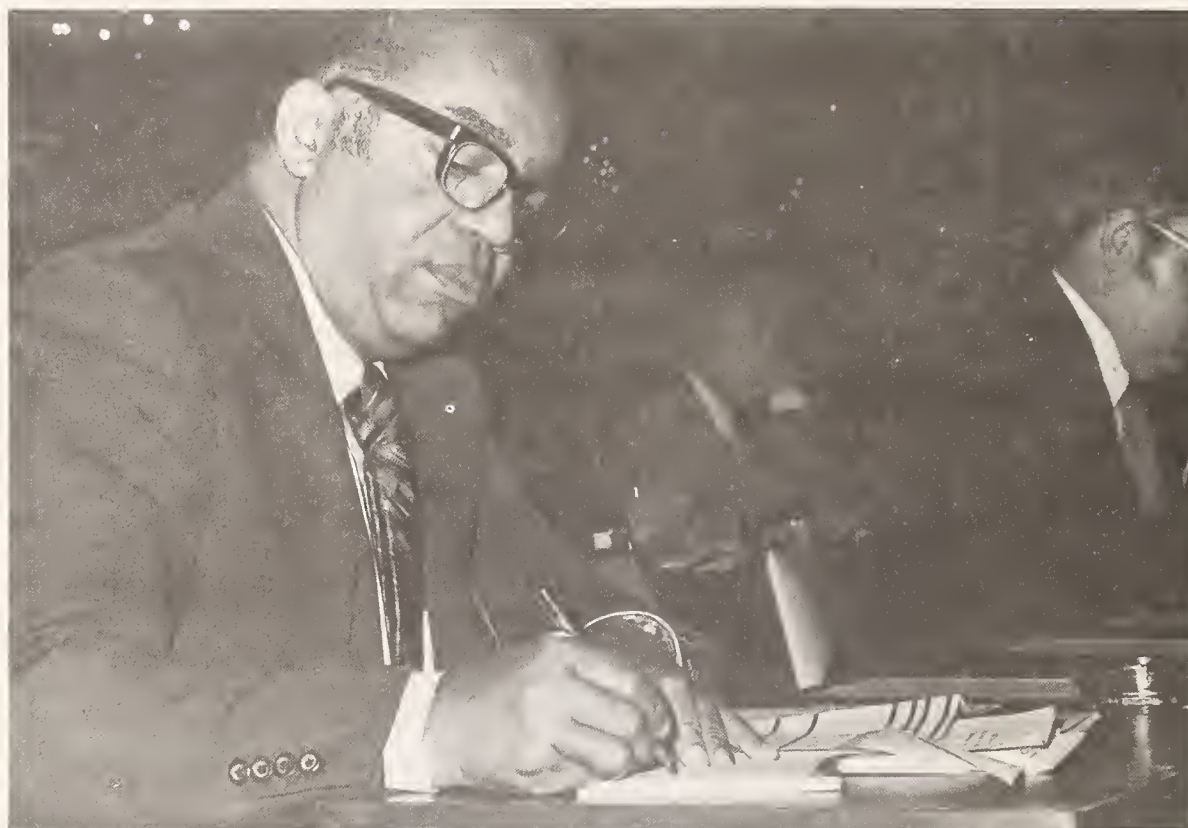
Abstract

This paper addresses the problem of citizen participation in the transportation planning process. It has become increasingly apparent that despite federal legislation and administrative guidelines requiring citizen participation, the public is not being involved to its satisfaction in the planning of new transportation projects, and is, therefore, growing more and more hostile to such projects.

The attempt is, therefore, made to define the role the public may assume in the transportation planning process and the degree to which the public may control that process. In order to define and assess that role, it is of course necessary to identify and define the various publics that exist in any planning purview area. This paper therefore analyzes the different interest groups that make up the public and classifies them in terms of their capacity for effective citizen participation. It also examines the various methods by which each type of public can be identified and contacted by the planning agency for significant informational feedback.

With the various publics identified and contacted, the problem then remains as to how to involve them in the transportation planning process in a concrete, meaningful way. The major requirement of such involvement is that it be early enough in the planning process for the public to feel that it has had a hand in the proposed project from start to

finish, and that it has significantly influenced the final recommendation, whether it be the original proposal or an alternative. In this way, the feeling of the public that its involvement is tokenism or after-the-fact formality can be avoided. This study therefore examines the many processes and techniques open to the planner for achieving early, concrete and cooperative citizen participation in a variety of transportation situations.



Oil company representatives were also present at the conference.

Introduction

Urban planning for transportation is a philosophy. It is the determination of what should be done and the development of the techniques of taking action just when it is necessary by a team of knowledgeable people. The goal of the transportation planning process is the betterment of the public welfare by satisfying what the people want.

This paper addresses the problem of citizen participation in the transportation planning process, and is a result of the current research, Optimization of Citizen Participation in the Transportation Planning Process (DOT - OS - 40098), sponsored by the Program of University Research, Department of Transportation (1).^{*} The results of the research done both in this study and in the National Conference and Workshop on Citizen Participation and Transportation show that despite the inadequacy of the public hearings required by federal law, no additional legal requirements are needed to further citizen participation. Current federal guidelines, which recommend public hearings as only one of many devices for citizen participation, are quite adequate if properly implemented.

Definition of Citizen Participation

The concept of citizen participation is not new. Citizen participation is one of the basic principles upon which this country was founded. Citizen participation in the transportation planning process, however, can be considered a relatively new construct as evidenced by the legislative and administrative actions dealing with this concept. Additionally, the existing literature offers many definitions of what

^{*}Numbers in parenthesis refer to listing in Bibliography

citizen participation should be or what function it should perform.

The open literature is evidence to the less than fully transparent understanding of who constitutes the participative body of citizens. Therefore, to arrive at a working definition of citizen participation, within the context of the transportation planning process, consideration must be given to the following questions:

- 1) Who comprises the participative body of citizens;
- 2) What is the function of the participative body in the transportation planning process;
- 3) At what level of participation should the participative body perform their function?

The research team has therefore adopted the following definition of citizen participation.

In transportation planning, citizen participation applies to all people who reside and/or have a business within the purview area of the transportation planning process and who are not formally attached to the planning or decision-making body. Citizen participation is the process that affords these citizens the capability of influencing transportation decisions at all stages of the planning process at a degree of participation that is suitable to both planning officials and decision-makers and the participating citizens.

Roles of Citizen Participation

The participative roles of citizens in the transportation planning process are found to fall into three categories:

- 1) Internal Citizen Energy;
- 2) External Citizen Energy; and these are summarized in Figure

1 and Table 1.

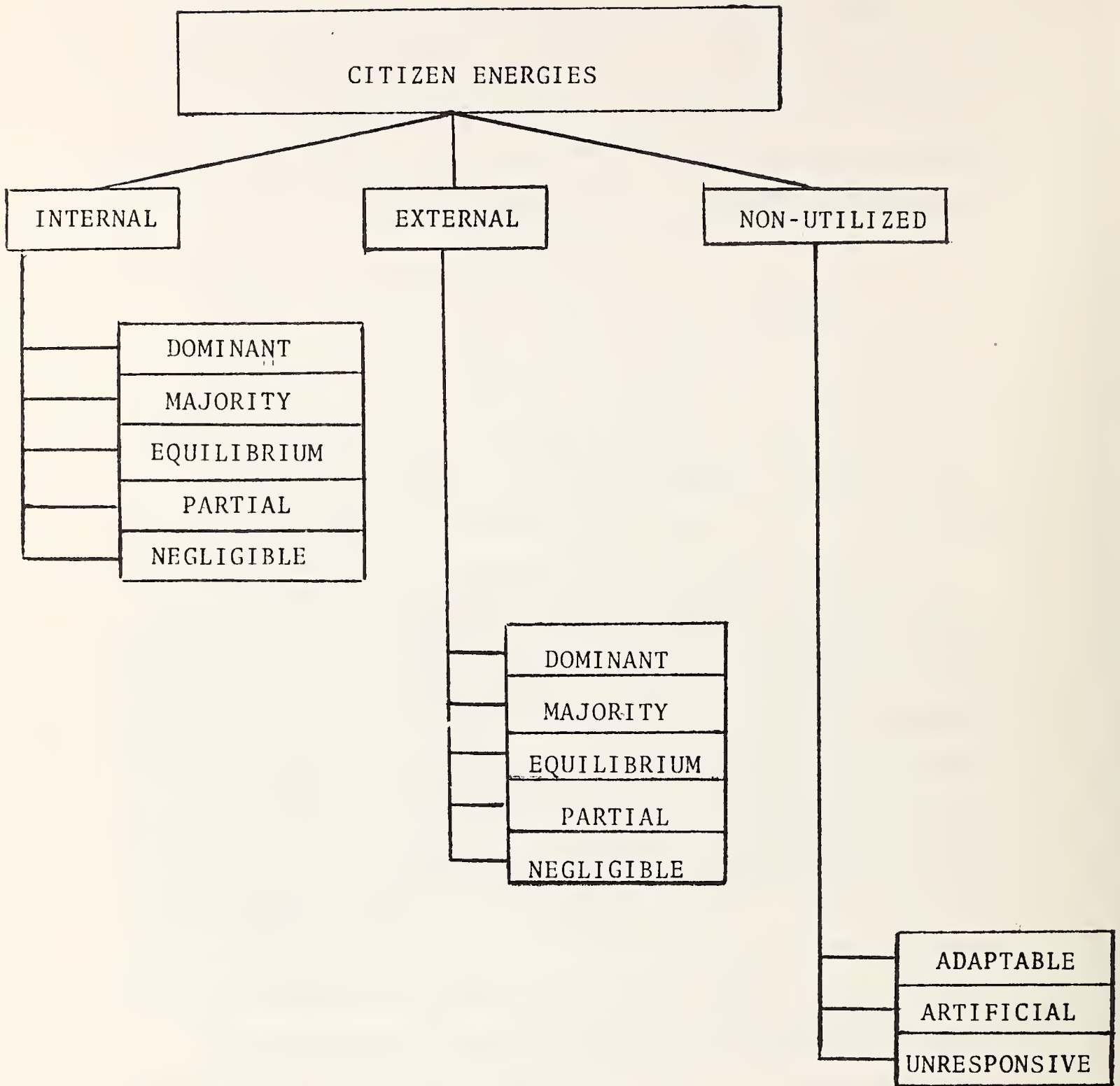
Internal Citizen Energy

Internal Citizen Energy affords the public through its representatives the opportunity to participate in a meaningful manner in the formation of a suitable plan for a transportation project that will affect them. The citizen participants do not react to the offered plan prepared by someone else; rather they work with the planning officials in comprising the most desirable plan.

Some technically capable planners might feel that the citizen participants are intruding if the citizens work internally. They may also think they are being threatened and that the public could never effectively work within their system because the public does not know what it wants, nor does it possess the ability to select what it wants. These beliefs, to which some planners subscribe, are simply not true.

Planning officials, of course, possess a significant amount of knowledge about their learned specialty. Indeed this is beneficial, but the omniscient planner is a myth, (2) He is limited to the information of which he is aware and to the perspective to which he subscribes. If citizen participants work internally the planner can contribute his technical expertise while the citizen participants contribute their expertise in regard to their own professional knowledge, their knowledge of the affected area, and their knowledge of their community's needs and desires. These are factors of which the planning official may not be totally cognizant. However, such factors must be considered in order to arrive at a plan that will benefit and satisfy the members of the affected community.

Internal Citizen Energy is not active participation in the final design stages (for example, geometric, bridge, or pavement design) of a transportation project; rather the citizen's available expertise limits him to a more passive role in the drafting of designs. However, the citizen's participation in the formative planning stages of the project



TYPES AND DEGREES OF CITIZEN ENERGY

FIGURE 1

TABLE 1
 POWER FUNCTION FOR EACH DEGREE OF INTERNAL,
 EXTERNAL, AND NON-UTILIZED CITIZEN ENERGY

INTERNAL CITIZEN ENERGY

<u>DEGREE</u>	<u>POWER FUNCTION OF CITIZEN PARTICIPANTS</u>
1) Negligible	To Observe
2) Partial	To Advise
3) Equilibrium	To Share Equally
4) Majority	To Lead
5) Dominant	To Decide

EXTERNAL CITIZEN ENERGY

<u>DEGREE</u>	<u>POWER FUNCTION OF CITIZEN PARTICIPANTS</u>
1) Negligible	To Receive Information
2) Partial	To Receive and Convey Information
3) Equilibrium	To Share Equally
4) Majority	To Lead
5) Dominant	To Decide

NON-UTILIZED CITIZEN ENERGY

<u>DEGREE</u>	<u>POWER FUNCTION OF CITIZEN PARTICIPANTS</u>
1) Unresponsive	To Receive No Informa- tion
2) Artificial	To Be Deceived
3) Adaptable	To Be Finessed

is necessarily one that is active. It can be understood that if the transportation planning process is to be wholly effective, citizens must be provided the proper vehicle for participating throughout the entire planning process. This is particularly critical when the planners are consultants or others who may not be totally familiar with the affected area.

The confrontation situation that usually develops between planning officials and citizens at public hearings could be avoided by utilizing Internal Citizen Energy since there would be little need to acquaint the public with the proposal; public knowledge and attitudes would have been directly incorporated into the plans from the earliest stages of the planning process.

External Citizen Energy

The concept of External Citizen Energy provides for citizen participation by allowing the citizens and planning officials to interact on an assemblage basis. Such an assemblage often evolves into a confrontation or encounter since the citizens are invited to react to plans which have been prepared and presented by planning officials. As such, this type of citizen participation can be a legitimate form but it is often less than wholly effective. It should be noted that this is currently the most accepted and utilized form of citizen participation.

Non-Utilized Citizen Energy

Three Degrees of Non-Utilized Citizen Energy have been identified: Unresponsive, Artificial, and Adaptable. Each of which can be recognized as a form of non-participation. As such they possess a low efficacy score.

The concept of Non-Utilized Citizen Energy provides a substitute for genuine citizen participation, allowing planning officials to exercise and enjoy absolute control over the decision-making of planning tasks.

IDENTIFICATION OF THE PUBLICS

The concept of Citizen Energy was developed on the premise that each citizen is a source of relevant information and power which can be effectively and beneficially utilized in the planning of transportation facilities. For example, affected citizens are the best source of information with respect to the character, cohesion, goals, needs and desires of their community. In addition, they possess and enjoy a technical expertise and creative capacity that allows them to approach planning decisions from a different perspective than that utilized by planning officials.

However, before effective citizen participation can begin it is necessary to identify and contact the various publics in the planning purview area. The identification process is far from being an easy task for several reasons.

Every study area is unique and the task of identifying and contacting each of the affected publics will differ for each area, particularly since in any study area there does not exist a single, all-encompassing public. There are actually many publics representing many interests. (3), (4). There is ample evidence supporting the belief that a wide range of diverse interests exist in the transportation planning process purview area, (5), (6), (7), especially if the planning involves a metropolitan setting. (8) As such, the planning agency must allocate a sufficient and often considerable amount of time to the identification task.

A simple investment of time, however, does not necessarily assure successful identification of all relevant publics. It is often the case that regardless of the amount of time, effort, and funds are expended to identify the publics, some will be excluded. As a result, the citizen

groups and individuals not identified at the initial stages of the project may possibly identify themselves at later stages and demand that their needs and desires be incorporated into the planning effort. Inclusion at such a late date is difficult for the planner to accomplish without destroying the continuity of the planning process.

This particular type of disruption, whereby individuals and ad hoc citizen groups surface and express their preferences at late stages of plan development or even project construction, is prevalent in planning distant future transportation links and networks where the time between plan development and implementation may be many years.

Other problems associated with the identification of publics arise: when the citizen groups and individuals comprising the affected publics change during the course of the planning process; when the relevant publics vary according to the type of planning proposal (a transportation issue cannot be expected to interest all publics.); and when citizen groups and individuals may not desire to participate throughout the entire course of the planning effort. (9) For example, some may wait until later stages of the process to become involved, and still others may not participate until physical changes resulting from the project affect their immediate environment.

Sensitization and Stimulation Processes

The 3C planning process has a direct and significant influence on the regional area it services. The regional area is constructed from a large array of interrelated segments of a complex society; a society which is comprised of heterogenetic publics. It is this fundamental characteristic of advanced community diversity that challenges the planning agency's ability to effectively implement citizen participation in the transportation planning process.

Advanced community diversity make the task of identifying publics

difficult. But recognizing the difficulty of the task allows one to approach the work effort with a useful respect. Such respect fosters an appreciation for the social structures which are present and necessary for a community to function properly.

If a process for the identification of publics is to be effective, it is necessary that the planning agency possess an understanding of the types of communication flow involved in a planning effort.

Sensitized and Stimulated Publics

Every action by planning officials has an affect on some of the many publics found within a particular study area. Those publics which are aware of this action via the operation of a feedforward communication are said to be sensitized publics.

Although many publics are sensitized as a result of the actions taken by planning officials, only a small number perceive the impact as a threat to their physical, social or cultural environments. Such publics respond to the feedforward communication offered by the planning officials with a feedback communication that is couched in reactionary rhetoric and conveyed with an emphasized intensity. These publics can therefore be considered to be stimulated publics.

One must realize that a specific maturity order is present. For example, a public can exist as an organized group and become sensitized in response to a communication flow from the planning official. Once sensitized it can practice an apathetic persuasion or decide to offer feedback (positive or negative) to the planning official. If it decided to offer feedback it defines itself as a stimulated public. Therefore its maturing process must advance from sensitization to stimulation; it is not possible to be stimulated without first being sensitized.

To make the discussion comprehensive, it is necessary to recognize that a non-sensitized public also exists. This potentially broad

public is constructed from citizens who have not been the recipients of a communication from the planning official. They, of course, possess no mechanism for participation in the planning process. Particularly since they may not even be aware that it exists.

In addition, one can recognize that the concepts of sensitization and stimulation are constructed from a continuum of degrees. Each of which reflects the amount of interest of the public or the magnitude of impact endured by the public.

Sensitized and Stimulated Planners

This discussion, of course, leads one to a consideration of the complements of this concept whereby sensitized and stimulated planners can also be defined. For example, if a communication originates with a public and is forwarded to the planner, it can be said that the planner is sensitized. Similarly, if the planner responds with a feedback communication to the public, he is considered to be stimulated. Currently this planners sensitization and stimulation process rarely occurs while citizen sensitization and stimulation is relatively common.

Definition of Publics

With the identification and importance of the sensitization and stimulation process noted, a working definition of publics is offered. Every citizen is an important source of relevant information and power. The research team has, therefore, chosen to define as a public every sensitized or non-sensitized citizen or group of citizens that constitute a specific interest and are included within the purview area of the transportation planning process. Each of these publics should be contacted and asked to contribute their energy in the form of information at a sanctioned degree of power, i.e., a specific degree of Citizen Energy.

The research team has chosen to classify the publics into the following categories:

- 1) Stable Community
 - a. Visible Publics
 - b. Covert Publics
- 2) Transient Community

Visible publics usually possess the capability of influencing other community members, either positively or negatively. As such, these publics must be identified and contacted or they may very likely use their power to negatively influence the attitudes of other citizens.

It is a different task to identify covert publics (perhaps the largest sector) since they often possess an apathetic nature regarding transportation planning activities or are not concerned with the transportation planning process until physically affected by planning proposals. Members of this category might be unaffiliated citizens or citizens who will initiate or join ad hoc groups when physical changes are suggested.

These publics should be identified and at least sensitized regarding planning activities because they are members of the stable community and can act in a detrimental manner after the plan development stage is reached. Methods for identifying these publics are offered in this section. However, as will be observed, some of these methods involve only a feedforward communication from the planning agency to the publics which is aimed at sensitizing these publics. If such publics desire to have an effect on it they will have to provide feedback communication which hopefully will escalate into a dialogue.

Publics who comprise the transient community are those who will not remain in the TPP purview area for the duration of the planning effort. However, reasons for moving from the area do not include being displaced as a result of a proposed transportation facility. Typical members of

this category may include many apartment dwellers and college students.

The planning agency may not desire to contact these publics because of their temporary stay in the purview area. However, these publics should be sensitive to the planning effort and identification should be attempted since they enjoy an objective perspective. The objective perspective of the transient community results from the fact that they will usually not benefit nor sacrifice as a result of planning proposals. Therefore, their participation should be sought since they may offer a creative capacity and technical expertise not found in the biased (perhaps) viewpoints of vested interest publics.

Identification and sensitization methods are available for transient publics identifying themselves.

Methods for Identification and Contact

The connecting link between planners and the publics themselves are methods for identification and contact. Table 2 illustrates a summary of identification methods.

CITIZEN PARTICIPATION PROCESSES AND TECHNIQUES

A citizen participation technique can be defined as a vehicle for obtaining input concerning the values and goals of the citizenry at a discrete stage of the transportation planning process. A participation technique can possess either an active or passive quality. For example, a brainstorming session actively involves citizens while the technique for testing planning agency communications does not involve citizens but is necessary to enhance the effectiveness of an additional technique, e.g., public meetings.

A citizen participation process is a continuous device for obtaining input regarding the values and goals of the citizenry during the course of the planning process - from plan conception to the recom-

mentation of a course of action for implementing an alternative plan.

A variety of citizen participation processes and techniques are available. A number of the processes and techniques have been adequately described in the open literature. (9), (10), (11).

Table 2

Identification Methods

Agency Employee Knowledge
 Citizen Groups Catalog
 Information Offices
 Interviews
 Issue Specific Reputational Method (ISRM)
 Mailing Lists
 Mass Media
 Newspaper Content Analyses
 Personal Letters and Telephone
 Street Maps and Lists of Influentials
 Work-of-Mouth

A process or technique must satisfy an objective, and the following objectives have been identified:

- 1) Communication - education
- 2) system assessment
- 3) attitude formation or change
- 4) direct decision making
- 5) indirect decision making
- 6) large and small group problem solving
- 7) conflict resolution
- 8) systems analysis
- 9) economic involvement in planning

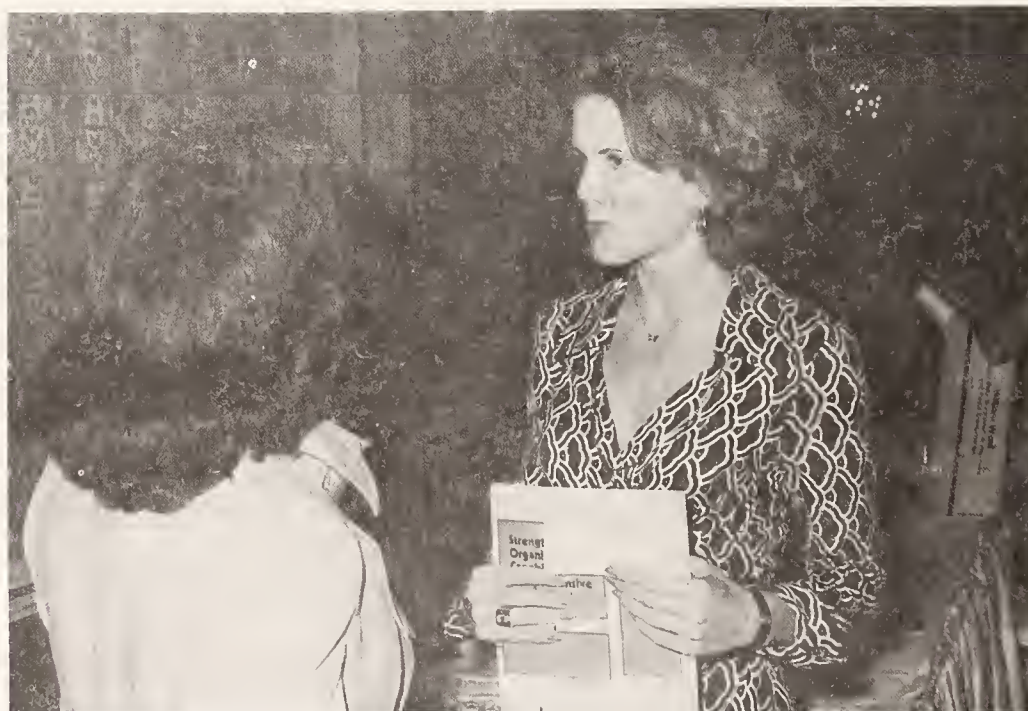
Six processes and fifty-three techniques have been studied and classified by the research team for meeting each objective and are offered in Table 3 to 11.

Conclusion

The means of achieving meaningful citizen participation in the transportation planning process involves more than the legally required public hearing. The various publics affected by a project in the planning purview area must first be identified and contacted: for such identification and contact a variety of methods are available.

The role that citizens may play in the planning process is of three kinds: Internal Citizen Energy, External Citizen Energy, and Non-Utilized Citizen Energy, with the first being best for citizen involvement in the planning process from the very beginning.

A number of processes and techniques are useful for insuring significant and concrete citizen participation in the planning process. These processes and techniques must be used bearing in mind the type of citizen energy used and the nature of the publics involved.



Vicki Loven, City Post Oak Association, talks with Conference Director, Naomi W. Lede' (back to camera) of Texas Southern University in Houston.

Table 3

Citizen Participation
Processes and Techniques Which can be Used
To Satisfy the Objective of
Communication-Education

Processes

Advocacy Planning
Fishbowl Planning
Coordinator Strategy
Coordinator-Catalyst Strategy
Informative Planning
Informative Planning with Feedback
Plural Planning

Techniques

Citizen Advisory Committees
Citizen Transportation Text
Demonstration Projects
Deal with Citizens in Planning Agency Offices
Direct Mail
Educate Citizens about Planning and Decision-Making Processes
Evaluation
Experiments
Fishbowl Discussion
Hotline
Informal Neighborhood Meetings
Initiate Acquaintance
Interactive Graphics
Introductory Brochure
Mass Media
Open House
Participatory Television
Public Hearings
Public Meetings
Role-Playing Games
Steering Committees
Test Planning Agency Presentations
Tri-Polar Discussion Group

Table 4

Citizen Participation Processes
And Techniques Which can be used to Satisfy
The Objective of System Assessment

Processes

Advocacy Planning
Fishbowl Planning
Coordinator Strategy
Coordinator-Catalyst Strategy
Informative Planning
Informative Planning with Feedback
Plural Planning

Techniques

Analyze Past and Current Plans
Attitude Surveys
Background Study
Community Self Survey
Election Issue Review
Evaluation
Issue Ballots
Listening Posts
Monitor Mass Media
Monitor Meetings
Participatory Television
Personal Observation
Photo Essay
Public Hearing
Public Meeting
Scheduling
School Essays
Tri-Polar Discussion Group
Value-Analysis

Table 5

Citizen Participation Processes
And Techniques Which can be used to Satisfy
The Objective of Attitude Formation
And Attitude Change

Processes

None

Techniques

Direct Mail
Educate Citizens about Planning and Decision-Making Process
Introductory Brochure
Mass Media
Open House
Photo Essays
Role-Playing Games
School Essays
Tri-Polar Discussion Group

Table 6

Citizen Participation Processes
And Techniques Which can be used to Satisfy
The Objective of Direct Decision-Making

Processes

None

Techniques

Citizen Referendum

Table 7

Citizen Participation Processes
And Techniques Which Can Be Used To Satisfy
The Objective of Indirect Decision-Making

Processes

Advocacy Planning
Fishbowl Planning
Coordinator Strategy
Coordinator-Catalyst Strategy
Plural Planning

Techniques

Delphi
Listening Posts
Regional Citizen Committee
Value Analysis

Table 8

Citizen Participation Processes
And Techniques Which Can Be Used To Satisfy
The Objective of Large and Small
Group Problem Solving

Processes

Advocacy Planning
Fishbowl Planning
Coordinator Strategy
Coordinator-Catalyst Strategy
Plural Planning

Techniques

Brainstorming
Charette
Delphi
Design-In
Fishbowl Discussion
Focus Groups
Steering Committee
Task Forces
Workshops

Table 9

Citizen Participation Processes
And Techniques Which Can Be Used to Satisfy
The Objective of CONflict Resolutions

Processes

None

Techniques

Arbitration
Delphi
Meditation
Ombudsman

Table 10

Citizen Participation Processes
And Techniques Which Can be Used To Satisfy
The Objective of Systems Analysis

Processes

Advocacy Planning
Fishbowl Planning
Coordinator Strategy
Coordinator-Catalyst Strategy
Informative Planning
Informative Planning with Feedback
Plural Planning

Techniques

Community Map Construction
Mapping
Monitor Mass Media
Rating Panels
Value Analysis

Table 11

Citizen Participation Processes
And Techniques Which can Be Used to Satisfy
The Objective of Economic
Involvement in Planning

Processes

None

Techniques

Employment of Community Residents on Transportation Planning Projects

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PHILLIP WILSON: Our next speaker will offer his thoughts on techniques for evaluating citizens participation at the neighborhood level. Mr. Richard B. Yukubousky is the President and owner of Yukubousky and Associates which is a consultant firm operating out of Seattle, Washington. Seattle is one of my favorite cities. I think that it is probably one of America's favorite cities. I understand there used to be a billboard on the outskirts of the city that read "the last person to leave, please turn out the lights." It's a beautiful city. I believe he came to Texas for number one, to warm up, and two, to see what water looks like again. I understand that they are running short of water.

He will speak to us about an innovative neighborhood planning program which they have initiated and carried forward in Seattle. I think that if you were to refer to the bio-data again, you will note that he is certainly not a parochial individual. He is presently located in Washington State. He has also had experiences in New York and New Jersey. Without further ado, I bring you Richard Yukubousky. (Applause)



Concentration in the midst of discussion.

INTEGRATIVE PARTICIPATION: NEIGHBORHOOD PLANNING WITH TRANSIT
DEPENDENT CITIZENS

by
Richard Yukubousky
Yukubousky & Associates
Seattle, Washington

Abstract

Although citizen participation has been a major transportation planning concern for more than a decade, precious little is known about the tradeoffs among various participation strategies. Part of our confusion blossoms from the diverse ideological bases for citizen participation, and the remainder from our failure to pursue research capable of addressing some of the critical issues.

A synthesis of a large body of theoretical and a much smaller body of empirical literature on citizen participation suggests dichotomous strategies that are useful for analytical purposes. The "additive" or traditional strategy is descriptive of much of current practice in technically oriented planning exercises such as transportation planning. A contrasting strategy, the "integrative" or partnership approach, is more compatible with our dominant social ideologies and has potential for better meeting a wide array of participatory objectives: consensus, citizen efficacy and decreased alienation, future consciousness, better information, creative and effective solutions, etc.

This paper explores these contrasting strategies, and derives a partnership strategy proposal for addressing the problems of transit dependent groups such as the elderly, handicapped, and inner city poor. A discussion of the possible advantages and potential problems of this neighborhood transit planning approach concludes the paper.

Ideology and Participation

Virtually everyone accepts the concept of citizen participation in governmental agency decision making. Citizen participation is, in theory, the cornerstone of American democracy. Yet as Sherry Arnstein illustrated in her well known "Ladder of Citizen Participation," the rhetoric of participation has produced diverse implementation strategies and approaches.¹ These range from therapy and manipulation (forms of non-participation) to full citizen control or power. When the theory of citizen participation is given and in substance, translated into strategies and techniques for completing the planning process, bitter struggles can develop between citizens and their elected and appointed officials. Since a major theme of this conference is cooperation and partnership, it is worth reflecting on the causes of this apparent acrimony.

Effectiveness criteria for citizen participation are defined by the role and ideological perspective of individuals who propose them, and thus suggest conflicting guidelines for participatory programs. Elected public officials seek the views of their constituents and must be concerned with future reelection campaigns. Agencies want to legitimize their programs by building constituent bases for them. Technical experts express concern over the quality of information used in the decision making process and sometimes view citizen participation as a threat to the integrity of their professional standards. Various segments of the public-at-large want a "fair shake" from their governmental institutions and/or seek to further legitimate interests. Since there is no unity of purpose in the decision or policy arena, it is very difficult to identify universally accepted guidelines for the design and implementation of citizen participation programs. Failure to recognize this dilemma has resulted in the adoption of citizen participation programs that frustrate some or all of the involved parties and can produce rancorous conflict. A cycle of mistrust between citizens and their planning institutions is thereby further fueled.

Contemporary citizen participation practice evolves from several intertwined ideological roots. These strands of American socio-political thinking

suggests differing planning styles and citizen participation strategies. Differences in planning style revolve around the important political issue of who determines the plan's goals and means. This issue is central to the planning debate because quite frequently those benefitting from a plan bear neither its direct nor indirect costs.

The Fainsteins have identified 4 important American social theories: technocratic, democratic, liberal, and socialist.(2) Each of these is founded upon a set of dominant social values and beliefs and uses a particular approach to define the "public interest". Since these ideologies form a backdrop for the two citizen participation strategies that will be contrasted in the next section of this paper, their primary characteristics are briefly sketched in the next few paragraphs.

Disciples of technocratic social theory wish to harness the power of science and technology to ameliorate conditions of the lower classes and to solve other pressing social problems. Dominant values are order, progress and efficiency. The public interest is equated to the interests of the upper classes as interpreted by a scientific-managerial elite. "Traditional" planning styles are associated with this social theory.(3) Citizen participation is used primarily to prevent anticipated obstructionism to agency plans. (4) The emphasis is upon public relations, educating the public, "rubber stamp" advisory boards, etc. Sometimes, this participation amounts to nothing more than manipulation, therapy or placation. A recent survey completed by the Citizen Participation Committee of the Transportation Research Board suggests that these strategies may be common within the transportation planning realm.(5)

Democratic social theory is founded upon the primacy of the individual and the sanctity of his or her interests. All sovereignty emanates from the people and everyone has a chance to advance their cause. The public interest is usually interpreted as the will of the majority. "User oriented" planning

styles, focusing upon an identification of client needs, and a citizen participation strategy of consultation are generally used.(6) Surveys, neighborhood meetings, and public hearings are the most commonly used community interaction techniques. Ideas, suggestions, and proposals are invited but they may not be used.

In the American context, liberal theory is very closely related to democratic theory; often, they are simultaneously espoused. Individuals are assumed to be rational and the best judges of their private interests. Therefore, the diffusion of power, and rule by law and procedure are highly valued. And since the public interest is defined through the interplay of a multiplicity of interests, governmental institutions are frequently charged with responsibility for developing procedures to insure that all interest groups have adequate opportunity to influence decisions. An "incremental" style of planning results.(7)

Liberal theory is closely aligned with the partnership strategies that this conference is trying to define. Elaborate organizational mechanisms (joint policy boards, planning committees, etc.) and complex procedures facilitate negotiations between citizens and powerholders and assist the resolution of impasse over planning issues. This strategy works best where: (1) there is an organized power base in the community to which citizen leaders are accountable, and (2) community groups have the resources to hire/fire technicians, community organizers, etc.(8).

Socialist theory is dominated by a concern for equality and winning power for the poor or deprived classes of society. The American strain is in part a reaction to the basic conservatism of interest group liberalism, which assumes that all interest groups have the necessary power and/or resources (skill, money, organization, etc.) to successfully compete with others, many planners became "advocates" for the poor during the 1960's.(9) Advocacy is both a planning style and a citizen participation strategy.

A full treatment of the differing ideological bases for American planning styles is beyond the scope of this paper. But this brief discussion shows that fundamentally different values are at the hub of the debate over appropriate planning styles and citizen participation strategies in the planning process. However, each produces quite different strategies for accomplishing the ideological goal. And although each participation strategy is generally founded upon values of individual freedom and equality, quite different conceptions of the degree of actual citizen power can emerge. The call for citizen participation as an end in and of itself, based upon ideological grounds, is very ambiguous at best. Moreover, it is improbable that planning programs adhere to one social ideology while completely excluding others. Each actor brings their own values, preferences and biases to the planning arena. To the extent that these actors can influence the planning agenda, resulting planning strategies will be a unique blend of technocratic, user oriented, advocacy, incremental and other forms of planning.

An Integrative Participation Strategy

A mass of citizen participation literature, including several catalogs of citizen participation techniques, confronts agency planners and administrators who seek to select the most effective citizen participation approach for their particular situation. (10) But research on the relative effectiveness of alternative citizen participation strategies is extremely limited both in the number of worthwhile studies completed and the general applicability of study findings beyond rather restrictive contexts. Therefore, to simplify analysis and further evaluative research, this body of literature was distilled to produce a dichotomy that seemed to depict the debate between traditionalist planners and citizen activists (and their reformist planner allies) Figure 1 presents the major characteristics of the "additive" and "integrative" strategies of participation.

Figure 1

FEATURES OF THE ADDITIVE AND INTEGRATIVE STRATEGIES OF

CITIZEN PARTICIPATION		
<u>Primary Characteristics</u>	<u>Additive Strategy</u>	<u>Integrative Strategy</u>
Citizen role in forming alternatives	Review and comment	Initiate & synthesize
Use of technical experts (Roles)	Elites	Coordinator/catalyst Negotiator Facilitator
Citizen role in decision making	Advisory	Bargaining partner
Decision rule	Simple majority	Consensus/compromise
Representation	Partial-and not substantive	Complete and substantive
Techniques to select reps.	Self selection	Self selection supplemented by outreach programs
<u>Associated Features</u>		
Interaction techniques (examples)	Public hearings, Advisory committee Polling	Small group task force Nominal group process
Communications emphasis	Feedforward & Feedback	Dialogue
Who set agenda?	Staff	Community & Staff
Principal locus of control over process	Staff	Community
Relative citizen influence & power	Low	High
Organizational features of planning study	Mechanistic & hierarchical	Organic & Non-hierarchical
Probably geographic focus	Region or city	Neighborhood or sub area

The "additive" strategy characterizes a widely practiced transportation planning approach whereby citizen participation is treated as another "add on" to the planning process. It is an attempt to accommodate the legal requirements for citizen participation while preserving the traditional planning approach to the fullest extent practicable. Citizens' role in forming alternatives is restricted to "review and comment" after technical experts develop, explore, and present their analysis to the public-at-large. In other words, the public role is advisory. Citizen views are usually expressed through feedback techniques such as public hearings, advisory committees, and public opinion polls.

A sharply contrasting strategy, the "integrative", attempts to bring citizens into the planning and decision process as full bargaining partners with public officials and planners. Ideologically, it is more compatible with the democratic-liberal tradition of our socio-political system. Citizens initiate and synthesize alternatives with assistance from planners who act as coordinator/catalysts, facilitators, mediators -- and sometimes even community organizers -- rather than technical elites. Citizen representation in the process is more substantive, i.e., a full range of community values is input by "representatives" who are in touch with their constituents' needs and aspirations. And to the fullest extent practicable, decision making is consensual. Dialogue intensive, group process, interaction techniques such as small group task forces or working committees are devices common to this strategy. Geographic focus of the integrative strategy is more likely to be a neighborhood or sub area rather than a region or city. It is difficult to identify transportation planning examples that are fully integrative. Most contemporary practice is somewhere between additive and integrative. (An integrative planning proposal for identifying and solving the needs of the transportation disadvantaged is presented in the next section of this paper.)

Although the integrative strategy may demand greater planning resources and staff skills, there are compelling arguments for adopting the integrative

approach. A review of the theoretical literature on planning theory and citizen participation suggest several probably advantages of the integrative -- compared to the additive strategy of citizen participation.

1. Greater community consensus and satisfaction among residents about planning decisions and priorities, resulting in greater ease in implementation. (11)
2. Higher levels of citizen efficacy and decreased alienation (feelings of powerlessness) in dealing with complex bureaucracies. (12)
3. Increased future consciousness of the community. This will enable communities to more intelligently guide their evolution and probably will result in greater willingness to work toward community improvements. (13)
4. Higher citizen ratings of governmental and agency accountability, credibility, responsiveness and trust. (14)
5. Better information about citizens' values, goals and needs. (15)
6. More creative, innovative and effective solutions to community problems.

Neighborhood Level Transit Planning

Although the integrative strategy has unexplored potential at a region or citywide scale, it is better suited for planning at a more localized level. In a transportation planning context, there are many problems that can best be identified, tackled, and solved at the sub-area or neighborhood level.

One set of problems is the mobility restrictions suffered by the inner city poor, the elderly, and other transit dependent groups who may be concentrated in relatively small, neighborhood sized, geographic areas. Therefore, this specific context was chosen to illustrate how the integrative strategy might be applied in transportation planning. This neighborhood level transit planning proposal has several key components:

1. Pre-Programmed Funds -- A specified dollar amount of transit improvement funds is targeted to a neighborhood where transit dependent group mobility problems are known to be serious. All too often citizens suffer through elaborately long and complex planning processes only to have their hopes dashed and frustrations heightened because resources are not available to fund community identified and much needed projects. In essence, pre-programmed funds guarantee participants that a specified minimum dollar amount worth of projects or programs will result from the planning process. This is a carrot to stimulate citizen participation.

2. Steering Organization -- The lead, or funding agency, organizes for the study with particular emphasis upon identifying and seeking participation from human resource agencies that currently supply transportation services to clients residing in the target area, as well as organizations that represent clients needing transportation. This latter group could include senior citizen organizations such as the Gray Panthers, organizations that advocate the civil rights of disabled and handicapped individuals, and resident organizations such as community councils. By involving transportation suppliers in mutual problem solving activities, long term savings may accrue through the elimination of duplicatory services and better coordination of transportation resources. Once major study participants are identified, a steering organization is established to provide policy guidance to the planning study. This steering group could include service providers, potential clients, and interested planning agencies. Their major tasks are to develop the "planning agenda" (item #3) and to resolve conflicts that occur in the course of carrying out this agenda.

3. Planning Agenda -- Representatives of the lead agency, other participating agencies, service providers, and client groups "negotiate" an agenda for the study. This agenda is analogous to a constitution; it specifies the rights, duties, privileges and responsibilities of the participants. The

agenda should also specify the broad parameters of the planning process and identify the roles of participating agencies and community organizations. Also, recognizing that conflicts over interpretation of the agenda are inevitable, this agenda should outline procedures, rules and decision structures to facilitate resolution of such conflicts, thereby insuring an agreeable conclusion to the study.

4. Outreach -- Substantive participation is essential to the success of the study. And subtle announcements buried in the legal notices of the local newspaper will not produce large turnouts. Nor is it wise to assume that service provider, client, or resident organizations can identify all potential transit needy individuals in the neighborhood. The barriers to participation are large but are not insurmountable. Drastic measures are warranted. A mass mailing to every household in the study area may be an effective technique for announcing the initial community wide meeting. A summary of key points from the study agenda should be included. At the first meeting, the study process is outlined in more detail and discussed. Toward the close of this meeting, smaller work groups are formed; these groups will elaborate on specific sub problem areas as the planning study progresses.

5. Planning Process -- The planning phase of the study will probably require about 12 to 18 months, depending on the complexity of local issues.

A sequence of planning activities might include:

- a. Identification of problem areas from the multiple perspectives of the participants. This need not be a highly technical exercise; perceptions are every bit as important as "facts".
- b. Production/collection of data to verify the extent to which these perceptions are accurate and to provide a data base for the exploration of alternatives.
- c. Generation of alternative solution proposals.
- d. Analysis, evaluation and decision.

e. Early implementation of those projects which garner substantial community support. Pre-programmed funds are used to implement these projects.

6. Voting -- The decision about which projects to fund could be made by a community vote at a general public meeting. Alternate proposals that are judged to be technically, administratively, and economically feasible are presented to the public by advocates of the various projects. A discussion of the pros and cons of alternative projects precedes the vote. Figure 2 shows a portion of a ballot that was used in Seattle for a similar purpose, the allocation of capital improvement funds within the neighborhood's boundaries. Note that the estimated price of each project is shown on the ballot. Each "voter" receives a sheet of gummed labels of varying dollar denominations that total the maximum dollar amount programmed for that area. Voters allocate these funds to the individual projects of their choice.

Barriers to Participation

Based on a preliminary evaluation of Seattle's Block Grant Neighborhood Planning process, which provides a working example of the integrative strategy but in a different programmatic context, this investigator believes that the above proposal has considerable unexplored potential for identifying and solving the problems of inner city transit dependent groups. However, a review of the institutional framework for transportation planning, initial findings in the Seattle study, and the literature of neighborhood planning suggest some obstacles that are not overwhelming but most none-the-less be explicitly recognized.

The Citizen Participation Committee of the Transportation Research Board recently polled its members and other interested parties to identify critical implementation issues of participatory transportation planning programs. Survey respondents feel that the two most significant obstacles to participation are:

FIGURE 2

BALLOT

West Woodland Ballot

A. TRAFFIC CIRCULATION

Next 1 Do you want a traffic control system for NW 48th, NW 49th, and NW 50th Streets west of NW Market St? Then place \$60,000 in NIP bills below

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Next 2 Do you want a traffic control system for N 49th, N 50th, N 51st, N 52nd and N 55th Streets east of NW Market St? Then place \$80,000 in NIP bills below

--	--

Next 3 Do you want a pedestrian signal and a landscaped island for traffic control at N 50th St and Phoney Ave N? Then place \$30,000 in NIP bills below

--	--

Next 4 West Woodland Elementary School - Two options are available:
a) Do you want angle parking for 40-45 cars on 5th Ave NW adjacent to the school? Then place \$5,000 in NIP bills below
b) Do you want angle parking on 5th Ave NW and a landscaped island for traffic control at NW 58th and NW 58th Streets to slow traffic? Then place \$20,000 in NIP bills below
Select only one \$5,000 or \$20,000

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Next 5 Do you want a traffic control system for the area bounded by 6th Ave NW, 14th Ave NW, NW 65th St and Phoney Ave N? Then place \$10,000 in NIP bills below

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Next 6 Do you want to repair the "hump" on NW Market St. between 5th and 6th Streets for two lanes downhill from Phoney Ave N? Then place \$10,000 in NIP bills below

--	--

B. PEDESTRIAN IMPROVEMENTS

Next 7 Do you want a sidewalk on N 57th St from Greenwood Avenue N through the underpass to Woodland Park? Then place \$10,000 in NIP bills below

--	--

Next 8 NW Leary Way - Two options are involved, select only one:
a) Do you want to provide sidewalks with wheelchair ramps on NW Leary Way with the total project funded with NIP money? Then place \$70,000 in NIP bills below
b) Do you want to provide sidewalks with wheelchair ramps on the southwest side of NW Leary Way with a Local Improvement District 40% funded by NIP and 60% by adjacent property owners. Then place \$15,000. Select only one

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Next 9 Do you want to establish a north-south bikeway along the east side of 14th Ave NW between the existing curbs and sidewalks? Then place \$10,000 in NIP bills below
Select only one \$10,000 or \$45,000

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Next 10 Do you want to install motor vehicle yield to bicyclists and supportive devices along NW 58th-NW 56th-N 57th Streets from 5th Ave NW to Woodland Park? Then place \$75,000 in NIP bills below

--	--

Next 11 Do you want to establish north and south boulevards along 8th Ave NW from NW Leary Way to NW 65th St? Then place \$15,000 in NIP bills below

--	--

D. BEAUTIFICATION AND RECREATION PROJECTS

Next 12 Do you want to plant trees on both sides of 14th Ave NW in addition to one tree at each end of each median and boulevard? Then place \$10,000 in NIP bills below

--	--

Next 13 Do you want to plant trees along 8th Ave NW from NW Leary Way to NW 65th St? Then place \$75,000 in NIP bills below

--	--

Next 14 Do you want to establish a footpath and landscaping on unused portion of NW 58th St between 2nd Ave NW and 3rd Ave NW? Then place \$75,000 in NIP bills below

--	--

Next 15 Do you want to provide a neighborhood mini park on NW Market St at Palmer Drive and 1st Ave NW? Then place \$10,000 in NIP bills below

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Next 16 Do you want to provide a neighborhood mini park on NW Market St at Palmer Drive and 1st Ave NW? Then place \$10,000 in NIP bills below

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Next 17 Market St and NW 52nd - Two options are involved, select only one:
a) Do you want to improve the crosswalks including the installation of pedestrian signals at NW Market St, NW 52nd St and 3rd Ave NW? Then place \$10,000 in NIP bills below
b) Do you want to redesign and update the entire intersection to meet Engineering Department's standards, condense the two lights into one? Then place \$60,000 in NIP bills below
Select only one \$10,000 or \$60,000

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Next 18 Do you want to install stairway lighting on NW and NW 46th St? Then place \$35,000 in NIP bills below

--	--

C. BICYCLE ROUTES

Next 19 14th Ave NW - Two options involved, select only one:
a) Do you want to establish a two-way bikeway along the median of 14th Ave NW? Then place \$45,000 in NIP bills on next page
b) Do you want curbs and others installed on this route between 3rd Ave NW and Greenwood Ave N with the total project funded by NIP money. Then place \$80,000 in NIP bills on next page

Next 20 Do you want curbs and others installed on this route between 3rd Ave NW and Greenwood Ave N with a Local Improvement District 40% funded by NIP and 60% by adjacent property owners. Then place \$25,000 in NIP bills on next page
Select only one \$25,000 or \$80,000

PORTION OF THE WEST WOODLAND BALLOT USED TO PRIORITIZE PROJECTS

Source: West Woodland Neighborhood Plan, January, 1977.

1. Poor state of the art, lack of skills, techniques and ways to communicate.
2. Poor agency/planner attitudes and lack of commitment to participation. (16)

The first problem is easier to solve than the second. There exists an array of potentially useful interaction techniques and devices for effective participation. But training programs for the effective use of these techniques require managerial commitment to participatory programs. High level administrators often argue that citizen participation is too costly. While citizen involvement sometimes may require substantial amounts of time and money, these costs are often exaggerated by critics of citizen participation. With careful design of the participatory program, little additional time need be spent on decision making. (17) Moreover, most of the monetary cost of participation can be subsumed under normal expenditures for public decision making. However, increased funding levels may be required for programs to teach transportation planners how to use some of the more innovative interaction techniques.

Poor agency/planner attitudes is a more complicated problem. To a certain extent, this problem had ideological roots. Some transportation planners believe in the values underlying technocratic social theory and the traditional planning style discussed earlier in this paper. There are also personal and organizational reasons why the introduction of more extensive participation programs is resisted. Significant changes exact psychological and political costs. Personnel who are asked to learn new ways to perform their jobs become anxious, doubtful, alienated, and sometimes defensive. (18) We must recognize that significant changes sometimes threaten the self-worth, dignity, and self-esteem of individuals affected by them.

Intergrative citizen participation strategies also raise community issues. Most cities do not have authoritative definitions of community or neighborhood boundaries. The delivery of services by a multitude of specialized

agencies forces communities and neighborhoods to deal with a large number of administrative units. It is very common for several agencies to use different "neighborhood boundaries" when dealing with the same community. Smaller communities, where they do exist, generally have no regularized relationships to the political units which enclose them. Thus, planning agencies that adopt this neighborhood transit planning proposal will have the sometimes difficult tasks of identifying relevant neighborhood boundaries, and identifying or forming organizations that substantively represent the target community. Where neighborhood organizations already do exist, it is preferable to work with these as a nucleus for the study, and to initiate outreach programs to foster participation among non-represented segments of the community.

This raises another extremely important issue: how does an agency obtain substantive representation in the planning process? One study concluded that substantive representation is more likely to occur where there is:

1. An organized relationship between formal representatives and their constituents.
2. Competition among those seeking to be formal representatives of the community. (Community election of neighborhood representatives to a policy board to oversee the study could serve this function.)
3. Substantial influence by formal representatives over the operations of the relevant program or planning process. (20)

This investigator is exploring some of the key differences between "actives" and "passives" in six Seattle neighborhoods that are currently using citizen participation intensive neighborhood planning processes. A mail survey of 400 actives and 600 passives was conducted in December 1976 for the dual purposes of identifying: (1) under represented segments of the population, and (2) barriers to participation. Preliminary findings are presented in Figure 3.

Socio-economic differences between actives and passives are well docu-

Figure 3
SOME KEY DIFFERENCES BETWEEN NEIGHBORHOOD ACTIVISTS
AND PASSIVE RESIDENTS

Characteristic	Percent of Group Having This Characteristic		Chi Square Significance Level*
	Activist	Passive	
Lived in neighborhood more than 10 years	38%	52%	.01
Does not plan to move within next few years	79%	65%	.003
Belongs to neighborhood organization	61%	12%	.0001
Believes that neighborhood can influence city government	70%	48%	.0001
Prefers the familiar to unfamiliar	39%	53%	.0001
Believes that citizens do not understand issues and arguments	22%	39%	.0001

*Missing values were not included in the computation of the Chi Square statistic.
Based on 418 survey respondents in 6 Seattle neighborhoods

mented: actives earn higher incomes, are more educated, and are more likely to be employed in professional, scientific and managerial jobs. (21) And these demographic differences may explain some of the attitudinal differences suggested by Figure 3. The "passive" has been a resident of the neighborhood for a longer period of time than the active, is more likely to move out of the neighborhood during the next few years, and presumably has less of a commitment to the neighborhood's future. Passives are less likely to believe that neighborhood residents can influence city (and higher level) government decisions. In other words, a large number of individuals remain passive because they are convinced that participation will be a frustrating and non-effective means to achieve goals. One wonders how much of this cynicism results from past experience or observations of non-integrative modes of participation.

Passives are far less likely to belong to neighborhood organizations, demonstrating a need for outreach programs to complement partnership arrangements with community councils and the like. Ironically, passives are less comfortable with the unfamiliar, yet are least likely to participate in decisions about changes that may effect their lives. Finally, passives are more prone to believe that citizens do not understand issues and arguments, suggesting another important reason for their "apathy".

The integrative strategy of participation has potential for removing some of the barriers to participation. Partnership arrangements do give more influence to neighborhood residents and should result in increased feelings of efficacy in dealing with higher levels of government. And the transit planning proposal presented in this paper is designed around a planning process that should be easy to understand and less technical than city or regional scale transit planning.

In a further attempt to establish why non-participants choose to remain passive, the following question was asked: "Which of the following reasons

best describe why you currently do not participate in neighborhood decisions? (Check 3 most important reasons)" Figure 4 represents a rank ordering of responses to this question by the total number of times a given response was indicated. "Lack of time" was cited as the most important barrier. Especially among low income residents, there are many important time consuming, life needs that have higher priority than going to public meetings. Participation is somewhat of a luxury and is more available to those individuals whose time is not totally consumed in acquiring the basic necessities: food, clothing, housing, etc. Others would rather spend their evenings with family and friends. The response "Don't like being out at night" partially reflects a desire to spend evenings at home and, in many instances, expresses fear of street related crimes. Elderly individuals were more likely to rate this as a reason for non-participation. Afternoon meetings may better meet their needs. The third rated response, "Poor Publicity", is especially interesting since a flyer was sent to every household in each of the six neighborhoods to announce the initial public meeting. And the "individuals have no influence" response bolsters previous observations about participation being a potentially frustrating experience. Encapsulated in the "other" category are a number of responses from disabled or handicapped individuals who indicated that they were physically unable to participate because of mobility problems, and are unable to attend community meetings. Needless to say, meeting places must be accessible by public transportation to enable the participation of transit dependent citizens. Special transportation services (home pick up and delivery) for the physically disabled may also be warranted.

Figure 4

REASONS CITED BY PASSIVE RESIDENTS FOR NON-PARTICIPATION
IN NEIGHBORHOOD DECISION MAKING

<u>Reason for non-participation</u>	<u>Number of times cited*</u>
Lack of time	137
Don't like being out at night	78
Poor publicity	66
Individuals have no influence	48
No representative organization	30
Experts should decide	23
Not interested	16
Prefer citywide participation	11

*Based on a sample of 179 passive residents. Respondents could indicate up to three reasons for non-participation.

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4. For a discussion of the cooptation strategy, see: Edmund Burke, "Citizen Participation Strategies", Journal of the American Institute of Planners. (September, 1969). pp. 301-310.
5. Citizen Involvement Survey. Conducted and summarized by the Survey Task Force of the Committee on Citizen Participation in Transportation Planning, The Transportation Research Board. 1976.
6. Susan and Norman Fainstein, p. 351.
7. Ibid, p. 356.
8. Arnstein, p. 221.
9. Davidoff, Paul. "Advocacy and Pluralism in Planning," Journal of the American Institute of Planners. 31:4 (November, 1965). pp. 331-338.
10. For examples, see: Ueland and Junker Architects and Planners, A Manual for Achieving Effective Community Participation in Transportation Planning, prepared for the Pennsylvania Department of Transportation. Citizen Participation in Transportation Planning, Volume II, A Catalog of Techniques, 1976.
11. Edmund Burke, p. 291, and Gordon Lippitt, "People and Change", Nations Cities. 3:12 (December, 1965).
12. These are the most often cited reasons for the recent (post 1960) surge of interest in citizen participation. See, for example, the following, R.K. Yin, W.A. Lucas, P.L. Stanton, and J.A. Spindler, Citizen Organizations for the United States Department of Health, Education and Welfare: Increasing Client Control Over Services. Santa Monica, California: RAND Corporation, 1973. and Bertram Gross, "Planning in an Era of Social Revolution," Public Administrative Review.
13. Hazel Henderson. "Technology Assessment and The Citizen," The Trend in Engineering. (April, 1974). p. 15. Also see: Alvin Toffler, "What is Anticipatory Democracy?" The Futurist. (October, 1975). p. 224. And finally: Amitai Etzioni, "Commentary," Journal of the American Institute of Planners. (March, 1973). p. 107.
14. Sidney Verba and Norman Nie. Participation in America. (New York: Harper and Row, 1972).
15. Regional Plan Association. Public Participation in Regional Planning. New York, 1967.

16. Citizen Involvement Survey, p. 19.
17. Nelson M. Rosenbaum, Citizen Involvement in Land Use Governance. (Washington: The Urban Institute, 1976). pp. 78-77.
18. Gerald Zaltman, Robert Duncan, and Jonny Holbek. Innovations and Organizations (New York: John Wiley and Sons, 1973). p. 101.
19. Gerald Suttles, "Community Design: The Search for Participation in a Metropolitan Society," in Amos Hawley and Vincent Rock (eds.) Metropolitan America in Contemporary Perspective. (New York: Halsted Press, 1975). pp. 235-297.
20. Paul Peterson, "Forms of Representation: Participation of the Poor in the Community Action Program," American Political Science Review. June, 1970. pp. 491-507.
21. See Robert E. Lane, Political Life: Why and How People Get Involved in Politics. (New York: The Free Press, 1959). For a literature review of participant characteristics, see: Richard Yukubousky, Citizen Participation in Transportation Planning -- A Selected Biography (Albany, New York: New York State Department of Transportation, 1972). pp. 12-17.



Naomi W. Lede', briefed the news media on the nature and purpose of the National Transportation Conference prior to its scheduled date.



Elma Barrera of KTRC-TV (ABC-Channel 13) interviews UMTA official, Robert Gallamore



"Effective coordination of planning resources is essential," explains Anthony J. Catanese of University of Wisconsin. He talks with Ed Shannon of KPRC-TV & Radio.



Richard Yukubousky talks with news-person about the citizen's role in transportation planning.



Naomi W. Lede', director of the Urban Resources Center in TSU explains the importance of comprehensive planning and its potential impact on low income transit dependent groups.

CLOSING SESSION

- A. Problems in Existing Planning Requirements and Suggested Alternatives.
- B. Findings, Observations, and Specific Recommendations: Negative vs. Positive Aspects of Interorganizational Planning.

PHILLIP WILSON: We come now to the Closing Session. We have one remaining speaker. I guess in view of my earlier comments, if I were to speak in the vernacular of Billy Carter, I would have to identify this fellow from New Orleans as a "good ol' boy," since he is from the South. He is really not in need of any introduction because yesterday afternoon he was the moderator of one of the Workshops, Workshop A, that was held concurrently. I think that I would simply identify him as Anthony J. Mumphrey, Jr., Associate Director and Associate Professor of Urban and Regional Planning, Urban Study Institute at the University of New Orleans. Tony and I were intrigued yesterday afternoon because several years ago, I had literally borrowed from the planning process and had made a speech entitled the planning game and I'm glad to know that somebody finally put it down and structured the game. With that, I give you Tony Mumphrey. (Applause)

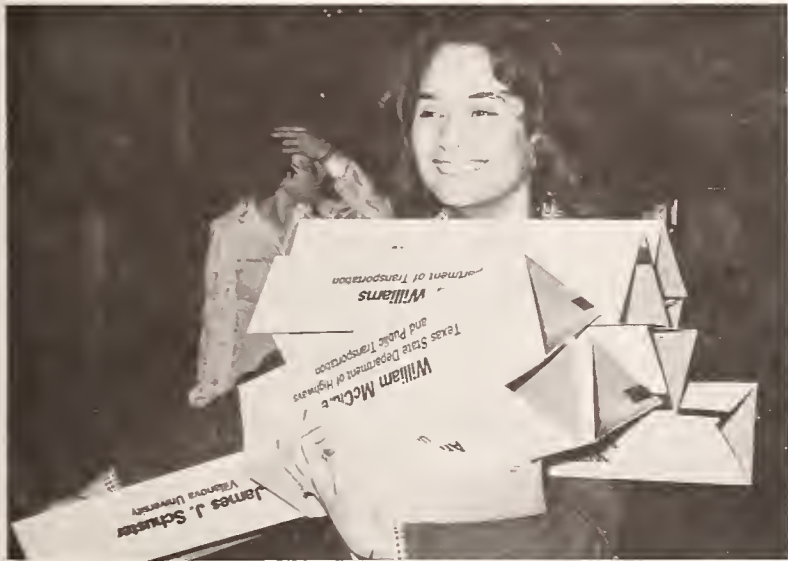
NOTE: Recommendations and observations have been included at the beginning of this report. See page 5.



Listening attentively...



Exchange of information



Final moments



Rolling up banner....



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4.0 APPENDICES

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APPENDIX B
CONFERENCE PROGRAM

The general focus of the conference will be to examine the extent to which the existing planning process is working sufficiently well to incorporate the needs and demands of low-income transit dependents. Additional concerns relate to problems inherent in existing planning requirements and/or whether the demand modeling process is one of exclusion rather than inclusion.

Specific inquiries will include the following:

- (1) What kind of involvements can be made to produce the most effective planning mechanism?
- (2) What kind of technical process is needed to enhance or to produce the most effective transit planning?
- (3) And, what additional planning requirements, if any, should be imposed?

The above questions should serve as a guide for participants - keynote speakers, workshop leaders, resource persons, and general audience. The issues introduced should be specifically addressed.

TRANSPORTATION FORUM '77 - NATIONAL CONFERENCE ON
 "STRENGTHENING ORGANIZATIONAL CAPABILITIES FOR
 COMPREHENSIVE TRANSPORTATION PLANNING

Tuesday, March 1, 1977

6:00 - 8:00 p.m.
 Lady Hilton Booth

Registration

6:30 - 7:30 p.m.

Pre-conference meeting (Discussion on procedures and issues to be addressed with keynote speakers, workshop leaders, and resource persons only)

7:30 - 9:30 p.m.
 Embassy Room

Cocktails (Cash Bar)

Wednesday, March 2, 1977

8:00 - 6:00 p.m.
 Emerald Room Foyer

Registration

GENERAL ASSEMBLY
 (9:30 - 12:00 Noon)

9:30 a.m.
 Emerald Room

THEME: EXPLANATION OF ISSUES AND INTERORGANIZATIONAL
 PLANNING REQUIREMENTS AND STRATEGIES

Presiding: Naomi W. Lede', Director
 Urban Resources Center
 Texas Southern University

Welcome: The Honorable Judson W. Robinson, Jr.
 Councilman
 City of Houston

Introduction of First Speaker:
 William V. Ward
 Engineer-Manager
 Houston Urban Project Office
 State Department of Highways and Public
 Transportation

"Intergovernmental Relations, Transportation Planning/
 Decisionmaking, and Community Agency Relations"
 Bruce D. McDowell
 Senior Analyst
 National Advisory Commission on
 Intergovernmental Relations
 Washington, D.C.

10:05 a.m.

Introduction of Second Speaker:
 James Race, Jr.
 Assistant to the President and
 Coordinator of Advanced Institutional
 Development Program (AIDP)
 Texas Southern University

"Effectiveness in State/Regional Planning: Issues and Possible Answers"

Anthony J. Catanese, Dean
School of Architecture & Urban Planning
University of Wisconsin (Milwaukee)

10:35 a.m.

Coffee Break

10:45 a.m.

Introduction of First Speaker:

G. Sadler Bridges
Division Head
Texas Transportation Institute
Texas A&M University

"An Analysis of the Role and Effectiveness of Inter-disciplinary Teams in Transportation Planning"

Evan Iverson, Supervisor
Social and Economic Planning
Washington State Highway Commission
Olympia, Washington

11:15 a.m.

Introduction of Second Speaker:

Jerry King, Director
Traffic and Transportation
City of Houston

"Role of Planning: The Relationship Between Transportation and the Acquisition of Funds to Implement Proposed Programs"

Barry Goodman
Transit Administrator
Public Transportation
City of Houston

11:35 a.m.

Questions & Answers

12:00 Noon
Embassy Room

LUNCHEON MEETING

Presiding: Naomi W. Lede', Director
Urban Resources Center

Introduction of Head Table

Introduction of Speaker

"Alternative Approaches to Mass Transportation: Focus on Houston:

Ronald W. Holder
Associate Research Engineer with Texas
Transportation Institute and Program
Manager
Transport Operations Program
Texas A&M University

Special Awards

CONCURRENT WORKSHOP SESSIONS
(1:00 - 5:30 p.m.)

1:00 p.m.
Castilian Room
Panel I

WORKSHOP A - "STRENGTHENING AGENCY/INSTITUTIONAL
RELATIONSHIPS FOR TRANSPORTATION PLANNING"
(Analytical and Process Perspective)

Moderator: Paul N. Geisel, Professor
Institute of Urban & Regional Studies
University of Texas at Arlington

"Blueprint of Organizational Strategies for Community
Agency Involvement"

Paul N. Geisel
University of Texas at Arlington

"Housing, Community Development, and Public Transit:
A Cooperative Planning Strategy"

Robert L. Moore, Director
Housing Authority of the
City of Houston

2:15 p.m.
Panel II

Moderator: Oliver F. Stork
Houston-Galveston Regional Transportation
Study
State Department of Highways and Public
Transportation

"Comprehensive Planning for Transportation: A
Regional View"

Bill Kopecky
Transportation Manager
Houston-Galveston Area Council
of Governments

"Transportation, Coordination, and Budgeting: A
Planning Process"

Donald E. Harley
Budget and Planning Office
Governor's Office
State of Texas

3:15 p.m.

Coffee Break

3:30 p.m.
Panel III

Moderator: Anthony J. Mumphrey, Jr.
Associate Director & Associate Professor
of Urban & Regional Planning
Urban Studies Institute
University of New Orleans

"Mass Transit Policy Planning and the Urban Disadvantaged"

William J. Murin
Associate Dean of Faculties &
Associate Professor of Public
Administration
University of Wisconsin (Parkside)

"Citizens, Politicians, and Decisionmakers: A Helix Game for Transportation Planning"

Anthony J. Mumphrey, Jr.
(Assisted by)

Cindy Fromherz
Graduate Student in Urban and
Regional Planning
University of New Orleans

1:00 p.m.
Belvedere A
Panel I

WORKSHOP B - PLANNING FOR PUBLIC TRANSIT SERVICE
DELIVERY AND TECHNIQUES FOR CITIZEN
INVOLVEMENT

Moderator: David Chen
Transportation Institute
North Carolina A&T University

"Cost of Transportation Systems for the Elderly and Handicapped: The Benefits of Consolidated Programs"

Alice E. Kidder
Acting Director
Transportation Institute
North Carolina A&T University

"Special Provisions for Low Income, Elderly, and Handicapped Transit Dependents"

Arthur Saltzman
Director-Transportation Studies
Institute
North Carolina A&T University
(on leave 1976-77 University of
California)

"Mobility Patterns of Transit Riders by Occupational Level"

Donald R. Deskins, Chairman
Department of Urban Geography
University of Michigan

2:15 p.m.

Questions & Answers

2:30 p.m.

Coffee Break

2:40 p.m.
Panel II

Moderator: Robert E. Paaswell
Office of University Research
U.S. Department of Transportation
Washington, D.C.

"Influence of Economic Factors on Transit Planning for Low-Income Groups"

Sid Davis
Urban Transportation & Urban Affairs
Project
School of Business Administration
Atlanta University

"No Barrier Fare Collection: A Study in Honesty"

Richard Stanger
Senior Planner
Metropolitan Atlanta Rapid Transit
Authority (MARTA)
City of Atlanta, Georgia

"Leisure Activity Considerations for a Captive Rider-
ship"

Daniel M. Schores, Jr.
Associate Professor
Department of Sociology
Austin College

"Policy Aspects of Transportation Planning and Land-
Use Planning (with emphasis on Local, Regional, and
State Resources)"

John Shanahan
Associate Professor
School of Public Affairs
Texas Southern University

6:00 p.m.

Cocktails (on your own)

7:00 p.m.

Embassy Room

SPECIAL DINNER MEETING

Presiding: Naomi W. Lede', Director
Urban Resources Center

Introduction of Head Table

Greetings: Granville M. Sawyer
President

Texas Southern University

Address: "Toward a More Effective Partnership in
Transportation Planning"
Michael J. Rabins, Director
Office of University Research
Office of the Secretary
U.S. Department of Transportation
Washington, D.C.

Thursday, March 3, 1977

8:00 - 10:00 a.m.

Emerald Room Foyer

Registration

GENERAL ASSEMBLY
(9:30 - 12:00 Noon)

9:39 a.m.

Emerald Room

THEME: PLANNING AND IMPLEMENTING POLICIES AND
PROGRAMS (a functional focus)

Greetings: Jon Lindsay, Judge
Harris County

Introduction of Speaker:

Glen Ford
Regional Director

Urban Mass Transportation Administration

Regulations Issued Jointly by UMTA and FHWA"
 Robert E. Gallamore
 Associate Administrator for
 Transportation Planning
 Urban Mass Transportation
 Administration
 Washington, D.C.

Introduction of Second Speaker:
 Linda Cherrington
 Assistant Administrator
 Public Transportation
 City of Houston

"The Need for Interagency Cooperation in Meeting
 Transportation Planning Requirements for the Future"
 Carole Keck
 Planning Division
 New York State Department of Transportation

10:30 a.m.

Coffee Break

10:45 a.m.

Introduction of Speakers:
 E.C. Powell
 Chairman, Department of Sociology
 Texas Southern University

"Options for Transportation Service Utilization (With
 Emphasis on Carsharing and Alternative Modes of
 Transportation)

C. Howard McCann
 Planning Engineer
 Department of Civil Engineering
 Texas A&M University

"Community Organizational Techniques and Provisions
 for Transportation Service Delivery"

Robert E. Paaswell
 Office of University Research
 U.S. Department of Transportation
 Washington, D.C.

(16 Minute Film) - Not Just a Rode

12:00 Noon
 Emerald Room

LUNCHEON MEETING
 Introduction of Guests
 Presiding: The Honorable Anthony Hall
 House of Representatives
 State of Texas

Introduction of Speaker:
 Royal Hatch
 Executive Director
 Houston-Galveston Area Council of
 Governments

Address: "Future Planning for Transportation:
Challenge and Opportunity"
Willard E. Walbridge, Former Chairman
Houston Chamber of Commerce and
Senior Vice President for Corporate
Affairs, Capital-Cities Communications, Inc.

AFTERNOON GENERAL SESSION

(1:00 - 5:00 p.m.)

1:15
Emerald Room
Panel I

Presiding: Phillip Wilson
State Planning Engineer
Transportation Planning Division
State Department of Highways and
Public Transportation of Texas

Moderator: Anthony J. Catanese
University of Wisconsin

"Urban Relocation Project: A Cooperative Effort"
William L. McClure
Administrative Engineer
Houston Urban Project Office
State Department of Highways and
Public Transportation
Houston, Texas

"Public Involvement Techniques Outlined in Highway
Agency Action Plans"
William M. Wood
Federal Highway Administration
U.S. Department of Transportation
Washington, D.C.

"Intraurban Mobility and the Aged"
Donald R. Deskins, Chairman
Department of Urban Geography
University of Michigan

2:30 p.m.

Questions & Answers

2:45 p.m.

Coffee Break

2:55 p.m.

"Mass Transit Planning: Incremental Policy-Making
and Ghetto Isolation"
William J. Murin
Associate Dean of Faculties &
Associate Professor of Public
Administration
University of Wisconsin

"Citizen Involvement in the Transportation Planning
Process"

James J. Schuster
Institute for Transportation Studies
Villanova University (Pa.)

"Techniques for Evaluating Citizen Participation
at the Neighborhood Level"

Richard Yukubousky
Department of Urban Planning
University of Washington
President-Yukubousky & Associates
Seattle, Washington

3:45 p.m.

CLOSING SESSION

- A. Problems in Existing Planning Requirements and Suggested Alternatives
- B. Findings, Observations, and Specific Recommendations: Negative vs. Positive Aspects of Inter-organizational Planning
Anthony J. Mumphrey, Jr.
Registered Engineer & Associate
Professor
Institute of Urban & Regional Planning
University of New Orleans

5:00 p.m.

Adjournment

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5.0 SUMMARY, OBSERVATIONS
RECOMMENDATIONS AND
EVALUATIONS

Evaluation/Demographic Profile

STRENGTHENING ORGANIZATIONAL CAPABILITY FOR
COMPREHENSIVE TRANSPORTATION PLANNING

March 1 - 3, 1977

TARGET GROUPS:	% Represented
Business & Industry	4.9
Education	16.0
Social Agencies	21.0
Government (city, state, national)	32.0
Planners	8.0
Citizen Groups	13.0
Others	6.0

Demographic Make-up:

Sex: Male 72%
Female 28%

Total Number of Cities Represented: 48
Number in Texas (22)
Outside Texas (26)

Total Number of States Represented: 17
(including D.C.)

Names of States Represented at National Conference:

1. Arkansas
2. California
3. District of Columbia
4. Georgia
5. Louisiana
6. Michigan
7. New Jersey
8. New Mexico
9. New York
10. North Carolina
11. Oklahoma
12. Pennsylvania
13. South Carolina
14. Texas
15. Virginia
16. Washington
17. Wisconsin

TRANSPORTATION FORUM

Purpose: The conference was designed to explore how middle & low income transit dependent groups could become meaningfully involved in transportation planning; to examine the overall impact of the transportation planning process on transit dependent groups, and to discuss techniques & methodologies for strengthening the transportation planning capabilities of organizations serving the needs of middle and low income groups.

Conference Emphasis:
Interdisciplinary Teams in Transit Planning
FHWA & UMTA Planning Requirements
The impact of Federal Transportation planning regulations on middle & low income groups
Planning for public transit service delivery & techniques for citizen involvement
Planning & Interorganizational Relationships

Materials Disseminated:

- Lede', Naomi W., "Public Involvement: A Guide to Action," August, 1975.
"Responding to the Changing Environment: Summary Report," State Department of Highways & Public Transportation, State of Texas, July, 1976.
"Guidelines for the Identification and Measurement of Social Factors in Transportation Planning", Washington State Highway Department Research Program Report (25.2), September, 1975
"Guidelines for the Operation of Inter-Disciplinary Teams", Washington State Highway Department Research Program Report (25.4), October, 1975
"A Directory of Vehicles for Elderly and Handicapped", U.S. Department of Transportation, October, 1974.
"Integration of Para-Transit with Conventional Transit Systems", D.O.T., Oct., 1976.
Flusberg, Kullman, Casey, "Small Transit Vehicle Survey", D.O.T., Dec., 1975.
"A Guide to Program Evaluation", Urban Resources Center, Vol. I and 2.
"Summary of Rewards and Published Reports", D.O.T., 1975-1976.
"Guidelines for Team Scheduling and Management," Washington State Highway Department Research Program Report, October, 1975.
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March 1 - 3, 1977

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