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The Implementation of Downtown Auto-Restricted Projects

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NOTE: This report is an review of key issues associated with auto-restricted zones and downtown revitalization. Part of its content includes program and other recommendations based upon this contractor's perception of the issues involved. Recognizing that there may be many alternative approaches to resolving transportation problems, these positions may not necessarily reflect those of the U.S. Government. As such, no endorsement of these recommendations is either expressed or implied by the U.S. Department of Transportation.

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Final Report
June 1984

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PREFACE

This is the final report prepared by the Community Studies Program at The Pennsylvania State University on behalf of the Office of Technical Assistance of the U.S. Urban Mass Transportation Administration under contract project number UMTA-PA-06-0073.

Philippos J. Loukissas, Assistant Professor of Urban and Regional Planning, was the principal investigator and project manager. Stuart H. Mann, Professor of Operations Research, was responsible for the conduct of research in the ARZ projects survey (Phase III) and for writing Chapter 4. John L. Mace, Jr., a Ph.D. candidate, was responsible for the literature review, the conduct of research in the CBD revitalization survey (Phase II) and for writing Chapters 2 and 3. Larry Bruwelheide, a Ph.D. candidate, participated in the field research (Phase IV) and the writing of the case studies. Susan Knasko and Kent Simendinger, both graduate students, contributed in the data collection and the review of the literature (Phase I). Evangelos Triantaphyllou, also a graduate student, assisted with the drafting of the illustrations.

Joseph Goodman, the UMTA project manager, contributed his extensive experience acquired in the administration of the auto restricted zones demonstration program. Vince Milione, while at UMTA, provided critical support for the study.

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Several Community Studies Program staff contributed to the typing of this report. They include Randi Hetrick, Wanda Gordon, Lee Ann McClusick and Nancy Johnson.

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EXECUTIVE SUMMARY

Study Overview and Methodology

In 1975, UMTA's Office of Service and Methods Demonstration (SMD) launched a demonstration program of Auto Restricted Zones (ARZs) which went beyond the traditional scope of linear pedestrian malls. ARZs involve auto restriction in a large geographic area with integration of a transit component. This study's goal is to evaluate the implementation process of the ARZ demonstration program. In order to accomplish this, it was decided to examine other Central Business District (CBD) revitalization project alternatives to the ARZs and to include projects at different stages of completion in the investigation. The study followed a multi-method approach to information collection that consisted of a combination of survey research, case studies, and the use of secondary sources.

The work plan began with a brief review of the literature in the areas of plan implementation and community decision making. Plan implementation has been a relatively recent field of investigation. The traditional view of implementation as one of putting programs into action has been criticized as a not very helpful one in the understanding of the process. Usually, major capital improvement projects take a long time to develop and during this time circumstances change, requiring a continuous project redefinition. Although the literature did not provide the researchers with a ready-to-use unified conceptual framework, it did suggest a set of general categories of variables that influence the outcome of the implementation process. These include: characteristics of the community environment, the project type, attributes of the organization, interorganization relations, and the roles that individuals play in influencing events. Because of the limited examples offered in the literature, this study had to rely to a great extent on intuition and unstructured open-ended questionnaires in the design of the surveys.

A mail survey was conducted to solicit information from city planning department directors in the 112 central cities of 99 standard metropolitan statistical areas (SMSAs) in the U.S. Survey items were directed to the period since 1975 and addressed several issues: Central Business District (CBD) problems, CBD revitalization projects, and implementation problems and lessons associated with the projects. The 51 cities which indicated that their city had proposed an ARZ since 1975 were sent two additional questionnaires for the purpose of gathering more detailed information from multiple informants. The second of these questionnaires focused on the impact of 17 events and 33 implementation problems which had been identified in the previous surveys on project success.

In the last phase of the study, in-depth information regarding the role of organizations and individuals, and the influence of both on the project's development was collected. Field interviews were conducted with 17 persons in the six cities which had been originally selected by UMTA as demonstration sites: Boston, Burlington (VT), Memphis, Providence, New York, and Tucson. Interviewees included professionals

and representatives from the public and business communities involved with the project. Additional information such as newspaper reports and planning and evaluation studies were also used to build the case studies.

Findings

CBD Revitalization Projects. For analysis purposes, CBD projects were grouped into three categories corresponding to public, private, and cooperative joint public and private projects. Public improvement projects, which included street improvements, pedestrian amenities, open space, and ARZ projects, accounted for one-half of all reported projects. Such projects played an important role in the overall strategies for downtown development by facilitating private investment. ARZs accounted for 10 percent of all 166 reported projects. Since 1975, three quarters of the 67 responding cities in the first survey had considered ARZ projects and 27 percent had implemented one. This figure may be compared with 13 percent of all U.S. cities with population of more than 50,000 which had implemented malls prior to 1977. One fifth of all the projects were private developments including offices, retail, hotel, and multiple types of developments. The rest were mixed projects resulting from public and private collaboration.

The average cost of a project was \$42.5 million and reported projects costs ranged from \$50,000 to \$1.5 billion. Public improvement projects cost significantly less than private projects. They averaged \$4.9 million vs \$25.8 million for private development projects. ARZs, according to the second survey, average about \$9.1 million. The cost of the average ARZ demonstration (including estimates of projects not implemented) was much less, averaged \$5.2 million. Federal funding covered half of the costs of a public project, but in ARZ demonstration cases it covered 75 percent of the total costs.

Forty-five percent of the reported projects had been completed by the time of the first survey. Similar rates of completion were reported in the two other phases of the study. An average duration of 5.4 years was reported for completed projects. In the demonstration cases, it was found that projects required at least 8 years from conception to completion. Sixty nine percent of the completed projects took longer than anticipated with the average time overrun estimated at 1.75 times longer than planned. No statistically significant relationship found between the implementation time for a CBD project and its cost.

Implementation Problems. Raising funds was the most frequent problem element, having been mentioned in one-fifth of all projects. Acquiring land, agreeing on the plan, coordinating participants, and anticipating economic changes were problems mentioned in at least 10 percent of the projects. The fifteen problem elements which were identified in the first survey were categorized into three groups: raising funds and acquiring land were labeled as "acquisition" problems; agreeing on the plan and solving construction problems were combined into a category of problems related to the "plan"; and the remaining problems - anticipating economic changes, coordinating participants and instigating support were labeled "support" problems. There were more

"support" problems overall.

Implementation problems were found to be related to the type of project. Public improvement projects were less likely to have reported problems than were the other two project types. Problems reported with public improvement projects were generally associated with "plan" problems. These projects had fewer "acquisition" and "support" problems than the projects which have private development components.

One of the most interesting findings was that the completion status of the project had an effect on the type of problem that respondents perceived. Incomplete projects tended to have "support" problems, while completed projects reported disagreement on "plans". The distribution of implementation problems for public development projects are not different with respect to project completion status. However, those for private development projects are different. Completed private development projects are reported to have had no problems, while incomplete ones are reported to have "support" problems. This finding, consistent with findings in other phases of the study as well, suggests that the perception of implementation problems depends upon the stage that the project is in and poses some interesting questions regarding the definition, identification and management of implementation problems to be addressed in future research efforts.

In the second survey, respondents were asked to evaluate ARZ implementations according to 33 specific problems. More than 50 percent of the cities indicated no problems and only four problems, those related to securing funds and lack of support from the private sector, yielded "severe or worse" responses in 25 percent of the cities. Implementation success was found to be related to political will and positive or negative initiative by powerful interests. The involvement of the mayor or a local business association in the project had much more positive impact on the success of the completed projects than on projects not completed. Also important was the commitment of funds by a federal agency or by the private sector. The type of the city was found to have an important impact. In smaller cities, the involvement of individuals and groups or exogenous events made a difference in the success of the project. Finally, in projects with a transit component (about half of the reported ARZ projects included such an element), events such as involvement of individuals and groups were less likely to have had a positive influence on the project success.

ARZ Demonstration Cases. Of the six cities originally selected, by UMTA more than eight years ago, only two have implemented ARZs within the SMD program. A third city is approaching the construction phase. Boston is the only city to successfully and promptly complete an actual full-scale ARZ. The Memphis ARZ essentially involves improvement of transit circulation and streetscape upgrading of an existing mall. The project encountered several construction delays. In Providence, after many delays in reaching an agreement, a substantially scaled down design has achieved consensus and construction was expected to start in August 1983. In New York, agreement on the project has still not been reached and it is uncertain if the Broadway Plaza will even be started in the foreseeable future. Burlington successfully implemented the ARZ project after withdrawing from the SMD program. The sixth city, Tucson, was the

least successful and dropped out of the SMD program in an early stage.

Auto restrictive zones have been promoted by UMTA primarily as a means to improve traffic conditions and encourage the use of public transportation. Cities have developed an interest in the technique primarily as a means of revitalizing their downtowns. These two goals seem mutually compatible. In most cities studied, auto restriction has been met with resistance by the business community. Agreement on the size and design was found to be a source of difficulty and a cause of delays. In those cases where ARZs were successfully implemented, the unpopular aspects of auto restriction were ameliorated to make them more palatable to opposition groups. Merchants and public officials have learned that a successful mall is more than a street closed to traffic. Vital economic activity, stimulating outdoor events, sound maintenance management, and policing are essential ingredients to success.

The political and managerial problems associated with coordination of public and private interests during the process of adopting an agreeable ARZ plan have emerged as formidable. The absence of a single coordinating agency responsible for project implementation has caused delays which are costly in terms of dollars, momentum, and support. The influence of charismatic leaders has proven to be essential to the project's success.

The experience in the case studies highlight timing and exogenous events as very important ingredients. Innovative and complex projects such as ARZs take time to gain support and acceptance, even in the most progressive cities. There is a lot to be gained by maintaining an experimental attitude and flexibility in management and enforcement. However, a poorly planned experiment can backfire. In cities with successful prior experience with malls, implementation was facilitated, while cities with negative experiences were not able to overcome the resistance.

The literature has pointed to the importance of several of the above key factors in plan implementation. What was found in these case studies is that it is not essential that all factors be achieved simultaneously for the project to be successful. One single powerful factor can sway the project's fate one way or the other.

Discussion

The results of this study are generally subject to limitations typical in survey research. The response rate in the first survey was considered very good. Subsequent surveys yielded lower rates of return making averaging of multiple views per city and multivariate analysis difficult. The findings from the surveys can be generalized to opinions of city planners in other SMSAs. It is more difficult to make generalizations from results of the case studies due to the limited number of observations.

The contributions of this study include the development of a classification of implementation problems associated with CBD projects and the measurement of the intensity of such problems for ARZ projects

specifically. The field study provided the most comprehensive and extensive view so far of the SMD ARZ demonstration program's implementation process.

The study, in general, reconfirmed two important views about planning and the role of planners. First, that policy is not just drawn up and implemented, but it is continually adapted through a negotiating process. Second, that planners although are quite successful in combating "plans" type of problems, they have problems confronting "support" type of problems. The latter, consisting primarily of instigating support and coordinating participants are considered within the scope of the emerging direction of planning. The skills of negotiation and coordination become essential to deal with the private sector, indicating that a redefinition of the role of public planning is in order. In this crucial phase, the planner can play an important role as a mediator in building and maintaining a durable consensus and in resolving disagreements that threaten to impede implementation.

Chapter 1

INTRODUCTION

The general concept of an Auto Restricted Zone (ARZ) is the designation of an area in which vehicular traffic is prohibited or restricted (Voorhees 1977, Vol. 1). ARZs have been applied in many types of land use situations ranging from residential and commercial/historic to institutional areas, in order to prevent penetration of through traffic. This study focuses on ARZs in Central Business District (CBD) areas.

Auto restriction in the form of pedestrian and transit malls, is still considered an innovative technique, since it attempts to solve urban problems through structural change, but it is not a new idea. Separation of pedestrian and vehicular traffic has been applied successfully in many European cities since the middle 1940's, in response to high congestion in dense historic urban centers. U.S. cities slowly developed an interest in the technique as a means of improving the economic vitality of urban centers. In addition, ARZs aim at accomplishing several other objectives such as: improving traffic conditions, encouraging public transit and non-auto modes of travel, creating a more relaxed and pleasant atmosphere for pedestrians, improving environmental quality through the reduction of noise and air pollution, and increasing safety through the elimination of pedestrian-automobile confrontation.

Despite the success of a few early malls in the early 1960's, attempts at mall implementation have to date been limited and very modest in scale, generally confined to a single street and no more than a couple of blocks in length (Voorhees 1977, Vol. 1). According to Knack (1982), while most of the 150 malls that have been constructed in the U.S., haven't failed outright, few have lived up to their expectations. Very little is known about the many cities that have attempted to institute ARZs, but have not been successful in bringing them to fruition. The focus of this study is to investigate the implementation process that communities undergo while attempting ARZ projects. The recent experience in cities with demonstration ARZs as part of an Urban Mass Transportation Administration (UMTA) program will be examined in particular. In this chapter, the US experience in ARZs and the UMTA program is introduced. Then the study problem is defined, the objectives are specified and the methodology is outlined.

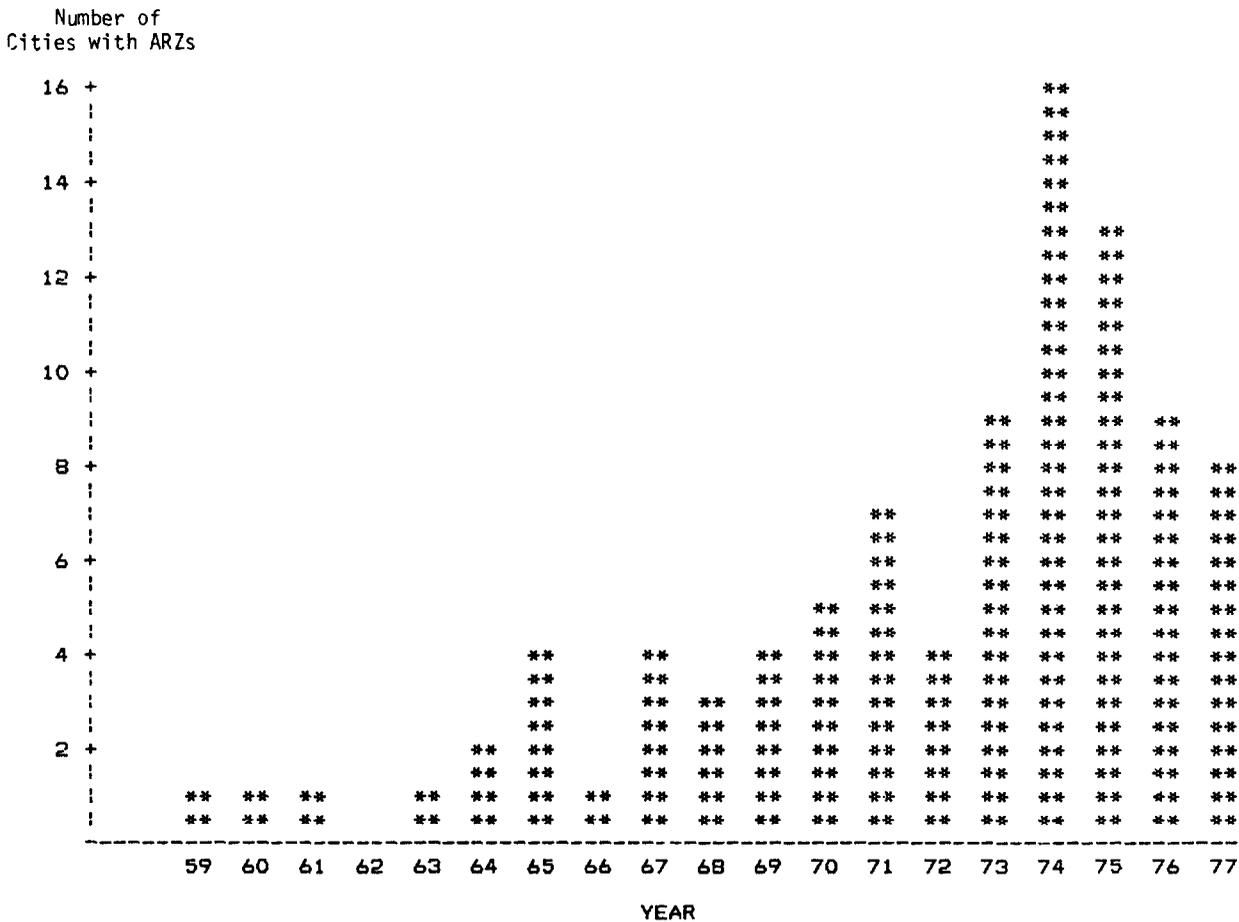
Some Observations on Pre-1977 ARZs in U.S. Cities

This section contains a brief examination of the history and spatial distribution of ARZs in U.S. cities in an effort to discover similarities or differences with models suggested by the community innovation adoption literature (Bingham 1976). This discussion relies primarily on secondary sources describing the history of American malls (e.g., Voorhees 1977, Brambilla and Longo 1977, Rubenstein 1978). Such references contain information that describe the physical design and

economic features of selected cases and briefly address the socio-economic impacts of such projects.

According to Weisbrod and Loudon (1981) and Brambilla and Longo (1977) about 100 U.S. cities have implemented downtown ARZs since the early 1960's. For 5 years following the construction of the first mall in Kalamazoo, Michigan in 1959, an average of one mall per year was built but, by 1969, 22 malls were constructed. In the early 1970's there was a period of rapid adoption, followed by a slowing rate of growth. Figure 1-1 illustrates a pattern of development which resembles the "S" shaped curve common in the adoption of new innovations literature as suggested by Bingham (1976). It is unclear whether the decline observed during the latest years represents reality or is due to a lack of complete information. If it's real, it is uncertain whether the decline can be attributed to an expected slowing of the rate of adoption or to a worsening general economic condition - inflation and cuts in governmental spending.

Figure 1-1
U.S. Cities with ARZs by Year of Completion



Source: Brambilla & Longo, 1977, and Rubenstein 1978

Brambilla and Longo (1977) argue that small and medium cities have implemented pedestrian malls with varying degrees of success, but almost none of the largest cities have progressed past preliminary planning stages. The authors continue to state that ironically, it is the largest cities that are choking with traffic and air pollution and are losing retail trade. Such cities would benefit most from a pedestrian environment. They need the diversity and scale that pedestrian environments can provide. The authors attribute this phenomenon to the fact that big cities survive on a delicate balance of complex political and economic factors. A mall can threaten that balance of interests and only the most sensitive planning and leadership can resolve the multitude of factors and constituencies affected.

A more careful analysis of the phenomenon leads to different conclusions. Prior to 1977, of all the U.S. cities with populations greater than 5,000 only 2 percent had built ARZs. The proportion gets much higher as city size increases. For example, one out of every 4 cities in the over 1/2 million category have implemented ARZs, one out of every 5 cities in the category of 100-500,000 inhabitants, while the proportion drops to less than 1 out of 10 for cities in the group of less than 100,000. It is true that most malls (60%) have been built in urban areas of less than 100,000 inhabitants (see Table 1-1), but this finding is to be expected, since most cities fall into that category. Since 1975, some of the larger cities, i.e., Philadelphia, Boston, Chicago, were successful in implementing ARZs.

The adoption of innovation literature also suggests that there is some basis to the contention that there is a geographic basis for the spread of innovation. The geographic distribution of ARZs on Figure 1-2 provides little evidence that there is a general national diffusion pattern of ARZs. Though it appears that there is a high concentration of malls in a few states, it must be remembered that these states have high density population. There is an overall slight underrepresentation of cities with ARZs in the south (see Table 1-2). In the category of more than 1/2 million inhabitants 10 of 13 cities with malls are located in the south and west. On the other hand, in the class of cities, between 25-50,000 inhabitants, cities with malls are underrepresented in the same region, as illustrated on Table 1-3.

A more thorough analysis is necessary to test a hypothesis such as that suggested by Bingham (1976) "cities adopting innovation are located in close physical proximity to other innovation adopting cities". It appears that a more complex model that incorporates the variable of ARZs degree of success is needed. A successful ARZ may encourage imitation by nearby communities. Similarly, a failure may discourage imitation. Finally, ARZs appear to have components that relate to both types of product and process innovation discussed by Bingham and tend to respond to improving community amenities rather than needs.

Table 1-1

Comparison of Cities with ARZs with all Cities by Population Size*
(Pre-1977)

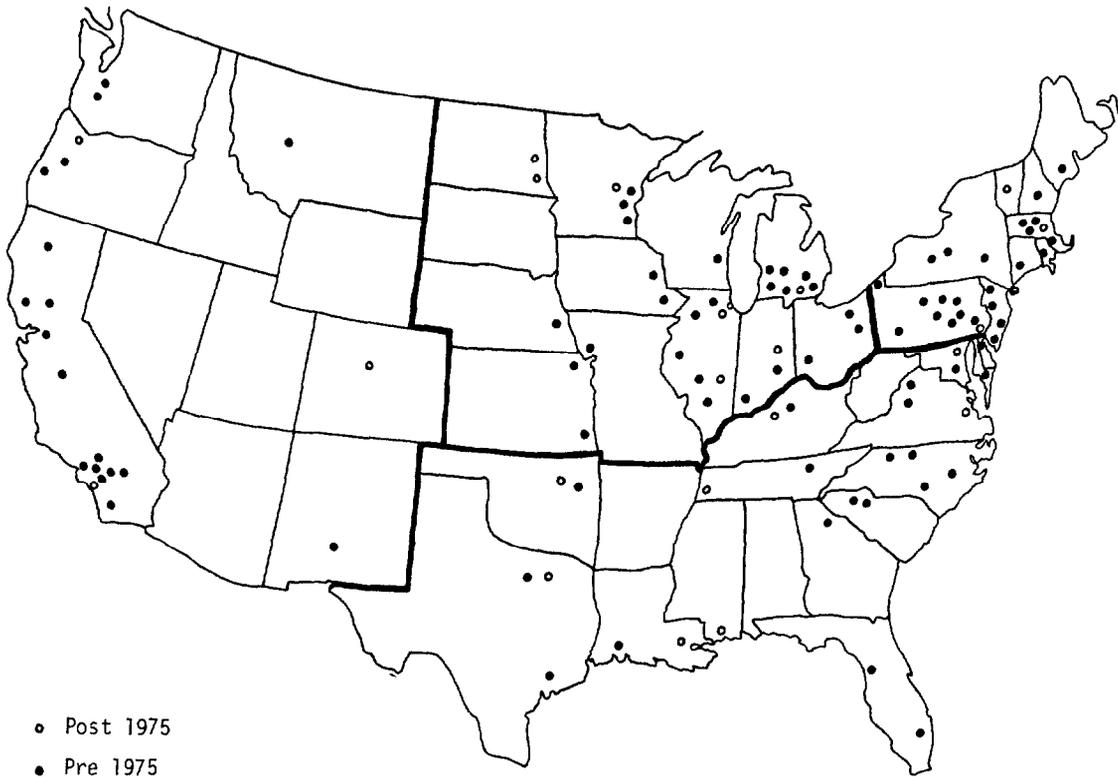
Population Size	Cities with ARZs	Percent of all Cities with ARZs	Total # of Cities	%	% of Cities with ARZs
More than 500,000	7	7.7%	26	.6%	26.9%
250-500,000	6	6.6	30	.7	20.0
100-250,000	19	20.8	100	2.4	19.0
50-100,000	21	23.1	240	5.8	8.7
25-50,000	22	24.1	520	12.5	4.2
5-25,000	16	17.6	3,224	77.9	.5
All cities more than 5,000	91	100.0	4,140	100.0	2.2%

Sources: Rubenstein 1978

*U.S. Cities with population of more than 5,000 inhabitants, 1970 Census.

Figure 1-2

U.S. Cities with ARZs (Pre 1977)



Source: Rubenstein 1978

UMTA's ARZ Demonstration Program

Over the last 10 years, UMTA's Office of Service and Methods Demonstrations (SMD) has played a pioneering and critical role in sponsoring the development, demonstration and evaluation of innovative transit techniques and in disseminating this information to the public (UMTA 1978). The demonstration of ARZs is one of the SMD programs.

UMTA's Office of SMD launched a comprehensive project to determine the feasibility and effectiveness of ARZ's in U.S. cities in 1975. The SMD's concept of an ARZ goes beyond the traditional scope of linear pedestrian malls. It refers to managing auto use in a large geographic area with a transit intensive orientation. The purpose of the study was to investigate existing experience, evaluate the feasibility of concepts, identify and evaluate potential sites for suitable demonstration projects and design demonstration programs for selected sites (Voorhees 1977, Vol. IV).

Table 1-2
 Comparison of Cities with ARZs with all Cities by Region*
 (Pre-1977)

Geographic Regions	Cities with ARZs	Percent of all Cities with ARZs	Total # of Cities	%	% of Cities with ARZs
Northeast	24	25.4%	957	23.1%	2.5%
North Central	28	30.8	1202	29.0	2.3
South	21	23.1	1246	30.1	1.6
West	18	19.8	734	17.7	2.4
All	91	100.0	4140	100.0	2.2%

Sources: Rubenstein 1978

*U.S. Cities with population of more than 5,000 inhabitants, 1970 Census.

Table 1-3
U.S. Cities with ARZs by Size and Region
(Pre 1977)

Population Size	Northeast	Northcentral	South	West	All
More than 500,000	2 8% 28%	0 0% 0%	4 19% 57%	1 6% 14%	7 8%
250- 500,000	0 0% 0%	1 4% 17%	2 9% 33%	3 17% 50%	6 7%
100-250,000	7 29% 37%	6 21% 32%	3 13% 16%	3 17% 16%	19 21%
50-100,000	3 12% 14%	8 29% 38%	5 22% 24%	5 28% 24%	21 23%
25-50,000	8 33% 36%	9 32% 41%	2 9% 9%	3 17% 14%	22 24%
5,000-25,000	4 17% 25%	4 14% 25%	5 22% 31%	3 17% 19%	16 18%
All cities more than 5,000	24 26%	28 31%	21 23%	18 20%	91

Key: Number of cities
Col. %
Row %

Source: Rubenstein 1978

Seventy-five cities were contacted as part of the project to determine their interest in a demonstration program. From the outset of the study, it was recognized that the ARZ concept is a complex one, not appropriate for all situations and that there are major obstacles to the implementation of demonstration projects. The sample of cities to be contacted was selected in such a way as to assure that all cities both interested and able to implement such a demonstration project would be given the opportunity to be considered (Voorhees 1977, Vol. IV). The list of cities was compiled from a combination of sources because of the knowledge of their willingness to seriously consider such a demonstration project. Forty-five cities responded favorably with information about their plans. The review process, the purpose of which was to determine the probability of success, used indicators such as past performance, present commitment and future planning in the areas of institutional performance, transportation factors, urban form, and opportunities which would be supportive of the ARZ concept (Voorhees 1977, Vol. I and IV).

Five cities with the highest potential for a successful demonstration were selected, as a result of this process. These were Boston, Memphis, Providence, Burlington, VT, and Tucson. The latter two dropped out of the SMD program at an early stage. New York City, which had started a transit mall project, was added later to bring the total of participating cities to four.

In 1976, UMTA expected to fund ARZs in only two cities and to offer each only about \$1 million. Only a total of \$2.6 million would be available for the two cities combined. UMTA had sought to have more money for the ARZ project, but larger amounts were not allocated by the Office of Management and Budget. The SMD Office contracted a team of consultants to help planners in the five cities to prepare detailed working plans for the ARZs which would be submitted to other federal funding sources. Alan Voorhees and Associates, Cambridge Systematics, Inc., Moore-Heder Architects and A.T. Kearney comprised the UMTA's team of consultants. New York was the only city to prepare its own ARZ plans.

Problem Definition

UMTA's experience with the ARZ demonstration program has led to the belief that the technical skills necessary to plan an ARZ project, which is responsive to problems in a particular area, are insufficient to successfully undertake and complete the project. The political and managerial problems associated with the coordination of both public and private interests during the process of adopting an agreeable ARZ plan have emerged as formidable. Apparently, unexpected obstacles along the project's "institutional trail" are frequent and, even when circumvented, cause delays which are costly in terms of dollars, momentum and support.

For these reasons, there is a need to learn more about the implementation process of ARZ projects. Some information currently exists for cities which have successfully implemented such projects.

However, most of these studies focus primarily on the study of ARZ impacts and little attention is paid to the implementation process. (Cambridge Systematics 1982; Koffman and Edminister 1977; Heaton & Goodman 1980; Loukissas and Gancarz 1978). There is another body of literature on ARZs which is characterized by its preoccupation with attention to physical design features (Brambilla and Longo 1977; Rubenstein 1978). So far, there are no studies that investigate ARZ cases that failed to be implemented.

This study will pay attention to two issues: the first issue deals with more generic procedural questions regarding the community projects and implementation process, while the other deals with substantive questions regarding the nature of the ARZ as a planning strategy and its adoption process. An examination of the first type of issue leads to questions such as: What are the critical socio-political and environmental factors responsible for the initiation and for formation of ideas regarding urban development in general? How are development decisions generated and how does the original idea grow and mature to the level of a project? What is the role of personal and organizational motives, the timing of decisions, the external factors, preconditions in the environment and community needs in fostering acceptance and endorsement of innovative ideas? In order to address the second type of issue, we need to ask questions such as: Why do some cities readily adopt ARZs, while others oppose them? What happened to all those cities (45) which were interested but were not selected to receive ARZ demonstration grants? How does the ARZ strategy compare with other alternative strategies to achieve the same CBD revitalization objectives?

This study will attempt to answer the above questions examining the implementation process of CBD revitalization projects in general and by studying experiences of successful and unsuccessful ARZ projects. It is hoped that this exploratory investigation will result in a better understanding of the implementation process and provide some guidelines that future planners may use in their efforts to avoid the most common obstacles.

Study Objectives

Given the above issues and questions, there are five specific objectives to be accomplished in the present study.

1. Describe the major types of CBD improvements which have occurred in U.S. cities since 1975. Estimate a the relative frequency and importance of ARZ components in CBD revitalization strategies.
2. Describe and explain the types of implementation problems which have been experienced on these projects.
3. Assess the unique features of implementing an ARZ as opposed to other types of CBD revitalization projects.

4. Describe the experience of a small number of selected U.S. cities in their effort to implement ARZ projects.
5. Describe the major types of institutional obstacles which impede ARZ implementation.

Study Methodology

This study is both descriptive and explanatory. It attempts to provide information about projects in a large number of cities and explain the occurrence of implementation problems in those projects. Given the research needs and the resources available for this study, it was decided to follow a multi-method approach to data collection that consists in a combination of survey research, case studies, and use of existing studies and data.

The work plan to achieve these objectives consists of four sequentially dependent information gathering phases.

Phase I. This phase is preparatory for subsequent phases and it consists of two tasks. The first is to review the literature. Two main areas were reviewed. In order to address the first type of procedural concern, the theoretical literature in the three related areas of implementation, adoption of innovation and community decision making was reviewed. It was expected that this literature would provide support for designing the study. A brief review is included in Chapter 2.

The second task is to collect baseline information in 112 cities from secondary sources. The sample includes the 74 cities contacted by UMTA in 1975 as well as 28 additional cities, within SMSA's, selected to make the sample more representative in terms of size, geographic location and pre-1975 ARZ experience.

A computerized data file has been established containing census data on socio-economic variables of each city in the sample for 3 time periods. These variables are used in the analysis of results from Phases II and III.

Phase II. A mail survey approach has been chosen to address the first two study objectives of describing the characteristics of CBD projects in a large number of cities. A questionnaire was developed to solicit information regarding CBD problems, types of urban revitalization projects undertaken since 1975 and implementation problems associated with these projects. Letters were sent to the directors of city planning departments in the 112 cities to collect the information. The methods and results of the analysis of this Phase are presented in Chapter 3 of this report.

Phase III. The purpose of this Phase is to address the third study objective by describing the process of implementing ARZs and understanding the problems within that process. In this Phase more detailed information was intended to be gathered through mail surveys from multiple informants, in a large number of cities where, according

to information from the previous phase, ARZ projects were proposed or constructed during the last 8 years. The information was collected sequentially in two rounds, in a quasi-Delphi approach.

It was anticipated that a more thorough understanding of the ARZ implementation process would result from the first round of questioning, through completed descriptions of the implementation process and analysis of the relationship of the process with its inherent problems. This understanding led to the development of a second round questionnaire which was sent to selected participants from the original pool. It was expected that this strategy would elicit more specific information and judgments with respect to problems and their remedies. It is believed that this strategy of research is best because the literature on implementation is sparse and no unified theory exists. The results of this Phase are reported in Chapter 4.

Phase IV. This phase addresses the last two objectives. Its purpose is to provide a qualitative and in-depth understanding of the micro-perspective of implementation, to explain findings from the quantitative analysis of previous phases and to add richness to the interpretation of the implementation process. Emphasis in this Phase was placed on the comprehensive study of the role of organizations and actors and their interaction and influence on the development of project events. Case studies were developed for the six cities that were selected by UMTA as ARZ demonstration sites. Information was collected primarily through informal interviews with key informants. Detailed case studies for Boston, Burlington, VT, Memphis, Providence, New York City, and Tucson are presented in Chapter 5.

Chapter 6 summarizes the results, contrasts the main conclusions of the various phases in the study and offers some recommendations for future research.

Chapter 2

REVIEW OF THE LITERATURE

Theoretical issues addressed in this study are covered by three related literatures: the newly emerging field of project implementation research, the community innovation adoption process and, more generally, theories dealing with the community decision making process. Following is a brief review of a few representative studies in these areas. The purpose of this review is to provide a conceptual foundation on which to design data collection instruments and to be able to interpret the study findings.

The literature on implementation has its roots in three disciplines: policy analysis, organizational structures, and political science. This latter area has been primarily responsible for producing the case oriented literature (e.g., Williams, et al., 1982). The policy analysts interested in including implementation feasibility as a factor in the analysis of alternatives (e.g., Quade, 1982) and those interested in organizational structures argue that the implementation problem may be fruitfully addressed by manipulating the decision making process (e.g., Project Management Institute, 1981).

The issue of implementation has not been a separate area of academic inquiry for very long. While policy analysis received a great deal of attention, it was generally assumed that if the policy was carefully formulated its implementation would be automatic (e.g., Management Analysis Center, 1982). As the practice of program evaluation emerged with the Great Society era of the sixties, it was discovered that not only did a great many programs fall short of expectations, but frequently they failed miserably. The study of implementation as a separate issue seems to have emerged with attempts to explain these failures (e.g., Derthick, 1972; Pressman and Wildavsky, 1973).

Since the early seventies, an ever increasing number of books and articles have addressed the implementation problem. In this short time, no theory or perspective has emerged as dominant, definitions have not been agreed upon, and Pressman and Wildavsky's subtitle, "Why it's amazing that Federal programs work at all" provides as much a common thread as anything else.

Definition of Implementation

According to Alterman (1983) and Alexander (1983) there are two basic approaches to the definition of implementation. Most authors appear to proceed under the "classic" approach which assumes that implementation is the process of "putting a policy into effect" (e.g., Sabatier and Mazmanian, 1981). Implementation is the process of turning a policy, a program or a plan into reality through a sequential series of stages. Bardach (1980) lists four ways in which the term "implementation" has been used): 1) as the adoption of a policy recommendation by an authoritative figure, 2) as the empirical details

evident through the application of a policy, 3) as the set of operating routines of an organization, and 4) as "the process of rearranging patterns of social conduct so as to honor the prescriptions set forth in some policy mandate" (p. 139). Bardach prefers this last definition. However, it suffers in as much as it contains several terms and phrases which themselves seem in need of definition.

Earlier, Bardach (1977) had referred to implementation as what happens after a policy is adopted. While Williams (1980) defined implementation "as the stage between a decision and operations" (p. 1). He goes on to clarify the meaning, stating that implementation considerations are, or ought to be, a part of the decision and that implementation does not end 'when the doors open', but covers a start-up period as well. Perhaps the simplest definition, of that approach is Berman's (1978): "implementation is the carrying out of an authoritative decision, i.e., a policy choice" (p. 160). With any of the definitions which have been offered so far, there is no clear way to tell when implementation starts and when it ends.

The second approach to the definition of implementation is taken by the "revisionists." In this approach, implementation is seen as a dynamic circular process. According to Barrett and Fudge (1981) policy and implementation cannot be divorced from each other, but must be analyzed as one continuous adaptive "policy-action relationship." They suggest a perspective similar to Susskind's of seeing implementation as a "negotiating process" (Susskind and Ozawa 1983). The study of implementation becomes a concern with effectiveness in implementing public policy.

Up to this point, the terms "policy," "program," and "project" have been used interchangeably as that which is being implemented. Thus far, no distinction between these concepts has been found in the literature (viz. Project Management Institute, 1982, p. 2). Most of the literature not dealing with case studies addresses itself to the implementation of social policy; for example, the implementation of education or welfare programs. By and large, the rest of the literature addresses itself to arbitrary policies or programs. The discussion of implementing capital improvement projects is limited to a few case studies (e.g., Derthick, 1972). No distinction between social programs and capital projects is made in the more theoretical literature. The extent to which the two are different is a matter for discussion.

Evaluation of Implementation Outcomes

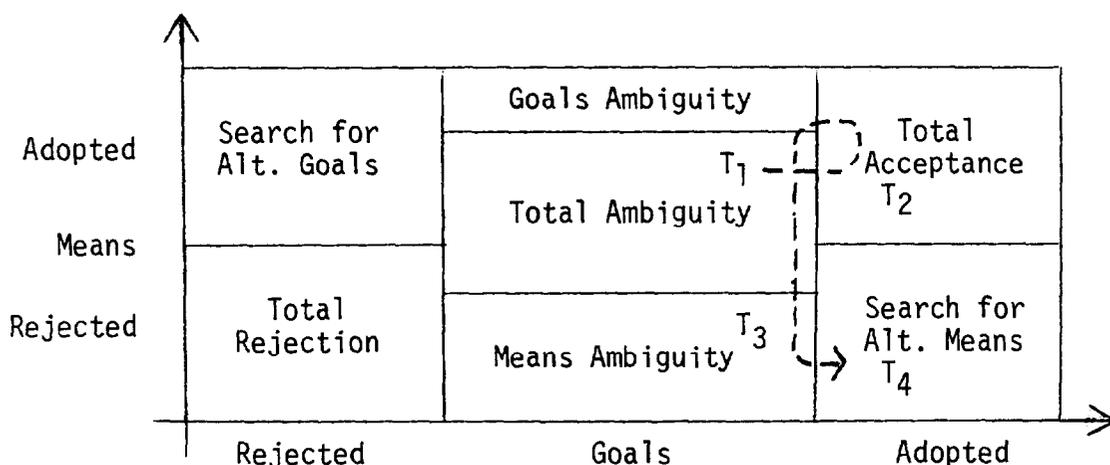
As with the definition of implementation, those of "successful" and "failed" implementations are not agreed upon. The case studies, which comprise most of the substance in the implementation literature, seem to regard "program failure" and "implementation failure" as synonymous. But, as Bardach (1980) points out, the two may be very different. Clearly, if implementation fails, to the extent that the program fails to be implemented, then the program fails in as much as the possibility for positive impact and the achievement of objectives is removed. However, the converse need not be true; that is, it must be possible for implementation to succeed and for the program to fail. An analogy to

science might be helpful here. Policy mandates are often likened to theories or hypotheses. They may be transformed into "if-then" or causal type statements (see, for example, Berman, 1978). If policies are construed as hypotheses, then implementation may be construed as the operationalizing of the "if" portion of the statement, as the specification of the methods. The "operations" referred to by Williams may be likened to the administration of the treatment once the subjects are in place. A failure to observe the hypothesized results may, in science, be attributed either to a flaw in the theory, to a flaw in the methods, or to both. Anxious to eliminate the last two possibilities, scientists are very careful about their methods. Similarly, if a poorly implemented policy fails, one cannot tell if the policy idea was any good or not (see Elmore, 1978, p. 187). Thus, policy success depends on successful implementation, but implementation success does not necessarily depend on whether the policy will work. In any event, the two are not synonymous.

Regarding this same issue, Bolan and Nuttall (1975) acknowledge that policy outcomes cannot be viewed as the simple act of adopting or rejecting a plan and offer a variety of possibilities for policy outcomes. Figure 2-1 presents a diagrammatic conceptualization of a field made up of two axes. One axis measures the adoption of means and the other measures the adoption of goals. Only two small parts of the field involve either total acceptance or reflection of a plan, while other positions reflect possible combinations associated with decision outcomes. Time is another dimension which can be added to this diagram, where each case history can be traced through points in time.

Figure 2-1

A Conceptual Framework for Analyzing Decision Outcomes
Adopted from Bolan and Nuttall



One of the most controversial aspects of evaluation research is determining the criteria of success and failure to review programs. In practice, for the most part, success has been defined as simply having

the project implemented. Bradford (1983), in a recent study evaluating public/private partnerships in community development, suggests three additional conditions besides the traditional one of acceptance of goals and means by all involved parties. The first one requires that all cooperating parties play an active role during the project implementation which is consistent with their roles and capabilities. The second one requires that there are no delays in gaining support. The third condition has to do with the project's effectiveness in achieving its goals once it is implemented. For more discussion on post-implementation evaluation research, see Loukissas and Mace (1983). A short discussion of some theoretical models of the implementation process follows.

Models of the Implementation Process

The Van Meter and Van Horn Model. Van Meter and Van Horn's (1975) model is one of the most frequently cited pieces in the implementation literature (Alexander, 1981). The model is construed as a descriptive and explanatory one, with policy performance as the response variable. Implementation is viewed, according to the first definition, as mediating between the policy and its performance. To Van Meter and Van Horn, implementation is defined as encompassing "those actions by public and private individuals (or groups) that are directed at achievement of objectives set forth in prior policy decisions" (p. 447). Here, implementation may be construed as being in the eyes of the implementor. In other words, it would be quite possible for someone to fight a particular program, while in support of an alternative, claiming that the program was incapable of meeting its objectives. By this definition, we would have to say that the person was implementing the program. The definition is ambiguous.

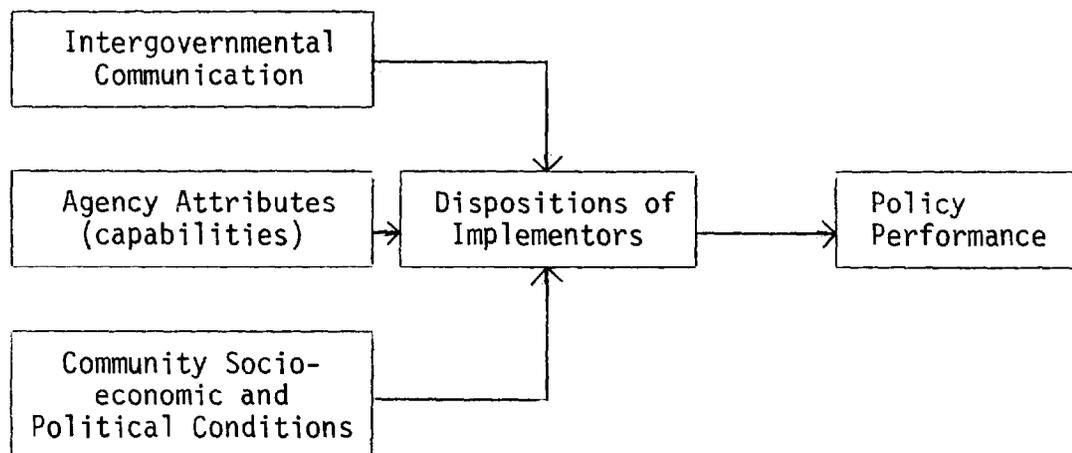
The policy is seen by Van Meter and Van Horn as specifying a set of standards and objectives as well as allocating a set of resources. These two sets are seen as sets of explanatory variables. The standards and objectives serve to define the performance measure. The extent to which the objectives and standards are capable of being unambiguously understood is considered an explanatory variable (Rosenbaum, 1981, has actually measured this extent). Similarly, resources, by way of funds and/or incentives, are included as a set of explanatory variables and, while the authors state that funds are usually insufficient, they do not define the variable any further than to name it.

Four additional sets of explanatory variables are included; these are not attached to, or specified in, the policy mandate. The first is called "interorganizational communication and enforcement activities." By this, the authors include the clear understanding of policy objectives by those responsible for implementation, the communication between organizations responsible for implementation, and mechanisms by which authorities may influence the compliance of implementors with policy objectives. The second set of explanatory variables is called "characteristics of the implementing agencies." These include both "formal structural features of the organizations and the informal attributes of their personnel" (p. 471). The third set of explanatory variables is called "economic, social, and political conditions."

"Although the impact of these factors on the implementation of policy decisions has received little attention, they may have a profound effect on the performance of implementing agencies" (p. 471). (See Figure 2-2).

Figure 2-2

A Conceptual Diagram of the Van Meter-Van Horn Model



The latter two sets of explanatory variables are seen as influencing performance directly. All three sets of explanatory variables influence performance indirectly through a fourth mediating set called "the disposition of implementors." The comprehension of policy objectives by the implementors (who include all "subordinates") as well as the type and intensity of their response to the policy are seen as influencing their ability and willingness to implement the policy. These four sets of conceptually defined predictor variables are seen as determining policy performance. They are also seen as more specifically addressing the general issues of communication, capability, and disposition.

This model is typical of most in the literature. While other models of the implementation of social policy (e.g., Berman, 1978; Sabatier and Mazmanian, 1981; Bingham, 1976; Bolan and Nuttall, 1975) are more detailed and may differ slightly in perspective, they are seemingly, not much more sophisticated. As a group, these models do appear to focus upon the same general sets of variables. It is more convenient to discuss them within the context of these sets.

The Williams Model. Williams (1982, p. 6) suggests that there are two concepts which have emerged as central to the study of implementation: that of "capacity" at the point of service delivery and that of organizations as mechanisms for solving complex problems. To these, he adds a third and calls it policy attributes. In the literature, there

appear to be two camps evolving, one which takes an analytic, systems approach and another which takes a softer, more humanistic approach. The distinction may be best seen as one between a top-down systems approach and a bottom-up more humanistic approach. Both approaches are normative ones. The system analysts generally consider policy attribute variables (the top) to be the most important, while the humanists generally regard the capacity at the point of service delivery (the bottom) to be the important focal point. Both groups, however, regard the problem solving capability of organizations (the middle) to be important. Hence, this study will focus on this concept and view the others from that vantage point.

The Elmore Model. The distinction is clarified in a quite well conceived article by Elmore (1978). Having observed that organizational structure appeared to be the focal variable in implementation studies, he examined that literature and identified four basic models: he called them systems management, bureaucratic process, organizational development, and conflict and bargaining. Following is a brief description of each model that outlines this view of the implementation process.

The systems management model is the one adopted by the system analysts, including Van Meter and Van Horn whose model was discussed above. In this model organizations are viewed as rational, value maximizing systems. Behavior is goal directed. The organization is hierarchically structured with goals being defined at the top. Responsibility is optimally allocated so as to maximize performance on objectives. "Implementation consists of defining a detailed set of objectives that accurately reflect the intent of a given policy, assigning responsibilities and standards of performance to subunits consistent with these objectives, monitoring system performance, and making internal adjustments that enhance the attainment of the organization's goals." (Elmore, 1978, p. 191).

Most authors in the implementation field who are not reporting case studies adopt this view either explicitly or implicitly. Notably, this includes Sabatier and Mazmanian (1979, 1981) whose work is popular. Under this model, implementation studies should analyze the policy statement and concentrate on the issues of control and compliance. The art of implementation is finding the optimal balance between control at the top and (the unfortunately unavoidable) discretion at the bottom.

The systems management model is normative and its behavioral counterpart seems to be the bureaucratic process model. This model is based on the ideas of the irreducible discretion exercised by "subordinates" in their day-to-day decision making and on the operating routine which evolves around the use of this discretion. Decision-making power becomes fragmented among centers of discretion. Hence, all proposals for change are seen as threatening discretion and routine: proposals for change are resisted in favor of the status quo. "Implementation consists of identifying where discretion is concentrated and which of an organization's repertoire of routines need changing, devising alternative routines that represent the intent of policy, and inducing organizational units to replace old routines with new ones." (Elmore 1978, p. 200).

The humanists generally adopt portions of this model in as much as it forces attention to the point of service delivery, to the "street level bureaucrat". A failure to anticipate responses at this level is a serious mistake. Remedies are easily seen as being antithetical to those of the systems management model. Berman (1978) approaches a compromise position between these two models with his conceptual distinction between macro- and micro- implementation. His distinction leads one to view implementation both from a top-down (macro) perspective and from a bottom-up (micro) perspective. While his view of micro-implementation is still primarily that of the system analysts it is much more sensitive to the routines of local bureaucrats than other models. Berman identifies the mutual adaptation between the project and the implementing organization as a primary determinant of implementation success. While he does not specify a model of mutual adaptation, he does explicitly include the notion of federalism and thereby addresses one major criticism often levied against system's conceptualizations. The empirical work by Browning, et al. (1981) comparing the model cities, CDBG, and general revenue sharing programs supports Berman's contention that there are different mechanisms operating at the macro- and micro-levels during implementation.

Elmore calls his third model of organizational structure the organizational development model. Like the systems management model, this is a normative model. It specifies that organizations should operate in order to satisfy the psychological and social needs of its members. Clearly, this is a favorite of the humanists. By attending to the needs of individuals, the goals of the organization will be more readily realized. The organizational structure should be such that individual control, participation, and commitment to the goals of the organization are maximized. Hence, hierarchy should be minimized. Decision making depends upon work groups which in turn depend upon a high quality of interpersonal relations. "The implementation process is necessarily one of consensus-building and accommodation between policy makers and implementors. The central problem of implementation is not whether implementors conform to prescribed policy but whether the implementation process results in consensus in goals, individual autonomy, and commitment to policy on the part of those who must carry it out." (Elmore 1978, p. 209).

While aspects of the bureaucratic process model are used by the humanists to explain why implementation fails, the organizational development model is often used as a normative remedy. This model insists on a bottom-up perspective; the commitment of the lowest level implementors is the most important factor. The role of higher administrators is solely to provide necessary resources and non-manipulative support. Elmore offers a convincing supportive argument for this model, relying on the empirical findings of a Rand Corporation study (1975). This study has not been reviewed here.

According to Elmore, the most serious criticism levied against the organizational development model is that it fails to address conflict and power struggles. These are precisely the bases upon which the conflict and bargaining model is based. This model views organizations as "arenas of conflict" in which relative power over the allocation of

scarce resources is the prize. The power distribution is never stable and is not defined by position or any other non-personal, non-situational variable. Decision making occurs through bargaining and does not depend upon consensus, but rather upon agreement to keep on bargaining. Given the desirability of the resources, there is no other choice. "Implementation consists of a complex series of bargained decisions reflecting the preferences and resources of participants. Success or failure cannot be judged by comparing a result against a single declaration of intent, because no single set of purposes can provide an internally consistent statement of the interests of all parties to the bargaining process." (Elmore 1978,p. 218). Barret and Fudge (1981), Bolan and Nuttall (1975), and Susskind and Ozawa (1983) also suggest the perspective of negotiating process to view implementation.

This is a behavioral model and Elmore states that the empirical support for it is abundant. In fact, he cites most of the case literature in implementation as supporting this model. The cases which have been reviewed here (e.g., Pressman and Wildavsky, 1973; Derthick, 1972) offer no good reason to dispute Elmore's classification. This model may be seen as the basis of Bardach's (1977) frequently cited elaboration of Implementation Games.

The Bardach Model. Bardach names and supports with empirical examples over twenty different games which are subsumed under the following headings: the diversion of resources the deflection of goals, the dilemmas of administration, and the dissipation of energies. The list begins to appear like a chess game, with moves and counter moves, and counter-counter moves. etc. Nevertheless, it does seem to provide a good basis for developing an observational instrument for use at meetings. No such instrument has been mentioned in the literature reviewed here.

While organizational structure is a convenient theme around which to organize the literature, there is no good evidence that it is a useful concept in explaining the "success" or "failure" of implementation. In fact, to the contrary, there is some evidence that it is not a useful variable. In the Rand study cited above, management style was unsuccessfully used as an explanatory variable (Elmore, 1978). Assuming that it is a useful conceptual scheme, Elmore concludes by suggesting that cases be compared with each model in an attempt to determine which best fits the observations. This, however, does little to help one in designing a study.

The Community Innovation Adoption Process

Another body of literature that addresses related issues is the one which deals with the community innovation adoption process. Studies in this area attempt to identify preconditions that affect the way in which a particular community adopts an innovation.

Bingham's (1976) work summarizes most of the existing literature on the subject and presents a composite analytic framework for the innovation adoption process, in an effort to provide answers to the

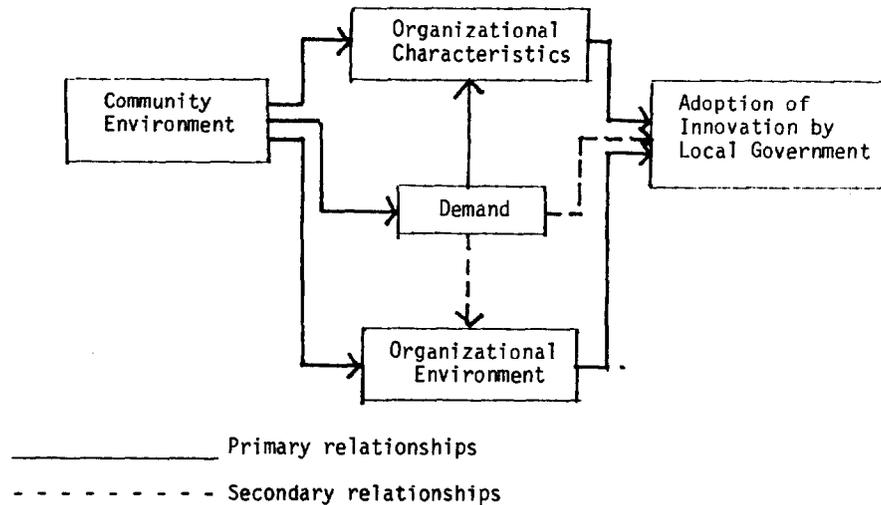
following two questions: (1) Why do some local governmental units readily adopt technological innovations, while others virtually ignore them? (2) How is an innovation adopted or what are the processes usually followed in adopting innovations? In order to answer the first question, Bingham conducted a quantitative analysis of a large number of cities using his model as a foundation. In order to answer the second question, he did field research on selected projects. The model that he suggests contains four sets of variables:

- 1) Characteristics of the community environment - Such characteristics include physical, demographic, attitudinal and cultural variables and have been pointed as important in determining the kinds of innovations communities adopt. For example, city size has been shown to be positively related to the adoption of technological innovations.
- 2) Demand - This is directly related to conditions in the community environment. Demand is defined as the discrepancy between existing conditions or community environment and the standards or aspirations that community or outsiders set as goals. One difference in demand that has been identified as important is whether the innovation aims at community needs or amenities. Innovations based on need include upgrading of substandard performances of a system. Amenity innovations are defined as those designed to improve already adequate performance. High socio-economic status communities tend to adopt amenity-type innovations, while need innovations are adopted by communities with lower socio-economic status levels.
3. Organizational environment - It usually refers to the relationship between governmental units. Much of the research stresses the significance of federal assistance and the role of the private sectors in influencing adoption of innovation. Agnew (1978) argues that promotion of the innovation by a central propagator has a different effect on the process, than the case where innovations are adopted on the basis of local initiative.
- 4) Organizational characteristics - They include attributes such as size, structure and professionalism have been suggested as affecting adoption of innovations. An example of a hypothesis suggested is that the adoption of innovation is positively related to an appointed (vs. elected) decision making body. The availability of slack resources in the organization is a factor frequently mentioned.

The model suggests a series of direct and indirect relationships between the independent variables and the dependent one, which is the adoption of innovations. The size of the city and the organization was found to be the primary organizational variable significantly affecting innovation adoption, but only indirectly. The size of the city generates demand and coupled with the community environment it works through organizational factors to affect innovation adoption. Organizational characteristics and organizational environment are the major direct determinants. The latter offering the policy maker the

best opportunity for intervention. See Figure 2-3 for a diagrammatic model.

Figure 2-3
Model for Adoption of Innovation by Bingham



Bingham distinguishes between process and product innovation. Product innovation involves the adoption of a new physical product. It has been found that adoption of such innovation tends to be on an irregular or random basis. Process innovation requires a change in the way things are done in the organization.

The Community Decision-Making Process

There is another set of theories dealing with the community decision-making process. These are concerned with the structure of power and with the role which actors and organizations play in order to learn the nature of social factors and events that influence decision-making process. One example of a community decision making model is that developed by Bolan and Nuttall (1975). The authors tested this model through the use of case study analysis.

Bolan and Nuttall explore the building of a conceptual model of the community decision making process. The model is partly tested in four case studies. Two of the cases are concerned with elements of the urban transportation system. In an effort to learn about the process, they focus on cases in which planning failed.

The model postulates four different variable sets as having an impact on the outcome of a community decision making process.

1. The characteristics of actors', roles and the skill, motivation and effort involved;
2. The characteristics of organizations and institutions (decision unit and socio-political environment) engaged such as power and accountability attributes and group dynamics;
3. The nature of planning and action strategies; and
4. The characteristics of the issues being considered.

Of these, only the first two variables were tested using a model very similar to Bingham's. In terms of the first variable set, role and skills were most prominent. Two basic skill dimensions proved to be crucial: cognitive, problem solving skills and skill in interpersonal social relations. The possession of veto power also plays a crucial role.

Organizational variables were somewhat less significant overall, although power and accountability was related to whether decision makers were elected or appointed and the length of term of office. The size and breadth of function of organizations involved proved to be crucial factors as well. The model overall reinforced the general feeling that community decision making is a complex process involving a intricate combination of social, political and psychological factors.

Bolan and Nuttall suggest the need for further exploration and development of important variables such as motivation and opportunity and more explicit handling of the dynamic aspects and interaction between variable sets. They argue also for the need of the development of an operational definition of a balance of power equation that incorporates not only actor skills, but also organizational characteristics. Furthermore, specification is also needed in defining the factors that determine the sequence of events and steps in the decision making process and finally the decision outcomes.

Hall (1982), in his effort to draw lessons from studying cases of "great planning disasters," attacks the simplistic approach to modeling community decision making in favor of an "eclectic" theory. Such a theory will, as its name suggests, embody different insights from different social sciences. He suggests that planning decisions result from complex interaction among three groups of actors: the community, the bureaucrats and professionals and the politicians. These groups are heterogeneous having different objectives and modes of organization and operation and power to shape events.

The review of the literature so far paid little attention to methodological considerations. In an attempt to acquire some guidance in the implementation field, a review of such will be reported next.

Methodological Considerations

Yin (1982) has reviewed eleven "exemplary" implementation studies and has extracted the methodological approaches which characterize them. Yin's primary conclusion is that the common feature to these studies is their multi-method approach. These include unstructured discussions (Yin's preferred method), structured interviews, participant observation, direct observation, and the use of secondary sources including documents, news reports, and participants' published reports. He strongly recommends a concentration on multiple sources of information; however, his attempts to describe the integration of these sources and the analysis of them are underwhelming. His claim is that while methodological rigor is a worthy goal, implementation researchers are currently excused from judgment on this basis due to the young age of the field.

Kirst and Jung (1982), citing Yin in another reference, list five common characteristics of the best first generation implementation case studies: 1) they were factually dense, usually lacking explicit theory or conceptual frameworks; 2) they found failure more often than success during the initial phases of implementation; 3) they underscored the wide scope of political, organizational, and socio-economic factors that influenced the implementation process; 4) they used multiple sources of evidence; and, 5) they concentrated primarily on the first one to three years of implementation (p. 120).

Concluding Observations

In summary, there is agreement in the literature reviewed that implementation and related innovation adoption and decision making are complex and dynamic processes and therefore difficult to study. Although the literature does not provide us with a ready to use, unified conceptual framework, it does suggest a common set of general categories of variables that appear to influence the outcome of the implementation process. Some of them have been shown to influence the process, while others are intuitively sound. These include: characteristics of the community environment, the characteristics of the project being considered attributes of organizations and interorganization relations and the role that individual actors play in influencing events.

The literature reviewed suffers in relevance to the present study application in two major ways. First, this literature is aimed primarily at the implementation of social policy and the present study's focus is on the implementation of capital improvement projects. While the adoption of a new mass transit system or the construction of an auto restricted zone might well be construed as reflective of social policy, it seems reasonable to assume that the problems associated with the implementation of capital improvements differ in substantial ways from those associated with the implementation of, for example, welfare reforms. Justification for this distinction may be found in results indicating different adoption patterns for "process" and "product" innovations (see Bingham 1976). "Process" innovations correspond to social policies; whereas "product" innovations correspond more closely to capital improvements. Second, the models reviewed focus on the

implementation process rather than on the nature of the problems which occur during that process. These differences between the reviewed literature and the focus of this study have diminished dependence on the literature in structuring the study design.

This study is primarily descriptive in nature. As a result, an effort will be made not to impose beforehand a particular theoretical model. Instead, through the study of multiple cities, a wide range of phenomena will be explored in an attempt to search for common characteristics, that contribute to particular implementation outcomes.

Chapter 3

CBD REVITALIZATION PROJECTS

Introduction

The purposes of Phase II are three: 1) to describe the types of CBD revitalization projects which have been undertaken in major U.S. Cities over the past seven or eight years; 2) to describe the types of implementation problems which have been experienced on these projects; and 3) to begin explaining the occurrence of these problems. The second purpose stated above, that of describing the types of implementation problems which commonly occur on CBD revitalization projects, is the most important one. Implicit in the purposes stated above is another purpose: that of generalizability. The problem types and relations should be identified in such a way that it seems reasonable to assume that they will apply to cities and projects not included in the sample. In light of this goal, the general approach taken in Phase II was to contact a large number of cities via questionnaires requesting information about revitalization projects and the problems experienced while implementing them.

The questionnaire was designed to measure four general conceptual variables: "city characteristics", "project type", "organization", and "implementation problem". The last three variables are considered to be project level variables. The first variable, "city characteristics", is considered as a city level variable. To measure "city characteristics" some items were considered together with information gathered from the census.

The items on the questionnaire were generated from three sources: the literature review, staff discussions, and feedback on preliminary drafts of the questionnaire. An informal pretesting of the questionnaire was conducted with four individuals who work in different cities and are familiar with UMTA's ARZ Demonstration Program. The final draft of the questionnaire is included as Appendix A. The questionnaire may be seen as consisting of two parts. The first part concerns city level variables and the second part concerns project level variables. The questionnaire requests that each respondent describe three CBD revitalization projects of their own choosing. The development of the items on the questionnaire will be discussed in the next few paragraphs.

As was discussed in the previous chapter, the literature which has been reviewed suffers in relevance to the present application. Therefore, dependence on the literature in constructing the questionnaire is limited. The most apparent departure from the emphasis in the literature is our emphasis on the type of project. This emphasis stems both from UMTA's interest in the types of CBD revitalization projects undertaken recently and from staff discussions. It seems reasonable to assume that the implementation problems which are experienced on any revitalization project depend on the nature of the project itself.

The conceptual variable, "project type", is measured by several items on the questionnaire. The primary item is an open-ended one

requesting that the respondent simply describe the major features of the project. In addition, the name of the project, its objectives, cost, and duration were intended to shed light on the project type. Duration was measured as the difference between the reported completion date and the reported initiation data. The dates of adoption and construction initiation were also requested. With knowledge of the completion date, projects could also be partitioned according to whether or not they were complete at the time the questionnaire was filled out. The literature relies heavily on variables and ideas from the field of organizational behavior: the notion of "successful" implementation is generally seen as depending on the structure of the organization responsible for implementing the project, the strength of the mandate for the project, the specificity with which the goals of the project are stated, and the personalities of the individuals involved. In early drafts of the questionnaire, items were included for the purposes of soliciting information regarding organizational structure and gaining insights into the personalities involved. The set of these items became quite large in number and they were, for the most part, difficult for respondents to answer with any degree of certainty. Coupled with our self-imposed constraint of sending only one questionnaire to each city, the vague and subjective nature of these items lead us to reduce their relative weight within the final instrument.

Retained from the literature was the general conceptual variable, "organization". Conceived as a project level variable, "organization" was reflected by three items on the questionnaire, each of which was intended to name those organizations responsible for various parts of the project. One closed ended item asked for the percentage of the project cost paid by Federal, local, and private sources. Two additional open ended items requested the names of the agencies responsible for planning and for implementing the project, respectively.

The third and last major project level variable concerns the type of implementation problem. In the absence of any theory of implementation problems, this variable was measured directly with an open ended item on the questionnaire. The question asked the respondent to describe any implementation problems that occurred in connection with the project.

Two additional items on the questionnaire were included to shed light upon the variable, "implementation problem". Both items were open ended questions. The first asked the respondent to describe how the project had succeeded and how it had failed. The second item asked the respondent to describe any lessons which had been learned throughout the course of implementing the project.

The variable named "city characteristics" was defined in order to reflect different types of cities. For the most part, "city" variables were collected from the census reports and other public documents. There were, however, some items on the questionnaire which were intended to discriminate different types of cities. The first item on the questionnaire asked respondents to list the five most pressing problems faced by their city's CBD over the past seven or eight years. The second item requested that the respondents state their city's strategies or policies for addressing CBD problems.

In addition to the variables which are explicitly related to the purposes of the questionnaire, data on several other items of interest was collected. These included questions about the respondents familiarity with UMTA's SMD projects, as well as questions about the city's history with ARZ projects.

The four major conceptual variables, "city characteristics", "project type", "organization", and "implementation problems", are measured as discrete variables. The specific values taken by these variables were determined by the responses and were not determined a priori. These values and the procedures for naming them will be presented in the next section along with the univariate results. Relations between "implementation problems" and the predictor variables will be discussed subsequently.

Sampling Procedures

While the units of analysis in this phase of the study are individual projects, projects themselves were not sampled directly. Cities within Standard Metropolitan Statistical Areas (SMSA's) were sampled. Cities included in the sample were sent questionnaires and useable project descriptions from returned questionnaires constituted the project sample.

The sample includes those 74 cities which were originally contacted by UMTA in 1975 concerning SMD's ARZ demonstration project. This number, 74, includes four boroughs in the City of New York. The cities are located in 60 SMSA's. Thirty-nine SMSA's were added to this sample to make the sample more reflective of the U.S. population of SMSA's in terms of size and location. The additional SMSA's were selected arbitrarily within categories determined by size, location, and existence of an ARZ. Most of the additions were smaller SMSA's in the South and North Central regions. The central city in each SMSA was added to the sample of cities. The final sample contained 112 cities representing 99 SMSA's. These cities are listed in Appendix B.

Names and addresses of the Directors of city planning departments (or the equivalent thereof) were obtained for each of the 112 sample cities. There were two primary sources for these names and addresses. A mailing list for the fifty largest cities in the sample was obtained from the American Planning Association. The remaining names and addresses were obtained directly from the planning agencies over the telephone. When planning departments were contacted over the telephone, efforts were made to speak with the Director or with the person who would complete the questionnaire in order to establish a personal contact and to explain our objectives.

To each Director of Planning, or his or her designee, was sent a copy of the questionnaire together with a self addressed envelope. A self addressed, stamped postcard requesting information about ARZ projects was also included with the request that it be mailed back immediately. A total of 56, or one-half, of the cities responded to the questionnaire. This response rate is considered to be quite good.

Seventeen cities returned a postcard and did not return a questionnaire; we had hoped for a higher return on the post cards. To those cities which did not respond to the questionnaire, a shortened version was sent and eleven new responses were received, making a total response sample of 67 cities. Again, we had hoped for a higher response rate to the shortened questionnaire. Copies of materials sent to the cities, other than the questionnaire, are included as Appendix A. The type of responses received are included in Appendix C.

The sixty seven responding cities had been asked to describe a total of 201 CBD revitalization projects: three apiece. Within this set of project descriptions, there were 25 no responses. Of the 176 responses, ten were dropped because they were planning studies and not CBD revitalization projects. This left 166 projects which constitutes the project sample.

Description of Results

In this section, responses to the questionnaire will be described. The section is divided into four parts, each part corresponding to one of the four major conceptual variables: "city characteristics," "project type," "organization," and "implementation problems." In each section, the items in the questionnaire corresponding to the conceptual variable are named, coding procedures are described if necessary, the univariate distribution is presented, and relations among the variables are described. Throughout, the numbers reported are from the 67 responding cities or from the 166 projects described by these cities.

For each of the conceptual variables, there is more than one corresponding questionnaire item. In designing the study, the basic idea was to combine the items corresponding to each conceptual variable into a single discrete variable with a small number of categories, thus permitting a discrete multivariate analysis of the four-way relation between the variables. This procedure is based on the testable assumption that the items corresponding to each of the conceptual predictors would be highly correlated. The intra-variable relations presented in this section serve as a test of this assumption. At the end of this section, data from miscellaneous items on the questionnaire are presents. Analyses of the multi-way relations are presented in the next section.

City characteristics. City level variables measured through both the questionnaire and the census were seen as indicating the situation in which the projects were implemented. Three of these variables were used: location, census group, and CBD problems. Each of these variables will be discussed in turn.

The location of each city was measured on a four point nominal scale with the following values: North East, North Central, South, and West. Of the 67 cities responding, 14 are in the North East region (50% of the cities contacted in that region), 13 are in the North Central Region (52% of the cities contacted there), 25 are in the South (71% of the Southern cities contacted), and 15 are in the West (63% of those cities contacted). The locational distribution of responding

cities does not differ statistically from the distribution of cities which were contacted.

Census data on seventeen variables were collected for each city contacted. Population figures for 1960, 1970, and 1980 were collected for each city and its SMSA. The primary source of data was the 1980 Census of the Population - U.S. Summary. Also from this source were taken each city's 1980 median family income and square mileage. Data on retail sales was collected for each SMSA, city, and CBD for the years 1967, 1972, and 1977. These figures were collected from the U.S. Census on Retail Trade - Major Retail Centers for each of the years named. Several values were missing at the CBD level for 1967 and some for 1972. These were estimated using a procedure described below.

The census variables were summarized by nine variables chosen to reflect conditions which might affect either the types of projects selected or the types of implementation problems experienced. The nine chosen variables were:

- 1) the city's 1980 population;
- 2) the city's population rate of change between 1970 and 1980;
- 3) the city's density;
- 4) the city's median family income for 1980;
- 5) the CBD's retail sales in 1972;
- 6) the CBD's rate of retail sales change between 1972 and 1977;
- 7) the CBD's rate of retail sales change between 1967 and 1972;
- 8) the CBD's percentage of the city's 1977 retail sales; and,
- 9) the rate of change of the CBD's percentage of the city's retail sales between 1967 and 1977.

These nine variables were used to group the cities along a variable named simply "census group". The variables were transformed if necessary so that each had an approximately normal distribution. Existing values for each city were used to estimate missing values for CBD retail sales in 1967 and 1972. Maximum likelihood estimates were obtained so that transformations of the estimates would also be maximum likelihood estimates. A principal components analysis was performed on 66 of the cities in the space of these nine variables; Manhattan, being quite deviant on several variables was dropped from this stage of the analysis. Three components had eigen-values greater than one and together they accounted for about 73 percent of the variance in the sample. A varimax rotation was performed to aid in naming the axes. The cities were then clustered on the three factor scores using a centroid algorithm. Three clusters emerged. They were named: 1) decentralized and growing cities; 2) centralized and decaying cities; and 3) small cities. These three groups constitute the values of the variable, "census group". Descriptive statistics of the sample and each of the three "census groups" are included in Table 3-1.

Of the 67 cities, 29, or 43 percent, were classified as centralized and decaying. These cities are characterized by CBD's with a large

Table 3-1

Comparison of Census Groups

Sample	City Population 1980	CBD Retail 1977 (th/\$)	Family Income 1980 (\$)	City Pop % Change 1970-80 (per/sq mi)	City Density 1980	CBD Retail % change 1967-72	CBD Retail % change 1972-77	CBD Retail % of City 1977	CBD Retail % of City change 1972-77
Mean	307,252	162,866	18,504	0.050	4,930	-0.007	0.076	0.142	-0.484
Minimum	29,318	10,908	10,607	-0.236	710	-0.291	-0.531	0.026	-0.802
Maximum	1,595,138	2,982,722	30,877	0.585	64,920	0.456	0.692	0.420	-0.071
Standard Deviation N = 67	318,312	366,999	3,242	0.164	7,880	0.153	0.257	0.089	0.177

Centralized & Decaying									
Mean	326,286	266,573	18,018	-0.051	7,520	0.053	0.095	0.190	-0.335
Minimum	58,913	47,351	13,340	-0.236	2,210	-0.212	-0.313	0.070	-0.579
Maximum	1,428,285	2,982,722	30,877	0.395	64,920	0.456	0.644	0.420	-0.071
Standard Deviation N = 29	287,460	535,056	3,642	0.127	11,180	0.161	0.234	0.100	0.130

Decentralized & Growing									
Mean	585,510	140,751	19,245	0.181	2,160	-0.037	0.087	0.072	-0.611
Minimum	170,616	68,722	15,746	-0.049	710	-0.291	-0.159	0.026	-0.752
Maximum	1,595,138	292,993	22,856	0.585	3,170	0.133	0.396	0.133	-0.453
Standard Deviation N = 16	350,745	67,221	2,010	0.169	670	0.129	0.179	0.027	0.089

Small									
Mean	79,792	42,247	18,605	0.087	3,520	-0.066	0.042	0.130	-0.589
Minimum	29,318	10,908	10,607	-0.172	1,160	-0.276	-0.531	0.048	-0.802
Maximum	173,979	89,392	25,202	0.337	13,160	0.306	0.692	0.223	-0.375
Standard Deviation N = 22	40,624	21,046	3,296	0.114	2,780	0.125	0.321	0.059	0.125

Source: US Census.

share of the city's retail sales but with populations and retail sales which are declining on a relative scale. Sixteen cities, about 24 percent, were classified as decentralized and growing. As the name suggests, these cities are characterized by CBD's with a relatively small share of the City's retail sales and populations and retail sales which are growing on a relative scale. The cities in this group also had somewhat lower densities and somewhat higher median family incomes than the rest of the sample. The remaining 22, about 33 percent, cities are small and do not deviate from the average on measures of centralization or growth. Appendix D contains the list of cities for each group.

The third variable corresponding to the conceptual variable, "city characteristics" is "CBD problems". The first item on the questionnaire requested respondents to list, in order, the five major problems facing their city's central business district. Thirty response categories, i.e. specific problems, were identified in part on an a priori basis and in part on the basis of a perusal of the responses. Each of the five responses from each city was dichotomously coded as either mentioning a specific problem or not. For each city, a problem set was defined as those specific problems which were mentioned at least once. In this treatment, neither the order of the specific problem, i.e., whether it was mentioned as part of the first problem or the fifth, nor the frequency with which the individual respondent mentioned the specific problem were taken into account.

The ordering of the problems was investigated to a minimal extent. By and large, more frequently mentioned problems were mentioned before less frequently mentioned problems. The decision to include all five problems and to weight them equally was made on the basis of the rationale that cities have many more than five problems and thus it was assumed that the five which were mentioned constitute a picture of the most serious problems.

Table 3-2 is a cofrequency matrix of the 30 specific problems. In this Table, diagonal entries represent the frequency of each specific problem: the entry in the upper left hand corner of the Table indicates that 41 of the 67 cities mentioned the problem, "declining retail sales" at least once. Off diagonal entries in this Table represent the frequency with which the row problem and the column problem were mentioned by the same city. For example, the second entry in the first row indicates that "declining retail sales" (the row problem) and "declining services" (the column problem) were mentioned together by four cities. This is important information in the light that "declining services" were mentioned by only four cities in the whole sample. Thus, each city that mentioned "declining services" also mentioned "declining retail sales". Table 3-2 is symmetric.

"Declining retail sales" was the most frequently mentioned problem, with over 60 percent of the sample cities mentioning it at least once. Several other specific problems were mentioned by at least 20 percent of the cities: "Competition from Suburban Developments" (25%); "Lack of Parking" (52%); "Poor Circulation" (30%); and, "Lack of Historic Preservation" (22%). Twenty-two cities mentioned problems which were not on the list and 24 cities (36%) did not name five problems.

Table 3-2

CBD Problems

Cofrequency Matrix for City Sample

Problem (number)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Declining Retail (1)	41	4	11	6	7	3	21	13	3	6	4	5	0	5	8	5	4	10	0	5	0	1	4	4	9	2	4	0	13	14
Declining Service (2)	4	4	1	0	0	0	2	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	2	1	0	0	0	1	1
Suburban Development (3)	11	1	17	1	4	0	7	3	4	3	4	5	0	2	2	3	0	2	0	4	1	1	2	2	3	1	3	1	6	3
Poor Economy (4)	6	0	1	8	3	1	3	1	0	0	2	1	0	2	3	1	0	1	0	0	0	0	0	0	2	0	2	0	1	3
Lack of New Investment (5)	7	0	4	3	11	0	6	1	1	0	1	1	0	3	2	2	1	1	0	2	0	1	2	1	2	1	3	0	2	2
Declining Tax Base (6)	3	0	0	1	0	3	1	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1
Lack of Parking (7)	21	2	7	3	6	1	35	12	5	7	5	4	1	4	3	3	3	6	1	3	2	4	2	6	7	2	2	0	10	12
Poor Circulation (8)	13	0	3	1	1	2	12	20	3	3	4	2	3	1	3	3	2	3	0	3	1	3	0	0	2	0	1	0	4	7
Lack of Access (9)	3	0	4	0	1	0	5	3	8	1	2	1	0	0	0	3	0	1	0	2	1	1	0	3	0	0	0	1	2	4
Inadequate Mass Transit (10)	6	1	3	0	0	0	7	3	1	12	0	2	0	0	1	1	3	4	1	0	1	0	1	1	2	1	0	0	6	4
Deteriorating Buildings (11)	4	0	4	2	1	0	5	4	2	0	10	2	1	0	1	3	0	3	0	3	0	2	0	0	2	1	0	1	2	2
Deteriorating Infrastructure (12)	5	1	5	1	1	0	4	2	1	2	2	10	0	0	0	1	0	2	1	0	1	2	0	3	1	0	1	0	2	2
Air & Water Quality (13)	0	0	0	0	0	0	1	3	0	0	1	0	4	0	0	2	0	1	0	1	0	2	0	0	0	0	0	0	2	1
Lack of Maintenance (14)	5	1	2	2	3	0	4	1	0	0	0	0	0	7	1	1	0	0	0	2	0	1	0	0	1	0	2	0	0	1
Poor Aesthetics (15)	8	0	2	3	2	1	3	3	0	1	1	0	0	1	8	0	2	1	0	1	0	0	0	0	1	1	2	0	1	2
High Vacancy (16)	5	1	3	1	2	0	3	3	3	1	3	1	2	1	0	10	0	5	0	1	0	1	0	1	1	0	1	1	3	3
Historic Preservation (17)	4	0	0	0	1	1	3	2	0	3	0	0	0	0	2	0	6	3	1	0	1	0	0	0	0	1	0	0	1	1
Inadequate Housing (18)	10	1	2	1	1	0	6	3	1	4	3	2	1	0	1	5	3	15	1	2	1	2	1	0	3	0	0	0	6	3
Lack of Open Space (19)	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1	1	2	0	2	0	0	0	0	0	0	0	0	1
Population Decline (20)	5	1	4	0	2	0	3	3	2	0	3	0	1	2	1	1	0	2	0	9	1	0	2	0	3	1	0	0	1	1
Excessive Office Development (21)	0	0	1	0	0	0	2	1	1	1	0	1	0	0	0	0	1	1	2	1	3	0	0	0	0	0	0	0	0	1
Crime (22)	1	0	1	0	1	0	4	3	1	0	2	2	2	1	0	1	0	2	0	0	0	7	0	1	1	0	0	0	2	2
Loitering (23)	4	0	2	0	2	0	2	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	4	1	2	0	0	0	2	1
Fear of Crime (24)	4	2	2	0	1	0	6	0	3	1	0	3	0	0	0	1	0	0	0	0	1	1	7	0	0	0	0	2	4	
Negative Image (25)	9	1	3	2	2	0	7	2	0	2	2	1	0	1	1	1	0	3	0	3	0	1	2	0	13	1	1	1	5	1
Poor Planning (26)	2	0	1	0	1	0	2	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	1	5	1	2	1	1
Poor Public/Private Coord. (27)	4	0	3	2	3	0	2	1	0	0	0	1	0	2	2	1	0	0	0	0	0	0	0	0	1	1	6	1	1	2
Constraining Regulations (28)	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	1	3	2	2
Other (29)	13	1	6	1	2	2	10	4	2	6	2	2	2	0	1	3	1	6	0	1	0	2	2	2	5	1	1	2	22	8
No Response (30)	14	1	3	3	2	1	12	7	4	4	2	2	1	1	2	3	1	3	1	1	1	2	1	4	1	1	2	2	8	24

Notes:

1. The number of Cities in this sample is 67.
2. A diagonal entry is the number of Cities mentioning the problem component.
3. An off-diagonal entry is the number of Cities mentioning both the row and column components.

The intent in constructing Table 3-2 was to use the cofrequencies to identify problem sets which occurred frequently together and, hence, to identify groups of cities with similar problem sets. Cities were grouped according to their CBD problems by the following procedure. Indices of five problem types were created as linear combinations of the specific problems. These problem types were: 1) economic decline; 2) traffic problems; 3) physical decay; 4) social problems; and, 5) planning problems. The latter two problem types did not discriminate well between groups of cities because of their relatively low frequencies; however, the first three problem types did discriminate fairly well. Four groups were identified by the following criteria: 1) cities mentioning economic decline and traffic, but not physical decay problems; 2) cities mentioning economic decline and physical decay problems but no traffic related problems other than parking; 3) cities mentioning both traffic and decay problems; and, 4) all other cities. The first group, named "economic and traffic" contains 18 cities; the second, called "economic and physical" contains 19 cities; the third group, "physical and traffic" contains 17 cities; and, the "other" group contains the remaining 13 cities.

All three of these variables, "location", "census group", and "CBD problem", were hypothesized to measure the same concept: "city characteristics". If indeed they are measures of the same concept, then they should be related to each other. Tables 3-3a, 3-3b, and 3-3c show the bivariate relations between these variables. Each of the relationships is statistically significant at the .05 level. None, however, is very strong, as might be indicated by a probability of less than .001.

The relations which are important may be identified by high (≥ 2.0) standardized deviates. These relations include: Western Cities reporting "other" CBD problems (see Table 3-3a); decentralized and growing cities being located primarily in the South (see Table 3-3b); and, small cities reporting traffic and physical problems (see Table 3-3c). These three specific relations are, however, the only ones that are statistically significant. This result suggests that although the three variables are pairwise related, the relationship is general and may not be attributed to several particular cells. The result also reflects the small number of cases available for analysis.

Since the bivariate groupings are not terribly strong and investigation of a three way relation is precluded by the small sample size, a choice must be made as to which of the three variables to use as an indicator of "city characteristics" in later analyses. We have chosen the variable, "census group", for four reasons: 1) it has stronger bivariate relations with the other two variables; 2) it has a smaller number of categories; 3) it is based on more information than the other two variables, and 4) the subjective nature of the CBD problems makes it a less reliable measure. Respondent's perceptions of CBD problems are probably influenced by the city's past and expected future performances as well as the respondent's personal frame of reference.

The three "city characteristics" variables are discussed on the city level. The remainder of the variables to be discussed are

TABLE 3-3A

Joint Frequencies of Census Group, CBD Problems and Location

CBD PROBLEM	LOCATION				TOTAL
	N. East	N. Cent	South	West	
Economic & Traffic	6	3	7	2	18
Economic & Physical	1	6	8	4	19
Physical & Traffic	7	3	5	2	17
Other	0	1	5	7	13
TOTAL	14	13	25	15	67

STATISTIC	VALUE	D.F.	PROB.
PEARSON CHISQUARE	17.478	9	0.0417
LIKELIHOOD-RATIO CHISQ.	17.726	9	0.0385

TABLE 3-3B

CENSUS GROUP	LOCATION				TOTAL
	N. East	N. Cent	South	West	
Centralized	9	5	5	10	29
Decentralized	0	2	11	3	16
Small	5	6	9	2	22
TOTAL	14	13	25	15	67

STATISTIC	VALUE	D.F.	PROB.
PEARSON CHISQUARE	15.421	6	0.0172
LIKELIHOOD-RATIO CHISQ.	17.115	6	0.0089

TABLE 3-3C

CENSUS GROUP	CBD PROBLEM				TOTAL
	Ec&Trf	Ec&Phys	Phsy&Trf	Other	
Centralized	9	6	5	9	29
Decentralized	5	8	1	2	16
Small	4	5	11	2	22
TOTAL	18	19	17	13	67

STATISTIC	VALUE	D.F.	PROB.
PEARSON CHISQUARE	14.787	6	0.0220
LIKELIHOOD-RATIO CHISQ.	14.319	6	0.0263

associated with the projects themselves. They are grouped under the three conceptual variables: "project type", "organization", and "implementation problems".

Project Types. Several items on the questionnaire were intended to characterize the project itself. These include the major features of the project and its objectives, cost, duration, and completion status. The sample in this case includes 166 CBD revitalization projects. As was mentioned earlier, planning studies were excluded from the sample. We will first discuss the "major features" of the projects.

The "major features" of each project are analyzed in a fashion similar to that used with "CBD problems" in the previous section. Twenty-two project components were identified in part on an a priori basis and in part on the basis of a perusal of the responses. The last category classified as "planning studies" with 10 observations was excluded from the sample since it was not considered to be a CBD revitalization project. Each project was dichotomously scored as either containing or not containing each component. In scoring each project, three items on the questionnaire were used: the project name, the project objectives, and the major features of the project. Parenthetically, the item requesting the project's final objectives was not intended to reflect the major features of the project; however, most of the responses stated objectives of the form: "to build a park." This level of describing project objectives is not the one we were hoping for, but the item did serve to shed light on the nature of what was actually done, so it was used in this capacity.

Table 3-4 is another cofrequency matrix. It contains the list of 21 project components, the number of projects containing the component (along the main diagonal), and the number of projects containing both the row and column components (along the off-diagonals). The matrix is symmetric. The most frequently mentioned component was "office", with 48 of the 166 projects, about 29 percent, having included one. A "retail" component was included in 42, or 25 percent, of the reported projects. Other high frequency components included "hotel" (20%), "parking garage" (21%), and "pedestrian amenities" (21%).

The cofrequencies shed some light on the interrelatedness of these components. One half of the projects containing an "office" also contained a "retail" component; conversely, 57 percent of the projects containing a "retail" component also contained an "office". In addition, "offices" are highly related with "hotel", "entertainment", "residential", and "parking garage" components. The reader will notice that the upper left hand corner of Table 3-4 is relatively dense with high cofrequencies. Similarly, an area just slightly more than half way down the main diagonal is also relatively dense. The former area represents "development" projects; whereas, the latter represents "public improvements" projects. In the discussion which follows, this broad distinction between "development" and "public improvement" components will be relied upon.

Operationally, "development" components include all those on the list in Table 3-4 from "office" to "residential" and the remainder, through "ARZ", are defined as "public improvements". The remaining four

Table 3-4

Project Types

Cofrequency Matrix for Project Sample

Component (number)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Office (1)	48	16	2	24	7	6	11	13	1	2	3	1	3	3	4	6	1	8	7	4	1
Hotel (2)	16	33	6	13	6	4	5	9	0	1	2	0	1	0	2	5	0	5	2	2	1
Convention Center (3)	2	6	7	1	1	0	1	4	0	0	0	0	0	0	0	1	0	0	1	0	0
Retail (4)	24	13	1	42	8	4	9	12	1	1	3	1	3	1	3	5	2	9	2	2	3
Entertainment (5)	7	6	1	8	15	2	6	5	0	1	2	1	2	0	3	3	1	4	0	1	1
Cultural Center (6)	6	4	0	4	2	20	1	4	0	1	0	2	0	0	1	5	2	5	1	1	2
Residential (7)	11	5	1	9	6	1	21	4	0	0	1	0	1	0	4	5	1	3	3	5	2
Parking Garage (8)	13	9	4	12	5	4	4	35	0	0	1	0	0	2	3	5	2	4	6	2	1
Transit Terminal (9)	1	0	0	1	0	0	0	0	7	0	1	2	1	0	2	0	0	1	1	1	0
Mass Transit (10)	2	1	0	1	1	1	0	0	0	14	4	1	2	2	6	1	7	0	0	0	0
Street Improvements (11)	3	2	0	3	2	0	1	1	1	4	23	1	10	4	14	3	3	3	1	2	1
Surface Parking (12)	1	0	0	1	1	2	0	0	2	1	1	10	1	2	2	3	2	1	1	1	1
Infrastructure (13)	3	1	0	3	2	0	1	0	1	2	10	1	20	1	10	2	2	3	1	2	1
Traffic Management (14)	3	0	0	1	0	0	0	2	0	2	4	2	1	12	4	1	3	1	2	1	0
Pedestrian Amenities (15)	4	2	0	3	3	1	4	3	2	6	14	2	10	4	35	7	5	3	1	8	3
Park (16)	6	5	1	5	3	5	5	5	0	1	3	3	2	1	7	22	0	3	4	4	3
ARZ (17)	1	0	0	2	1	2	1	2	0	7	3	2	2	3	5	0	16	0	1	1	1
Historic Preservation (18)	8	5	0	9	4	5	3	4	1	0	3	1	3	1	3	3	0	22	0	3	1
Acquisition/ Demolition (19)	7	2	1	2	0	1	3	6	1	0	1	1	1	2	1	4	1	0	19	3	1
Financial Assistance (20)	4	2	0	2	1	1	5	2	1	0	2	1	2	1	8	4	1	3	3	16	1
Other (21)	1	1	0	3	1	2	2	1	0	0	1	1	1	0	3	3	1	1	1	1	8

Notes:

1. The number of projects in this sample is 166.
2. A diagonal entry is the number of projects containing the project component.
3. An off-diagonal entry is the number of projects containing both the row and column components.

categories, from "historic preservation" through "other" are not explicitly included in the procedures used to define "project types". They are different from those in the "public improvement" and "development" groups in that they do not reflect characteristics of the project's physical design. No projects in the sample are described uniquely by any subset of these four components.

As is apparent from Table 3-4, several of the project components have relatively low frequencies. The task of collapsing these components so that each project could be associated with a single "project type" proceeded in several steps. In defining "project types" at each step, the goals were: 1) to make the components in each type similar to each other, while making the types dissimilar from each other, and 2) to preserve naturally occurring groups. Existing

statistical procedures generally used to identify naturally occurring groups, such as cluster analyses, are not particularly useful for the data structure of these project components because a Euclidean space is assumed. In effect, this implies an assumption that "offices" are as "close" to "parks" as they are to "hotels". We found this implicit assumption undesirable; consequently, these procedures played a minimal role in defining "project types". The basic procedure included examining the cofrequencies and attempting to define "types" which both satisfied the goals and made some logical sense. Several combinations were tried at each step before a classification scheme was accepted.

The first grouping of "project types" includes eight types. In defining these eight types, information regarding the source of funding was also considered. Team members felt that important differences exist between, say, a project in which private funds are used to construct an office and one in which public funds are used to renovate or construct a new city hall which is also an "office." When considering only the components, there was no way to distinguish between these cases; hence, funding source information was used. The confounding of the two variables made more easily definable differences such as the one between development projects and public improvements projects mentioned above. This particular distinction, apparent in the cofrequency table, also played an important role in defining "project types". Projects were assigned to the group which best reflected the description offered by the respondent. The eight types include:

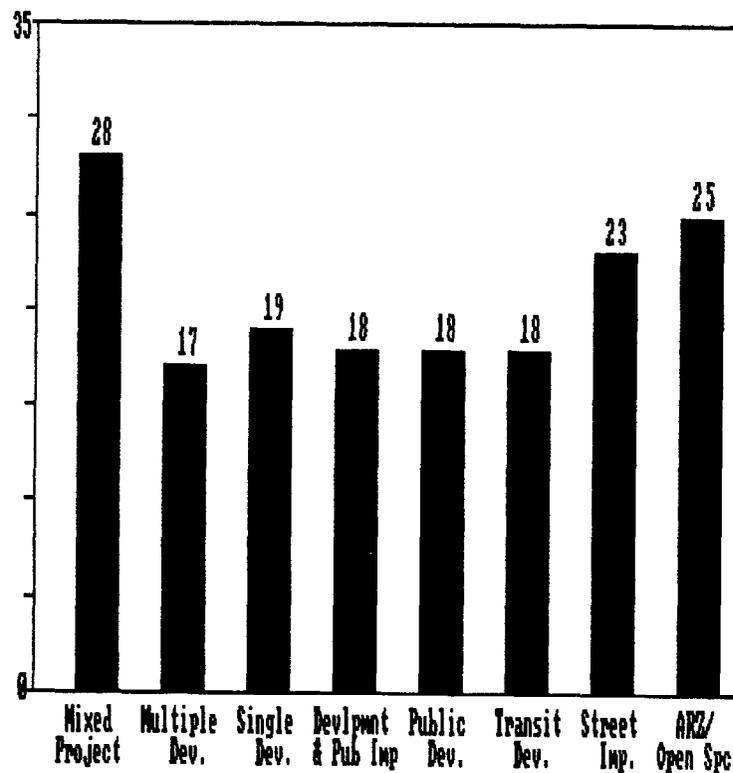
- 1) mixed projects
- 2) multiple developments
- 3) single developments
- 4) single developments with public improvements
- 5) public development
- 6) transit development
- 7) street improvement and
- 8) ARZ's and other open space projects.

"Mixed projects" are just that; they typically contain several components from both the "development" group and the "public improvements" group. Projects described as "multiple" or "single developments" include components from only the "development" group: several in the former and only one in the latter. These projects are funded with private funds. A "single development with public improvements" is as the name suggests, but implies that the funding source was primarily private. The vast majority of these "developments" included a "parking garage". A "public development" project includes components from the "development" group and perhaps a component from the "public improvements" group and was publicly funded. "Transit development" projects included either the "transit terminal" or the "mass transit", component or both as the primary component. Included in this group are a few highway construction projects. "Street improvement" projects included as primary components either "street improvements" or "pedestrian amenities". Many of these projects also included an "infrastructure" component. The final group, "ARZ's and open space projects", consists mostly of ARZ projects. The open space projects were included in this group for three reasons: a) open space projects are closer to ARZ's in terms of function than they are to any

of the other groups; b) the open space projects and the ARZ's had similar types of implementation problems; and c) adding them to the ARZ's balanced the frequencies of the groups.

The distribution of projects over these eight types is shown in Figure 3-1. The projects are fairly evenly distributed over the types, ranging from 28 (17%) "mixed projects" to 17 (10%) "multiple developments" (see Figure 3-1).

Figure 3-1
Distribution of Projects by Type



In addition to the specific variable, "project type", several other project level items on the questionnaire were intended to reflect the concept of "project type". These include "cost", "duration", and "completion status."

The "duration" and "completion status" variables were imbedded in a four part item in the questionnaire. Respondents were asked for the dates on which the project was initiated, adopted, and completed and the

date on which construction began. Few respondents filled in all of these dates; however, most filled in the initiation and completion dates. Project "duration" was defined as the difference between the completion date and the initiation date. One hundred and twenty eight projects had the necessary data for computing duration. The distribution of durations is skewed right with a mean of 5.44 years, a median of 4 years and a mode of 3 years. The standard deviation, skewness and kurtosis of the distribution are 4.43, 2.42, and 8.63 respectively. These moments may be compared to those of the standard normal distribution with a skewness of zero and a kurtosis of three.

Completion status was measured according to whether or not the completion date was before 1983. In all cases, it was possible to determine from the dates reported whether or not the project was completed at the time the questionnaire was filled out. Seventy-five (45%) of the projects were complete while the remaining 91 had not yet been completed at the time the questionnaire was filled out.

The project costs were also skewed right. The mean and median are, in millions of dollars, 42.517, and 15.000, respectively. The standard deviation, skewness, and kurtosis are 107.34, 5.73, and 42.53, respectively. The cheapest project in the sample cost \$50,000 and the most expensive was estimated at \$1.5 billion. Fourteen projects cost more than \$100 million and twelve were under one million.

Organization. The organization of a particular project was approximated by three variables. All three are described in terms of responsibilities for different aspects of the project: funding, planning, and implementation. Each of these variables is discussed below.

"Funding sources" were defined on the basis of a single item on the questionnaire: that requesting the percentage of the total project cost paid by federal, local, and private sources, respectively. The percentage paid by state agencies was not requested, but several respondents added this response category. Responses indicating state support were counted as having indicated federal support. The funding sources fell neatly into nine categories:

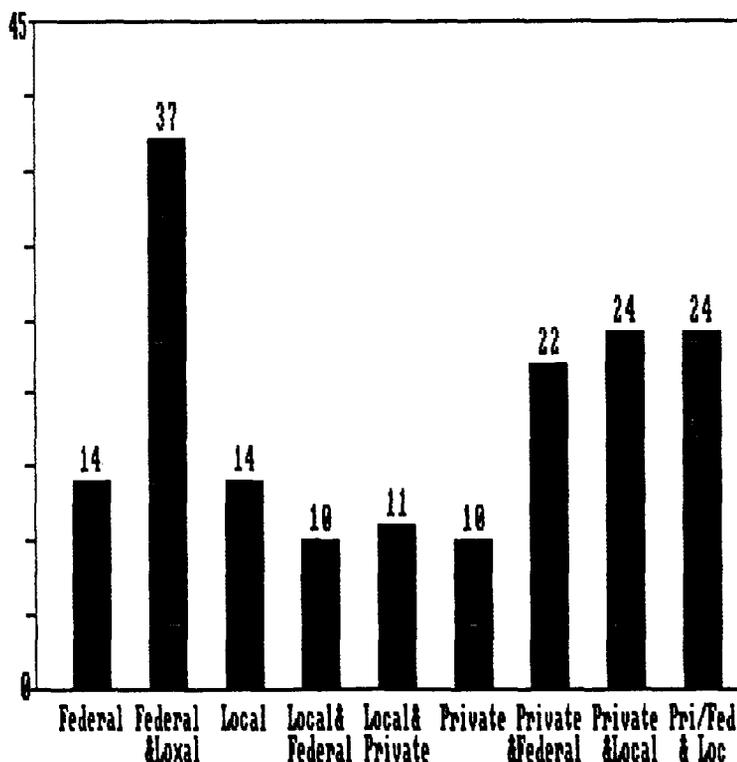
- 1) "mostly federal"
- 2) "federal and local"
- 3) "mostly local"
- 4) "local and federal"
- 5) "local and private"
- 6) "mostly private"
- 7) "private and federal"
- 8) "private and local" and
- 9) "private, federal, and local."

The order of the sources in the category names is significant; the source mentioned first paid for at least one-half of the project cost, while the source mentioned second paid for at least 20 percent of the cost. Single sources paid for 100 percent of the project, except for one of the projects in the "mostly federal" group, in which the federal government paid for 85 percent of the project. The reader will note

that no projects were reported wherein the federal government paid for more than half of the project and the private sector picked up the balance. The distribution of projects over these funding sources is shown in Figure 3-2. The largest group is "federal and local" with 37 projects (22%). Two groups contain 10 projects (6%) each: "local and federal" and "mostly private".

Respondents were also asked to name the agencies responsible for planning the project as well as those responsible for implementing it. These agencies were classified into 13 groups. In defining these "agency types", single groups were distinguished from multiple groups,

Figure 3-2
Distribution of Projects by Funding Source



public agencies from private ones, and city departments from other local agencies. It is interesting to note that federal agencies were never mentioned as having participated in either the planning or the implementation of sample projects. The groups are listed in Table 3-5 along with the joint planning and implementation frequencies. The "agency type" names listed should be self explanatory.

"City departments" were most frequently responsible both for planning and for implementing projects. Seventeen percent of the projects were planned by "city departments" and over one-quarter were implemented by them. For example, several projects which were paid for with private funds were implemented by "city agencies". Staff members believe that it is unlikely that a private organization would pay for the construction of an office building and let the city government be

responsible for implementing the project. It seems reasonable to suspect that there are hierarchies within implementation responsibility structures and that only selected levels are reflected by the data. Twelve percent of the projects were planned by the "city and a private group" and over 10 percent were implemented by this same type of cooperative effort.

Most of the entries in Table 3-5 occur along the main diagonal, indicating that the same type of agency both planned and implemented the project. The projects were also scored as to whether the exact same set of agencies were listed as having planned and implemented the project. This variable was named "responsibility match". Of the projects with complete data, about 42 percent reported that the same agencies both planned and implemented the project.

Table 3-5

Joint Frequencies of Planning and Implementation Responsibilities

Agency Type Responsible for Planning the Project (number)	Agency Responsible for Implementing the Project														TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Not Reported (1)	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Urban Renewal Agency (2)	0	9	0	0	0	0	0	0	0	0	2	1	0	0	12
City Department (3)	0	1	21	0	0	0	0	0	2	0	2	1	0	1	28
Regional Planning Agency (4)	0	1	5	6	0	1	0	0	1	0	1	1	0	0	16
State Agency (5)	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
City Committee (6)	1	1	2	0	0	5	0	0	0	0	0	0	0	0	9
Business Organization (7)	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
Consultant (8)	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Developer (9)	0	0	1	0	0	0	0	0	9	0	1	2	0	0	13
Other (10)	0	0	0	1	0	0	0	0	0	2	1	0	0	0	4
City & Public Agency (11)	0	0	4	0	0	0	0	0	0	0	3	0	0	0	7
City & Private Group (12)	0	1	5	0	0	1	0	0	2	0	0	11	0	0	20
Two Public Agencies (13)	0	2	0	0	0	0	0	0	0	0	0	0	1	0	3
Public & Private Groups (14)	0	0	2	0	0	0	0	0	0	0	0	1	0	3	6
TOTAL -	41	15	43	8	3	7	1	0	14	2	10	17	1	4	166

Implementation Problems. The description and explanation of implementation problems is the primary purpose of this phase. In as much as the literature does not provide an adequate taxonomy of implementation problems, the development of a classification scheme was taken as the primary goal. The relationships between "implementation problems" and several of the project level variables will be discussed in the following section.

"Implementation problems" reflected primarily responses to a single open-ended question which asked the respondents to name any problems which occurred on the project. When coded, the item regarding implementation problems was viewed together with responses to two other items: one was concerned with the project's success and the other with lessons which were learned during implementation. About half of the respondents rated the projects as successful. Only 5 percent admitted failure, about 20 percent indicated that the results were mixed. Finally, about 1/3 responded that it was too early to evaluate the projects. A perusal of the lessons suggested that in and of themselves, responses to that question did not lend themselves to quantitative analysis, however, in some cases, they did shed light on the problems experienced during implementation. Following are the ten most frequently mentioned lessons (mentioned at least twice). Appendix E contains a complete list of lessons and comments.

1. Valuable experience was gained through project implementation.
2. Private and public partnerships were very important and they worked.
3. Difficulty was experienced in coordinating government agencies and private development.
4. Good timing played an important role in planning activities.
5. There is a need for sensitivity to user needs and for a recognition of the importance of citizen/business participation.
6. There is a need for strong political support and creation of interest groups for downtown projects.
7. A technically oriented staff is needed to better understand the economics of private development and financing options, to prepare a more comprehensive plan, to use sound criteria and to select competent consultants.
8. There was an appreciation of the time needed to implement projects.
9. The importance of assuring maintenance and promotional follow up was recognized.
10. There is a need for determination, persistence, confidence and flexibility.

The initial coding of implementation problem proceeded in much the same way as with the open-ended questions regarding CBD problems and major project features. The primary difference in the procedure is that the list of problems which was generated depends solely on the data and is not a blend of a priori categories and ones suggested by the data. The list of problems which was settled on is included in Table 3-6 which is another cofrequency matrix. The procedural difference is reflected in Table 3-6 by the relatively low cofrequencies, suggesting that the responses were better reflected by a single category than by a combination. Otherwise, the procedure mimicked that described previously.

Table 3-6 may be read in the same manner as the other cofrequency tables. Fifteen (9%) of the respondents stated that there were no implementation problems. There were twenty-eight (17%) "no responses". These are difficult to interpret because the questionnaire item was poorly worded: it made a response conditional on the existence of a

problem. Thus we cannot tell whether these "no responses" are truly omissions or whether they represent "no problem".

Table 3-6
Implementation Problems
Cofrequency Matrix for Project Sample

Problem (number)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Raising Funds (1)	31	4	3	7	3	6	2	4	0	2	3	1	0	0	0	1	0	1	0	1	0
Acquiring Land (2)	4	17	1	2	0	1	2	2	1	3	1	0	3	0	0	1	0	1	0	0	0
Finding a Developer (3)	3	1	9	2	1	1	1	2	0	0	0	1	0	0	0	1	0	1	0	0	0
Obtaining Approval (4)	7	2	2	12	1	0	0	6	0	3	0	1	0	0	0	0	0	2	0	0	0
Agreeing on the Plan (5)	3	0	1	1	20	2	2	0	0	2	0	0	1	2	0	2	0	5	0	0	0
Instigating Support (6)	6	1	1	0	2	14	1	1	0	1	1	1	1	1	0	1	1	1	0	1	0
Confronting Opposition (7)	2	2	1	0	2	1	13	0	0	0	1	0	2	0	0	0	0	2	0	0	0
Coordinating Participants (8)	4	2	2	6	0	1	0	18	0	1	1	0	0	1	0	3	2	1	0	0	0
Determining Responsibility (9)	0	1	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0
Negotiating Contracts (10)	2	3	0	3	2	1	0	1	1	9	1	0	0	0	0	0	0	1	0	0	0
Anticipating Economic Changes (11)	3	1	0	0	0	1	1	1	0	1	16	1	1	0	0	2	2	3	0	0	0
Complying with Regulations (12)	1	0	1	1	0	1	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0
Relocating Tenants (13)	0	3	0	0	1	1	2	0	0	0	1	0	6	0	0	0	0	2	0	0	0
Solving Construction Problems (14)	0	0	0	0	2	1	0	1	0	0	0	0	0	12	1	0	1	3	0	0	0
Minimizing Construction Impacts (15)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	0	0	0	0	0
Other (16)	1	1	1	0	2	1	0	3	0	0	2	0	0	0	1	10	1	0	0	0	0
Cost Overruns (17)	0	0	0	0	0	1	0	2	0	0	2	0	0	1	0	1	4	0	0	0	0
Time Delays (18)	1	1	1	2	5	1	2	1	0	1	3	0	2	3	0	0	0	13	0	1	0
No Problem (19)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0
Not Implemented (20)	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	7	0
No Response (21)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28

Notes:

1. The number of projects in this sample is 166.
2. A diagonal entry is the number of projects for which the problem was mentioned.
3. An off-diagonal entry is the number of projects for which both the row and column entry were mentioned.

The most frequently mentioned problem was "raising funds"; it occurred on 31 (19%) of the projects. This response is the most highly integrated, meaning that it was mentioned most frequently with other problems. Other problems mentioned with a relatively high frequency include: "agreeing on the plan" (13%); "coordinating participants" (11%); "acquiring land" (10%); and, "anticipating economic changes" (10%).

The category, "raising funds", is straight forward and these are the words most often used by respondents. Similarly, "acquiring land", "finding a developer", "agreeing on the plan", "confronting opposition", "determining responsibility", negotiating contracts", "complying with

regulations", "relocating tenants", and "solving construction problems" are straight forward and don't require explanation as there seemed to be little doubt about how responses in these categories were coded.

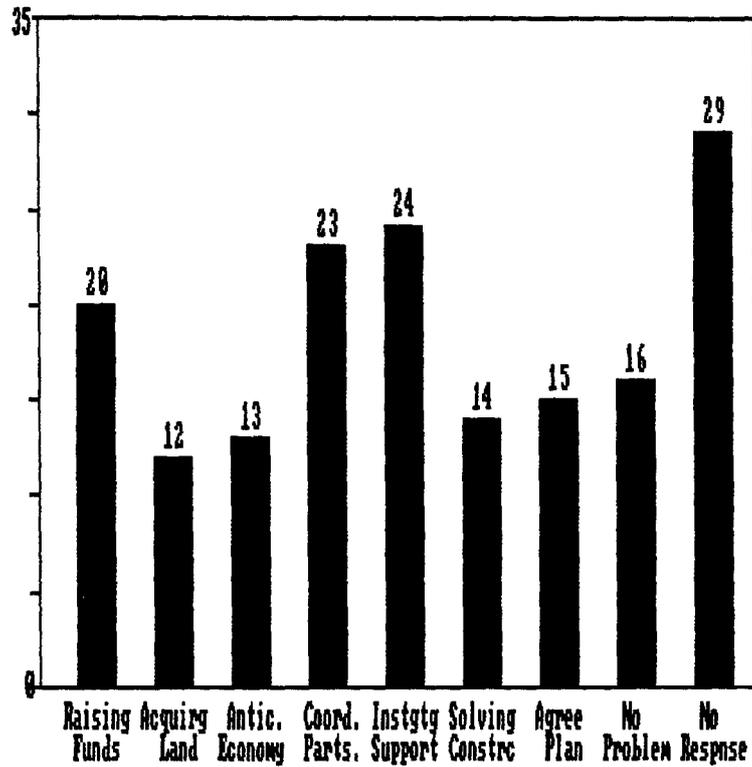
Some of the other categories cover a little more ground and deserve definition beyond that implied by the name. "Obtaining approval" generally referred to the approval of a non-legislative governmental body such as a federal agency. More than half of the projects which had difficulty "obtaining approval" also had problems "raising funds". "Instigating support" is similar to "obtaining approval", except that the former refers to constituent groups as opposed to organizations from whom support (approval) is somehow required. Thus, failing to gain support within the ranks of the city council is closer to "obtaining approval" than it is to "instigating support"; however, failing to gain support from a formal or informal merchants' organization is closer to the latter than to the former. Somewhat related is the problem, "coordinating participants". This response category contains the most divergent set of responses. Included are general coordination problems which were often revealed by statements about an inability to get various participants to complete their portion of the work on time. Scheduling difficulties were coded with this problem as were problems with infighting and problems motivating project participants.

The most difficult response category to name was "anticipating economic changes". This category includes responses indicating a failure to correctly forecast interest rates, market shifts, private developments, and the like. All of the projects with this code suffered because the future state of some relevant system, usually the economic system, was not correctly anticipated. In this sense, it is close to the problem, "solving construction problems", which may also be seen as failures to correctly anticipate the future state of a relevant system. However, there were sufficient construction problems to warrant a separate category and predicting interest rates seems substantially different from removing forgotten infrastructure elements.

Included in the list in Table 3-6 are the categories "time delays" and "cost overruns". The former was frequently mentioned; however, staff members do not feel that this is really an implementation problem, but rather the effect of some, perhaps unnamed, problem. The frequencies are reported but these categories are not included in the analyses of implementation problems.

Each project was coded as either mentioning each problem listed in Table 3-6 or not. These codings produced the cofrequencies. Each project was also assigned to one and only one of nine problem categories. These categories have been named to reflect the dominant category listed in Table 3-6. The frequency distribution of projects over these problem types is shown in Figure 3-3. Frequencies range from a low of 12 for "acquiring land" to a high of 29 for "no response." The names of the categories coupled with the explanations offered above are sufficient to reflect the types of problems experienced on the projects in each group. As before, the category, "coordinating participants" served as sort of a catch-all category for general managerial problems - those which seemed as though they could have been solved by better management.

Figure 3
Frequencies of Implementation Problems



Miscellaneous Results. Other questions in the survey dealt with the city's history with ARZ projects and the respondents' familiarity with UMTA's SMD program. Three quarters (51) of the cities responded that they had proposed an ARZ project since 1975 and 27 percent (18) had implemented one. However, only 39 percent of all respondents have heard of the ARZ demonstration project in Boston and even fewer (21%) knew about the SMD program. This is especially surprising since at least 2/3 of the cities were contacted by that program in 1975.

The analysis presented in the next section focuses on attempting to explain the occurrence of implementing problem types given knowledge of the situational, organizational, and project type variables.

Analysis of Results

In this section, relationships among the variables are described. The primary focus is on relations with the variable, "implementation problem"; however, relations among the other project level variables will be explored first. The situational, organizational, and project type variables are considered here as predictor variables, with implementation problem being the response variable.

Predictor Variables. Relations among the predictor variables will be discussed first. The motivation behind this part of the analysis is to reduce the number of predictor categories as much as possible while maintaining important differences between projects. These are, of course, conflicting objectives. The first objective is important because the number of projects in the sample is low relative to the number of categories which have been defined. The small sample size relative to the degrees of freedom reduces the power of statistical tests and increases the standard errors associated with parameter estimates. The second objective is important because if the predictor categories are not meaningful, any relations with them will be meaningless as well.

The analysis is thus characterized initially by efforts at data reduction. The general procedure has been a compromise between the strategies of combining categories which are conceptually similar and combining categories which are observed to be structurally similar in their relations with other variables. By and large, in collapsing predictor variables, the first strategy has dominated; while, in collapsing the response variable, the second strategy has dominated.

Team members feel that the variable, "project type", is important to the understanding of implementation problems, despite the lack of support for such a notion in the literature. The argument is simple and intuitive: that the problems which you are likely to have depend on what you're doing. On the basis of this assumption, it is logical to investigate the relations of the organizational variables and other project level variables reflecting project type generally with the specific variable named "project type". These bivariate relations are discussed in two groups. In the first group are the remaining discrete predictors, while in the second are the two continuous predictors, cost and duration.

The eight "project types" described may be collapsed along one or more of several dimensions: for example, public improvements versus other types of developments, or single developments versus multiple developments, etc. The strongest set of relations with the other predictor variables was found in collapsing the eight categories into three named "public improvements", "private developments", and "mixed". About one-half (84 or 51%) of the projects are classified as "public improvement" projects; these include four of the "project types" previously defined: "public development", "transit development", "street improvements", and "ARZ/open space". "Multiple" and "single" developments are combined to form "development" projects (n = 36 or 22%) and "mixed developments" and "development with public improvements" are combined to form "mixed" developments (n = 46 or 28%). "Development" and "mixed" projects have not been combined because they are related to the other predictor variables in different ways. Table 3-7 summarizes the relations of the collapsed "project type" variable with several of the other predictors.

As may be seen from Table 3-7, the new "project types" are quite strongly related with "funding source". For the most part, "public improvements" are funded by sources which include the federal government

Table 3-7

Summary of the Relations of "Project Types"*
with other Predictor Variables

Variable	Chi-Square	Probability	Likelihood Ratio Chi-Square	Degrees of Freedom	Uncertainty Coefficient
<u>SITUATION</u>					
Census Group	4.186	.3814	4.230	4	.012
<u>ORGANIZATION</u>					
Planning Responsibility	23.524	.0006	23.223	6	.061
Implementation Responsibility	77.292	.0000	88.860	6	.234
Planning and Implementation Responsibility	49.195	.0000	57.149	2	.203
Responsibility Match	0.389	.8234	.391	2	.002
Funding Source	112.861	.0000	127.986	16	.226
<u>PROJECT TYPE</u>					
Cost	33.706	.0000	35.303	2	.138
Duration	3.166	.2054	3.049	2	.013
Completion Status	14.025	.0009	14.264	2	.049

*Based on 3 "project types": "public improvements", "development", and "mixed"

and not the private sector. "Development" projects always involve a private source and "mixed" projects generally involve both federal and private funds. Local governments seem to be indiscriminate about the projects they assist in funding, at least when projects are looked at in this way. Not surprisingly, public agencies were almost never responsible for planning and implementing either "development" or "mixed" projects without the assistance of private groups. However, almost 60 percent of the public improvement projects were planned and implemented by public agencies without any private assistance. These relatively strong relations are desirable in the sense that the collapsed "project types" reflects a lot of information about funding source and planning and implementation responsibility as well as information about project type.

The mildly strong relationship observed between the collapsed "project types" and the variable indicating whether or not the project is complete is not so desirable. This means that certain project types which were reported (specifically, "mixed" projects) are less likely to have been completed. One interpretation of this bias is that respondents felt that it was more interesting to report more complex "mixed" projects, even if they were incomplete. This bias in the sample must be taken into account when the "project types" are related to "implementation problems".

The absence of a relationship between these project types and "census groups" must be interpreted with caution because there is a necessary dependence between the variables in as much as they are measured at nested scales. However, we may take the absence of a relationship here to suggest that cities in different "census groups" did not systematically report different types of projects from each other.

We turn now to the two continuous project descriptors, cost and duration. These two variables are not related to each other in any strong or meaningful way ($r = .13$). This suggests that, in our sample, the length of time a project takes to complete (duration) does not depend on the size of the project (cost). Relations with the collapsed "project type" variable were assessed by means of one-way analyses of variance using the natural logarithms of both the costs and durations. Five projects costing more than \$200 million dollars were dropped from the calculations. The three project types do differ in how much they cost ($F(2,138)=23.77$, $p < .0001$). In particular, "public improvements" cost significantly less than do either "development" or "mixed" projects. The former averaged about \$4.90 million dollars, while the latter two averaged \$25.79 million and \$29.08 million, respectively.

"Public improvement", "development, and "mixed" projects do not differ significantly in duration in our sample ($F(2,120)=1.12$, $p < .33$). This suggests that "project type" does not influence how long a project takes to complete. The average duration of a project in the sample is about 5.5 years.

In summary, by collapsing the eight "project types" into three categories according to whether the projects were "public improvements", "development", or "mixed", information regarding the "organizational"

variables is preserved. That is, "project type" and "organization" are highly related. However, these three project types can not be predicted from the situational variable, "census group". The three "project types" preserve differences in cost, but are unrelated to the duration of the project. Lastly, there is a bias in our sample toward completed "public improvements" projects and incomplete "mixed" projects.

Response Variable. Next, we turn attention to the analysis of implementation problems. As was the case with "project types", it was necessary to collapse the nine "implementation problems" into a smaller number of categories. As mentioned above, this collapsing process relied on the structural similarities of the categories in their relations with the predictor variables. The four collapsed categories are defined below with their component categories in parentheses. The conceptual meanings of these four new categories do not seem to require explanation.

1. "acquisition" ("raising funds" and "acquiring land"),
2. "support" ("anticipating the economy", "instigating support", and "coordinating participants"),
3. "plan" ("agreeing on the plan" and "solving construction problems"), and
4. "no problem" ("no response" and "no problem").

Summaries of the relationships of this collapsed "implementation problem" variable are included in Table 3-8. In general, none of the relations with "implementation problems" is very strong, though many are statistically significant. From Table 3-8, we can see that there is no reason to suspect that cities in different "census groups" experience different types of implementation problems.

As a group, the "organizational" variables are not as highly related to "implementation problems" as one might suspect from the literature. Neither "funding source" nor "planning responsibility" exhibits a statistically significant relationship with "implementation problems". "Implementation responsibility", however, is related to a statistically significant degree ($\chi^2_3=15.02$ $p < .005$). In this relationship, only a single standardized deviate (the square root of the cell's Chi-Square component) exceeded 2.0: projects implemented by public agencies were more likely to experience problems with the "plan" ("agreeing on the plan" or "solving construction problems"). Projects implemented via a joint public/private effort were less likely to experience this problem, though not quite to a statistically significant degree.

Knowledge of the type of organization which has responsibility for implementing a project reduces the uncertainty about the type of problem experienced by less than 4 percent, as is reflected by the uncertainty coefficient. Thus, while related to "implementation problems", "implementation responsibility" does not serve as a very good predictor of problems. A variable indicating whether or not the same agency had responsibility for both planning and implementing the project, "responsibility match", is also related to a statistically significant degree with "implementation problems". None of the cells in this relationship had a standardized deviate exceeding 2.0. There is a

Table 3-8

Summary of the Relations of "Implementation Problems"*
with Predictor Variables

Variable	Chi-Square	Probability	Likelihood Ratio Chi-Square	Degrees of Freedom	Uncertainty Coefficient
<u>SITUATION</u>					
Census Group	3.468	.7482	3.445	6	.008
<u>ORGANIZATION</u>					
Planning Responsibility	15.024	.0903	15.157	9	.034
Implementation Responsibility	19.652	.0202	19.971	9	.045
Planning and Implementation Responsibility	11.861	.0079	11.923	3	.036
Responsibility Match	10.861	.0125	10.948	3	.038
Funding Source	28.352	.2455	31.021	24	.049
<u>PROJECT TYPE</u>					
Project Type ¹	35.048	.0279	35.952	21	.058
Project Type ²	17.686	.0071	18.275	6	.045
Cost	13.863	.0031	14.210	3	.047
Duration	5.249	.1544	5.418	3	.018
Completion Status	9.502	.0233	9.612	3	.028

*Based on 4 "implementation problems": "acquisition", "support", "plan", and "no problem".

1. Based on eight "project types"
2. Based on three "project types"

tendency, however, for projects planned and implemented by the same agency to be less likely to report a problem and less likely to have a problem with "support". Again, this variable does not serve as a very good predictor.

Cost and duration were dichotomized about their respective means and related to "implementation problems". The duration of a project was not related to "implementation problems" in a statistically significant way, although such a relationship does exist with cost ($\chi^2_3 = 13.86, p < .005$). No standardized deviates exceeded 2.0; however, smaller projects have a tendency to experience more "plan" problems than do larger projects. Smaller projects, as the reader will recall, are more likely to be "public improvement" projects, so we would expect that "public improvement" projects would also tend to have more "plan" problems.

The relationship between the eight "project types" and the three "implementation problems" is significant at the .05 level. The substance of the relationship is preserved when the "project types" are reduced to three ($\chi^2_6 = 17.69, p < .01$). In this relationship also, no standardized deviates exceed 2.0 and the predictive power of the three "project types" is less than 4 percent. This relationship is displayed in Figure 3-4 and the data for the relationship of the three "project types" with the eight "implementation problems" is shown in Table 3-9.

Figure 3-4
Joint Frequencies of Project Types and Implementation Problems

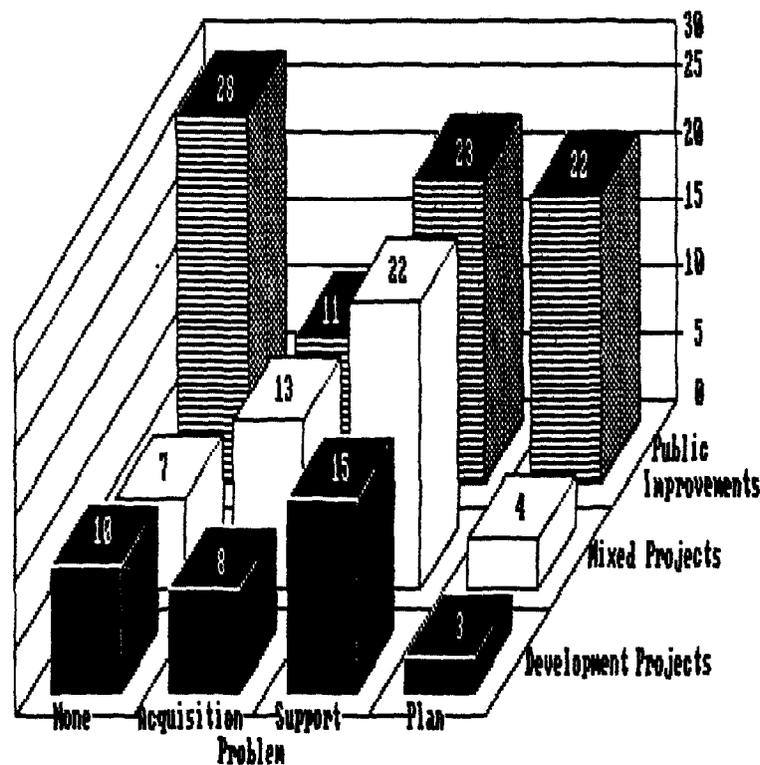


Table 3-9

Joint Frequencies of Nine "Implementation Problems"
and Three "Project Types"

Implementation Problem	Project Type			Total
	Public Improvement	Development	Mixed	
Raising Funds	9	5	6	20
Acquiring Land	2	3	7	12
Anticipating the Economy	4	2	7	13
Instigating Support	12	5	7	24
Coordinating Participants	7	8	8	23
Agreeing on the Plan	11	1	3	15
Solving Construction Problems	11	2	1	14
No Problem	12	2	2	16
No Response	16	8	5	29
TOTAL	84	36	46	166

The pattern of standardized deviates within the relation between the "project types" and the three "implementation problems" may be loosely interpreted. "Public improvement" projects are less likely to have problems than the other two project types; the problems on these projects are generally problems associated with the "plan" as was expected from the relation with project cost. "Public improvement" projects have fewer "acquisition" and "support" problems than would be expected by chance. "Development" projects are less likely to have problems with the "plan" than are the other two types of projects; otherwise, "development" projects have about the number of problems (and non-problems) as would be expected by chance. Least likely to report "no problems" are the "mixed" projects. "Mixed" projects are more likely than the other two types to have "acquisition" and "support" problems and less likely to have problems with the "plan".

Since we have assumed that the variable "project type" will be included in all models tested, the goal now becomes one of exploring the relationship depicted in Figure 3-4. This exploration will proceed in two directions which cannot be merged due to the relatively small sample size. This constraint is most unfortunate because the directions lead us to conclusions which are different.

City Type Influences. The first direction is to condition the relationship on the "census group" of the city in which the projects were undertaken. This procedure results in three relationships, one for each of the three census groups. These three relationships are shown in Tables 3-10a, 10b, and 10c. None of the relationships is statistically significant at the customary .05 level.

Table 3-10a

Joint Frequencies of Implementation Problems and Project Types
Centralized and Decaying

Project Type	Implementation Problem				TOTAL
	Acquisition	Support	Plan	No Problem	
Public Improvement	4	8	9	13	34
Development	6	8	2	5	21
Mixed	7	10	1	4	22
TOTAL	17	26	12	22	77

STATISTIC	VALUE	D.F.	PROB.
PEARSON CHISQUARE	10.849	6	0.0932
LIKELIHOOD-RATIO CHISQ.	11.214	6	0.0820

Table 3-10b

Decentralized and Growing

Project Type	Implementation Problem				TOTAL
	Acquisition	Support	Plan	No Problem	
Public Improvement	3	5	7	5	20
Development	1	2	1	4	8
Mixed	1	7	2	2	12
TOTAL	5	14	10	11	40

STATISTIC	VALUE	D.F.	PROB.
PEARSON CHISQUARE	5.598	6	0.4697
LIKELIHOOD-RATIO CHISQ.	5.318	6	0.5037

Table 3-10c

Small

Project Type	Implementation Problem				TOTAL
	Acquisition	Support	Plan	No Problem	
Public Improvement	4	10	6	10	30
Development	1	5	0	1	7
Mixed	5	5	1	1	12
TOTAL	10	20	7	12	49

STATISTIC	VALUE	D.F.	PROB.
PEARSON CHISQUARE	7.968	6	0.2405
LIKELIHOOD-RATIO CHISQ.	7.859	6	0.2486

Almost one-half (46%) of the projects in the sample are from cities in the "centralized and decaying" group. The relationship between "project type" and "implementation problems" is significant at the .10 level within this census group. The pattern of standardized deviates is similar to that in the whole sample, though no standardized deviate exceeds 2.0.

Forty projects in the sample were submitted from cities classified as "decentralized and growing". Within this census group, "project type" and "implementation problems" are independent; however, the expected values under the independence model are quite low and there is no sound basis for believing that the test statistic is distributed as Chi-Square so the relation here must be interpreted with several grains of salt. Within this census group, "public improvement" projects are more likely to have problems and more likely to have "acquisition" problems than they are in the sample as a whole. "Development" projects, however, are less likely to have problems than they are in the sample as a whole, but somewhat more likely to have problems with the "plan". Similarly, "mixed" projects are a little less likely to have problems in general, but, the ones they do have are more likely to be associated with the "plan" and less likely to be associated with "acquisition".

"Small" cities submitted 49 (30%) of the projects in the sample. As with the "decentralized and growing" projects, the sample of projects in "small" cities is small and relations between project type and implementation problems must be interpreted with caution. Within this census group, "public improvement" projects were a little more likely to have problems with "support" and a little less likely to have problems with the "plan" than were these projects in the whole sample. "Development" projects were a little more likely to have problems with support, but "mixed" projects were less likely to have "support" problems and more likely to have "plan" problems.

The relationship between project type and implementation problems does seem to be mediated by the census group of the city in which the project is being implemented. Unfortunately, our sample is too small to get a clear picture of how this mediation occurs.

Mediating Influences. The second direction in which the relationship between "project type" and "implementation problems" was explored involved adding more variables to the model. Several dichotomous variables were added separately and the presence of a three-way interaction was tested. The three-way interaction models were assessed with log-linear models. These are the most common models for discrete multivariate analyses.

Log-linear models have become popular for the analysis of discrete multivariate data during the past ten or twelve years. Their use and interpretation is well documented (e.g., Fienberg, (1980) and Bishop, (1975)). The models predict cell frequencies as a multiplicative function of parameters associated with the categories. In the (natural) logarithmic scale, these functions are additive and look much like linear regression models. In the log scale, the parameters are specified so that their interpretation is similar to the interpretation of analysis of variance effects, i.e., there are main effects and

interaction effects of orders up to and including the number of variables being considered in the model. A "saturated" model is one with as many parameters as there are cells in the table. In our treatment, we will only fit "hierarchical" models: ones subject to the constraint that inclusion of an effect implies the inclusion of all lower order effects containing the terms in the effect of interest. More simply, inclusion of a two-way interaction effect implies that both main effects are in the model.

The variables which were added in models with "project type" and "implementation problems" included cost, duration, planning and implementation responsibilities, funding source, the match between planning and implementation responsibilities, and completion status. With only the latter variable was a significant three way interaction observed ($G^2_6 = 14.87$ $p < .03$).

This is an important result: the relation described earlier between the four "implementation problems" and the three "project types" is independent of: cost, duration, planning responsibility, implementation responsibility, funding source, and whether or not the same agency planned and implemented the project. Given the strong bivariate relations between the "project types" and most of the other variables, this may not seem too surprising; however, it is substantive in light of the significance of the interaction with "completion status" in as much as "completion" is also strongly related to "project type".

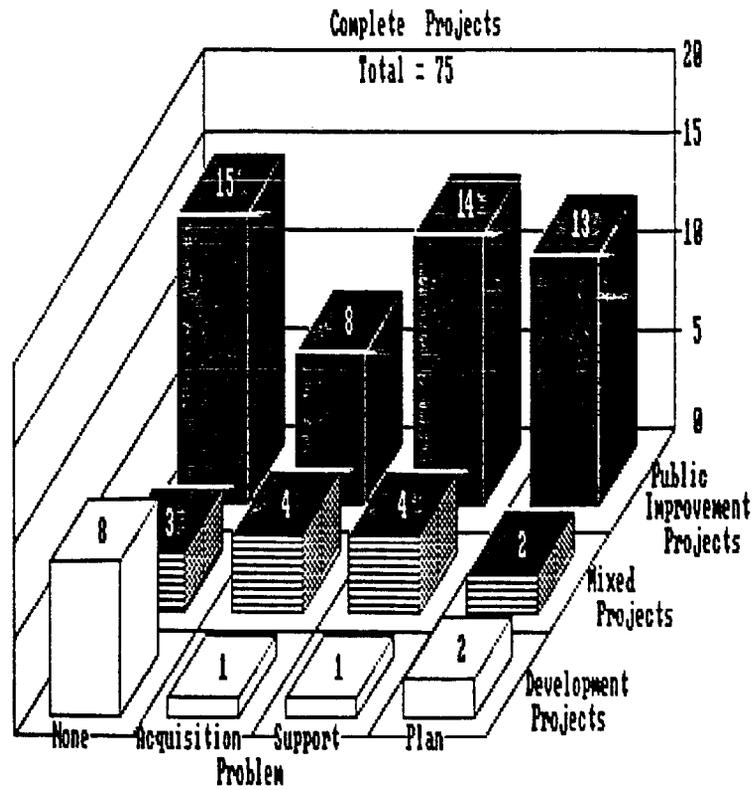
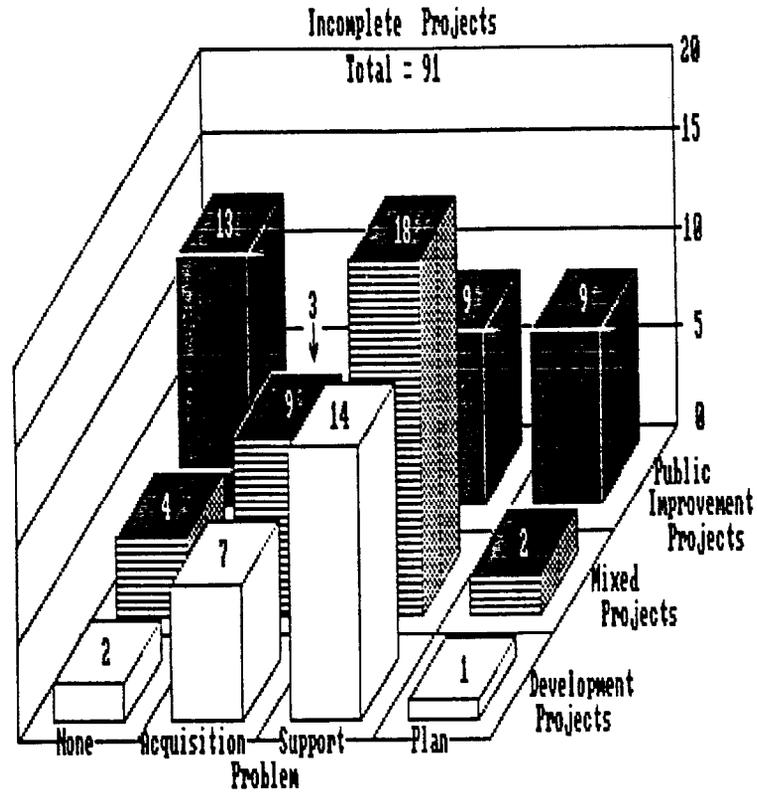
In this three-way relation (4 implementation problems by 3 project types by 2 completion statuses), the main effect due to completion is non-significant and the marginal relation between "completion" and "project type" noted earlier vanishes. The relations between "project type" and "implementation problems" for both completed and incomplete projects are shown in Figure 3-5.

The parameters of the log-linear model representing the three-way interaction may be interpreted. Twelve of the 23 parameters in the saturated model are significant (one parameter is used for the overall mean). Selection of these parameters does not result in a hierarchical model and may not be tested directly with the software we have used (BMDP Statistical Software (1981), program P4F). The non-hierarchical model may be tested directly using other software. Doing so would change the parameter estimates which are not of critical concern here; we are interested in those effects which are significant. An effect will be considered significant here if the parameter estimate divided by its standard error is greater than or equal to two.

Six degrees of freedom are associated with main effects and three effects are significant. Significant main effects indicate departures from uniform distributions in the margins. As mentioned above, the main effect due to completion status is not significant. The effect associated with the "support" problem is significant, and that associated with the "plan" problem is close with a standardized score of -1.93. The effect due to "support" is positive, suggesting that these problems occur more frequently than would be expected by chance under a uniform distribution; "plan" problems may occur less frequently than would be expected by chance.

Figure 3-5

Joint Frequencies of Project Type, Implementation Problems and Completion Status



The main effects associated with both "public improvement" and "development" projects are significant, while that associated with "mixed" projects is not. The sign of the parameter associated with "public improvements" is positive meaning that the number of projects of this type is higher than would be expected by chance, and that associated with "development" projects is negative meaning that this frequency is lower than would be expected by chance, though not quite statistically significant. These main effects tell us little more than what we might grasp by looking at the one-way frequency tables. The information which is added is that of statistical significance within the context of a three-way relation.

There are eleven degrees of freedom associated with two-way interaction effects; five parameters are significant. Each set of two-way interactions contains significant effects. In the relation between "project types" and "completion status", there is one significant effect: "public improvement" projects are more likely to be completed than one would expect by chance. This is the bias in the sample mentioned earlier: for some reason, the respondents in our sample chose to report completed "public improvement" projects significantly more often than such projects in progress. The distributions of complete and incomplete "development" and "mixed" projects are about what would be expected by chance.

The relation between "implementation problems" and "completion status" contains one significant effect: the "support" problem is more likely to be reported on incomplete projects than on completed ones. This relation makes some intuitive sense and will be discussed later. The interaction of "no problem" with "completion status" is also close to the significance level with a standardized score of 1.84, suggesting that respondents reported fewer problems for completed projects, but not in enough numbers to produce a significant parameter in our small sample.

The relation between "project types" and "implementation problems" produced two significant interactions, both of which are associated with "public improvements". These projects are more likely to have "plan" problems and less likely to have "acquisition" problems than would be expected by chance. The latter interaction makes sense given our knowledge that "public improvements" are almost always implemented by "public agencies", many of which have the power of eminent domain. The positive interaction with "plan" problems suggests that "public improvements" beget, and hence "public agencies" have, difficulties agreeing on what to do.

Three of the six three-way interaction effects are significant: none of them involves "mixed" projects. The three-way interactions are a bit tricky to interpret. The parameters are based on deviations from expected values given the one- and two-way effects described above and the interpretation of the effects must be made with this in mind.

The first significant three-way interaction is for "public improvement" projects on which there was no problem. The effect is positive for incomplete projects and negative for complete ones. This result may seem at odds with the observed frequencies which are nearly

identical (13 and 15, respectively; see Figures 3-5a and 5b). The effect of this parameter in the model is to offset a pair of two-way interactions. The first is between "no" problems and completion status and the second is between "public improvement" projects and completion status. These two two-way interactions together would yield predictions of very few incomplete "public improvement" projects with "no" problem. The three-way interaction compensates for this double impact.

The second significant three-way interaction enhances one of the two-way interactions mentioned in the paragraph above. While incomplete projects are less likely to have "no" problem, except for "public improvement" projects as outlined above, incomplete "development" projects are even less likely to have "no" problem. Complete "development" projects, on the other hand, are more likely to have "no" problem. This effect is easily seen in the Figures 3-5a and 5b.

The last significant three-way interaction is also easily seen in the Figures 3-5a and 5b. The interaction is between "support" problems, "public improvement" projects, and completion status. Recall from above that "support" problems were more likely to occur on incomplete projects than on complete ones. The direction of this three-way effect is such that incomplete "public improvement" projects are less likely to experience "support" problems and completed ones are more likely to experience them.

Summary and Discussion

As was stated in the beginning of this chapter, there are three purposes for this phase of the project. The first two purposes are descriptive, regarding the type of CBD revitalization projects which have been undertaken in major US cities over the past 7 or 8 years and associated implementation problems. The third purpose is to begin explaining those problems. First the results from the descriptive analysis will be summarized and discussed and then the conclusions from the analysis will be reported.

An analysis of the 166 CBD revitalization projects in 67 cities identified twenty-two project elements. Over one-quarter of the projects included an "office" element, about one-quarter included a "retail" element, and over one-eighth of the projects in our sample included both elements. Around twenty percent of the projects included at least one of the following elements: "hotel", "parking garage", and "pedestrian amenities".

The physical elements were classified as being either "development" or "public improvement" elements. Based on this dichotomy and subsets within each category, eight general "projects types" were identified. The highest frequency is associated with the "mixed projects" which include more than one element from each category. For the purposes of analyzing the data, the eight categories were reduced to three categories. The four "public improvement" types were combined together accounting for one-half of the projects reported. Two additional categories were formed on the basis of whether or not the projects included a "public improvement" element in addition to the "development"

element. Just over one-fifth of the projects included only "development" elements, while the remaining projects (28%) contained both "development" and "public development" elements. In general, strictly "development" projects were planned, funded, and implemented by the private sector, while the "mixed" projects were the result of public/private collaborations, and the "public development" projects were either planned, funded, and implemented primarily by the public sector.

The average project cost was \$42.5 million with the public improvements being the least expensive type of project. The average duration for a project's completion was 5.4 years. The length of time was found to be independent of project cost and type.

Fifteen elements of implementation problems were identified. Over 70 percent of the projects described in our sample included an implementation problem. The most frequently mentioned element was "raising funds," cited with almost one-fifth of the projects. Around 10 percent of the reported implementation problems included at least one of the following elements: "acquiring land," "agreeing on the plan," "coordinating participants," and "anticipating economic changes." Frequently occurring combinations of elements were identified to yield seven "implementation problems" which were named according to the most frequently occurring element. In addition to the five elements named above, categories also centered around the "solving construction problems" and "instigating support" elements.

These seven categories were reduced to three on the basis of their structural similarities. "Raising funds" and "acquiring land" were combined to form a category thought to represent "acquisition" problems, "agreeing on the plan" and "solving construction problems" were combined into a category of problems related to the "plan," and the remaining three problems - "anticipating economic changes," "coordinating participants," and "instigating support" - were combined into a category representing "support" problems. There were more "support" problems than either "acquisition" or "plan" problems. The interpretation of the term "support" here is general and refers to political, managerial and technical support functions.

A significant relationship was identified between project types and implementation problems. Public improvement projects are less likely to report problems than other project types. The problems on these projects are generally associated with the plan. Mixed development programs are more likely to report support and acquisition problems. When the relationship was conditioned upon the census, we found that the relationship between "project type" and "implementation problem" vanished; that is to say that the relation was no longer statistically significant. This is a curious result and one that we are not in a position to adequately explain. We would like to believe that the result is an artifact of the small subsample sizes or that, within each census group, the relationship is mediated by some additional variable. Unfortunately, we are unable to test either of these general hypotheses. Subsequent research on implementation problems should be either limited to a single census group or should be conducted at a large enough scale so that these conditional relationships can be explored further.

When another variable of "completion status" was added to the relationship of "project type" and "implementation problem", significant three-way interactions were not found with any other variable in the project type or organizational groups. In general, this result suggests that the perception of implementation problems depends upon the stage that the project is in. That is to say, that some phenomena may appear as problems at or near the time they occur; however, with the passage of some time, they are not remembered as problems. This is reflected in the data by the higher probability of "no" problem for completed projects than for incomplete projects.

The general result poses a problem in the definition, identification, and management of implementation problems. Is it more fruitful for theory development to consider as a problem any phenomena which appear as problems at the time of their occurrence, or will we learn more by studying phenomena which are remembered as problems after the project is completed? If a particular problem type has a low probability of being remembered as a problem, should a manager make less of an effort to anticipate it? Should she handle the problem differently upon its occurrence? These are again questions to which we are unable to offer answers on the basis of these data; they are, however, important questions and should be addressed in a serious way through future research efforts.

Comparing the problems reported for completed and incomplete projects, we find that the incomplete projects are about twice as likely to be seen as having "support" problems than are completed ones. This may mean that "support" problems appear as being major when they are occurring, but upon their presumed resolution, they are not recalled as having been major problems. It may also be that "support" problems, when they have occurred, are always recalled as major problems but when they are not resolved, the project is dropped. Recall that only one dropped project was reported to us and that it was not included in the sample, surely, a higher proportion of projects are dropped. It is possible that some of the incomplete projects may never materialize.

Completed projects are about twice as likely to be seen as having had "plan" problems as are incomplete ones. To some extent, this latter result is an artifact of the definition of "plan" problems which include "construction" problems. Most of the incomplete projects have not yet entered the construction phase. Thus, it is impossible for them to have associated "construction" problems. The existence of this "structural zero" was not taken into account during the analysis.

Differences between the "project types" without regard to completion status are few. "Public improvement" projects are less likely to have "acquisition" and more likely to have "plan" problems than are either "development" or "mixed" projects. However, there are several differences within and between the "project types" given completion status. As an aside, a visual comparison of Figure 3-5 leads to an interesting speculation. There appears to be an ordinal relation among the three project types with "mixed" projects being in the middle between "public improvement" and "development" projects. The nature of this possible ordering would appear to be along a public/private

dimension. However, it is not clear whether this possible ordering is more strongly related to "project type", "planning" and/or "implementation" responsibility, or "funding source" because all of these variables are highly interrelated. The possibility of such an ordering has not been explored in any rigorous fashion here.

The distribution of "implementation problems" for complete and incomplete "public improvement" projects are not different from each other. Nor are the distributions for complete and incomplete "mixed" projects. However, those for "development" projects are different. Notably, completed "development" projects are reported to have had "no" problems, while incomplete ones are reported to have "support" problems. Here, it may be that "development" projects which suffer from support problems wind up being dropped. Another explanation is possible. The respondents on our sample are all members of public planning agencies. Development projects are primarily planned, implemented, and funded by "private" organizations. Thus, the folks in our sample probably do not have the insight into "development" projects that they do into either "public improvement" or "mixed" projects and there may have been a tendency for them to assume there were "no" problems associated with a completed "development" project. At the same time, there may have been a tendency for them to report ongoing "development" projects if the project were hotly contested for some reason or another.

This latter point hints at several issues with regard to the interpretation of the data. Not only was the sample of respondents filled completely by members of public planning agencies, but it has some other characteristics which may have served to bias the data as well. First a sample of cities was selected and the Director of City Planning was then contacted in each city. This person, however, was free to give the questionnaire to anyone of his or her choice. Thus, there may have been some systematic bias in the pattern of these choices. For example, the Directors in larger cities may have had a tendency to pass the questionnaire on, while those in smaller cities may have filled them out themselves. Assuming that the Director of City Planning has a broader overview of both projects and problems, the selection of projects and problems by the respondent, and hence the relation between these two variables, may be more a reflection of who filled out the questionnaire than it is of relations in the real world. This hypothesis is consistent with and could be a possible explanation for our observation in the first part of the analysis - the independence of "project type" and "implementation problems" when conditioned on "census group." Further, respondents were constrained only very loosely in their choice of projects and the responses from each city represent the opinions of but a single individual; hence, the validity of the responses from any given city are suspect.

The comments above are important ones. They represent "threats" to the internal validity of this study and should be viewed as possible alternative hypotheses: alternatives to the hypothesis that "implementation problems" are related to "project type" and "completion status."

This concludes the second phase of the study. In spite of the above shortcomings it is felt that the study has succeeded in accomplishing the three objectives for the Phase, and has made a

contribution to the state-of-the-art in the study of the implementation problems. It has produced an empirically based list of implementation problems which was conspicuously absent in the literature. It has also shown how these problems are related to various attributes of CBD revitalization projects.

Chapter 4

AUTO RESTRICTED PROJECTS

Introduction

The objective of the third phase of the project was to determine if the success, or lack thereof, of an ARZ project might be associated with particular events during the process of implementation and/or problems that might have occurred. Additionally, we were interested in achieving a greater understanding of the problems of implementation. In order to make this determination two rounds of questioning were used. In the first round, questionnaire respondents (see Appendix F, "ARZ Implementation Survey") were asked about some general characteristics of their ARZ project and then specifically to indicate the sequence of events that was used in the planning and implementation of the project. For each of the listed events respondents were asked to indicate the main problem associated with the event and the severity of the problem. In addition to the sequence of events and problems that might have occurred during this sequence, there were many other questions asked about the ARZ projects. These questions involved origination of project, project support, objectives, physical features, project costs, project's relative importance, length of project, and responsibility for project.

The results from this round indicated that the process of planning and implementation was fairly consistent for all types of ARZ projects. There were two principal types of responses to this question of process. That is, the indicated process closely followed what might be called a global approach. Events related to problem definition began the process with implementation generally an event at the end of the process. This approach used about five events to describe the entire process of planning and implementation. The other approach, while again using about five events presented the most recent events in the process. These results did not present a clear picture about how the process might have influenced success or failure. What was very clear, however, were the many different problems that occurred during the events of planning and implementation. This result contributed to and directed the construction of the questionnaire for the second round of Phase III.

The purpose of the second round was to determine if there were characteristics of ARZ projects related to events and problems occurring during the planning and implementation of the project. The questionnaire [see Appendix G, "ARZ Implementation Survey (Last Round)"] was constructed using information from the questionnaires returned in the first round. This iterative process of questioning resembles the Delphi Method (Linstone and Turoff 1975) so often used in consensus building.

Sampling Procedures

The first round questionnaire was sent to 51 cities and 116 persons

in those cities. These names and cities were generated during Phase II questioning, when we asked if they had been involved with an ARZ project either completed, planned or in progress. The response rates to the first round are indicated in Table 4-1 below.

The second round questionnaire was sent to 50 cities and 110 persons in those cities. Some individuals asked to be removed from the list and one city was removed because it had not been involved with an ARZ. The response rates to the second round are also indicated in Table 4-1. As it can be seen from the table, the second round yielded a slightly higher rate of return from individuals as well as from cities. This fact was probably due to the format of the second round questionnaire. The second round questionnaire was of a more closed-form variety than the first round questionnaire. The Table in Appendix C provides a list of cities responding to the two questionnaires.

In seven cities more than one return was received. From those seven cities, however, only the response from the city planning director was utilized. Other responses were received by individuals holding positions such as Development Coordinator, Traffic Planner, Project Manager, Executive Secretary, Deputy Director, and Assistant Planner. A brief review of the responses from the same city revealed very little agreement regarding the importance of events or the severity of problems. The average agreement among two respondents occurred in about 25 percent of the questions, while among these respondents it was reduced to less than 10 percent. We can only speculate that this lack of agreement may be due to personnel turnover and long durations for planning and implementation of projects leading to varied and sometimes forgotten interpretation of events, or that problems are individual expressions of personal interpretation of events. For this reason and for consistency, only the response from the city planning director, or the equivalent, was utilized.

Round I Results

While the first round questionnaire did not yield information deemed useful in interpreting the process of planning and implementation of ARZ projects, for the reasons described earlier, it did yield some useful information from its closed form questions. The results from

Table 4-1
Response Rates to Rounds I and II

	Cities with completed ARZs		Cities with incomplete ARZs		All Cities	
	Round I	Round II	Round I	Round II	Round I	Round II
persons contacted	54	49	62	61	116	110
persons responding	16(30%)	16(33%)	17(27%)	22(36%)	33(28%)	38**(35%)
cities contacted	18	17	33*	33	51	50
cities responding	12(67%)	12(71%)	13(39%)	17(52%)	25(49%)	29**(58%)

*In NY City questionnaires were sent to persons associated with three ARZs.

**Two responses were questionnaires with no response other than name and address.

several questions are presented in Appendix I. In a comparison of the cost of the projects for both completed ARZs and not completed¹ ARZs, it can be seen that for completed ARZs the average cost was \$9.14 million and for not completed ARZs the average proposed cost was \$6.32 million. These average costs are not statistically different ($t = .73$, $df = 20$). In an analysis of the variances of the two samples the variances of the costs are also not statistically different between completed and not completed projects ($F = 2.17$, $df = 12,8$)

In examining Appendix J for the local participation in the funding of ARZ projects, it appears as if the average participation (40.3%) of completed projects is greater than that of projects not completed (22.3%). While the magnitude is certainly greater, the difference is not statistically significant ($t = 1.00$, $df = 19$). In both completed projects and projects not completed the average participation by the Federal government was around 50 percent.

In projects completed, of eleven responses there were only four responses indicating that there had been cost overruns. The amounts, however, ranged from \$300,000 to \$8,500,00. In the case of \$300,000, this was an overrun of 16.7 percent and \$8,500,000 was an overrun of 29.3 percent. It seems like a surprisingly few overruns, but, when they did occur, they were very large.

Of thirteen responses to the question of whether the completed ARZ took longer to complete than anticipated, nine answers indicated that the project took longer. The average time overrun was 1 1/2 years with a range of from .4 years to 4.7 years. The average percentage overrun was 175 percent or almost 1 3/4 times as long as had been expected! This higher underestimate of time may be due to either very poor forecasting or many time delays due to problems of various kinds in the planning and implementation process. Planning and implementation problems are addressed in the next section of this report.

Round II Results and Analysis

As stated above, the second and last round of questions were developed from the results of the first round questionnaire. By inspecting the events listed by the respondents on the first round questionnaire, seventeen possible events were listed on the second round questionnaire. For each event the respondent was asked to indicate the impact that the event may have had on the successful completion of the project. Answers could range from a "very negative" impact to a "very positive" impact with the event "not occurring" as an additional possibility. The frequency tabulation of those responses is given in Appendix H.

¹ The terms completed and not completed will be used throughout this Chapter. They are to be interpreted in the same manner as they were used in Chapter 3, that is, a project not completed may never have started the construction phase.

Again, using the first round questionnaire and an earlier questionnaire not specific to ARZs, 33 potential problems were identified and included in the second round questionnaire. With each potential problem the respondent was asked to indicate the severity of the problem in inhibiting the successful completion of the project. Answers could range from "no problem" to "very severe problem" with "not applicable" also a possible response. The frequency tabulation of those responses is given in Appendix K.

Evaluation of Events

The analysis and evaluation of events will have the following format of presentation. The first section discusses the total sample response to the question of the degree of impact of the event with respect to the successful completion of the project. The second section looks at the status of the ARZ project in terms of whether it has been completed or not to see if that completion status might yield some important results. In the following three sections, city characteristics, project costs and existence of a transit component in the ARZ are considered together with the completion status of the ARZ project to see if there may exist some dependencies between these factors and the perceived impact of the events on the project's success.

Total Sample Response. Table 4-2 presents the fraction of answers that stated that the impact of the event was either a "positive" or "very positive" (P/VP) impact on the success of the ARZ project. The "event did not occur" responses have been eliminated from the counts. It can be seen that most of the events were seen as having a P/VP impact on success by more than half of the respondents. The only events for which less than half responded that the impact was P/VP were

1. changes in Federal or State policies;
2. change of key government official;
3. exogenous events.

Using Appendix I and considering "changes in Federal or State policies", 50 percent of the responses indicated no impact and 33 percent indicated a "negative" or "very negative" (N/VN) impact. For "change of key government official", only one response out of seven indicated N/VN impact with five out of seven indicating "no impact." "Exogenous events" yielded 50 percent of the responses, "no impact", and only three out of twelve or 25 percent of the responses N/VN. Thus, while these three events were not seen as having a positive impact on success, they were not seen by many as having much of a negative impact on success either.

Completion Status. Since it was believed that there may be differences between the responses from cities in which the ARZ had been completed (12 in number) and from cities in which the ARZ had not been completed (15 in number), an analysis was done by separating the responses into these two groups. Tables 4-3 and 4-4 below gives the results of that analysis.

Table 4-2

Fraction of "P" or "VP" Responses
Impact of Event on Project Success (excluding the "NA" responses)

<u>Event</u>	<u>Fraction</u>
1 Involvement of legislator	.59 (10/17)
1 Involvement of mayor	.80 (20/25)
1 Involvement of local business association	.76 (19/25)
1 Involvement of citizens group	.58 (14/24)
1 Commitment of funds by Federal agency	.69 (11/16)
1 Commitment of funds by private sector	.77 (10/13)
2 Changes in design	.67 (10/18)
2 Changes in Federal or State policies	.17 (2/12)
2 Change of key government official	.14 (1/7)
3 Appointment of overall project coordination	.88 (15/17)
3 Selection of consultant	.85 (22/26)
3 Formation of public/private task force	1.00 (20/20)
3 Creation of special assessment district	.75 (9/12)
4 Mass media coverage	.67 (16/24)
4 Public relations efforts during construction	.92 (12/13)
4 An event in another related project	.53 (9/17)
4 Exogenous events	.25 (3/12)

Table 4-3

Fraction of "P" or "VP" Responses
Impact of Event on Project Success (excluding the "NA" responses)

<u>Event</u>	<u>Individual Events</u>		<u>Categories</u>	
	<u>ARZs Completed</u>	<u>ARZs Not Completed</u>	<u>ARZs Completed</u>	<u>ARZs Not Completed</u>
1 Involvement of legislator	.63	.56		
1 Involvement of mayor	.92	.69		
1 Involvement of local business association	.91	.64		
1 Involvement of citizens group	.58	.58		
1 Commitment of funds by Federal agency	.88	.50		
1 Commitment of funds by private sector	.88	.60	.80	.61
2 Changes in design	.67	.44		
2 Changes in Federal or State policies	.17	.17		
2 Change of key government official	.25	.00	.42	.28
3 Appointment of overall project coordination	.88	.89		
3 Selection of consultant	.83	.86		
3 Formation of public/private task force	1.00	1.00		
3 Creation of special assessment district	.70	1.00	.85	.91
4 Mass media coverage	.73	.62		
4 Public relations efforts during construction	.90	1.00		
4 An event in another related project	.50	.55		
4 Exogenous events	.00	.60	.59	.63

Looking at Table 4-3 we can see that the involvement of a mayor or a local business association had a much greater P/VP impact on the success of completed ARZs than for those ARZs not completed. Likewise, commitment of funds by a Federal agency or by the private sector had a more P/VP impact on success of completed projects than on projects not completed.

In Table 4-4 we can see, as would be expected, for ARZs not completed there are many more events with the fraction of responses much higher than for ARZs completed. Higher negative impacts can be seen for seven events. The group of events involving citizens groups, legislator, or local business have a considerably larger negative response for ARZs not completed. Likewise, changes in Federal or State policies or key government officials yielded much higher negative response rates. The commitment of funds from either a Federal agency or the private sector were events that yielded much higher negative responses from cities with ARZs not completed.

In attempting to uncover some relationships between events and the success of ARZs projects, the events were combined into four general categories. The list below indicates the category number, name, and the events that comprise it.

Category 1: Involvement of individuals, groups, or agencies
(Events 1, 2, 3, 4, 12, 13)*

Category 2: Changes occurring during process of project
(Events 9, 10, 11)

Category 3: Organizational or interorganizational events
(Events 5, 6, 7, 8)

Category 4: Public relations and exogenous events
(Events 14, 15, 16, 17)

*Event numbers correspond to events given in Appendix I.

In Tables 4-3 and 4-4 the categories of combined events are used. The fractions reported represent the responses combined for the entire category of events. Thus it can be seen that the general pattern of impact remains the same when grouping the events into the four categories. Category 1 events yield more positive responses for completed ARZs but more negative responses for ARZs not completed. Category 2 events yield similar results. Category 3 events were seen as highly positive by most cities regardless of the completion status of the project. A reversal occurs with Category 4 events. For ARZs not completed the responses are more often positive for Category 4 events and less often negative than for ARZs completed.

City Characteristics. In addition to the state of the ARZ project (completed or not completed), it was believed that the size of the population (1980 census data) might also be a factor that could yield important information about the implementation of ARZs. In order to achieve as close to equal numbers of responses in each of the four cells

Table 4-4

Fraction of "N" or "VN" Responses
Impact of Event on Project Success (excluding the "NA" responses)

	Individual Events		Categories	
	ARZs Completed	ARZs Not Completed	ARZs Completed	ARZs Not Completed
1 Involvement of legislator	.00	.33		
1 Involvement of mayor	.08	.08		
1 Involvement of local business association	.09	.36		
1 Involvement of citizens group	.08	.25		
1 Commitment of funds by Federal agency	.00	.38		
1 Commitment of funds by private sector	.00	.20	.05	.26
2 Changes in design	.22	.11		
2 Changes in Federal or State policies	.17	.50		
2 Change of key government official	.00	.33	.16	.28
3 Appointment of overall project coordination	.00	.00		
3 Selection of consultant	.08	.00		
3 Formation of public/private task force	.00	.00		
3 Creation of special assessment district	.10	.00	.00	.00
4 Mass media coverage	.18	.08		
4 Public relations efforts during construction	.00	.00		
4 An event in another related project	.50	.36		
4 Exogenous events	.43	.00	.23	.16

of the contingency table, a population size of 300,000 was used. The cities ranged in size from 37,712 to 2,968,579. The numbers of cities in each cell is given in Table 4-5 below. For each event a frequency tabulation was made of the P/VP responses as a fraction of the total, excluding the "NA" response. Table 4-5 gives the frequencies and fractions for each of the four categories of events.

Table 4-5

Frequency (numerator) and Fraction of "P" or "VP" Responses
Impact of Category of Event on Project Success (excluding "NA" responses)

Status of ARZ	Event Category	Population Size	
		>300,000	≤300,000
Completed	Involvement of Individuals	19/23	28/36
	Changes	1/4	7/15
	Org. Events	16/17	19/24
	PR and Exog. Events	7/14 5	13/20 7
Not completed	Involvement of Individuals	18/32	19/29
	Changes	3/12	2/6
	Org. Events	16/17	15/17
	PR and Exog. Events	9/16 8	11/16 7

Numbers indicate the number of cities in the cell.

For each of the event categories, the frequencies from Table 4-5 were used in an analysis to determine if there were any statistically significant relationships between the completion status of the ARZ, the size of the population (as defined either $>$ or $<$ 300,000) and the P/VP impact. In each of the four cases (categories) the Chi square test for independence was not rejected, implying no statistically significant relationship between the completion status of the ARZ project and the population size with respect to the response of a P/VP impact on success.

Believing, perhaps, that the 300,000 population size might be too much of an artificial construct, the three census groups resulting from an earlier principal components analysis (see Chapter 3 and Appendix D) were used. These groups based on 1980 census data and a factor analysis were generally considered as 1) centralized and decaying; 2) decentralized and growing; and 3) small. The population ranges for the data used in that analysis were

- group 1) 58,913 to 1,428,285
- group 2) 170,616 to 1,595,138
- group 3) 29,318 to 173,97

Four of the cities responding to the second round questionnaire were not included in the earlier analysis. These cities were placed in one of the population groups based on their population size and other city characteristics. Thus, of the 27 cities responding, twelve were in group 1, eight were in group 2, and seven were in group 3. A similar analysis for independence of factors was then done using these three census groups and the ARZ status of completed and not completed for each of the four event categories. Table 4-6 presents the frequencies (numerator) and fractions of the P/VP responses for each event category, again excluding the NA responses.

In three event categories the null hypothesis of no relationship between the status of the ARZ and the census group was rejected at the particular ARZ status of completion and what census group the city is in. The statistically significant results occurred for all event categories except category 4 (public relations and exogeneous events).

For Event categories 1, 2, and 3, small cities were far more likely to indicate that these events were P/VP when the ARZ was completed. However, decentralized and growing cities were more likely to indicate that these events had a positive impact on success when the ARZ was not completed. For centralized and decaying cities there were very small differences between the expected frequencies and what was found across all three event categories that were significant.

For these three census groups a further analysis was done for N/VN responses to the impact of events on the success of the ARZ project. Table 4-7 presents the frequencies (the numerator) and fraction of the N/VN responses for each of the four event categories. In the four tests for the independence of census group and status of the ARZ for N/VN responses only event category 1 yielded statistically significant results (at the .05 level). Again in small cities there were higher than expected frequency of N/VN responses when the ARZ was completed.

Table 4-6

Frequency (numerator) and Fraction of "P" or "VP" Responses
Impact of Category of Event on Project Success (excluding "NA" responses)

Status of ARZ	Event Category	Centralized and Decaying	Decentralized and Growing	Small
Completed	Involvement of Individuals	19/24*	7/9*	21/26*
	Changes	3/17*	0/1*	5/11*
	Org. Events	15/16*	6/7*	14/18*
	PR and Exog. Events	7/11 [5]	4/7 [2]	9/16 [5]
Not completed	Involvement of Individuals	17/29*	16/24*	4/8 *
	Changes	3/10*	2/8 *	0/0 *
	Org. Events	17/17*	11/12*	3/5 *
	PR and Exog. Events	11/17 [7]	6/11 [6]	3/4 [2]

Numbers in boxes indicate the number of cities in the cell.

**Significant at the .05 level.

Table 4-7

Frequency (numerator) and Fraction of "N" or "VN" Responses
Impact of Category of Event on Project Success (excluding "NA" responses)

Status of ARZ	Event Category	Centralized and Decaying	Decentralized and Growing	Small
Completed	Involvement of Individuals	0/24*	0/9 *	3/26*
	Changes	0/7	1/1	2/11
	Org. Events	0/16	0/7	2/18
	PR and Exog. Events	2/11	2/7	4/16
Not Completed	Involvement of Individuals	9/29*	5/24*	2/8 *
	Changes	4/10	1/8	0/0
	Org. Events	0/17	0/12	0/5
	PR and Exog. Events	3/17	2/11	0/4

* Significant at the .05 level.

In looking at this analysis for census group 3 (small cities) it appears that the involvement of individuals, groups and agencies, in the case of completed ARZs played both a strong positive influence in some cases and a strong negative influence in others, both larger than would otherwise be expected. The data do not explain further why this should be the case in small cities. We can only conjecture that in smaller cities the influence of individuals or groups is much greater than in other types of cities.

Cost of Project. Further analysis of the impact of events on the success of the ARZ project was done with respect to the cost of the project. It was believed that there may be a relationship between the completion status of the ARZ, its cost and whether or not the city responded P/VP on the impact of an event. A cost of \$6,000,000 was chosen to separate the projects in order to yield a contingency table with as near as possible equal number of cities in the cells. Table 4-8 presents the frequency tabulation of the responses from the cities. The responses from 6 cities did not reveal the cost of the ARZ project, thus, these results are for 21 cities only. Statistical tests for a relationship between the completion status of the ARZ and the cost of project yielded no significant result at the .05 level of significance.

Table 4-8

Frequency (numerator) and Fraction of "P" or "VP" Responses
for each Event Category by Project Status and Cost (excluding "NA" responses)

Status of ARZ	Event Category	Cost of ARZ Project	
		≥\$6,000,000	<\$6,000,000
Completed	Involvement of Individuals	19/22	13/19
	Changes	3/8	1/7
	Org. Events	13/14	10/14
	PR and Exog. Events	6/13 4	7/11 4
Not Completed	Involvement of Individuals	17/26	13/26
	Changes	3/8	1/8
	Org. Events	19/19	6/9
	PR and Exog. Events	8/13 7	7/14 6

Numbers in boxes represent number of cities in the cell; total is less than 27 due to the absence of cost data for some projects.

That is, there is no apparent influence of the cost of the ARZ project, and whether it was completed or not, on the positive impact of the events on the success of the project.

Transit Component. It was believed that an important aspect of ARZ projects was whether or not there was a transit component in the ARZ design. Of the 27 cities that responded, 16 had ARZ projects with transit components, eleven cities did not. Again the data were analyzed across the four categories of events and for the two completion states of the ARZ project (completed or not completed). Tables 4-9 and 4-10 present the frequencies (as the numerator) and fractions of the P/VP and N/VN responses, +respectively, to the impact of the events on the success of the project.

In testing for independence¹ of the transit attribute with the completion status of the ARZ for the four event categories, both event category 1 and event category 3 yielded statistically significant results at the .05 level of significance. The other two categories did not. For events that involved individuals and groups (Category 1) a completed ARZ that was without a transit component was more likely to yield a P/VP response from a city than from the city with a transit component ARZ. Also, cities that had not completed the ARZ and had a transit component were more likely to respond with P/VP than were cities that had no transit component. The exact same relationships are true for events that were of an organizational or interorganizational nature (Category 3).

For the N/VN response, all four Chi square tests for independence of the attributes of "transit related" and "state of the ARZ" there were no statistically significant results. All tests of hypothesis were done at the .05 level of significance and the null hypothesis of independence of attributes was not rejected in any of the four cases.

Evaluation of Implementation Problems

The analysis and evaluation of implementation problems will have the same general format of presentation as for the evaluation of events.

¹The Chi square test for independence uses the frequency of the response and not the fraction of the total response. The fraction is given in all cases to indicate the magnitude of the total response that was of a non "NA" variety. The test for significance looks at the numbers in the cells to see if they have the "balance" expected if there were total independence of the two axes. Thus, it is possible to have, for example, 3 out of 3 responses in one cell be P/VP and 20 out of 80 responses in another cell be P/VP and even though the percentages are 100% and 25% P/VP respectively, we could find that ("in the opposite direction") the 20 responses are far more likely to occur than the 3 responses. That is the nature of the Chi square test.

Table 4-9

Frequency (numerator) and Fraction of "P" or "VP" Responses for each Event Category by Project Status and Transit Component (excluding "NA" responses)

Status of ARZ	Event Category	Transit Component	No Transit Component
Completed	Involvement of Individuals	20/23*	27/36*
	Changes	2/7	6/12
	Org. Events	17/17*	18/24*
	PR and Exog. Events	7/15 5	13/19 7
Not Completed	Involvement of Individuals	29/46*	8/15*
	Changes	4/14	1/4
	Org. Events	27/27*	4/7 *
	PR and Exog. Events	13/21 11	7/11 4

Numbers represent the number of cities in the cell.

* Significant at the .05 level.

Table 4-10

Frequency (numerator) and Fraction of "N" or "VN" Responses for each Event Category by Project Status and Transit Component (excluding "NA" responses)

Status of ARZ	Event Category	Transit Component	No Transit Component
Completed	Involvement of Individuals	0/23	3/36
	Changes	1/7	2/12
	Org. Events	0/17	2/24
	PR and Exog. Events	6/15	2/19
Not Completed	Involvement of Individuals	12/46	4/15
	Changes	4/14	1/4
	Org. Events	0/27	0/7
	PR and Exog. Events	4/21	1/11

Total Sample Response. Of the 33 problems presented on the questionnaire, a little more than half of them (17) yielded responses by at least 25 percent of the cities that the problem had "moderate or worse" (M/W) impact in the successful implementation of the ARZ project. However, only one problem, that of "obtaining funds from the private or public sector," yielded responses by at least 50 percent of the cities that the problem had M/W impact on the successful implementation of the ARZ project.

When looking at the responses that indicated that the problem was "severe or worse" (S/W), however, only four problems yielded those responses by at least 25 percent of the cities and no problem yielded the responses by 50 percent of the cities. The four problems eliciting the S/W responses by at least 25 percent of the cities were:

1. length of time for securing funds
2. obtaining funds from private and/or public sector
3. lack of support of merchants and other affected parties
4. private sector did not take major responsibility for the project

In Chapter 3, CBD implementation problems were discussed. As part of that discussion, seven implementation problem types were defined as:

1. acquiring funds (Problem nos. 6, 7, 23, 24, 26, 32)
2. anticipating economic changes (Problem nos. 5, 15, 30)
3. solving construction problems (Problem nos. 9, 10, 17, 28, 33)
4. acquiring land (Problem no. 11)
5. agreeing on plan elements (Problem nos. 1, 2, 13, 27, 29)
6. coordinating participants (Problem nos. 3, 4, 8, 16, 20, 21, 22, 31)
7. instigating support (Problem nos. 12, 14, 18, 19, 25)

The 33 problems stated on this final questionnaire were assigned to these seven problem types using the same decision rules and heuristics as in Chapter 3. Those assignments are indicated above and in Appendix H. In Table 4-11 the frequency distribution of the total response set is presented for these seven problem types. No problem type elicited S/W responses of more than 25 percent. However, all but one problem type (Agreeing on Plan Elements) yielded M/W responses of more than 25 percent. And, over 30 percent of the responses indicated M/W problems with acquiring funds, solving construction problems, and acquiring land. It should be pointed out that except for two problem types the majority of the responses were either "NA" or "no problem." Only for solving construction problems and instigating support was this not the case.

Completion Status. As with events, it was believed that the completion status of the ARZ project might show significant differences in the responses of the cities. The data were analyzed for these differences.

Table 4-11

Frequency Distribution of Responses by 27 Cities
to the Seven Problem Types

Problem	RESPONSES							TOTAL
	No Problem	Very Minor Problem	Minor Problem	Moderate Problem	Severe Problem	Very Severe Problem	Not Applicable	
Acquiring Funds	42	19	18	11	11	13	45	159
Anticipating Economic Changes	26	14	6	7	8	1	19	81
Solving Construction Problems	32	19	15	17	11	9	32	135
Acquiring Land	6	4	1	2	2	2	10	27
Agreeing on Plan Elements	49	21	10	12	4	5	34	135
Coordinating Participants	89	23	19	20	14	7	44	216
Instigating Support	47	21	16	12	12	9	18	135

For projects that had been completed, 73 percent (24 of 33) of the problems received a response of M/W in more than 25 percent of the responses other than "not applicable." However, only 12 percent (4 of 33) of the problems received a response of M/W in more than 50 percent of the responses other than "not applicable." These four problems are given on Table 4-12 below under the heading "ARZ Projects Completed."

In contrast for projects that have not yet been completed, 46 percent (15 of 33) of the problems received a response of M/W in more than 25 percent of the responses other than "not applicable." As with ARZ projects completed, there were four problems again that yielded M/W responses in more than 50 percent of the responses. Three of these problems, however, were different from the project completed case. For ARZ projects not completed the four problems yielding the 50 percent or greater response are given above under the heading "ARZ Projects Not Completed." Thus, for projects not completed the "moderate" or worse problems seem to occur in the areas of developing an organization for the project and in acquisition of funds. Then, perhaps after getting started, construction problems appeared. For projects having completed construction, however, the "moderate" or worse problems, while including the acquisition of funds and their need estimation also involved the political aspects of governmental changes and impacts of the project on other aspects of the CBD.

If we look at these problems for which the answers were "severe" or worse we find for completed projects there were nine problems that had more than 25 percent of the responses and for projects not completed there were seven problems that had a like percentage of responses. Table 4-12 also indicates the comparison of problem types for the "severe" and worse responses. Thus, there appears to be clear differences between the two project status for these "severe" and worse responses as well as for the responses that indicated the problems were of a sort that was "moderate" or worse.

Using the seven implementation problem types mentioned in the previous section leads to the summary data in Table 4-13. It can be seen that for the "moderate" or worse responses, for projects completed, all but one problem type (Agree on Plan Elements) elicited more than 25 percent of the responses. For projects not completed, only two problem types (Anticipating Economic Changes, Coordinating Participants) yielded less than 25 percent of the responses. No problem type elicited as much as 50 percent of the responses for either ARZ project completion status. The Chi-square test for independence between problem type and project completion status indicated that there was no reason to suspect a relationship between these two factors (the test of the null hypothesis of independence was not rejected at the .05 level).

In the case of the responses indicated a "severe" or worse problem there was only one problem type for either project status that yielded more than a 25 percent response. That one problem type was Acquiring Land, and it was for projects not completed. As it was for the M/W responses, the Chi-square test for independence (at the .05 level) between problem type and project completion status indicated that there was no reason to believe a dependent relationship exists. In the remainder of the analysis of implementation problems, only the "moderate"

Table 4-12

Comparison of Problem Types by Project Status

Problems that Received a M/W Response

in more than 50 Percent of Total Responses

<u>ARZ Projects Completed</u>	<u>ARZ Projects Not Completed</u>
1. obtaining funds from private and/or public sector	1. obtaining funds from private and/or public sector
2. underestimation of costs	2. length of time for securing funds
3. changes in local government	3. construction difficulties
4. impact of project on CBD activity	4. organization and coordination in starting project

Problems that Received a S/W Response

in More than 25 Percent of Total Responses

<u>ARZ Projects Completed</u>	<u>ARZ Projects Not Completed</u>
1. obtaining funds from private and/or public sector	1. obtaining funds from public and/or private sector
2. delays in getting work from consultants	2. length of time for securing funds
3. impact of change on traffic patterns	3. construction difficulties
4. impact of project on CBD activity	4. priority of project not high enough
5. exogeneous economic changes were not anticipated	5. responsibility and authority for project not clearly defined
6. lack of understanding of public opinion prior to start of project	6. land acquisition
7. finding suitable developer	7. lack of support of merchants and other affected parties
8. private sector did not take major responsibility for the project	
9. project took longer period of time than it should have	

Table 4-13

Frequency of Responses (both M/W and S/W) as a Fraction of the Total Responses
by Project Status (excluding "NA" responses) for each Project Type

Problem Type	Moderate or Worse (M/W)		Severe or Worse (S/W)	
	Project Completed	Not Completed	Project Completed	Not Completed
Acquiring Funds	20/57	15/57	14/57	10/57
Anticipating Economic Changes	10/31	6/31	5/31	4/31
Solving Construction Problems	23/54	14/49	12/54	8/49
Acquiring Land	3/9	3/8	2/9	2/8
Agreeing on Plan Elements	8/51	13/50	2/51	7/50
Coordinating Participants	21/81	20/91	9/81	12/91
Instigating Support	15/56	18/61	9/56	12/61

and worse responses are considered due to sample size requirements. The sample sizes for the analysis are too small to yield meaningful information in the cases of the "severe" and worse responses.

City Characteristics. As in the analysis of events, it was believed that in addition to the completion status of the ARZ project, the size of the population (1980 census data) might also be an important factor in yielding important information about the implementation of ARZ projects. Using the same criterion as for events, the population size was divided at 300,000 in order to yield cell sizes that were as similar as possible. The analysis was conducted with the data that appear in Table 4-14.

For each of the seven problem types the Chi-square test for independence was used to determine if there was a statistically significant relationship between the status of the project, the size of the population and the responses to the question on the severity of the problem with respect to the successful implementation of the project. Each of the seven tests was carried out at the .05 level of significance. The null hypothesis of independence was not rejected in any of the seven cases, indicating that there is no reason to believe that there is a relationship between the completion status of the project and the size of the population (when divided at 300,00) with respect to M/W responses.

Believing as we did in the event analysis that the split of the population at 300,000 may be too much of an artificial construct, the three census groups defined in Chapter 3 and Appendix D were used. The following Table 4-15 presents the data on which the statistical analyses were conducted.

For three of the seven problem types the null hypothesis of independence was rejected at the .05 level of significance. This implies that for each of those three problem types there is reason to believe that the M/W response is dependent on the project status and census group of the responding city. The problem types yielding significant chi-square values were Agreeing on Plan Elements, Coordinating Participants, and Instigating Support.

Table 4-14

Frequency of M/W Responses as a Fraction of Total Response
by Project Status and Population Size (excluding "NA" responses) for each Problem Type

Status of ARZ	Problem Type	Population Size	
		>300,000	<300,000
Completed	Acquiring Funds	3/22	17/35
	Anticipating Economic Changes	3/12	7/19
	Solving Construction Problems	10/21	13/33
	Acquiring Land	0/3	3/6
	Agreeing on Plan Elements	2/19	3/32
	Coordinating Participants	8/31	13/50
	Instigating Support	3/22	12/34
Not Completed	Acquiring Funds	6/26	9/31
	Anticipating Economic Changes	1/16	5/15
	Solving Construction Problems	6/21	8/28
	Acquiring Land	1/3	2/5
	Agreeing on Plan Elements	6/25	7/25
	Coordinating Participants	10/46	10/45
	Instigating Support	9/28	9/33

Numbers in boxes indicate the number of cities in the cell.

Table 4-15

Frequency of M/W Responses as a Fraction of Total Response
by Project Status and Census Group (excluding "NA" responses) for each Problem Type

Status of ARZ	Problem Type	Census Group		
		Centralized and Decaying	Decentralized and Growing	Small
Completed	Acquiring Funds	4/19	2/11	14/27
	Anticipating Economic Changes	1/11	2/6	7/14
	Solving Construction Problems	8/21	4/10	11/23
	Acquiring Land	0/3	0/1	3/5
	Agreeing on Plan Elements	1/17*	1/10	6/24*
	Coordinating Participants	3/27*	5/15	13/39*
	Instigating Support	3/21* 5	1/10 2	11/25* 5
Not Completed	Acquiring Funds	7/30	3/18	5/9
	Anticipating Economic Changes	3/16	1/11	2/4
	Solving Construction Problems	7/27	2/14	5/8
	Acquiring Land	1/4	1/2	1/2
	Agreeing on Plan Elements	7/25*	4/19	2/6*
	Coordinating Participants	12/51*	5/31	3/9*
	Instigating Support	7/33* 7	4/20 6	5/8* 2

Numbers in the boxes indicate the number of cities in the cell.

* Significant at .05 level.

In further analysis of the data, for all three problem types, small cities were more likely to have the problem type if their ARZ project had been completed. Centralized and decaying cities, however, were more likely to have the problem if their project was not completed. Decentralized and growing cities showed no significant differences related to project status.

Cost of Project. Further analysis of the severity of the problem inhibiting the success of the ARZ project was done with respect to the cost of the project. It was believed that there may be a relationship between the completion status of the ARZ project, its cost, and whether the city believed the problem had a moderate or worse impact on the success of the project. As in the event analysis a cost of \$6,000,000 was chosen to yield contingency tables with as near as possible equal number of cities in each cell. The following Table 4-16 presents the data on which the statistical analyses were conducted.

Using chi-square tests for independence at the .05 level of significance we find no relationship between status of project and cost of project for any of the seven problem types. That is, there is no apparent influence of the cost of the project combined with the status of the project on the severity of the particular problem in inhibiting the success of the ARZ project. This is, of course, for projects separated at the cost figure of \$6,000,000.

Transit Component. As in the analysis of the impact of events, it was believed that an important aspect of the ARZ project may be whether or

Table 4-16

Frequency of M/W Responses as a Fraction of Total Response by Project Status and Cost of the ARZ Project (excluding "NA" responses) for each Problem Type

Status of ARZ	Problem Type	Cost of the ARZ Project	
		≥\$6,000,000	<\$6,000,000
Completed	Acquiring Funds	5/22	6/22
	Anticipating Economic Changes	3/12	4/11
	Solving Construction Problems	10/20	8/19
	Acquiring Land	1/4	0/3
	Agreeing on Plan Elements	1/18	2/19
	Coordinating Participants	6/30	6/27
	Instigating Support	6/16	3/20
Not Completed	Acquiring Funds	5/28	7/24
	Anticipating Economic Changes	2/14	3/12
	Solving Construction Problems	5/23	6/19
	Acquiring Land	2/5	0/2
	Agreeing on Plan Elements	7/27	5/19
	Coordinating Participants	9/49	9/32
	Instigating Support	8/30	7/24

Numbers in the boxes indicate the number of cities in the cell. The numbers total less than 27 due to lack of cost data for some cities.

not there was a transit component directly related to the ARZ. Of the 27 cities responding, 16 had ARZ projects with transit components, eleven cities did not. The data from Table 4-17 were used to determine if there was a statistically significant relationship between the completion of the ARZ project, whether it had transit component, and the response of a moderate or worse impact of the problem type on the success of the project.

Using chi-square tests for independence there were four problem types that yielded results statistically significant at the .05 level. The four types included the same three that yielded significant results for the census group analysis, plus problem type 1--Acquiring Funds.

For each of the four problem types showing significant results, the same relationship exists. That is, for each of the four problem types

1. Acquiring Funds
2. Agreeing on Plan Elements
3. Coordinating Participants
4. Instigating Support

if the ARZ project were without a transit component and had been completed the problem was more likely than if the project had not been completed. Also if the ARZ project had a transit component, but, had not been completed the problem was more likely to have had a "moderate" or worse impact on the success than if it had been completed.

Implementation Problems and Events - A Combined Analysis

As a final analysis, it was conjectured that there may be some

Table 4-17

Frequency of M/W Responses as a Fraction of Total Response
by Project Status and Transit Component (excluding "NA" responses) for each Problem Type

Status of ARZ	Problem Type	Transit Component	No Transit Component
Completed	Acquiring Funds	4/21*	16/36*
	Anticipating Economic Changes	2/12	8/19
	Solving Construction Problems	8/21	15/33
	Acquiring Land	0/3	3/6
	Agreeing on Plan Elements	2/19*	6/32*
	Coordinating Participants	8/32*	13/49*
	Instigating Support	4/22* 5	11/34* 7
Not Completed	Acquiring Funds	9/42*	6/15*
	Anticipating Economic Changes	3/23	2/8
	Solving Construction Problems	7/35	7/14
	Acquiring Land	2/5	1/3
	Agreeing on Plan Elements	10/38*	3/12*
	Coordinating Participants	16/73*	4/18*
	Instigating Support	13/46* 11	5/15* 4

Numbers in boxes indicate the number of cities in the cell.

* Significant at the .05 level.

relationship in the pattern of occurrence of events and implementation problems in the queried cities. That is, do particular problem types and event types seem to occur together or in patterns? To determine if there was a relationship, a frequency count was first conducted. These frequencies represented the number of times an event that had a "negative" or "very negative" (N/VN) impact on success appeared with a problem that had a "moderate" or worse (M/W) impact on the successful completion of the ARZ project. Table 4-18 summarizes data for the four event categories plus the additional category of "no events" and the seven implementation problem types plus the eighth type of "no problems."

Table 4-18

Frequencies of Joint Occurrence of Event Category
and Implementation Problem Type

Problem Type	Event Category					TOTAL
	No Events	Involvement of Individuals	Changes	Org. Events	PR and Exog. Events	
No Problems	3	0	1	0	1	5
Acquiring Funds	14	37	14	5	13	53
Anticipating Economic Changes	5	11	7	4	9	36
Solving Construction Problems	15	25	12	6	26	84
Acquiring Land	4	2	1	1	2	10
Agreeing on Plan Elements	9	14	5	1	8	37
Coordinating Participants	13	46	22	5	21	104
Instigating Support	11	38	13	4	20	86
TOTAL	74	173	75	26	100	448

For the statistical analysis using a chi-square test for independence, the problem type "no problem" was eliminated because the expected cell frequencies were less than one. In the resulting 7 x 5 contingency table, the null hypothesis of independence was not rejected. This would indicate that there is no relationship between the implementation problems that yielded a M/W response and the event categories that produced the N/VN response for impact on success of the ARZ project.

Summary and Discussion

Through the preceding analysis we have investigated whether specific events or problems that occurred during the implementation process of an ARZ project might have influenced its success. We have also investigated in detail, responses to the two rounds of questioning and analyzed those responses for any implications or insight they might yield about the process of implementation of an ARZ project. Understanding of the process of implementation for ARZ projects has definitely increased as a result of this analysis. There are some important findings and implications about ARZ projects that are summarized in the paragraphs that follow.

The first finding, that was a bit unexpected, was that the step-wise process of planning of an ARZ project was very much the same across most cities. This led us to the conclusion that it was not the process, per se, to which we could attribute the lack of a successful implementation, but certain events or problems that occurred during the process. This finding led to the second round of questioning that was specifically related to events and problems during the implementation process.

In the investigation of project costs we did not find a significant difference in the average cost of a completed ARZ project vs. a project not completed. In projects completed for which there were cost overruns (36% of completed projects), the overruns were between about 17 and 29 percent of the cost of the project. While not occurring in the majority of the completed projects, in more than 1/3 of the projects these overruns had a significant impact on the cost of the project.

Federal participation seemed to have little impact on whether the project was completed. And while not statistically significant, completed projects that had local participation in funding were almost twice as frequent as projects with local participation that were not completed. The conclusion that might be inferred from this result is that local participation in funding is important to the completion of an ARZ project.

Another important finding from the first round of questioning concerned the length of time it took to complete the project. Sixty-nine percent of the completed projects took longer than anticipated with the average time overrun estimated at 1.75 times longer than anticipated. This fact in itself bodes important to those considering the implementation of an ARZ project. Much more attention should be

given to the estimate of project length and the impact such excessive time frames might have on the community. It is interesting to point out again, that when analyzed in Chapter 3, there was not a statistically significant relationship between the length of a CBD project and its cost.

The second round of questions focussed on the impact of 17 events and 33 potential problems that might occur during the process of implementation of an ARZ project. The cities queried responded with the impact such events and problems had on the successful completion of their ARZ projects. Most cities responded that 14 of the 17 events, if they occurred, had a positive effect on the success of the project. The three events that did not have a positive effect, however, had no negative effect either.

An interesting result involving the event of having a mayor or a local business association involved in the project is that when this occurred, it had a 20 to 25 percent more positive impact on the success of the completed project than on projects not completed. This result is similar to the result of local participation in the funding of an ARZ project, and probably not unrelated. It appears that if there is strong local participation in a project it has a greater chance of being completed than if there is not strong local support. This could have far ranging implications in projects of this type.

In an attempt to discover whether there were some characteristics of cities that might have influenced the responses related to the impact of an event on the success of a project, the census groups defined in Chapter 3 were used as one variable. Another variable was the completion status of the project. It was found that after combining the 17 events into four categories of similar events, "small" cities were more likely to respond that 3 of the 4 categories of events had a positive impact on the success when the project was completed than if it was not completed. Further analysis indicated that for small cities event category 1 was related to a negative impact on the success of completed projects. Event category 1 included the involvement of individuals and organizations and the commitment of funds. In the case of completed ARZ projects in small cities the influence of individuals and organizations and the commitment of funds had a stronger than expected positive influence on success in some small cities and stronger than expected negative influence on success in others. This result for small cities may imply that the involvement of individuals, groups, and organizations as well as the commitment of funding is more important to project success than for other city types.

Another variable analyzed for its relationship to the completion status of a project was called the transit component. There were two categories of events that yielded statistically significant results, category 1 (the same as above) and category 3, organizational and interorganizational activities. The findings indicate that these two event categories are more likely to have a positive impact on the success of a project if that project does not have a transit component and it is completed. Thus, it follows that projects with a transit component are less likely to find that events of this type have a positive influence on the project's success. This does not imply,

however, that such events would have a negative influence if there were no transit component. In fact, when that was investigated no such relationship was found. One possible interpretation of this finding may be that ARZ projects without transit components are more difficult to be implemented due to available funding resources, thus involvement of individuals and organizations becomes more crucial if projects are to succeed.

In the analysis of the 33 implementation problems, four of them received responses by at least one-fourth of the cities that these problems had a severe or worse impact on the project's success. These four problems involved the obtaining of funds and the time it took to secure them; the lack of support of merchants and others affected by the ARZ; and the lack of involvement by the private sector. After combining the problems into the seven implementation problem types as defined in Chapter 3, we found that for most problem types the majority of the responses were either not a problem or not applicable. Over 30 percent of the response indicated that there were moderate or worse problems with acquiring funds, solving construction problems and acquiring land.

After separating the projects by their completion status, a similar analysis was done. Of responses that were other than the "not applicable" or "not a problem" variety, there were four problems that emerged from both completed and not completed projects that yielded a moderate or worse response in more than 50 percent of the cases. Of the four problems in both cases only one problem was the same, that being obtaining funds. For projects completed, other problems, in addition to obtaining funds, were involved with underestimating costs, changing local government, and the project's impact on CBD activity. For projects not completed, the other three problems were different. They involved the organizational aspects of starting the project, the length of time to secure funds and construction difficulties. Thus, there were very definite differences between problems occurring on projects completed and not completed.

Comparing the census group, as defined for events, and the project completion status for each of the seven combined problem types we found a relationship of dependence in three instances for responses that indicated moderate or worse problems. The three problem types were agreeing on plan elements, coordinating participants, and instigating support. The analysis revealed that small cities were more likely to have these problems if the project had been completed but, centralized and decaying cities had them if their project had not been completed.

In analyzing the responses of moderate or worse for projects that had a transit component vs. those that did not, we found four problem types where a dependent relationship is implied between project completion status and the existence of a transit component. The four problem types included the same three as existed for the census group analysis plus acquiring funds. What we find is that if the project had been completed the problem was more likely to have occurred if there were no transit component. Likewise if the project had not been completed the problem was more likely if there were a transit components.

In an attempt to determine if there were some pattern of occurrence between "moderate or worse" problems and "negative or worse" events additional analyses were conducted. There was no evidence to indicate that the frequency of the joint occurrence of an event and a problem was dependent on the problem type and event category.

Chapter 5

UMTA'S ARZ DEMONSTRATION PROGRAM - SIX CASE STUDIES

As demonstrated in the last two chapters, the implementation process is a complex phenomenon. It involves a number of inter-related events and participants with different interests. So far, the quantitative aggregate analysis has examined primarily the effects of the situation and project type variables on implementation problems. The results produced are in many instances difficult to interpret and explain. Little attention has been paid to questions such as: What are the critical socio-political and environmental factors responsible for the initiation and formation of ARZ projects? How did the original idea grow and mature to the level of a project? What is the role of personal and organizational motives, the timing of decisions, the external facts, preconditions in the environment and community needs in fostering acceptance and endorsement of ARZ plans.

In this chapter, the results of the fourth phase of the project will be presented and discussed. The purposes of this phase are to provide important insights into the process of plan formulation and implementation in order to explain the findings from the quantitative analysis of the previous phases. Emphasis in this phase is placed on the indepth study of the roles of organizations, actors and their interactions and influences in the development of project events. Historical analysis and piecing together the major events in the implementation experience will be used to examine the reasons for success or failure of projects. The events have to do with organizational changes, critical decisions, personnel turnover, release of plans, commitment of public officials, etc.

In order to evaluate the success or failure of the ARZ projects the following criteria will be used.

1. Was the project officially adopted signifying agreement in the plans goals and means?
2. Were there delays in gaining support and funding?
3. Was there an active participation of involved public and private interests consistent with their own images?
4. Was the project completed within the first 8 years?
5. If the project was implemented, was it successful in achieving its original city and UMTA objectives?

The study team, in cooperation with UMTA, decided to examine the six cities which were selected by UMTA's SMD Office as demonstration sites. Project staff visited New York City, Providence, Boston and Burlington and interviewed a total of 17 persons (an average of 4 persons per city). For the two additional ARZ demonstration sites,

Memphis and Tucson, short descriptive case studies were developed. No visits were made to these two sites but information was collected through telephone interviews. The key planners in those cities had left town, making trips to those distant locations unnecessary.

Interviewees included city planners, traffic engineers, administrators, consultants, developers and representatives from the business community. The main criterion used in their selection was their high degree of involvement with and knowledge of the project. In one case, the selection was constrained only to technical personnel due to the uncertainty of the future of the project and its present sensitive stage. An informal style of questioning was utilized.

All subjects were promised confidentiality regarding the information that they provided to the project, and were offered the opportunity to review and comment on the first draft of the cases. In order to protect the confidentiality of the interviewees, personal communications will not be referenced in the case studies. Appendix J contains a complete list of interviewees.

Additional information such as newspaper reports, planning and evaluation studies, minutes from public meetings were also collected and reviewed during field surveys. In the Boston Case, the authors benefitted from the ARZ Evaluation report by Cambridge Systematics (1982) which does an excellent job of documenting the implementation of the Downtown Crossing. Because of the critical importance of this case in the SMD program, Chapters 2, 3, and 4 of the evaluation report are summarized in the section herein that discusses the preconditions, planning and implementation of that ARZ project.

Each city is examined individually in order of the state of completion of their ARZ project, and then a comparative analysis is done. The setting is described first and a narrative description of the situation which led to the development of the project is provided. The ARZ plan and variations are described in greater detail, together with the important events in the implementation process. The case studies conclude with some interpretation of events, general lessons and comments. A chronology of major events accompanies each case.

Boston: The Downtown Crossing

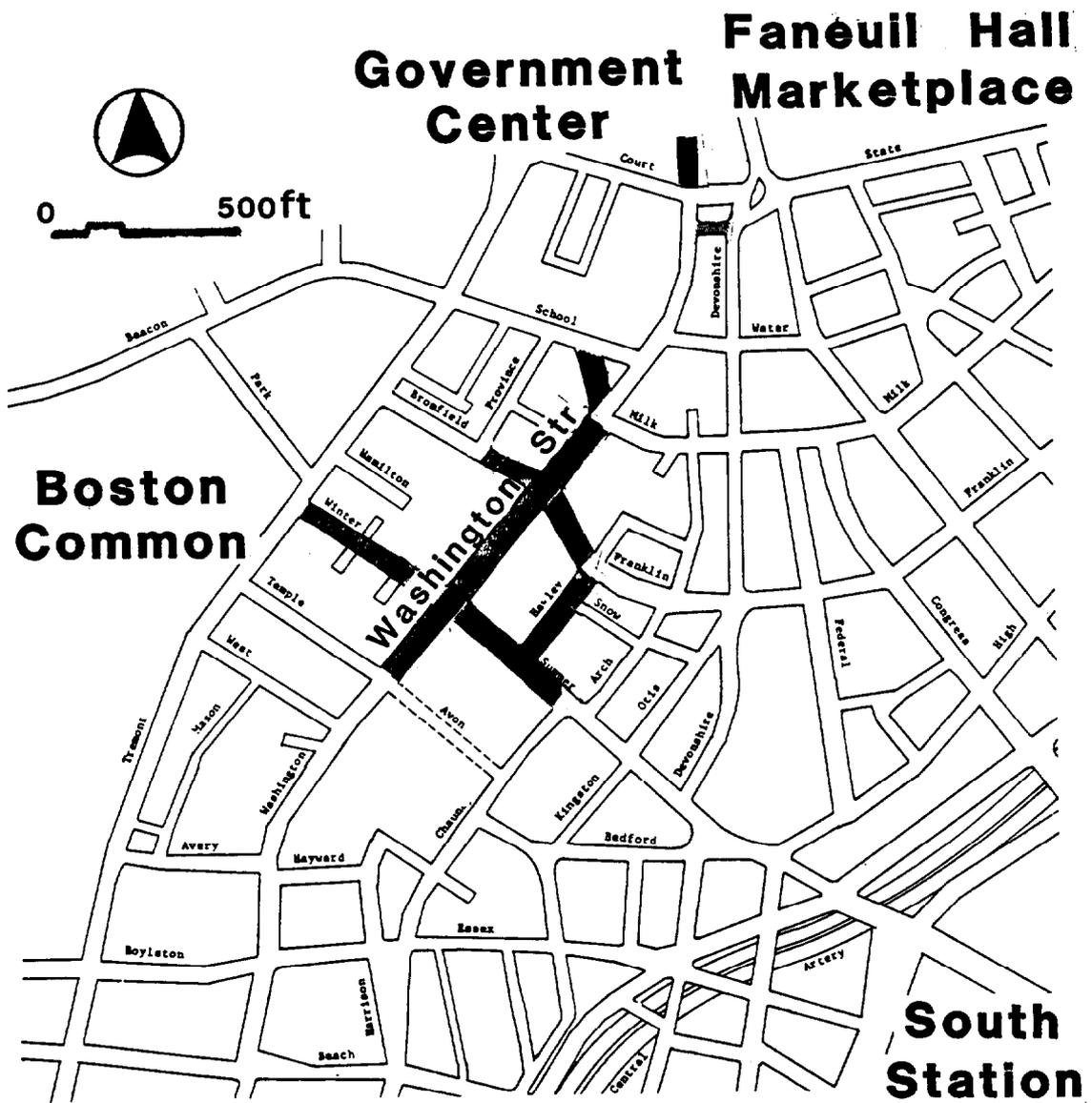
The metropolitan area of Boston is the primary urban center of New England, and among the oldest and most densely populated areas in the United States. According to the 1980 census, the metropolitan area contains about three million inhabitants, of which 562,000 live within the city limits. This represents a 12.3 percent drop from the 1970 Census figure in a continuous decline, since the late 1940's. Covering an area of forty-six square miles, the City has a population density of 11,000 persons per square mile.

By 1976, half of the City's work force of 535,000 were employed within a 3.6 square mile area of downtown Boston. With a predominantly white collar employment base in the downtown area, 54 percent (147,000) of workers work in privately owned office space (Matrullo, 1979) and another 8 percent (23,000) work in federal or local government office buildings. Finance, insurance, professional services, government, transportation and communication firms occupy the largest part of the office space. From the 1920 to the 1950s, Boston was a depressed, run-down and politically corrupt city. In the 1960s, things turned around. For the first time in recent years, the business community and city hall have joined forces under Mayor John Collins. Edward Longue, the director of the Boston Redevelopment Authority (BRA), merged the older City Planning Board in BRA and directed Boston's downtown redevelopment. Projects like the Prudential Tower, the new City Hall and Government Center and the John Hancock Tower mark this period of "new Boston." Mayor Kevin White, who was elected in 1967 and since then served for four consecutive four-year terms, continued that tradition. In the 1970s, new construction brought significant increases to the amount of retail and office space in downtown Boston (Menzie's 1981). A 1977 office building inventory indicated over 44 million square feet of office space to exist in downtown Boston, with over 40 percent of the space built since 1970 (Matrullo 1977). Almost 80 percent of the downtown office spaces are within a fifteen minute walking distance of the downtown retail district and it is estimated that within this office space there are about 116,000 office employees who are potential customers of the downtown retail district (Cambridge Systematics 1982).

The Downtown Crossing was the name given to a 12-block area in the retail core of downtown including Washington, Winter, Summer, Franklin, Brownfield, Hawley and School Streets. The corner of Washington and Summer Streets was the "100 percent retail corner" with Jordan Marsh and Filene's, two of the largest and most important retail establishments in Boston, occupying two of the corners. Downtown Crossing is in the middle of several activity centers with the Government Center Complex and nearby Waterfront to the north, the office district to the east and Boston Commons to the west. See map of the area in Figure 5-1.

Within the immediate vicinity of the Downtown Crossing area, three projects are under construction: Lafayette Place, a \$130 million mixed use development adjacent to Jordan Marsh department store, the Devonshire Towers, a high-rise luxury apartment/retail/office complex on Washington Street, between State and Water Street, and the conversion of a vacant department store on the corner of Temple and Tremont Streets

Figure 5-1
Boston Downtown Crossing



 AUTO RESTRICTED STREETS

Source: Cambridge Systematics 1982

into apartment units and retail space. Within 3.5 miles of Downtown Crossing, an additional 5,000,000 square feet of office space, 3,025 hotel rooms, 230 mixed-use apartments, and several parking facilities with a total of 3,800 available places are being planned and/or constructed. It is expected that these projects, whose planning preceded the Downtown Crossing Project, will provide a larger base of shopper employee and visitor activity to the CBD (Cambridge Systematics 1982). In 1976, the Faneuil Hall Marketplace opened nearby. The \$21 million project partly funded through Federal Renewal funds is one of the James Rouse's first downtown developments that has become a national trend-setter. The Marketplace features 150 small food plus speciality shops without an anchor store which breaks away from traditional retail merchandising.

Auto Circulation and Transit-System

The downtown Boston street pattern system consists of a maze of narrow, non-continuous, old, one-way streets with complex inter-sections that produce traffic congestion throughout the CBD during most of the day. The lack of proper traffic regulation enforcement has reduced capacity on some streets and has created many of the traffic problems. "Boston is a walking city, Bostonians will walk farther to shop than the citizens of any .pa other major U.S. city."¹ Heavy pedestrian volumes in the CBD, have also acted to exacerbate the traffic circulation (Cambridge Systematics 1982).

The Massachusetts Bay Transit Authority (MBTA) serving the metropolitan Boston area is one of the most extensive systems in the United States. As of 1977, approximately 45 percent of all trips to the CBD were made using the subway, local bus, shuttle bus or commuter rail system provided by the MBTA.

Events Prior to the Implementation of Downtown Crossing

As early as 1914, a Chamber of Commerce study recommended the widening of sidewalks on Washington Street to relieve overcrowding and pedestrian/vehicular conflicts. In 1960, the Boston City Planning Board prepared a plan which made recommendations for pedestrian malls on Washington, Winter and Summer Streets.

The Gruen Plan. In 1962, Mayor Collins was instrumental in the creation of the Committee for Central Business District, Inc. (CCBD), a group of 75 businesses and downtown interests, in an effort to revitalize the downtown. The CCBD and the Boston Redevelopment Authority (BRA) hired Victor Gruen Associates, the architect-planner who pioneered the concept of the shopping center, to prepare a plan for the redevelopment of the CBD. The Gruen plan suggested to restructure the downtown pedestrian and traffic networks, particularly around Winter, Summer, and Washington Streets. When presented in 1967, the plan drew

¹"It all points to downtown." Ian Menzies, The Boston Globe. February 10, 1983.

strong opposition from Jordan Marsh and Filene's and the City Commissioner of Traffic and Parking, all of whom argued that auto restriction and construction on the major retail streets would hurt retail trade, and cause serious adverse traffic impacts on surrounding streets (Cambridge Systematics 1982).

The Washington Street Mall. Proponents of pedestrian improvements in the retail area maintained interest in pedestrian zones and in 1971 installed a one day experimental closing of traffic on Washington Street. However, the attempt was not successful due to adverse traffic impacts, lack of advanced publicity, and poor planning.

In 1973, the BRA introduced a plan to turn Washington Street into a "semi-mall". The plan included widening of the sidewalks on both sides of the street, and reducing traffic to two lanes and installing temporary canopies. This plan met the merchants' and City's approval. The mall was completed by mid 1977 and proved successful (Cambridge Systematics 1982).

Development of the Downtown Crossing

Since 1973, the BRA had began in-house discussions on more extensive auto restriction in the retail area, and prepared private plans for Mayor Kevin White's office. No actions were taken on the plans until August, 1975, when the Mayor's office was contacted by an UMTA consultant team who were interested in the City becoming involved in an UMTA funded study to design an ARZ demonstration.

Concurrent with the UMTA's interest, but independently, Alvin Schmeltzler, a Winter Street merchant, who was persuasive with local merchants, formed the Winter Street Merchants' Association and was petitioning the City to close Winter Street to auto traffic and aid in revitalization of the area. At the Mayor's Office advice, the BRA returned to its intra-office plan, and applied for the UMTA funds in October 1975.

In April 1976, UETA approved Boston as one of the five auto restricted zone demonstration cities. Once approved, detailed planning for the ARZ began. The UMTA study team of four consultants, headed by Moore-Heder Architects, primarily conducted the planning, with aid from the Mayor's Office, the BRA, the Traffic and Parking Department, and the Metropolitan Planning Organization's central transportation planning staff. In the Mayor's office, Emily Lloyd and her assistant, Sue Clippinger, were designated as the project coordinators and provided policy inputs, while the BRA contributed technical support.

The proposed ARZ had several objectives: reduction of vehicle and pedestrian congestion and conflict and encouragement of transit usage, attainment of economic revitalization in terms of support, expansion and diversification of the existing activities and improvement of the image and physical enhancement of the area (Voorhees 1977, Boston).

The consultant team developed a plan in under five months that called for Washington, Winter, Summer, Temple and Hawley streets plus

portions of Chauncy street to be closed to auto traffic, amenity improvements in the form of brick paving, replacement of street lights, placement of benches and concrete planters with minimal amount of street furniture. Parking was banned and delivery times restricted. The plan recommended rerouting buses in the MBTA system, establishing Washington Street as a transit mall, as well as the provision of a new shuttle bus system that would increase local and express bus penetration into the CBD (Voorhees 1977, Boston).

Although there was strong support for the plan within the local and federal government agencies, public and merchant criticism led eventually to modification of the plan. Merchants were hesitant to give their support because of the street disruptions and length of time involved in the previous Washington Street Mall project, and distrust of change in the retail district, after two major department stores along Washington Street closed in 1977. Funding possibilities for the project were restricted due to public pressure to reduce city government spending. The City decided to modify the plan to a smaller scale that permitted more auto traffic to move through parts of the area, but kept the center of the area auto restricted.

UMTA viewed merchant support of the plan as primary and insisted on the City gaining their support before any demonstration funds could be awarded. Several factors eventually worked for the City's benefit in gaining the merchants' support. First, the City invited retailers from successful establishments on Philadelphia's Chestnut Street Transitway to talk to the Boston merchants about the benefits of an auto restricted zone. Second, the merchants in Boston's downtown retail district had experienced a 15 percent decline in sales volume between 1972 and 1977. The development of the Faneuil Hall Marketplace in 1976, was very successful in changing the image of downtown and attracting new business. It proved that people from the suburbs will still come downtown, if the atmosphere is right.¹ Third, the Jordan Marsh department store, which had opposed auto restriction along its store front, did a major renovation and consolidated the store and was planning a major hotel and retail development in an adjacent block to Washington Street (Lafayette Place) and eventually recognized the political support available if they supported the auto restricted zone. Fourth, the other major department store, Filene's was persuaded by the inclusion of MBTA buses on Washington Street that were projected to triple the number of customers brought by automobile. Fifth, the smaller merchants were hurt most by the area's physical and sales decline and saw the plan as improvements for them as well as the larger stores. Sixth, a traffic analysis done by the BRA demonstrated that most of the cars driving in the area were through-traffic and not potential customers. The traffic analysis indicated there were far more pedestrian customers to car delivered customers in the area, but the pedestrians had less space available than the cars. The proposed plan would decrease car space and increase pedestrian space.

¹"Washington Street Memo: Malls Popular." Ian Menzies, The Boston Globe. July 13, 1977.

The BRA and the Mayor's Office of Transportation maintained consultation and meetings with the merchants and by mid 1977 an estimated 80 percent of the merchants in the downtown approved of the plan. The merchants gave their support on the conditions that the project be implemented in the summer of 1978, and that the construction be completed by October 10 for the beginning of the Christmas shopping season (Cambridge Systematics 1982). In an effort to maintain the merchants' support, the Mayor's Office, the Traffic and Parking Department, and the BRA agreed to attempt to fulfill the conditions.

With the necessary merchant support and the \$1.5 million demonstration funds guaranteed by UMTA, City agencies were successful to acquire the necessary additional funds and MBTA offered in July 1977, and to commit \$795,300 out of an UMTA Section 3 grant for the design and construction of bus lanes in the retail district plan. An additional \$962,000 was committed in September 1977 for street physical improvements by the Massachusetts Department of Public Works (DPW) from FHWA Urban Systems Funds. All agencies involved in an unusual collaboration expedited the review process and delivered the funds within a year (Cambridge Systematics 1982).

The Mayor's Office, particularly the Department of Transportation, had been the primary agency for the design process and soliciting support for the project. The BRA was designated as a lead agency and assumed responsibility for construction and project coordination. A steering committee was formed in October 1977 to coordinate all of the activities necessary for final planning and implementation of the project beyond the BRA's responsibilities. This Committee consisted of members of the BRA, the Mayor's Office, Boston Traffic and Parking Department, Boston DPW and representatives from the MBTA. The Policy Department was to be reimbursed for added personnel costs. The Boston DPW was made responsible for maintenance of the retail district during the first year of Downtown Crossing's operation. The MBTA was made the lead agency for engineering contracts, development of plans and specifications for the mall. Massachusetts DPW was given responsibility for traffic enforcement and coordination, and MBTA, BRA and Traffic and Parking were charged for promotion (Cambridge Systematics 1982).

In February 1978, the engineering firm of Tibbetts-Abbett McCarthy & Stratton (TAMS) was selected to head design of the Downtown Crossing Marketplace area. In addition, the BRA's own design department became actively involved in the design of all the projects' elements. In the long run, however, controversy arose over several aspects of the overall design regarding curbs and the draining system. Additional problems arose because of the proposed bus shelters and the construction of the Franklin Street Park. The process of organizing a promotion effort began as soon as a marketing and promotion director was hired by July 1978 and the name "Downtown Crossing" was recommended.

The Construction Phase

The project was constructed in two phases. During the first phase, beginning in August 1978, construction focused on improvements necessary to allow the routing of buses through the area and on

September 1978, the traffic operational changes and rerouting of the buses were implemented. The first full week of operations saw very few traffic problems. Construction of the pedestrian walkways on Winter and Summer Streets were delayed by shortages of the building materials, and a decision was made to postpone the construction of the walkways until spring. Funding for the first phase was provided entirely by federal agencies (Cambridge Systematics 1982).

After phase one was completed, merchants along Temple Street complained that the imposed traffic restrictions resulted in a loss of exposure for the Temple Street stores and had made the street a parking lot for delivery vehicles. In addition, taxi violations of auto restriction were cited. In response to these problems, the Boston Traffic and Parking Department instituted traffic circulation changes in March 1979 that reopened Temple Street one way to traffic moving along Washington Street. Changes were also made in bus routes through the area, particularly in response to conflict between pedestrians and buses on the auto restricted portions of Washington Street. In May 1979, buses that were travelling along Washington Street between Temple and Franklin Streets were permanently rerouted to Chauncy and Arch Streets (Cambridge Systematics 1982).

In January 1979, the Boston Traffic and Parking Department considered an extension of the street reconstruction and new lighting to include Washington, Temple, West and Bromfield Streets. The Boston PWD and the BRA moved quickly the design and engineering of the Phase II improvements. Bids for construction were advertised on April 1979, contracts were awarded on May, the plans were presented to merchants by May, and construction began on June, 1979 (Cambridge Systematics 1982).

In 1979, construction was further delayed by two months when the Boston Water and Sewer Commission found it necessary to replace the water mains under Winter Street before bricking could proceed. All construction on the mall was completed by October, 1979. Information kiosks and bus shelters were in place by February, 1980. Funding for the second phase of construction was provided partly by the city of Boston to match the Federal Aid Urban Systems monies. The total costs for the completed project were \$5 million of which \$3.5 million was federally provided and \$1.5 million was given by the City (Cambridge Systematics 1982).

The Operation Phase

Promotion of the Downtown Crossing area began as early as July 1978 upon notification of demonstration funds, and a promotion budget was included in the preliminary application for the UMTA demonstration grant. Another goal of promotion was to organize the downtown merchants to participate in promotion of the Downtown Crossing area. In 1978, for the first time in years, local merchants collaborated in the promotion of Christmas shopping.

In 1979, a group of representatives from Filene's, Jordan Marsh, Woolworths, the Winter Street Merchant's Association, and the Retail Trade Board organized to coordinate promotional activities. In 1980,

Figure 5-2
Boston - Washington Street

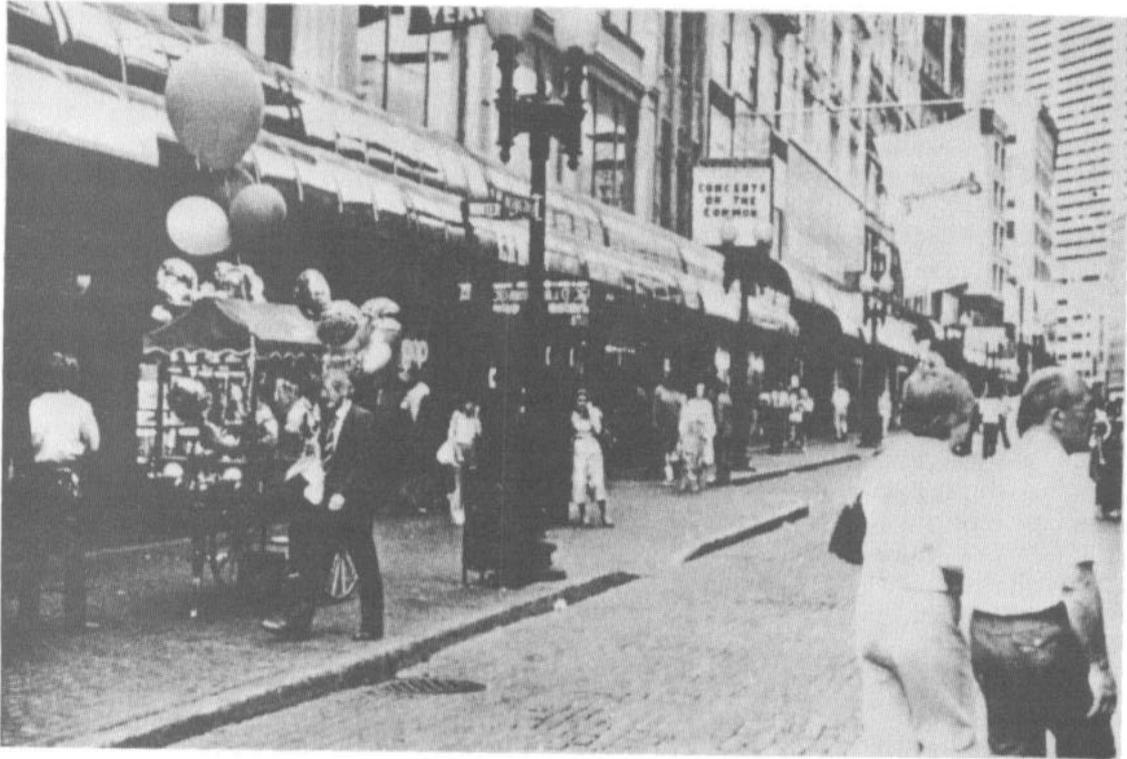
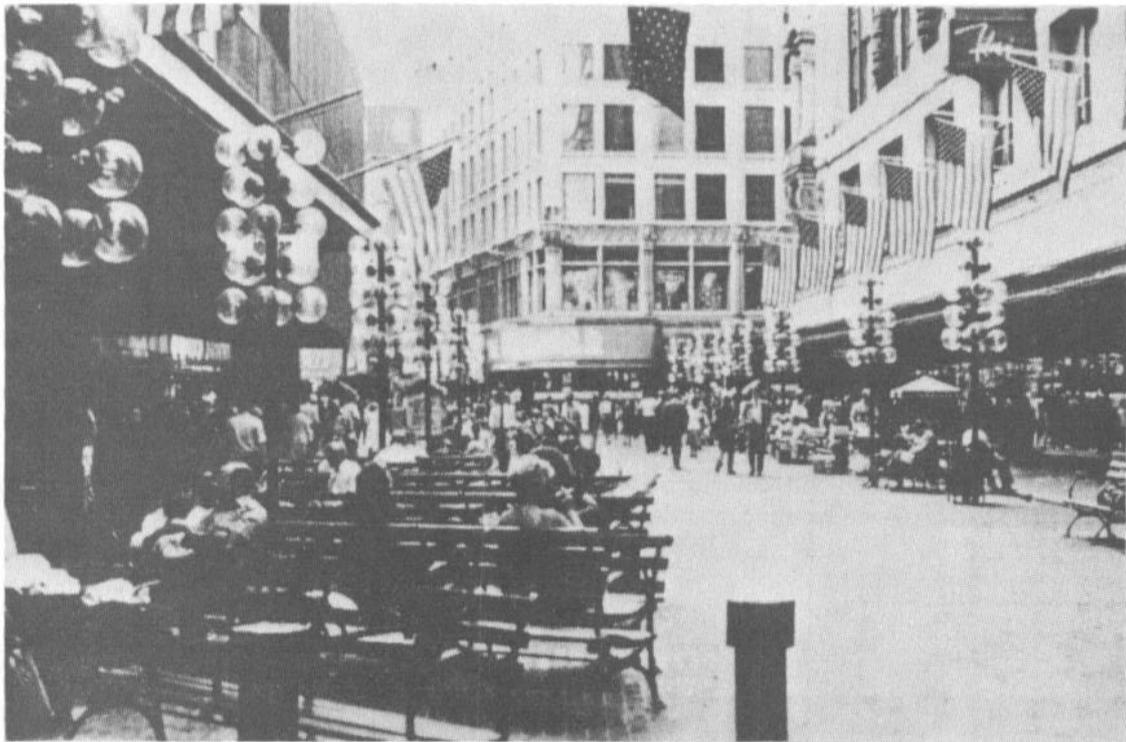


Figure 5-3
Boston - Summer Street



with \$30,000 from UMTA, in response to a requested extension on demonstration money, and under strong encouragement from the BRA, the group of representatives formed the Downtown Crossing Association as a private non-profit organization primarily focused on the civic and economic development at the area. Its major objectives include coordination of activities, arrangement of seasonal and special events, promotion and advertising and to act as a liaison between the city and the business community on issues such as redevelopment, traffic and sign control, street improvements, maintenance security, zoning, licensing, and sanitation (Cambridge Systematics 1982).

The Association is governed by a nine-member board of directors from local retail and business interests, and is run by an executive director and assistant. The Association was funded in its first year by the UMTA demonstration grant, plus matching funds from local merchants. Since then, it has been funded by private membership dues. Membership dues are based on gross annual sales. Additional income comes from street vendors. Vendors rent carts and licenses from a merchant who supplies the materials for the Downtown Crossing Association. A fee of \$500.00/month is charged for space on the mall, which goes to the Association. Vendors are also responsible for keeping their rented area clean. By 1983, 175 businesses were members of the Association, including almost all of the major merchants in the retail area, however, large chain stores in the area have not shown an interest.

Maintenance of the mall has had no clear policy since planning began. In 1979, money from the UMTA demonstration grant was used for clear up in the first year of operation. In the second year of operation the BRA took over responsibilities for maintenance costs, but due to lack of capital generated from merchants, UMTA money was again spent to cover the operations. Since then, the Downtown Crossing Association has entered into an agreement with Boston for the City to take responsibility for maintenance that would normally be needed. The Association is responsible for expenditures over and above normal city maintenance.

Store hours in the area have been changed to accommodate the office worker shopping group. Prior to the mall, stores were opened until 9:00 p.m. only two nights a week. Since implementation of the mall, stores are open until 7:00 p.m. all weekday evenings and Saturdays, while restaurants are open later. The mall is totally pedestrianized between 11:00 a.m. to 2:00 p.m. to accommodate the lunch crowd and shoppers. Between 2:00 p.m. and 7:00 a.m. only special service deliveries, such as newspaper trucks and brinks, are allowed to enter. General delivery vehicles are permitted in the area between 7:00 a.m. and 11:00 a.m. Since completion of the project, the incidences of serious crime have not increased in the area, but there has been an increase in retail area crimes, such as shoplifting and purse snatching. City policy coverage has waxed and waned in the area, due to city financial difficulties, and the Downtown Crossing Association frequently has to request additional coverage from the City. A different off-duty uniformed patrolman polices the area each night, and is paid by the Downtown Crossing

Association. In conjunction with improved street lighting on non-through side streets, the police vigilance has decreased the crime.¹

The Downtown Crossing area has not experienced a major turnover or closing of retail establishments in general. The area has experienced a conversion from shopping goods to convince stores and fast foods in the vacant areas, however, this is reflective of both national trends for downtown shopping areas, and the nature of the clientele of the Downtown Crossing area. Most of the shoppers are workers in the nearby office districts who come to the area during lunch or to shop at the end of the work day. The retail area also includes two subway stations plus bus stops, and it is estimated that 3/4 of the shoppers are mass transit commuters, so the area provides quick services to a transient group.

The impact of the Downtown Crossing Marketplace has not created competition that draws off retail business from other downtown areas. In fact, the Downtown Crossing area is tied to Faneuil Hall market area and the Prudential-Back Bay office and retail districts by a privately run shuttle bus service. The shuttle service was established with help from the City and now runs in cooperation with the MBTA. It is the opinion of City officials that since shoppers can visit all three areas, the competition is not restrictive to any one area, and actually demonstrates cooperation between the retail districts.

Cambridge Systematics, Inc., the consulting firm responsible for evaluating the Boston ARZ, has measured impacts in six major aspects that are directly related to the ARZ objectives. These include travel, economic and institutional impacts. Data were collected during four time periods: before implementation, during construction, six months to one year after implementation, and 18 months to two years after implementation. The data collection involved a combination of surveys, pedestrian traffic counts, business inventories, interviews, records, and observations (Cambridge Systematics 1979).

The final report was issued in Spring of 1982. The results indicated increased volumes of pedestrians especially at lunch-time, a slight increase in transit usage, a decrease in auto trips to downtown, an increase in occupancy of autos visiting downtown, an increase in restaurants and chain stores opening in the area, and retail activity that had not really increased but was strengthened by the growth in minor business transactions due to the lunchtime crowds. Surprisingly, the expected increase in traffic on nearby parallel streets did not occur. The historical trend of decreasing retail activity in the downtown area was halted since implementation of the project, although the relationship between the auto reduction and long-term economic revitalization is complicated by a variety of other simultaneous factors also occurring, such as other major developments, physical improvements and promotional activities in the Downtown Crossing (Weisbrod 1982).

¹"Crime Rate Drops in Downtown Crossing." Downtown Crossing News. Winter 1983.

By 1982 the estimated sales volume for Downtown Crossing reached \$373 million making the district one of the wealthiest in the country. In the meantime, the BRA has commissioned architectural planning and marketing studies aiming at expanding further Downtown Crossing sales by 60 percent by 1990. Mayor White and Robert Ryan, Director of BRA, outlined development strategies on March 1983 before the Downtown Crossing Association meeting. The first phase of the plan envisions a continuation of small scale improvements (i.e., cafe, trees, street furniture, building facade and sign guidelines). In the long-run they anticipate a \$25 million in public investments that would produce more than \$400 million in private investment for new offices, retail and residential buildings in the area.¹

General Comments

The Boston ARZ is the most successful SMD demonstration case to be constructed in only two years after the completion of the feasibility study. The design is in a true sense an auto restricted zone which represents a departure from traditional linear malls. Since the Boston ARZ was completed the City has participated in UMTA's host program through which planners and merchants from other cities can visit Boston and benefit from that experience.

The location of Downtown Crossing and the physical conditions and amenities of the city are among the strongest factors contributing to the Marketplaces success. The retail area is surrounded by offices, and 80 percent of the office workers in Boston are within a 15 minute walk from Downtown Crossing. Boston has an exceptionally high share of commuters who use mass transit. The Downtown Crossing area is a transit hub with two subway stations that provide access to all major routes. In the future, the Downtown Crossing area can expect more growth as planned residential and office space is completed along its perimeter.

The nature of the design and the incremental approach which was followed in the implementation process has added significantly to the Marketplace's success in that the City had the opportunity to test the concepts and the flexibility to modify the design. Two examples are the reversal of auto restriction on Temple Street, and the changes made to implement bus routes. The closing of Temple in 1978 was an original plan that proved to be inappropriate after implementation for the merchants on that street. The planning agencies were responsive to the problems encountered and reopened the street while still maintaining the unity of the traffic restriction system. The planning agencies also removed the bus routes from Washington Street after implementation because of bus conflicts with pedestrians. The removal proved more ammenable and an acceptable alternative for bus routing was found on the perimeter of the area.

¹"\$425m Expansion Plan Outlined for Downtown." Anthony J. Yudis. The Boston Globe, March 3, 1983 and "Downtown Crossing at the Crossroads of Major Reversal." Banker and Tradesman, March 9, 1983.

The scope of the project and construction were factors in its successful implementation. The ARZ was designed with very pragmatic criteria: minimal extra features beyond bricking, signage and parks, was not expensive; was quickly and easily constructed; and required minimal additional maintenance than the streets it replaced. In addition, the Washington Street mall had provided a demonstration of the feasibility of a pedestrian zone and provided a learning experience for construction. The Downtown Crossing mall was constructed during off-peak seasonal shopping periods, and done in phases to prevent interference on the retail market.

The timing of events was very critical, both merchants and public interests had began discussion with Mayor White's Office when UMTA announced the demonstration program. Alvin Schmeltzer, a Winter Street merchant, was instrumental in creating the Winter Street Merchants Association, which lobbied the city for money and auto restriction and later persuaded other merchants to become involved in the revitalization process. At the same time, the Mayor had preliminary plans on his desk from the BRA suggesting the implementation of an auto restricted area in the retail district. Table 5-1 presents a summary of major events.

Table 5-1

Boston - Summary of Major Events

1914	- Boston Chamber of Commerce recommends the widening of sidewalks on Washington Street to relieve traffic and pedestrian congestion.
1960	- Boston City Planning Board recommends pedestrian malls on Washington, Winter and Summer Streets.
1965	- Prudential Tower marks Boston's turning point when business and City Hall joined forces.
1967	- The Gruen plan for the CBD recommends the restricting of traffic networks, particularly around Summer, Winter, and Washington Streets.
1971	- One day experimental closing of traffic on Washington Street to create a pedestrian zone.
1973	- Boston Redevelopment Authority (BRA) introduces a plan to turn Washington Street into a "semi-mall" and begins in-house discussions on auto restriction in the downtown retail district.
	- Alvin Schmeltzler forms Winter Street Merchants' Association and recommends to the city that auto traffic be restricted on Winter Street.
May,	1975 - Chestnut Street Transitway is implemented in Philadelphia.

- October, 1975 - City of Boston applies for UMTA demonstration grant.
- January, 1976 - BRA develops preliminary auto restricted plans for downtown retail district.
- April, 1976 - Boston approved by UMTA as one of five ARZ demonstration sites.
- Washington Street Mall project approved and construction begins.
 - Fanueil Hall completed.
- September, 1976 - UMTA consultants present initial feasibility study.
- February, 1977 - Businessmen from Philadelphia's Chestnut Street Transitway attend meeting of Boston merchants.
- July, 1977 - MBTA asked to participate in ARZ project and provide funding through transit efficiency grant.
- August, 1977 - Massachusetts DPW asked to participate in ARZ project and provide money from FHWA Urban System funds.
- September, 1977 - Washington Street Mall completed and opened.
- BRA assumes responsibility for implementation of the ARZ project at request of Mayor's office.
- October, 1977 - Multi-agency Steering Committee established to coordinate planning and implementation.
- February, 1978 - TAMS engineering firm selected to head design.
- June, 1978 - Funding approved by UMTA, and FHWA.
- Construction bids advertised.
- July, 1978 - Promotional director hired.
- August, 1978 - Construction Phase I begins.
- September, 1978 - Downtown Crossing opens, new traffic circulation and bus routes are implemented.
- October, 1978 - Construction interrupted for Christmas shopping season.
- January, 1979 - Planning for Phase II improvements begin.

- March, 1979 - Temple Street is reopened to traffic. Announcement of City funding for Phase II.
- April, 1979 - Construction resumes.
- May, 1979 - Application for extension of UMTA demonstration grant.
- June, 1979 - Construction of Phase II begins.
- September, 1979 - Construction of Downtown Crossing completed.
- January, 1980 - Downtown Crossing Association is formed with aid from UMTA.
- August, 1980 - Second UMTA Demonstrating Grant awarded to cover operation and management of ARZ.
- July, 1982 - Consultant issues final evaluation report for Downtown Crossing.
- March, 1983 - The Mayor and the Director of BRA announce strategies for future expansion of Downtown Crossing developments.

Main Source: Cambridge Systematics 1982, pp 4-37 to 4-40.

Support for the project was maintained by several key persons. Mayor White supported the project as early as 1975 and maintained this position through completion. Emily Lloyd was the spokesperson and promoter for the project, first as the Mayor's advisor on Transportation, and later as the City's Commissioner of Traffic and Parking Department where she could coordinate the projects implementation. Sue Clippinger deserves a lot of credit as the real foot soldier in this effort gaining merchant support, and obtaining funding. The Boston and Washington UMTA offices provided the necessary funds, and gave extra incentives by supplying money for maintenance and operations during the completed mall's first two years, and providing seed money as a demonstration grant extension to fund the Downtown Crossing Association. While the BRA had the primary responsibility for the project coordination, various agencies shared responsibilities in the design, implementation, and/or operation of the mall, cooperated in funding for the project, and expedited procedures whenever necessary.

The retail district was still active and relatively healthy when the Marketplace was planned. The project was successful in spurring retail trade because the mall was not expected to be a rehabilitation, but to aid in a process of revitalization and growth. The impact of the successes of Faneuil Hall and Quincy Marketplace were very important in reversing suburban fear of the city and demonstrating to local merchants that the downtown retail districts could be revitalized and that people

from the suburbs could still come downtown if the atmosphere is right. This convinced the two major department stores to reverse traditionally conservative, resistance-to-change and to support the Downtown Crossing plan.¹ One of the most important successes of the project was that it brought together the merchant and business community. This was the first time that the major stores established communications among themselves and with small businesses on issues of common concern.

The Boston case was not without its share of problems, but they were overcome and proved to have minimal impact. First, construction in the summer of 1978 was delayed by the lack of materials and by the replacement of water mains in the winter/spring of 1979. The City had agreed with the merchants to complete construction during the summer of 1979 and fear arose that the merchants would withdraw their support if construction was not completed in time. Another problem was the difference of construction standards among the participating agencies, between the BRA and the City DPW. This culminated in different types of construction and drainage in phase one and phase two areas. This has not been reported to have caused serious problems, however. A similar instance arose between the architect and the MBTA in the design for the bus shelters. As of 1980, only one shelter was installed, and that being an MBTA shelter. In the long run, changes in bus routes throughout the Marketplace area may have mitigated against the construction of permanent shelters. In spite of careful and detailed research and planning, it was only after implementation of the new traffic circulation scheme and transitway, that problems were discovered with the operation. The City deserves credit for being responsive enough and for reacting quickly when correction was necessary.

Several project participants' advice is to avoid experiments. They advocate a total commitment to the project, not to just take the traffic off the streets, but to create the ambience of the setting too. They also recommend the need to have a complete plan for construction and maintenance from the very start of the project. Although all this advice sounds like the right thing to do, in the Boston case this did not happen and still the ARZ was successfully completed. It was the combination of the right location, the right timing and the lengthy efforts of a group of strong believers who were determined to make the project work and willing to make changes until the final design was accepted, and that made the Downtown Crossing a success.

¹"It All Points to Downtown." Ian Menzies, The Boston Globe, February 10, 1983.

Burlington, VT: The Church Street Marketplace

The City of Burlington and surrounding Chittenden County are Vermont's most populous areas (Kamerbeek 1981). The state of Vermont is the third smallest state in the Union with 510,711 inhabitants according to the 1980 Census. It is one of two states designated by the U.S. Census Bureau as predominantly rural with thirty-two percent of the state's population living in or around urban areas. During the past decade, Chittenden County's metropolitan population increased by 16 percent to 114,070 persons. With 37,712 residents, the city proper of Burlington accounts for 36 percent of the county population (Kamerbeek 1981). The City, with 10.8 square miles, has a density of 3,491 persons per square mile (U.S. Census 1980). The mean annual family income of Chittenden County residences is \$30,211, with 88 percent of the county population earning in excess of \$15,000. The Burlington and South Burlington districts are the most affluent (Stillerman 1982).

Burlington has been and continues to be the largest center of trade in the state of Vermont. The City's original commerce and trade can be traced to lumbering and farming, and transportation because of Burlington's position on the east shore of Lake Champlain. By the late 1800s, textile manufacturing prospered in the area due to the abundance of cheap hydroelectric power. As with many other cities in the Northeast, the 1950s and 1960s were a period of decline for the City. The textile industries had moved from the area, overall manufacturing was on the decline and the downtown area ceased capital improvements as the suburbs grew. The City's successful past as an industrial and commercial center in the 19th century is evidenced by the beautiful residences remaining from that period.

In recent years, the metropolitan area has experienced a revitalization with the entrance of new industries in computer and electronics manufacturing, defense manufacturing and increased tourism. Burlington has now established itself as the major market and transportation center for 290,000 persons in Vermont, northern New York and southern Quebec (Voorhees 1977, Burlington). The chief industries in the area are IBM, General Electric and Digital Equipment. Over 11,000 area residents are employed by these manufacturers, and all are located outside of the Central Business District (CBD). The downtown area is the second largest employment district in the county with over 6,500 white collar workers in service and retail positions. Universities and colleges make up the third largest base industry for the Burlington area. The University of Vermont, the Medical Center of the Hospital of Vermont and three other colleges are all within a mile of downtown. The student population of 15,000 is a major clientele for downtown businesses and public spaces, but unfortunately, due to poor accessibility to downtown, the market potential of this group has not been fully realized (Voorhees 1977, Burlington). Burlington, a Democratic run city in a traditionally Republican state, is one of the few U.S. cities that has elected a socialist mayor.

Physical Characteristics of the Burlington CBD

The downtown area is a twenty square block shopping and residential district bounded by major through streets on four sides. Within the

CBD, the major shopping environment is located on the four blocks of Church Street from Main to Pearl Streets. To the west side of the shopping district is the Lake Champlain waterfront, with several old factory buildings and a ferry terminal. On the other three sides are residential neighborhoods which rely on the downtown area for shopping, transportation and social services (Voorhees 1977, Burlington).

As estimated in 1976, the downtown area contains approximately 1,604,000 square feet of building space, a hotel and several office buildings. According to the same estimate, 470,000 square feet of building space is retail based (Kamerbeek 1980, Burlington). The majority of the retail space fronts onto the four block area of Church Street. The Burlington Square Mall, an additional 100,000 square feet of retail space, has been has its main entrance on Church Street (Kamerbeek 1980). At present, four other retail districts provide competition to the CBD. The University Mall, located two miles to the east of downtown Burlington, generates the second largest shopper trip frequency of all the retail districts. The Gaynes Shopping Center, and the Sears Complex, both located in the suburbs, serve a lower income clientele. The Champlain Mill north of Burlington, is a rehabilitated textile mill with many speciality shops that service higher income groups (Stillerman 1982).

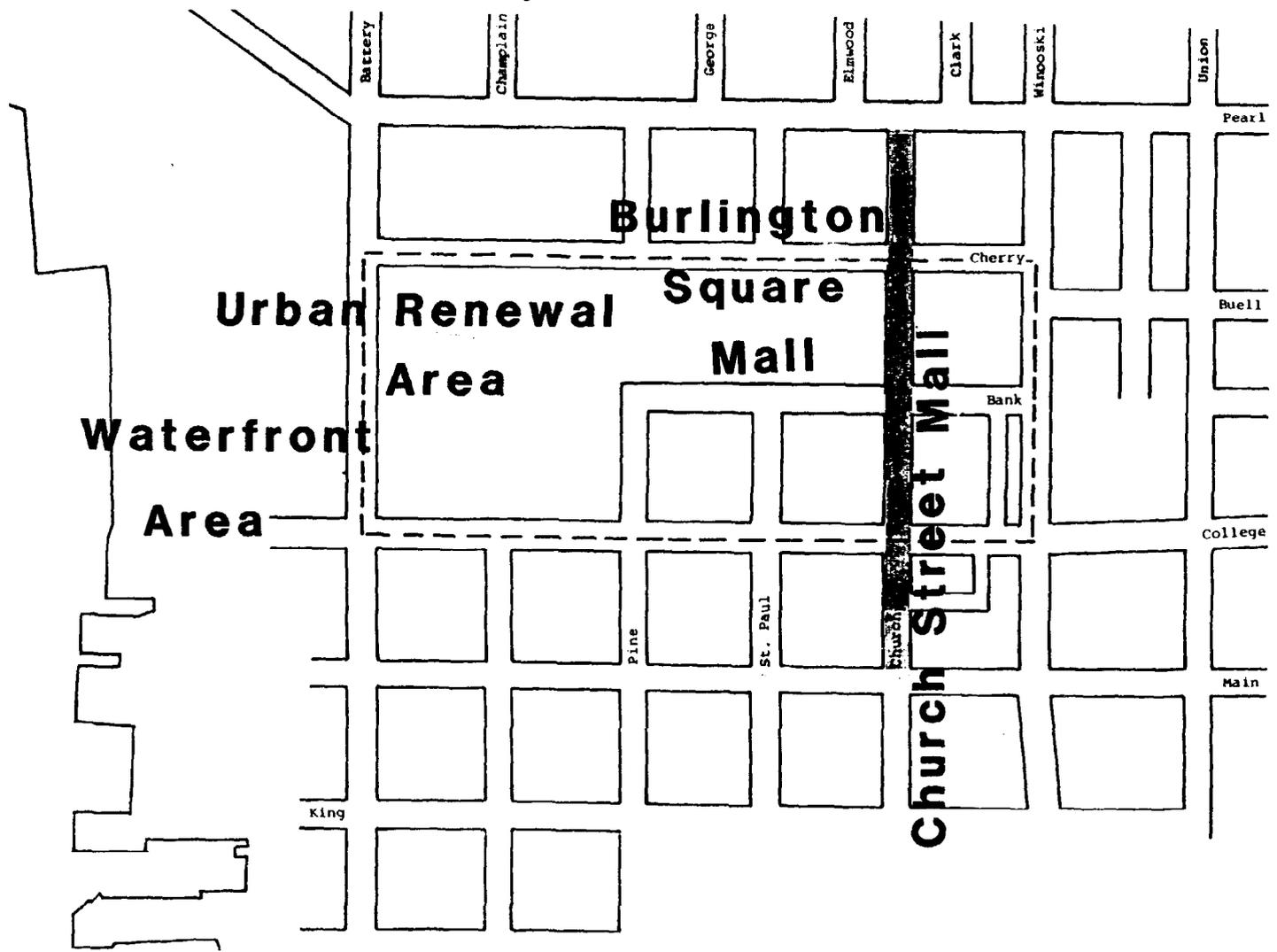
The Urban Renewal Project

Since 1958, a twelve acre Urban Renewal Project has been in process in Burlington in cooperation with the U.S. Department of Housing and Urban Development, but has yet to be completed. The developer for the renewal project is Fidelity Mutual Life Insurance Company. The original project plan called for the development of mixed uses, including office, retail, hotel and parking facilities. Prior to the start of construction on the Church Street Marketplace, a 200-room hotel, and four separate medium office buildings had been completed; a 620 space parking garage and the Burlington Square Mall had been built. Seven acres, all between Burlington Square Mall and the waterfront, remain to be developed. Separate from the urban renewal project, a 400-space parking facility has recently been completed off South Winookski Avenue, parallel to Church Street (Kamerbeek 1980). Funds for this garage were supplied by the Economic Development Administration (EDA). City officials report that Burlington now has a supply of parking which exceeds the average for a city its size.

Mass Transportation Services

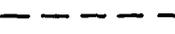
Prior to 1973, public mass transit service was operated within the Burlington area by the Burlington Rapid Transit Company (BRT), a private operator. In July of 1973, the BRT petitioned the state for cessation of services and the Chittenden County Transportation Authority (CCTA) was formed by state statute (Kamerbeek 1980). The new authority provides mass transit to the five municipalities of Burlington, South Burlington, Essex, Shelburne and Winooski and is the only public authority in the State of Vermont. The CCTA operates a fleet of 30 buses over 9 routes that service all points in the metropolitan area.

Figure 5-4
Burlington CBD



108

Pedestrian Areas 

Transit Areas 

Source: Voorhees, 1977, Burlington



0 400 ft

Purchase of 23 new buses was made possible with money provided by the Urban Mass Transportation Administration. Contrary to the trend in many small cities, CCTA has shown an increase in bus miles operated and passenger revenues due in part to increases in level of service, revised fare structure, improved transfer procedures, and new bus equipment (Kamerbeek). Because of impressive management and leadership within the Authority, CCTA recently received UMTA recognition for the lowest total cost per mile and the lowest operating subsidy in the nation (Voorhees 1977, Burlington).

Development of the Church Street Marketplace

The Church Street Marketplace is a four-block area along the main street through the retail district of downtown Burlington. The north end of the street is bounded by the First Unitarian Church, built in 1816. On the south end is City Hall and a city park. This retail district is composed predominantly of three and four-story buildings along a 66-foot wide street (Voorhees 1977, Burlington). The street level of the buildings was originally owned or rented by a wide mix of retailers and the upper stories were usually used as office space, storage or vacant. One hundred four retail units are located along Church Street, and the Burlington Square Mall, an enclosed retail center, has opened in and at right angles to the third block with 70,000 square feet of retail; an additional 52,000 square feet was added in 1980 (Kamerbeek 1980). Before implementation of the mall, pedestrians were allocated only 31 to 40 percent of the public street place, with the remainder going to parking, autos, buses and service vehicles (Voorhees 1977, Burlington).

The concept of the Church Street Marketplace originated as early as 1958 as part of the Urban Renewal discussions. During the summer of 1971, a one-day experimental street fair was held on the four blocks of Church Street by the Burlington Downtown Merchant's Association. Merchants and City officials report that approximately 15,000 persons attended. The success of the one-day street fair was taken as a demonstration of the feasibility of a mall.

By late 1971, Patrick Robins, the president of the Burlington Development Association, a downtown merchant's organization, had been appointed as chairman of the Burlington Street Commission, and a local architect Bill Truex had become chairman of the City's Planning Commission. Both men recognized the potential of the mall for supporting the retail district and as a way to bring Church Street into the Urban Renewal plans. Traditionally, the city of Burlington had a north-south orientation paralleling Lake Champlain. The efforts of the Urban Renewal project were to change the orientation to an east-west direction in order to develop the land areas between downtown and the lake shore while using the lake as a focal point. Church Street was seen as a potential anchor on the east side of the redevelopment project. Possibilities for this redevelopment scheme were aided by the exchange of property for St. Paul's church lot along St. Paul Street when fire destroyed the building in 1971. The Urban Renewal developer exchanged the church lot for one closer to the Lake. The Church property that is now the site of the Burlington Square Mall was acquired

by the developer as a private acquisition to connect the urban renewal project with Church Street.

As a further investigation into the feasibility of the Church Street mall, the City Planning Commission, the Street Commission and the Transit Authority director planned a second experimental street fair along Church Street for a week, in the summer of 1972. Traffic was rerouted from the four blocks of Church Street to the parallel streets, extra transit was added for the week and short-term physical modifications were made on the street, such as adding trees, benches and booths. Merchants were allowed full use of the area for display of retail goods and special events were planned. Reports by city officials and merchants indicate that the mall was successful. It was estimated that 50,000 persons attended during the week. The success of this demonstration facilitated the planning of a pedestrian mall and reinforced cooperation between the Planning and Street Commission, the Traffic Department and the downtown merchants.

Interest in the downtown area, especially in the creation of a Church Street mall continued to grow, and in 1974, the Downtown Burlington Development Association prepared impact studies of the Church Street mall project on pedestrian flows, traffic, and space usage. In 1975, Mayor Gordon Paquette appointed the Church Street Mall Steering Committee as a separate committee to further study the mall concept. The Mayor and the Planning Commission Director, Randall Kamerbeck, both strongly in favor of the project, were able to convince the City Council/Aldermen of the merits of the mall. Patrick Robins was made chair of the new Steering Committee, which included professional and business concerns. The committee commissioned Alexander and Truex, a local architectural firm to begin preliminary design work.

The Steering Committee and the architects collaborated to develop criteria for a design that included use for vacant building space in the mall area, provision for shelter from Vermont's weather along the mall, a system of snow removal along the mall and sidewalks, and a maintenance and promotion revenue scheme. By late 1975, the architects had completed a preliminary design that included access to the vacant upper stories of buildings by means of ramps and elevators, walkways covered by canopies to provide protection for pedestrians, and retail space in the street for small shops and booths (Kamerbeck 1980). Support for the Steering Committee and preliminary designs came from the Downtown Burlington Development Association, which helped raise capital and merchant support, and from money from Vermont's Bicentennial Commission.¹

In 1976, with some preliminary design work completed, and on the advice of the County's Transit Manager, the Steering Committee applied to UMTA for a \$1 million grant under the Service and Methods Demonstration program for auto restricted zones. Due to the success and recognition of the new Transit Authority, a good working relationship had been established between Burlington and UMTA, especially with the

¹ "Burlington Mall Plan Interests Federal Agencies", Ann Devroy, [Garnett News Service], September 13, 1978.

Boston field office. Upon receipt of \$1.6 million from the Public Works Employment Grant for a downtown parking garage, the Boston office advised the Steering Committee to rework their design, to stress the impact of the mall on mass transit and to apply for capital monies from Section 3, as well as other sources. The Steering Committee modified the original design plans and resubmitted its grant application in late 1976 to include an increased request from \$1 million to \$4.8 million.¹

Burlington was picked as one of five auto restricted zone demonstration sites and UMTA awarded Burlington a \$200,000 grant for design and planning of the mall in early 1977; the City also received \$50,000 from the National Endowment for the Arts, and \$10,000 from a local historic preservation fund to aid in the planning and design of the mall.²

Additional local merchant and public support for the Church Street mall was generated during 1976 and 1977 by the announcement from the Pyramid Company that plans were being developed to build an 82-store shopping complex in Williston, 6 miles east of downtown Burlington.³ Local officials, who favored a healthy downtown retail area, feared that the Pyramid mall would draw up to 40 percent of the downtown businesses' revenues to the suburbs. The City and the State were successful in deferring development of the Pyramid Mall, principally because of negative environmental impacts on traffic, air quality and economic effects upon the CBD.⁴ Litigation continued until June 1983 when the developers finally withdrew their plans.

During late 1976 and early 1977, a series of eleven local public hearings were held in Burlington to display the proposed design for the Church Street mall. Citizens' criticisms of the appointments to the mall, such as snow melting equipment and canopies, led the Steering Committee to scrap the original design.^{5,6}

1 "Burlington Delegation Headed to Washington to Lobby for Mall", The Times Argus, January 3, 1977.

2 "Church Street Mall Gets off Ground with Contract", Bob Sherman, The Times Argus, August 31, 1977.

3 "Is Burlington Pyramid Proof", Alan Abbey Vermont, November 1, 1981.

4 "Church Street Would be 'Decimated' by Pyramid, Forum Speakers Say", Scott MacKay, Burlington Free Press, December 10, 1976

5 "Committee Vows Major Rethinking at Church Street Project Hearing", Russ Garland, Burlington Free Press, February 3, 1977.

6 "The Church Street Mall: Mayor Paquette's Pet Project", Greg Guma, Vermont Cynic, September 29, 1977.

During the spring and summer of 1977, the Mayor, the Director of City Planning, Chairman of the Steering Committee, and the architects traveled to several other cities that had built auto restricted malls, such as Portland, Minneapolis, and Providence. From these exploratory trips, they decided that the factors most important to the success of a mall included responsibility for operation and maintenance, design on a pedestrian scale, offering community uses along various parts of the mall, and inclusion of a transit system compatible with the mall's design (Kamerbeek 1980). In August of 1977, city officials signed a \$304,000 design and architectural contract with Alexander and Truex to develop the new design for the project.¹

About the same time, Burlington officials turned down financial assistance from UMTA's Office of Service and Methods Demonstration for auto restricted zones. The awards of the section 3 grant had precluded the need for the demonstration monies. In addition, Burlington officials report the SMD grant placed restrictions on a choice of design, planners and scheduling. The Burlington officials had already done preliminary work and created an acceptable design while the SMD Office wanted to repeat the whole planning process. Also, the latest mall design limited bus routes to intersecting streets on the mall instead of the length of the mall, and the SMD office regarded this feature as contrary to its guidelines for ARZ demonstration projects.

The Two-Level Mall Design

The second design for Church Street was unveiled in March 1978. The design encompassed a two-level scheme, with the lower level below the street level and connecting to adjacent buildings through their basements. The lower level would add 80,000 square feet of retail space to the City's total with no new construction, and provide 20,000 square feet of city-owned retail space.² The main deck, or street level could be turned into an urban park with plantings and public spaces open for retail and pedestrian uses. The design did not add to the architecture of any existing buildings and left the street free to vary with no design impediments. A transit study recommended rerouting of the bus routes, rescheduling and additional capital improvement expenditures to improve access to the downtown from all points surrounding the City, and to reduce headways. The total cost for the proposed two level mall was projected to exceed \$19 million.³

In the fall of 1978, the Steering Committee and the Mayor returned to Washington to gain financial support for the two-level mall. Burlington was seeking \$7 million from UMTA for a bus loop linking

¹ The Times Argus, August 31, 1977.

² "Church Street Plan Includes Mall Arcade", Gayle Gertler, Burlington Free Press, March 23, 1978.

³ "Mall Project Cost Expected to Top \$15 Million", Gayle Gertler, Burlington Free Press, July 6, 1978.

downtown shopping, waterfront and entertainment districts with the regional bus system, \$3 million from Housing and Urban Development for development around the mall area, \$2 million from the Heritage Conservation and Recreation Service to turn street level sections of the market place into an "urban park setting," \$2 million from the Environmental Protection Agency for sewer and utility work on the site, and an additional \$3 million from other federal agencies.¹ The overall Federal response to the mall was positive, and the City of Burlington had political support in high places. Senator Leahy of Vermont, the first Democratic Senator elected in Vermont in over 100 years, owed much of the Democratic support in the State to Burlington's Mayor Paquette. The Senator appointed a full time staff person in his office to work on the Church Street Mall project. The Carter administration also offered its support; the administration saw Burlington as a small city with potential for success as a demonstration site for several federal projects. Jack Watson, special assistant to President Carter and head of intergovernment coordinating agency, voiced the President's support, and attended meetings between Burlington officials, UMTA and the other potential funding agencies.²

In March, 1979 the city of Burlington sponsored round table discussions in which a panel of development experts reviewed city plans to assess the need for a mall and strategies for implementation in response to the proposed \$20 million two-level mall.³ The panel recommended the creation of a mall, but raised questions about the two-level design. Local citizens and merchants also responded negatively to the idea. In a University of Vermont market survey of 2,800 persons, only 13 percent were in favor of the mall design. Merchants feared the long construction time of the project, incursion into subground basement areas, and the engineering and safety problems of working on buildings 100 years, however, the costs of the project proved to be the most prohibitive factor. Although there was much support among various agencies, only UMTA was able to promise any of the necessary monies.

The Final Mall Design

The Steering Committee decided to drop the two-level scheme by April 1979, and a new one-level plan was devised. The new plan included bringing the street level up to the sidewalk level, resurfacing the street with brick, adding canopies and shelters, closing the street to cars on the two central blocks, and implementing the downtown bus loop which would enable buses to cross Church Street at two intersections. The City again submitted applications to UMTA by May 1979 for \$5.4

¹ Ann Devroy, September 13, 1978.

² Ibid

³ "Boston Planner Expects Experience Easy to Adapt to Burlington Needs", Rob Eley, Burlington Free Press, February 23, 1979.

million from section 3 Urban Initiatives Grant. In June, 1979, the City was notified by the Boston Office that UMTA would allow \$5.4 million for the construction of the mall out of section 3 money, and that the City would have to put up the remaining 20 percent or \$1.5 million.¹

In late June, 1979, Burlington Aldermen and the Planning Commission approved asking city voters to approve changes to the city charter to enable establishment of a Church Street Marketplace district and a private governing commission. The Commission would be given power to levy common area fees, on properties that would benefit by the construction and operation of the Marketplace, for the purpose of running and maintaining the mall area. In addition, the Commission would have the power to lease space in the Marketplace, hire staff and raise money. Only 6,400 of the total 70,000 square feet of the Burlington Square mall were to be included in the district.² In a special election on August 21, 1979 citizens voted on a \$1.5 million bond issue for the City's share of mall construction costs. While, the voters did approve the creation of the Church Street Marketplace district and governing Commission, only 65 percent of the voters approved the bond issue, 2 percent less than the required 2/3 majority needed for approval.³ The Mayor, acting on what appeared to be popular support, asked for another election, and in October 1979, the bond issue passed with over the needed 2/3 majority.⁴

With the approved creation of the Marketplace Commission, passage of the bond issue, and assurance of federal money, involvement of the Burlington Planning Commission and the Church Street Steering Committee was over. At this time Robins, the driving force behind the project, and Alexander and Truex, the design architects, terminated their involvement in the project. A dispute between Truex and the City over construction standards of the 400-space parking facility may have caused the resignation of that firm for the Marketplace project which resulted in the hiring of a new architect for the final design of the mall. The last act of Robins as head of the Steering Committee was to pass a mandate through the Board of Alderman that in any design proposals the central two blocks of Church Street would remain completely for pedestrian use only, while the outside two blocks would handle pedestrians and cars. This was an acceptable compromise for all parties.

¹ "Marketplace Grant Withdrawn Delayed", Alan Abbey, Burlington Free Press, August 23, 1979.

² "Church Street Market District Finally Gets City's Approval", Alan Abbey, Burlington Free Press, June 28, 1979.

³ "Paquette Says City Should Expect Second Vote on Marketplace", Alan Abbey, Burlington Free Press, August 28, 1979.

⁴ "Voters OK Marketplace Bond Issue", Alan Abbey, Burlington Free Press, October 31, 1979.

The Construction Phase

The new Marketplace Commission was given charge of hiring a new architect and contractor, and beginning construction. C. E. Maguire, Inc., of New Britain, Connecticut, was hired to supervise the architectural/engineering work. That firm assumed all engineering tasks and contracted, in turn, with Carr, Lynch Associates of Cambridge, Massachusetts to act as architects. Design work was based on the final design scheme by Alexander and Truex, a one level street mall with replacement and improvement of utilities underground, resurfacing of the street and improvements and appointments along the surface. The new \$6 million design scheme was approved in early 1980 and construction was scheduled to begin in July, 1980. A contractor was selected, and a construction consultant manager was hired from an independent construction company to coordinate the efforts of the contractor and the architect, to expedite problem solutions, and to review scheduling and construction progress. The consultant manager has been credited with completing the construction of the mall ahead of schedule and under budget. Construction began on July 7, 1980.¹

In the 1980 construction season, the street was torn up and underground utility improvements were installed one block at a time. In 1981 the street amenities were added. During the sixteen months of construction, none of the businesses along Church Street changed locations or terminated business and retail sales in the area showed no decline. In fact, some reports indicate that more persons came into the Church Street area after construction began. Construction workers became local folk heroes, and tales of their skills became popular. The Marketplace Commission took advantage of the publicity of construction by publishing and broadcasting schedules of weekly construction events for spectators. Advertising and promotion were heaviest during the first month of construction to lessen the impact of construction on potential shoppers. Construction was completed in the fall of 1981.

The completed mall is covered by a level brick surface up to store entrances. Trees, planters and benches are placed along all four blocks of the mall. Auto traffic is restricted from the two central blocks, by removable barriers placed in the center of the street, but permitted on the intersecting streets and the two end blocks of Church Street. The intersecting streets allow one-way traffic flow, and alternate in the permitted direction of traffic flow. Delivery traffic is allowed on the main length of the mall between 8:00 and 10:00 a.m. In conjunction with the mall, an adequate bus system was created to allow workers and shoppers to get to and from the downtown easily, and the mall is complemented by close parking. The transit system was rerouted and rescheduled to include nine routes that service downtown from all suburban points. Each bus circles the transit loop of downtown before departing, thus passengers are within 350 feet of any destination downtown. Scheduling was coordinated by creating

¹ "Marketplace Construction Begins Monday; Merchants Hope Work Won't Scare off Shoppers", Steve Larose, Burlington Free Press July 6, 1980.

a "Pulse" system in which all buses depart simultaneously from downtown and headway was reduced to 15 minutes at all downtown stops.¹ Transit shelters were built on two streets that intersect the mall, and a new terminal was built next to the mall at the corner of Cherry and Church Streets. The shelters are semi-enclosed areas that protect waiting passengers from rain and snow, but provide little protection from wind and cold. A particular point of interest on the Church Street mall is the restriction of buses from the length of the mall; buses charge and discharge passengers at intersection corners of the streets and the mall.

In 1979, before construction of the mall, the transit system carried a 12 percent share of the downtown users and the share has now increased to 15 percent. Although the role of transit is a key issue, it appears that even without superior transit, Church Street mall may still have been successful since 35 to 40 percent of the Marketplace shoppers walk to the mall area (Voorhees 1977, Burlington).

Maintenance and Promotion of the Mall

In addition to overseeing construction and completion of the mall, the Church Street Marketplace District Commission was given the full private responsibility of operations, maintenance, and promotion of the mall. The budget of the Marketplace Commission is provided entirely by common area fees charged to private owners and retailers on the mall. In 1981-82, with a total budget of nearly \$ 225,000. Eighty thousand dollars was spent for advertising and promotion, and the remainder spent on maintenance and operating expenses.

Operations include the collection of common area fees, planning for additions, and licensing of street vendors. Currently, merchants along the mall pay nearly \$300,000 per year in Marketplace charges, including \$125,000 for promotion. The Commission also controls the amount of street space allowed for store front extensions, such as sidewalk eating and drinking areas. The spaces are leased by the square foot and on a temporary basis. The Commission also approves capital credit on investments for sidewalk tables and chairs. Street vendors are licensed by the Commission; an upper limit on the number of types of street vendors allowed has been established. Street vendors pay an annual fee of \$464. Snow removal on the mall is contracted out by the Commission, while litter removal, routine maintenance and repairs are performed by Marketplace personnel. Snow removal extends right to store fronts.

One form of promotion of the mall is the validation of parking and bus ridership. Although there has always been some sort of validation program, only recently has it been promoted strongly. The Marketplace Commission and merchants, in co-operation with the Transit Authority and

¹ "Changes in Bus Routes Begin Monday", Rob Eley, Burlington Free Press, July 5, 1980.

Figure 5-5
Burlington Church Street
1st Block East Side

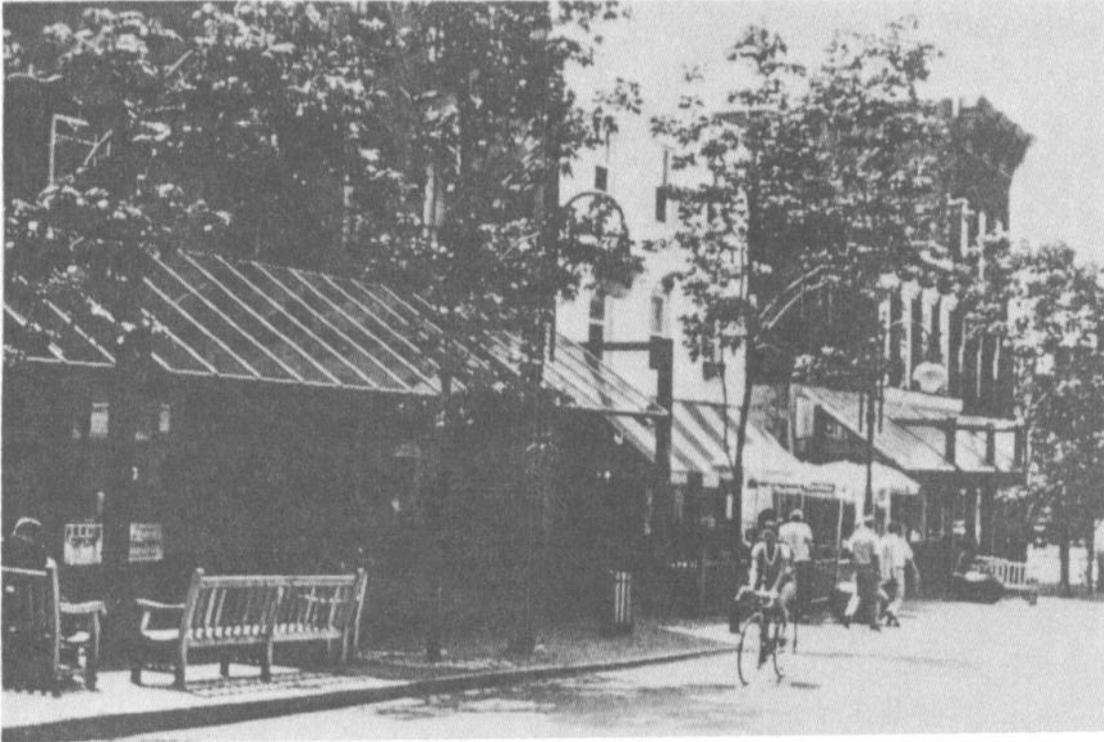
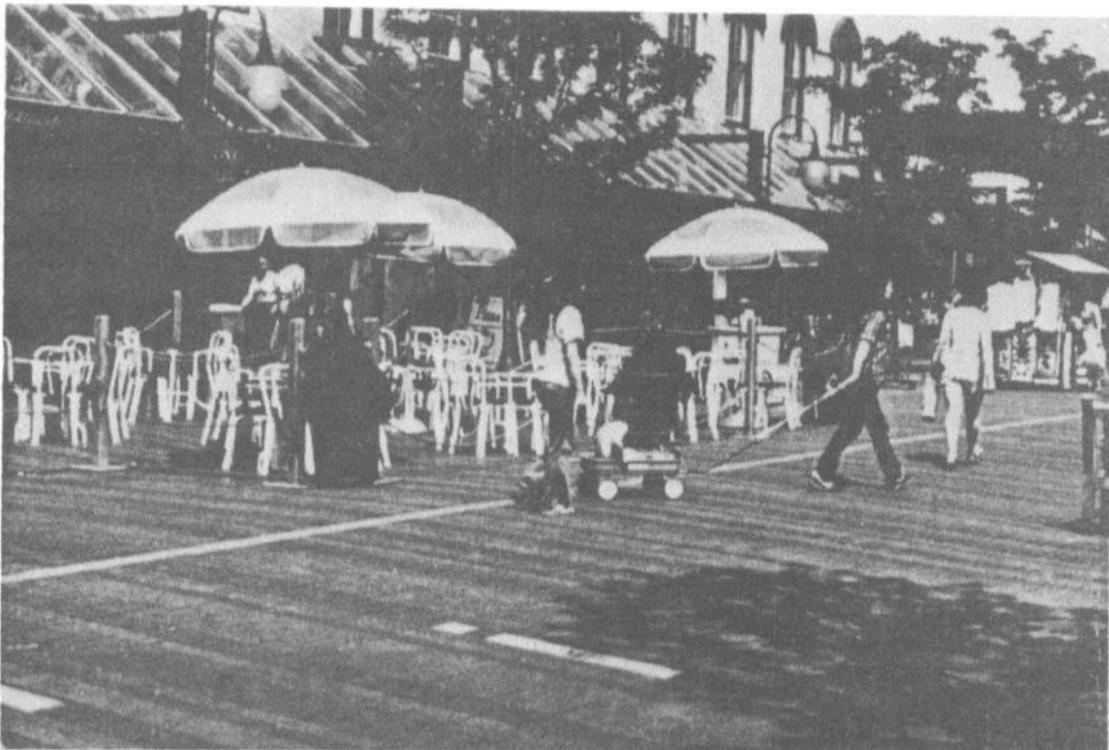


Figure 5-6
Burlington Church Street
2nd Block West Side



the parking facilities operator, make tickets available to downtown customers for each purchase. Each ticket is redeemable either for a 25 cent discount on parking or an off-peak bus fare. The combined system of subsidy for buses and parking validation is unique in the U.S.

Since completion of the mall, twenty of the 104 stores in the mall have turned over. Two of the stores (one of which was the smaller of the two local major department stores), were closed due to fire damage and have not reopened, several of the stores closed for other reasons than any impact due to the mall, and the rest were marginal businesses that closed due to the higher rents and fees charged as a result of the mall. The turnovers were reported by city officials to be no larger than under normal circumstances, although rents have increased from 25 to over 100 percent along the mall. Negotiations for leasing the two stores currently are progressing, and the urban renewal developer is attempting to attract a large chain department store to fill a store to be built in the urban renewal area. With the exception of the two fire damaged stores, the mall area has 100 percent occupancy with a waiting list.

A mix of incomes is served by the mall, and the opinion of city officials of criticism that the mall has created an expensive shopping district is that the market in the area will take care of itself. The student population of Burlington accounts for about 20 percent of the mall's market, and students' main use is for entertainment (Voorhees 1977, Burlington).

General Comments

Although Burlington turned down a grant offer from UMTA's SMD program, it was still able to come up with the necessary funds to successfully implement the Church Street Marketplace due to its good relations with the UMTA's Boston Office. From all indications the mall appears to be very successful in maintaining and enhancing the CBD and attracting customers. The transit loop system appears to be an interesting variation and according to some, an improvement over the bus lanes through the mall area as used in other ARZ sites. However, the absence of SMD support deprived the project of the required evaluation data to document that success. See Table 5-2 for a summary of major events.

Many factors have contributed to the successful implementation of the mall. An important factor is considered to be the size of the city and its relations to the state. Though Burlington is a small city, it has a strong economic base and it is the largest urban center in a small rural state. This provides it with a great deal of political power and influence in state and federal affairs. The CBD, the focus of an expanding metropolitan area, had a healthy retail district even before the mall was built. In this situation Burlington's small size worked to the City's advantage by facilitating interpersonal relations. This is demonstrated in the anecdote about construction workers becoming local folk heroes.

Table 5-2

Burlington - Summary of Major Events

-
- January, 1959 - Major urban renewal projects approved for the downtown area, resulting in permanent closing of two through streets.
 - 1965 - Demolition began on structures within the twelve acres of urban renewal area.
 - 1969 - Two new office buildings completed as part of the urban renewal project.
 - July, 1971 - One-day street fair held on Church Street.
 - 1972 - Land acquisition on Church Street for the Burlington Square Mall ties main shopping street to the Urban Renewal Site.
 - Week-long street fair held on Church Street.
 - Patrick Robins becomes chair of Street Commission; Bill Truex becomes chair of Planning Commission.
 - 1973 - Chittenden County Transit Authority (CCTA) replaces the Burlington Rapid Transit Company as the operator of metro Burlington mass transit.
 - 1975 - Church Street Steering Committee created, with Patrick Robins as chair.
 - Alexander and Truex chosen to draw up preliminary designs.
 - Senator Leahy, first Democratic Senator from Vermont in over 100 years, elected.
 - Church Street Steering Committee applies to UMTA's SMD Office for \$1 million grant.
 - January, 1976 - Preliminary design work for the mall is completed.
 - Burlington receives \$1.6 million from EDA to build 400-space parking garage near Church Street.
 - November 1976 - Steering Committee submits new application to UMTA for \$4.8 million.
 - Pyramid Company announces plans to develop Williston shopping complex.
 - Burlington is chosen as an auto restricted zone demonstration site by UMTA's SMD Office and is awarded design and planning money.

- 1977 - City of Burlington turns down SMD money.
 - Alexander and Truex chosen to design mall.
 - May, 1978 - Alexander and Truex unveil two level mall design projected at \$20 million.
 - 1978-79 - Burlington officials appeal to UMTA, FHWA, EPA, and HUD for financial support for two-level mall.
 - March, 1979 - Burlington sponsors round table discussions and finds lack of support for two-level mall.
 - May 1979 - New one level design unveiled.
 - Steering Committee reapplies to UMTA for \$5.4 million of section 3 money.
 - June 1979 - UMTA awards grant to Burlington \$5.4 million from Section 3.
 - August 1979 - Bond issue fails to pass voters.
 - October 1979 - Bond issue passes in a second special election.
 - C.E. Maguire, Inc., and Carr, Lynch and Associates hired as engineers/architects for the Church Street mall.
 - January 1980 - Church Street Marketplace Commission formed.
 - March 1980 - Final plans for Church Street mall approved by Marketplace Commission.
 - July 1980 - Construction of the mall begins and rerouting of buses comes into effect.
 - September 1981 - Mall completed.
-

Strong leaders in both the public arena and the merchant community were largely responsible for maintaining support and progress toward implementation. Locally, Mayor Paquette was in office over the period from conception of the mall through construction. He made the mall a high priority in his administration, was able to persuade the Board of Aldermen about the merit of the project and to gain public confidence especially on passage of the bond issue to insure the necessary local funds. Additionally, his positive relationship with Senator Leahy helped gain needed support in Washington.

In the merchant community, Patrick Robins, a charismatic person, appears to have been the driving force behind the mall. As head of the Downtown Burlington Development Association, he was able to gain the other merchants' support for the mall over a period of ten years. It all started as an experimental street fair. As a member of the Redevelopment Authority, he demonstrated foresight in the early planning of the Church Street Marketplace and saw both the practicality and financial implications of the mall as part of the urban renewal project. As chairman of the Church Street Steering Committee, he opened the Church Street mall to public debate and showed flexibility and openness to public opinion, thus ensuring public support for final implementation. He also worked well with the other committees and agencies and established good relations with federal funding agencies, especially the Boston UMTA office. The hiring of Truex, a local architect, for the preliminary design work may have facilitated the overall project implementation. Truex, who had previously served as the chairman of the Planning Commission, had a good understanding of the local problems and worked well with Robins. His two-level design, though it proved unfeasible, provided the necessary excitement and enthusiasm that motivated the participants.

At the federal level, Senator Leahy, the first democratic Senator from Vermont in many years, drew a great deal of his support from Burlington. He provided the necessary assistance and connections with the various federal agencies. Support also came from the head of the executive branch of the federal government when President Carter actively showed his willingness to help Burlington.

Close cooperation and coordination of all local committees and the transit and renewal authorities were crucial to the successful implementation of the mall. Involvement of the transit authority was among the most important factors since UMTA was currently working with the authority, and avenues of funding for the mall were opened by the inclusion of a transit component in the plans. The renewal authority's involvement was helpful in tying the Church Street mall to the urban renewal development project land and in providing new parking facilities on the perimeter of the mall.

The creation of the Church Street Marketplace Commission for construction, operation and maintenance proved to facilitate the mall development. The Commission decided wisely to hire a construction consultant to manage all aspects of construction who was able to complete construction ahead of schedule and under budget. The Commission also worked closely with the merchants along Church Street, and through promotion and advertising, successfully demonstrated that the decline of retail sales during construction can be minimized. The responsibilities of the Commission for maintenance and operation helped to ensure the smooth operation and continued success of the mall. The fact that Penrose Gearin, the Commission's administrator, was involved in the early planning phases of the project seems to have a positive influence as well.

One should not conclude that Burlington faced fewer obstacles along the road to implementation than other cities. Consensus on an acceptable design was not reached easily, the final plan represented a compromise in terms of auto restriction. But in spite of their problems, they persevered and were able to solve their problems creatively.

Finally, exogeneous events such as the announcement of the proposed Pyramid Mall in a nearby suburban area in 1976 played a very critical role in the project. It led to a public outcry to protect the downtown district from decay and proved to be the catalyst for a commitment to strengthen the downtown during the following years.

Memphis: The Madison Avenue Project

Memphis, a city of 646,356 people (1980 Census) in a metropolitan area of almost a million inhabitants was once the office and retail hub of the mid-South. The City covers an area of 264 square miles. Density is low with 2,447 persons per square mile. Downtown is compact located on the banks of the Mississippi River. The history of the City is tied to river transportation and agricultural trade. Main Street, center of retail business and the hub of the public transit system, led the downtown in the growth of major building and commercial activity. The City has experienced two continuous decades of decline and disinvestment and has succumbed to suburban sprawl. By 1974 two of the four major department stores left CBD for regional shopping malls (Voorhees 1977, Memphis).

In an effort to reverse this trend, local government and concerned downtown property owners funded the development of a Master Plan to change the image of the downtown. Part of the plan was accomplished by establishing a 10-block full pedestrian mall, one of the largest in the U.S., on the Main street. The mile-long Mid-America Mall, extends from Exchange Street south to McCall Street. It has an 85-foot right-of-way along the mall while in several areas particularly at City Hall it expands in width. It links the Convention Center and auditorium to the principal shopping area comprised of 100 retail businesses including the two remaining department stores. The mall is in effect a linear urban park. It features fountains, pools, sculptures, sitting areas, planting, pavillions, kiosks, banners and performance platforms.

The funds for the construction of the \$6 million Mid-American Mall were raised from the downtown property owners through the creation of the Central Business Improvement District. A mall management and promotion office was created as part of the project. The mall, which was completed in 1976, did not immediately solve the downtown dilemmas; however it created an attractive atmosphere and a functional space and attracted a large number of users.

In 1975, the Memphis Area Transit Authority in cooperation with the Public Works Division, the Office of Planning and Development, the Medical Center Council and the Tennessee DOT began working on an ARZ Demonstration Grant application for submission to UMTA. The proposal was unambiguous and incomplete but had good implementation chances because it was tied to the mall that was underway. Memphis was selected by the SMD Office as an ARZ demonstration site early in 1976.

UMTA's team of consultants headed by Moore Heder developed the plan. The project's objectives included linking the two highest employment centers in the downtown: the Medical Center, a concentration of 37,000 employees and visitors located less than 2 miles away, and the downtown, improving conditions for transit riders, extending the effects of the mall and downtown revitalization, encouraging reuse of vacant buildings and maintaining high levels of accessibility and circulation (Voorhees 1977, Memphis).

In 1977, the Center City Commission (CCC), a full partnership between government and the private business community was established and played an important role in the ARZ project implementation. The project was financed by a \$960,000 grant from UMTA in September 1978 and a pledge of \$100,000 from the State of Tennessee. A public hearing were held in November 1979 and by April 1981 the actual construction contract was awarded (Paight 1982).

The actual ARZ program included a downtown bus terminal, shuttle bus service ("Hustle") on Madison Avenue between downtown and the Medical Center, a bus terminal canopy and Medical Center bush shelter, streetscape improvements on 3 1/2 blocks of Madison Avenue, a major retail street and marketing (see Figure 5-7). The bus terminal was situated on the first floor of a vacant office building at the corner of second and Madison. The interior improvements of the terminal included customer service facilities and seating for 100 persons. The shuttle bus service carried an average of 62,000 passengers per month. The marketing of the "Hustle" was a very important part in promoting the project. Mass media ads were used to promote the service.

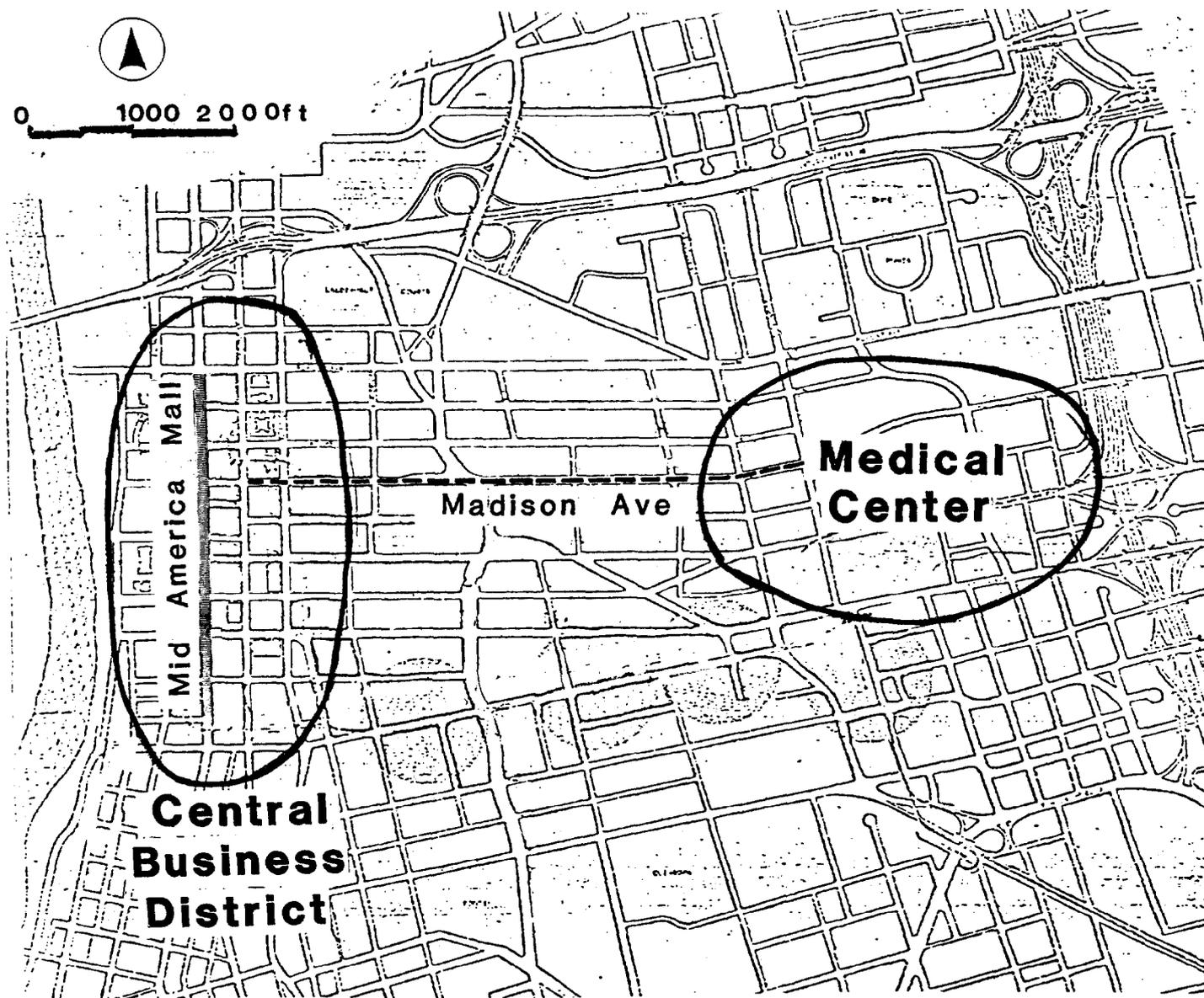
The most difficult portion of the project has been the street and sidewalk improvements along Madison. There were several administrative and design delays. Traffic flow was left open but it was restricted by widened sidewalks and a curving street pattern. Extensive engineering work was required because the basements of many old buildings extend under the sidewalks and out to the curblin. Landscaping, new lighting, and graphics were also included.

Due to construction delays, the contract was completed by late 1982. The ARZ project exceeded its budget by \$333,000. The additional funding was provided by a Capital Improvement Fund in the City and County budget established at the request of the CCC shortly after the grant was awarded. Charles River Associates, the consulting firm responsible for the evaluation study, has not yet completed the evaluation. Information available so far indicates that the project is successful. Downtown private investment has increased substantially, from \$250,000 in the year 1977 to \$40,000,000 in 1981. The vacant office building where the bus station is located was renovated and is occupied. Other buildings are being purchased, restored or renovated. The bus terminal, the "Hustle" bus and the new streetscape all played a role in the decision to reuse buildings. The marketing for the shuttle bus also seems to be very successful. There are reports of increased downtown patronage by Medical Center employees.

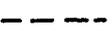
Each year the City and County contribute from one-half to one million dollars a piece for additional streetscape improvements downtown. The ARZ program was instrumental in creating this fund. Madison Avenue is being used as the prototype treatment for many of the other cross-streets to the Mall. Table 5-3 presents a summary of major events.

The Memphis ARZ was the cheapest and simplest of the demonstration projects. It was the second project to be implemented in a period of 6 years. The UMTA ARZ demonstration grant was awarded not to create an

Figure 5-7
Memphis Madison Avenue Transitway



Pedestrian Areas 

Transit Areas 

Source: Voorhees 1977, Memphis

Table 5-3

Memphis - Summary of Major Events

- 1974 - Two downtown major department stores moved to the suburbs.
 - Development of Master Plan funded by local government and downtown property owners.
 - December, 1975 - City responds to UMTA's SMD program solicitation.
 - 1976 - UMTA selects Memphis as one of the ARZ demonstration sites.
 - December, 1976 - Mid-America Mall completed.
 - 1977 - Creation of Center City Commission.
 - November, 1979 - Public hearing.
 - April, 1981 - Construction contract was awarded.
 - 1982 - Project was completed.
-

ARZ, but to continue the ongoing redevelopment process. The ARZ plan adopted a unique approach. Emphasis was directed away from major new capital facilities or services to consideration of selective improvements that could be made to expand and enhance the existing auto restricted area.

The Transit Authority was responsible for the implementation of the bus terminal and the shuttle bus service and that aspect of the project went smoothly. While the implementation of the street improvements that were under the jurisdiction of the Public Works Department progressed slowly, Mayor Chandler was not directly involved in the project and it was given a low priority. The project suffered from lack of a central coordinating agency. Although the Center City Commission was involved in the implementation and assisted in making local financing possible, had no authority or control over city departments.

Providence: The Kennedy Plaza

The City of Providence, with a population of approximately 150,000 in a metropolitan area of 900,000 inhabitants, serves many regional and state-wide functions. It is the capital and largest city of the State of Rhode Island and fourth largest city in New England. The City's location on a natural harbor at the head of Narragansett Bay, and its railroad connections offer special advantages for commercial activity, have facilitated its rapid industrialized development and have allowed Providence to prosper and grow. The City's prominence stems from its leadership within specific industries such as finance, jewelry, silverware and textiles. Manufacturing of precision tools is still a dominant sector, although it has been in decline recently. Government services play a major role as well in this state capital (R.I. Historic Preservation Commission 1981).

The City is compact, covering an area of 19 square miles, with a density of 8,252 persons per square mile. The evolution of Providence as a railroad-oriented center contributed to the compactness of the downtown, centralizing activities in Kennedy Plaza near the train station. In recent years, the City has experienced a decline in population and a loss of retail activity to suburban shopping centers and physical obsolescence problems, common in most large older American cities. In spite of these trends, the CBD remains active, primarily due to the concentration of government and financial district employees (Voorhees 1977, Providence).

The CBD, covering an area of 350 acres, is physically precisely defined by the Providence River on the east, the Capital Complex and train lines on the north and Interstate 195 and 95 on the south and west respectively. The highway system circling the downtown and the availability of an extensive transit system makes the downtown easily accessible. Over 55,000 people use the CBD daily and a 1975 survey showed that 79 percent of commuters arrive by car, 19 percent by bus and 1 percent by train. About 3 percent walk. Both bus and auto traffic do, however, encounter congestion and confusion entering downtown. There are presently about 14,000 downtown parking spaces on and off the street, many of which are underutilized because they are located in lots and garages separated from the immediate dense downtown districts (Providence PUD 1982).

The downtown includes five major activity districts in close proximity to one another. The Kennedy Plaza, an 8-acre traffic oval around a central park adjacent to Union Station, is in the center of the CBD and will be discussed later at greater length. The dense, high-rise financial district is immediately south of the Kennedy Plaza and employs the majority of downtown's 32,000 person workforce. Two large office buildings, Fleet and Old Stone, were recently erected in that area and more are in progress. The State House district is north of the Kennedy Plaza, and it contains most of the State buildings. The Capital Center project (which will be discussed later) involves redevelopment between the State House and the Kennedy Plaza. Northeast of the financial district is the College Hill district. It contains two nationally prominent educational institutions, Brown University and the Rhode

Island School of Design. The Hill represents one of the oldest, most beautifully preserved historic districts in the nation. The retail district is centered on three main commercial streets, Washington, Westminster and Weybosset Streets. During the late 1940's and 1950's, downtown Providence was vibrant. While the area still attracts many pedestrians, retail trade has been declining. The area is characterized by older low-rise buildings in physical decay. Adjacent and northwest of the retail district are the Civic Center, a major hotel and several entertainment facilities (Voorhees 1977, Providence). See map of downtown in Figure 5-8.

In 1959, the City, in collaboration with the Urban Renewal Administration, prepared a master plan to restore the downtown. The plan proposed an intown residential area, a convention center, a new bus and railway terminal, the reorganization of the circulation pattern and new parking facilities. The pedestrianization of Westminster Street was the core project to strengthen retailing and restore the historic character of the street.

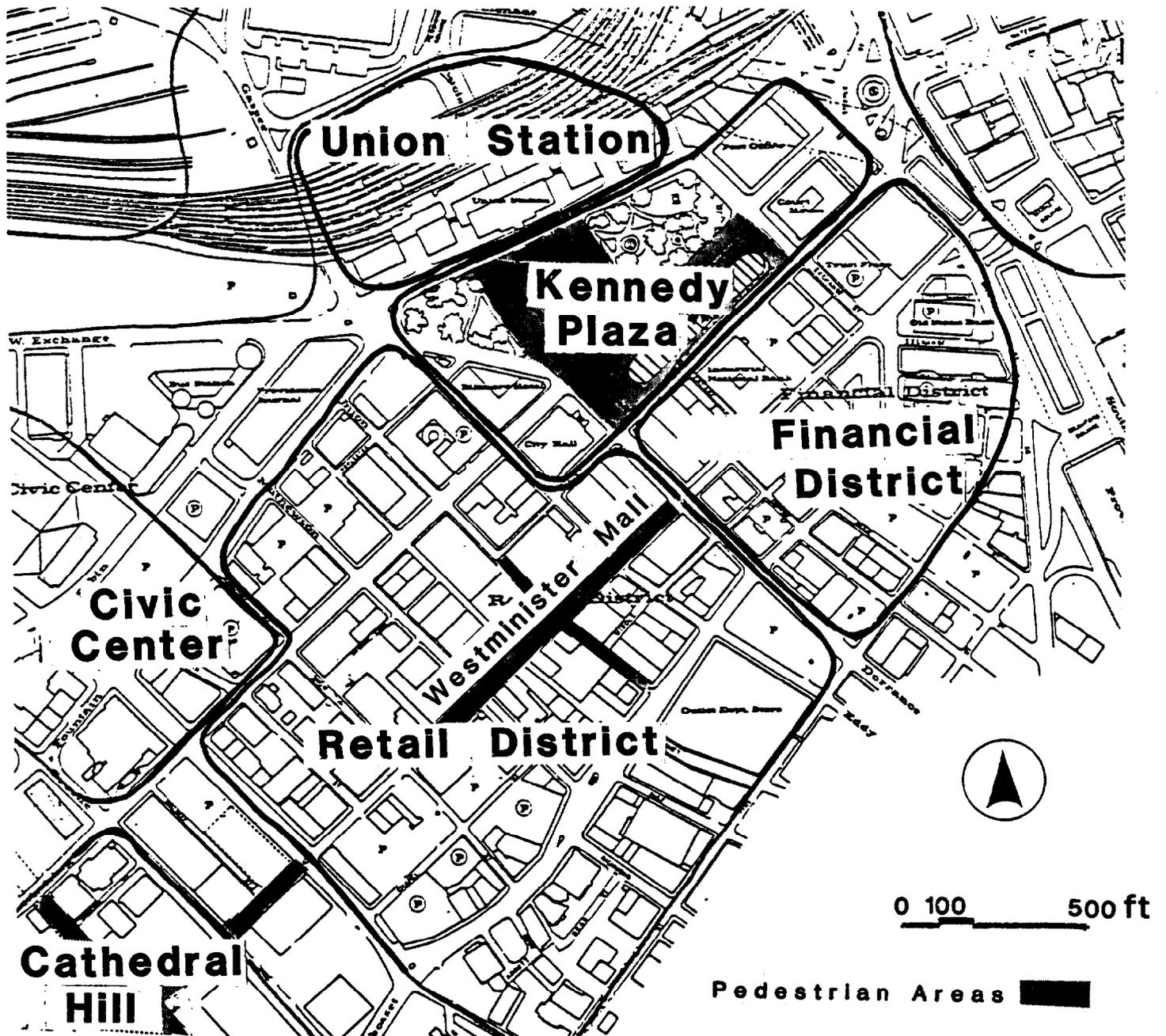
The Westminster Mall Project

The idea of closing Westminster Street to auto traffic goes back to 1907¹, but it was only in the early 1960s that the concept was operationalized and received strong support from the merchants. In 1965 the constructed six-block mall in conjunction with the Weybosset Hill Renewal area and I-95 to the radically transformed the heavily trafficked street. Providence was one of the first cities in the northeast to establish a pedestrian mall. That was the time when cities looked at limiting auto traffic and providing pedestrian amenities as a means to attract suburban shoppers into declining downtowns. The mall originally cost 1/2 million dollars, a combination of federal, city and private monies (Brambilla and Longo 1977). Retail decline during the past 20 years has been too great and the mall was not able to stop it. Although, it is still aesthetically one of the best streets for shoppers, and it is usually crowded, portions of it are run down and many stores remain vacant. Most upper floors of buildings along the mall are underutilized. Since the mall's construction, the City lost some of its largest and most popular department stores. Shepards' on Westminster Street closed down about 9 years ago. It was only recently, that the Outlet Company on Weybosset Street suffered the same fate. Both stores closed for reasons unrelated to downtown conditions, but have not been replaced yet.

In recent years, there have been efforts to reverse the situation. Four and a half million dollars in EDA grants were spent in 1981 to facelift the mall and other nearby streets (Bernstein 1983). Other public/private related efforts included rehabilitation of a number of buildings in the area. A 130,000 square foot privately developed office building housing Federal agencies was recently added to the mall. In spite of the above rehabilitation efforts, there remains a lot of

¹"The Ideas are Old", James Laffan, ©SProvidence Journal©S, February 3, 1963.

Figure 5-8
Providence CBD



Source: Voorhees 1977, Providence

unhappiness among the business community. Some merchants feel that the pedestrian mall has definitely hurt the retailers that border it and make it hard to attract new tenants. While some complain that the benches along the mall attract the "wrong kind of people," others insist that the harm done by loiterers is more perceived than real. The idea of ripping up the mall and reversing it to auto traffic has been seriously considered this year. A blue ribbon Committee was appointed in July 1983 to conduct a feasibility study of reopening the mall to traffic and analyzing future uses for upper floors (Bernstein 1983).

Other Efforts of Downtown Revitalization

Public investment for downtown redevelopment and historic preservation has found considerable support from the business community and other influential institutions in the City, such as Brown University and the Rhode Island School of Design. An example of such interest in the downtown came in 1974 in a study entitled Interface: Providence Report sponsored by the Providence Foundation and staffed by the Rhode Island School of Design, Architecture Department Faculty and students and supported by local businesses and the National Endowment for the Arts. The report presented a comprehensive plan for the improvement of transportation facilities and redevelopment of downtown.

The Providence Foundation, the sponsor of the Interface: Providence Study and affiliate of the Greater Providence Chamber of Commerce, was created in 1974 and has played an important role in coordinating public and private revitalization efforts and promoting specific projects in the downtown area. One of its early accomplishments was saving the very notable Ocean State Theater on Weybosset Street from threatened demolition. The building was rehabilitated into today's Providence's performing arts center. Other Foundation-related projects include the old Biltmore Hotel on Kennedy Plaza, which closed in 1974, subsequently renovated by a number of local businessmen and reopened in 1978, the restoration and remerchandising of Arcade, a 19th Century Greek revival enclosed shopping center, the construction of a state court complex downtown rather than at a suburban site and the construction of a new office building.

Other development opportunities connected with the Kennedy Plaza include the Providence Foundation initiated Capital Center project and the reuse of the Union Station. The Capital Center project is an extensive, complex undertaking whose major element is the relocation of the AMTRAK railroad tracks from its present location to a new right-of-way approximately 600 feet to the north below the State House. The project, which has been estimated to cost \$100 million in public investment, involves development of a new Federal Railroad Administration funded railroad station in a new location and creation of a park along the banks of the Providence River. A new Civic Center Interchange will connect Route 95 with Route 6 and provide a more direct connection to downtown. The plan's main purpose was to encourage private office development of the 60 acres of land presently used for parking. Once the relocation takes place, there are plans for reuse of the Union Station. The building is a landmark on the National Register for Historic Places. A feasibility study commissioned by the Providence

Foundation utilizing a grant from the Rhode Island Historical Preservation Commission and other sources is exploring the conversion of the Station into a convention and exhibition complex.

The Origins of the Kennedy Plaza Plan

Kennedy Plaza, in the middle of the major downtown district, is the largest public square in the state. The City Hall, the U.S. Court House, the Post Office, the headquarters of a major bank and the Biltmore Hotel are some of the other users facing the Plaza. All buildings are of significant historical value. Activity peaks at lunch time and between 4 and 6 p.m., but diminishes at the end of the business day and is moderate to light on weekends.

Kennedy Plaza serves as the focal point of the City's radial bus route system. The Rhode Island Transit Authority (RIPTA), the public agency responsible for the operation of all public bus routes within the state of Rhode Island, carries 36,000 passengers per day to and from the CBD (1971 on board survey) using approximately 236 buses (Voorhees 1977, Providence). The buses currently pass through narrow and congested city streets to reach the vicinity of Kennedy Plaza, causing delays in the transit operations. RIPTA has 32 regular transit routes that serve the downtown with five different terminals scattered throughout the CBD. Transfer points between routes require a walk of up to 1500 feet (Providence PUD 1982). No terminal has indoor waiting facilities. Activity centers within the CBD are not connected by public transportation service and the cost of an intra CBD trip is prohibitive. Because of the high density and the design complexity of the intersection, congestion and conflicts between automobiles, buses and pedestrians are problem. The level of carbon monoxide emissions in the downtown exceeds the federal standards. The State is bound by federal law to insure that air pollution is reduced¹.

The Interface-Providence plan argued that too much space is wasted downtown for roads and parking spaces. The city center, it was believed, should be primarily devoted to business, culture and residences. The study team recommended a ban on most vehicular traffic from as much as 250 acres of the city center. Automobiles would be parked on the fringes of the ARZ and travellers either would walk or take a bus to reach their downtown destinations. In this way, downtown air pollution would also be substantially reduced. One of the teams's proposals was an auto restricted zone for the downtown in the Kennedy Plaza area. Several alternative designs were prepared for turning the Plaza into an ARZ and rehabilitating Union Station. When UMTA's Office of SMD solicited proposals for ARZs in 1975, Providence was one of the cities to apply for a demonstration grant. The proposal developed by the Providence Department of Planning and Urban Development (PUD) relied heavily on the concept developed by the Interface: Providence design group.

¹ "Larger Auto Free Zone is Urged to Reduce Downtown Air Pollution", Providence Evening Bulletin, March 13, 1976.

In April 1976, UMTA announced that Providence was one of the five final selected cities to receive ARZ grants. At least two of those cities were expected, at the time, to be able to receive planning funds for a demonstration project. As part of the SMD demonstration program, UMTA was expected to assist Providence in preparing for submission of capital grant proposals to other federal agencies. A UMTA study team of four consultants headed by Lajos Heder, an urban designer from Boston, developed the original design. The plan evolved from a series of site visits and in cooperation with the Providence Department of Planning and Urban Development (PUD) staff headed by Martha Bailey.

The Moore-Heder ARZ Plan

The basic concept was to extend the existing Westminster Mall pedestrian system into the Kennedy Plaza and Dorrance Street, and to link the various downtown business centers on the south side of the Plaza with the new office center planned on the north side between the State House and Union Station. One of the primary objectives of the plan was to reduce air pollution to meet the federal air quality standards and to encourage more use of public transportation by reducing conflicts between transit vehicles and pedestrians, reducing transit delays, improving transferring between routes and providing efficient circulation bus service within the CBD. These goals were in line with contemporary national policies of energy conservation and environmental protection. In the long run, the objective was to create a more safe downtown environment that would encourage more discretionary trips into the CBD for shopping and entertainment in particular. The increased activity should in turn serve as a magnet to attract increased downtown investments by the private sector (Voorhees 1977, Providence).

The design plan consisted of a circulation framework and a pedestrian and transit improvement program. Most auto traffic would be rerouted outside the immediate downtown area. Automobiles would be directed to ring roads on Orange, Weybosset, Empire, Promenade, Gaspee and Dyer. Two hundred parking spaces would be eliminated in Kennedy Plaza. Most cars would be banned from the Plaza and it would be open only to pedestrians and buses. New pedestrian plazas would be established in front of City Hall and on the portion of Francis Street which was then covered by a parking deck. This structure would be removed. Portions of sidewalks in this area would be widened, repaired and lined with trees. Exclusive 3-block transit ways on Dorrance Street from Weybosset to Fulton Street, the north and south of Kennedy Plaza and on Francis Street from Washington to Pershing Square running under the Union Station would be constructed. A view of the Kennedy Plaza and Union Station is shown in Figure 5-9.

Twenty-three transit terminals in or adjacent to Kennedy Plaza were included in the plan. The majority were to be built around the traffic island in the center of the plaza. These would be comfortable, convenient and safe. Arcades were proposed at important terminals to provide comfort, protection and information. Through routing of presently dead-ended RIPTA transit routes would create better connection between various parts of the City. Creation of a downtown free-fare zone during off peak times was also proposed. An intra-CBD shuttle

Figure 5-9
Providence-Kennedy Plaza and Union Station



service would provide a connection between downtown locations and surplus parking in the periphery. (There are about 14,000 parking spaces in downtown.) A cost analysis showed that the operation of the free-fare zone would not result in loss of revenue. The only cost associated would be in marketing and service. Part of the SMD grant would be a subsidy to RIPTA to cover that expense. One of the first steps in the plan implementation process was to begin with an intensive management and promotion program which included development of public liaisons and production of public events.

When the ambitious plan was first presented by Mayor Cianci and Martha Bailey to businessmen in March of 1977, it received mixed reviews. Some major businessmen in downtown, including the Outlet Company and Textron, co-owner of the Biltmore Hotel, raised some major objections. There was fear that the plan would inconvenience shoppers and drive many to suburban shopping malls. They wished the City would improve the flow of traffic and provide more parking. Some also questioned whether many people would ride buses. The response of city planners was that the downtown area cannot and should not imitate suburban malls. Downtown retailers should concentrate on their primary markets of downtown workers and support attempts to attract more downtown employers. Planners agreed that rerouting of traffic would create some inconveniences but also would enable the City to create a unique, attractive and safe park, link major activities downtown for pedestrians and enhance chances for success of other redevelopment projects. The success of Faneuil Hall Marketplace in Boston, which opened a year earlier, was pointed out as a model to strive for¹.

Events Between 1977 and 1982

As a response to criticism, the PUD did modify the plan to satisfy objections from the major downtown interests. They acceded to the Outlet's demand to keep a lane open for southbound motorists on Dorrance Street and in exchange the store supported the plan. In a public hearing later in September, 1977 the plan received the qualified support of major downtown interests. Supporters included organizations and individuals from senior citizens to college students and environmentalists. However, a group of small businessmen with the support of Councilman Fagnoli, chairman of the Council's Committee on Urban Renewal, continued to be very critical of parts of the plan which called for auto restriction.² Mayor Cianci was successful in exercising his influence to ease the opposition and to get the project approved before the September 30 deadline for UMTA applications. The Providence Redevelopment Agency (PRA) and City Council voted unanimously to endorse the City's plan with the understanding that the design was not final.

¹"Cianci proposal Limits Auto Traffic in Plaza ", "Plaza Plan Seen by Businessmen ", and "Kennedy Plaza Receives Mixed Reviews", by William Collins, Providence Evening Bulletin, March 16, 17, and 20, 1977.

²"Fagnoli Strongly Opposed to Restyled Kennedy Plaza", William Collins, Providence Bulletin, June 18, 1981.

The endorsement authorized the City to borrow \$980,000 and apply for another \$4.8 million in federal grant funds¹. Later in mid-1978, city planners further revised the plan to allow for auto traffic in front of City Hall. In June of 1978, the PRA approved the revised plan. Voters in the past had approved the borrowing of more than \$4 million for urban renewal purposes and the downtown area was designated as an urban renewal district. Therefore, a new referendum was not required².

During this period, mass media gave high attention to the issue and newspaper editorials supported the Mayor's plan. Following the submission of the application, Providence received approval from UMTA to proceed with the final design and in the fall of 1978, the City received two UMTA planning grants for the Kennedy Plaza project totaling \$1.4 million.

In an action marked by much controversy, the PRA chose in June 1979 a group of architects and engineers led by Albert Veri Associates of Providence to prepare final plans for the Kennedy Plaza refurbishment based on Moore-Heder's revised plan. Veri's group included the firms of St. Florian and Howes³. (St. Florian was associate dean of architectural design of the Rhode Island School of Design and Howes, also a professor in the same School, had, as director of the Interface: Providence Study, played a leading role in the downtown renewal movement) and Pare Associates, one of the largest engineering firms in Rhode Island. The group submitted one of the highest bids of the five finalists considered by the PRA Board and had no prior experience working with UMTA. However, the Board was impressed by the fact that the team was local and that the Veri firm had a good past record and was finally picked only after they had been pressed to reduce their initial fee by more than 20 percent. The Board disregarded its staff recommendations which placed the Veri group among the lowest on the list of recommended consultants for the job. Among the groups rejected was the one with the lowest bid, headed by Moore-Heder. UMTA's Boston Office declined to approve the contract and instructed PRA to go through the selection process a second time. The reasons for the veto was that the Redevelopment Agency had failed to follow its own guidelines and those required by UMTA in its selection⁴. The incident caused the City a lot of aggravation and a great deal of delay. In the year that followed Martha Bailey resigned to be succeeded by Samuel Shamon as chief of planning and the administration in Washington changed hands.

¹"Renewal Agency Endorses City's Kennedy Plaza Plan", William Collins, Evening Bulletin, September 20, 1977.

²"Revised Kennedy Plaza Plans Okd ",William Collins, Evening Bulletin September 20, 1977.

³"Redevelopment Group Rejects Bid for Kennedy Plaza Renewal Plan", William Collins, Providence Journal, May, 1979.

⁴"City Plans Appeal of Plaza Decision," Evening Bulletin October 10, 1979.

In the second round, a year later, the PRA again selected the same architectural firm out of 7 groups bidding for the job¹. This time Veri teamed with the Cambridge, MA, firm of Wallace-Floyd, along with Pare. Assoc., while the City made sure that UMTA requirements were fulfilled.

Due to Reagan administration's budget cutbacks the UMTA's funds for this project were rescinded. Mayor Cianci, a Republican, had to go back to Washington to restore the funds. He was well received by Arthur Teele, the new UMTA administrator, who assured him that the City would still get a portion of the money, while more money could become available if improvements to state highway Rt. 895 were dropped from consideration². Eventually, the City had to reapply for Urban Initiatives Funds, another UMTA source of capital funds.

In another important development, Mayor Cianci appointed the Kennedy Plaza Advisory Committee to work with the City and consultants on the final design. The Committee, comprised of 30 members representing downtown interests (i.e., property owners, retailers, bankers, historic preservationists, and representatives from RIPTA, and the Chamber of Commerce), was appointed to fulfill UMTA's requirements. While the Committee's functions were strictly advisory, the Mayor didn't want to proceed with plans that were not acceptable to it³.

The downtown community, after being presented with the final plans developed by Veri, expressed its concern that the plans originally developed 5 years ago didn't address current conditions in the downtown. During this period, the CBD experienced a further transition from retail center to a financial and cultural center with small specialty shops catering to a limited consumer volume during peak traffic hours. Several large office buildings continued to be erected in the financial district, the rehabilitated Biltmore Hotel reopened. The Arcade, was restored and reopened, and the Westminster Mall was facelifted. The Ocean State Theater was also rehabilitated.

In its deliberations the Advisory Committee decided that the City was attempting to squeeze too many things into the plan by making accommodations for pedestrians, mass transit and automobiles. Objections were raised about the narrowing of existing streets which would make car travel to the downtown more difficult. The same fear of losing customers brought up 4 years ago, surfaced again. This time the small merchants were supported by major banking interests, such as the

¹"7 Groups Submit Proposals for Kennedy Plaza Facelift", William Collins, Providence Bulletin, June 18, 1981.

²"Cianci Finds Federal Support for Kennedy Plaza Aid", Katherine Gregg, Evening Bulletin, June 18, 1981.

³Minutes of the First Advising Committee on Kennedy Plaza, May 28, 1981.

Fleet Bank which raised objections about the location of buses around the Kennedy Plaza Memorial area. It soon became obvious that the plan was not acceptable and that a new concept had to be explored¹. The Advisory Committee established an eight member working Subcommittee to seek alternative design solutions. Ken Orenstein, executive director of the Providence Foundation, played an important role in coming up with six alternatives. The proposal gained new life in December, 1981, when UMTA released an additional \$1.3 million toward construction of the first phase of the project. Over the period of 3 months from October 1981 to January 1982 a new plan emerged which satisfied the original objectives and met the interests of the downtown community, transit operators, aesthetic concerns and fulfilled the historic role of Kennedy Plaza.

The Advisory Committee Plan

The new design though still based, to a great extent, on the original Moore-Heder concept is much more flexible and practical. Its primary objective is to increase private investments in the CBD. Although the new plan still calls for some reduction of auto traffic in the center of downtown, the term auto restricted zone was dropped from the name of the project. The new design further eases auto use and separates transit from auto circulation. It primarily reroutes traffic, creates a new bus terminal and refurbished downtown parks.

There are three basic changes that form the original proposal. The first change provides for smoother traffic flow around the Plaza. Auto traffic is routed through a circular system, utilizing Exchange Street, Exchange Terrace, Dorrance and Fulton Streets. The second change calls for moving the central bus terminal from the area surrounding the plaza monuments to Washington and Francis streets. Both streets become exclusive transitways. This design provides berthing areas in closer proximity. (A total of 22, 14 on Washington Street and 8 on Francis Street). The third major change is on Dorrance Street, where auto traffic will be allowed to travel both ways. Exclusive bus lanes are retained on Dorrance and Washington Streets. City Hall Park and Burnside Park will be united with the rest of redevelopment into a transit mall area through rehabilitation of landscaped and paved pedestrian areas (Providence PUD 1982).

Post 1982 Developments

On March 1982, an amendment to the original proposal was submitted to UMTA for funding and five months later UMTA approved an additional \$4 million for the project². Early in 1983, a construction manager was hired and it was expected that construction will start by the end of the

¹"Panel Won't Ok Kennedy Plaza", Bob Wyss, Providence Journal, November 19, 1981.

²"City Gets Grant", Bob Wyss, Evening Bulletin, Sept. 13, 1982.

summer. The consulting firm of Charles River Associates. has been contracted to conduct the evaluation study.

The cost of the project was finally estimated in 1983 to be \$7.6 million of which \$960,000 will be funded by an UMTA section 6 grant. The demonstration grant will cover transit operations improvements. Part of this money will be used as a subsidy required in the first two years of operation to cover possible loss of revenue from the fare free zone. It is projected that in the long run ridership will increase to cover the cost. Promotional functions and maintenance will be run from a storefront office in the area. After construction and once proven successful this activity will be funded by a private downtown organization. Eighty percent of the capital costs will be covered by UMTA's section 3 grant and 20 percent or \$1.3 million will be contributed by the city. The total final estimate is 30 percent more than the original cost estimated in 1977.

Some issues still remain unresolved. They deal mostly with construction and management details. The ownership and maintenance of the bus shelters is one of these issues. They will be constructed at a cost of \$40,000 each using money from the UMTA grant. However, maintenance of bus shelters presented several practical problems that had to be resolved. RIPTA refused to own the shelters which will be owned by the Public Property department. RIPTA has a contract with a company which builds the shelters in exchange for advertising. The nature and appropriateness of advertisement was another issue fought, since most advertising is geared to motorists. The private sector currently is negotiating with the City to assume the responsibility as well as the authority and transfer of government funds to pay for service and maintaining the Plaza. Formation of an assessment district or contractual arrangements are being discussed.

General Comments

The roots of the Kennedy Plaza go back to the Interface plan. A decade has lapsed since then. During this period the local situation changed in many ways, (see Table 5-4 for summary of major events). At the State level, RIPTA has had three general managers, at the City level, the department of PUD changed chiefs' of planning and similar changes occurred in the business community. All this, obviously, had an effect on the direction that the project has taken.

Throughout all these changes one factor remained stable. Mayor Cianci was the constant major force behind the Kennedy Plaza project from its conception to its current phase. Reelected for 3 consecutive terms, he has always given his unqualified support to the project. Kennedy Plaza was an integral part of his campaign program for downtown revitalization. His easy access to the Republican Administrations in Washington appears to have made a difference when the project's future seemed to be in doubt. On the local scene, he was able to rally support in City Council when needed. At the same time, he has been responsive to criticism and willing to adjust plans to accommodate downtown community interest.

Table 5-4

Providence - Summary of Major Events

- 1907 - Downtown pedestrian mall idea originated
- 1959 - City Planning Commission produced the "Downtown Master Plan 1970" Westminster Mall is proposed as a core element of the plan
- March 1964 - Ground broken on Westminster Mall
- 1965 - Interstate Highway I-95 opened
- August 1965 - Westminster Mall opened
- 1972 - Civic Center constructed
- 1974 - Interface: Providence, Rhode Island School of Design study points to pedestrian/vehicle conflicts and first proposes the Kennedy Plaza ARZ
 - Providence Foundation is created; Shepard's Department Store and Biltmore Hotel were closed
- August, 1975 - UMTA solicits proposals for ARZ demonstration sites; Providence responds to UMTA's solicitation
- 1976 - Faneuil Hall Marketplace opens in downtown Boston
- April, 1976 - UMTA announces that Providence is one of the five cities selected for receiving ARZ grants
- December, 1976 - UMTA Study team headed by Moore-Heder and city officials select design for Kennedy Plaza ARZ
- 1977 - A Democratic president assumes power in Washington
- March, 1977 - The plan is unveiled to business community and receives mixed reviews
- August, 1977 - Public hearing on Kennedy Plaza ARZ shows qualified support for plan. City planners modify plan to satisfy objections from downtown interest groups. Minority of small businessmen still voice strong opposition
- September, 1978 - Redevelopment Agency and City Council unanimously endorse plan to approve borrowing \$981,000 and to apply for federal grant for \$4.8 million. Vote came just in time to meet the UMTA deadline for proposal submissions

- City submits application for UMTA approval; Railroad relocation concept reintroduced.
- John D'Antuano was unprinted Project Manager of the Department of Planning of Kennedy Plaza.
- 1978 - Ocean State Theater is rehabilitated to a Performing Arts Center and Biltmore Plaza Hotel reopens
- June, 1978 - Redevelopment Agency approves revised plan for Kennedy Plaza that eases auto circulation
- November, 1978 - City receives UMTA planning grants for \$1.4 million for Kennedy Plaza
- 1979 - Westminster Center facelifiting on mall funded by EDA
- June, 1979 - PRA selects team of architectural and engineering firms headed by Albert Veri Associates to design project
- October, 1979 - UMTA declines to approve architectural contract and asks city to repeat selection procedure
- May, 1979 - Martha Bailey, Chief of Planning, resigns to be succeeded by Sam Shamoon
- April, 1980 - PRA selects Albert Veri Associates for a second time to proceed with final design
- 1981 - Arcade reopens:
 - Republican administration takes over in Washington
 - Budget cuts in UMTA lead to rescission of project funds
- May, 1981 - First meeting of the Kennedy Plaza Advisory Committee
- June, 1981 - Mayor Cianci visits Washington and receives federal support for Kennedy Plaza
- October, 1981 - Advisory Committee members raise opposition to restriction of motor vehicle traffic. A design Subcommittee is appointed to explore alternative plans
- December, 1981 - City receives \$1.3 UMTA grant to begin construction
- January, 1982 - Advisory Committee supports alternative plan to reroute traffic and further limit auto restriction
- March, 1982 - City resubmits plan revisions for funding from UMTA
- September, 1982 - UMTA approves an additional \$4 million for the project

January, 1983 - Committee on Urban Redevelopment Renewal and Planning conducts investigation concerning limited auto use of the Westminster Mall limited auto use of the Westminster Hall

- Outlet Department store closes

August, 1983 - Construction on Kennedy Plaza scheduled to begin

The planning staff in PUD, Martha Bailey, in the early phases and subsequently Samuel Shamon and John D'Antuono, were responsible for starting the project and steering it along a perilous road to completion. It all started with a progressive idea of what the downtown should be, but because of opposition from the business community they had to adjust their plans and make them more pragmatic.

It remains uncertain, however, whether the project will ever be able to achieve its objectives. According to the environmental impact statement the final plan doesn't improve air quality overall. Only if there is an eventual shift from auto to transit, would there be a reduction in air pollution. This is ironic since meeting air quality standards was one of the primary reasons for getting the project started. The name ARZ has taken on a negative connotation and is no longer used. The new plan consists basically in rerouting traffic and separating the auto from transit circulation. It is even doubtful whether the plan will be successful in revitalizing the downtown by itself. The downtown has undergone a major activity transformation and it is exceedingly difficult to regain what it has lost. Only if the Capital Center project comes to fruition, is there a high potential for the Kennedy Plaza to become the real city center.

Because of the nature of the project RIPTA was a major participant in the implementation process. The Agency underwent three changes in management. The first manager, Jim Craebner a progressive administrator, worked closely with the city planners and helped the project take off. His successors have proven to be more conservative and reluctant to take any major risks. Although bus ridership has increased during the past ten years, service has not kept pace with demand. Actually, because of cuts in operating budgets the agency has been forced to eliminate routes. City agencies changed their outlook towards mass transit improvement from one of considering to be public works projects, to viewing them as a means to increase private investment. RIPTA staff feel that there has been a productive give and take from all sides involved, especially on the issues of the number of bus berths and the layover of buses on the Plaza. They agree that the final design represents a contribution to the City's mass transit system.

Most of the issues that still remain to be resolved deal with operation and management details that result from confusing and overlapping responsibilities among city agencies. The Planning Department and Redevelopment Agency are responsible for planning and construction. There is a maze of city departments which own and are responsible for maintaining the Plaza once work is completed. For instance, the park facing Union Station is the maintenance responsibil-

ity of the Parks Department. But the park to the left of the station opposite to the Biltmore Hotel is taken care by the Department of Public Property because it has jurisdiction of City Hall which fronts the Plaza. Meanwhile, the island in the center of the Plaza where the monuments are located is divided between the Parks, the Public Property, and the Public Works departments. Finally, because of the historic significance of the monuments, the U.S. Department of the Interior's approval is needed for any work in area. To this confusing is needed for any work in area.¹ To this confusing picture one needs only to include the fiscal crisis and budget cutbacks in City -operations to understand why the City's ability to provide services and maintenance is doubted by the private sector. The business community feels that they pay their share in taxes and they deserve services from the City.

The Providence experience provides evidence that public/private cooperation is possible and can be effective. Through this process, the involvement of the private sector in public planning became institutionalized. The Kennedy Plaza Advisory Committee's work represents a good model of what a democratic process can accomplish. The adopted design was a committee effort. Individuals, such as Ken Orenstein of the Providence Foundation and a professional planner by training, were very instrumental in directing the Committee's work. The plan has received wider endorsement from the affected business community. It is agreed that internally and externally generated delays in implementing the project, though frustrating at times, resulted in an improved project.

¹ "New Foundation Chief Discovers Bureaucracy of Kennedy Plaza," Bob Wyss, Providence Journal, March 14, 1980.

New York City: The Broadway Plaza

The City of New York is the largest city in the nation, with a population of 7.1 million people living in the 365 square miles of the five boroughs, and 9.1 million people in the 5,366 square miles of the SMSA, according to the 1980 census. Business, manufacturing and government agencies in the metropolitan area provide more than seven million jobs, while about four million of these jobs are within the City itself. Manhattan is one of the most densely built urban areas in the world, with a density of 65,000 people per square mile. Its population of 1,428,285 has decreased since 1970 by 7 percent. Midtown occupies an area of three square miles and contains 1,125,000 workers and 110,000 residents (Census 1980).

Times Square, located in the center of midtown Manhattan, is a major theater center, tourist attraction and international symbol of New York City. Tourism is a very important sector of the City's economy and development. In fact, it was estimated that 16.75 million tourists visited New York City during 1977 and spend \$1.6 billion. In addition to being the most popular of the City's tourist attractions, the theaters are also the most lucrative. In the 1975-76 season, Broadway theaters grossed \$70 million, with a total paying patronage of 7.2 million persons. The 40 legitimate theaters (circa 1979) and 44 movie houses draw a daily average of 60,000 visitors to the area, generating a substantial multiplier effect in revenues for related businesses and \$6 million in city taxes (UMTA 1980).

The Times Square area also has an abundance of hotels that service the immediate district and the entire city. Although there are 54 hotels in the area, 32 of the hotels were constructed in the 1920's, are small and attract fewer tourists because of size, age and lack of amenities (UMTA 1980). Of the remaining hotels, most no longer provide luxury accommodations.

Although a very active area, Times Square's reputation and image have become tarnished in recent years. The immediate area contains, in addition to theaters, hotel, retail and office establishments, a large number of porn and novelty shops and fast food outlets. The city of New York, in cooperation with the state's Urban Development Corporation, has a \$1 billion plan to redevelop Times Square around 42nd Street between 7th and 8th Avenues, with a mix of 4.1 million square feet of office buildings, a 500-room hotel, a 2.4 million square feet wholesale mart, 180,000 square feet of retail development and the restoration of nine theaters. The Times Square transit station is to be completely rehabilitated as part of the project.

Transit Service and Traffic Conditions

The city of New York exhibits the highest use of mass transit of any city in the United States; the New York Metropolitan Transit Authority (MTA) transports 6.5 million passengers a day along the largest percentage of rapid transit lines operating in any city in the United States (Edwards and Kelcey 1978). Two subway lines, the

Broadway BMT and the Seventh Avenue IRT, converge under Times Square, and there are several stations along Broadway. Commuters to Times Square rely more heavily on the transit system than any other mode of travel, with more than 90% of all travel to Times Square done using mass transit, including trips for entertainment and social activities (UMTA 1980).

Although so heavily dependent on mass transit, the Times Square area exhibits severe traffic congestion, primarily due to the street pattern. Overall, the city is laid out on a grid system with one way avenues carrying either north or south traffic flows and narrower streets carrying one way east or west traffic. Laid across the grid are several diagonal arteries or avenues, such as Broadway Avenue. Times Square is the "bow tie" shaped space formed by the intersection of the south running Seventh Avenue and the diagonal Broadway Avenue. At the convergence between 45th and 46th Streets, both Seventh Avenue and Broadway each narrow from 60 feet wide to 33 feet wide. Traffic flows are hindered by the narrowing down of the streets and traffic patterns created at the convergence (UMTA 1980).

According to a recent survey, traffic through Times Square passes mainly along Seventh and Ninth Avenues. The traffic counts have shown an average of 26,000 vehicles per day on Seventh Avenue, with average speeds between 6.4 and 10.6 miles per hour, while Ninth Avenue carried 30,000 vehicles per day. In the same traffic count, Broadway as found to serve less traffic; the Seventh and Ninth Avenues only 21,000 vehicles per day, and at a higher level of service with average speeds ranging between 7 to 11.5 miles per hour (Edwards and Kelcey 1978). Reasons reported for the lower level of service on Seventh Avenue were the lack of taxi boarding areas and frequent double parking of delivery vehicles. Taxis accounted for 44 percent of the traffic on Seventh Avenue, but only 34 percent of the Broadway traffic. Because of the lack of appropriate taxi boarding areas, many passengers are forced to enter and exit taxis in the middle of the street (UMTA 1980). Traffic is also hindered at the Times Square convergence where through traffic on Broadway must cross Seventh Avenue while Seventh Avenue traffic must either cross traffic to continue along Seventh Avenue or turn onto Broadway.

Broadway is also used as a major bus corridor for the Times Square area. Five major routes overlap in Times Square along Broadway. Two of these routes originate along Seventh Avenue and bring 22 to 27 buses per hour into Times Square before departing on Broadway while the incoming Broadway buses account for 40-60 buses per hour. Bus travel time on all routes through Times Square is impaired by the traffic congestion and the prohibition of turns to other streets from Broadway (UMTA 1980).

Pedestrian movement is also hindered in Times Square. The volumes of pedestrians on Broadway around 46th Street reach 7,300 at midday and 5,200 on Seventh Avenue at the same time (UMTA 1980). At Times Square, the sidewalks on Broadway and Seventh Avenue end due to the street convergence, and pedestrians are forced to cross to the remaining 20 feet wide sidewalks on either side of the Square. A corresponding problem occurs in that pedestrians on one sidewalk then have to cross the flow of traffic on both Seventh Avenue and Broadway to get to the

opposite sidewalk. An additional hinderance to pedestrian and vehicular traffic occurs because of patron lines at the TKTS booth on the 47th Street island. The lines often extend past the southern tip of the island and into 46th Street. The TKTS booth is a salespoint that distributes Broadway theater tickets at reduced price on the day of the performance. The booth was built at a total cost of \$70,000 by the Theater Development Fund with cooperation between the City and the theater community. The temporary structure, erected in 1972, has received two design awards and has returned over \$12 million to the theaters in the area in the first four years of operation (UMTA 1980).

Events Prior to the Broadway Plaza Project

As early as 1929, the New York Regional Plan Association identified certain streets in midtown Manhattan that weren't conducive to traffic flow and recommended that parts of Broadway be separated for independent pedestrian, transit and other vehicle uses because of the diagonal cut of the street superimposed on the grid system and the narrowness of street and sidewalks at intersections. In recognition, Rockefeller Center was designed to include ease of pedestrian movement to adjacent areas (UMTA 1980).

The basis for the Broadway Plaza project was a 1970 comprehensive traffic review and plan for midtown Manhattan by Van Ginkel Associates in conjunction with the New York City Office of Midtown Planning and Development. In summary, the plan suggested the restriction of auto use and the development of a pedestrian network in parts of midtown including Broadway Avenue through Times Square (Van Ginkel 1970).

The Madison Avenue Mall. As an outgrowth of the plan, a proposal was made in 1970 to convert 15 blocks of Madison Avenue in Midtown into a pedestrian and bus mall. Mayor Lindsay quickly adopted the idea of implementing the country's largest mall. Although an experimental mid-afternoon street closing was attempted for two weeks in 1972 and proved to be enormously popular, a resolution to approve implementation was defeated at the Board of Estimate by a vote of 12 to 10 in July 1973 (Brambilla and Longo 1977). The Board of Estimate is the City's official organ that approves capital expenditures. Its membership is comprised of the Mayor, the president of City Council, the controller and five Borough presidents.

Support for the actual implementation of the mall was weak among the retailers along Madison Avenue, and opposition was strongly expressed by New York taxi unions and Midtown merchant groups (UMTA 1980). The prestigious avenue was prosperous and merchants along it did not want the city to interfere with their success by limiting auto access. They were afraid that the mall would disrupt traffic and discourage business. The Mayor proposed a 90-day test, which was also opposed and the courts eventually ruled that the test required the approval of the Board of Estimate which had previously ruled against the project. Faced with such opposition, the project was abandoned.

Preliminary (Phase I) Planning of the Broadway Plaza

As proposals for the Madison Mall were in discussion, it was already apparent to the Office of Midtown Planning and Development (OMPD) that a plaza in Times Square would be a more feasible project. The taxi union which opposed the Madison mall was willing to support auto restriction in that area, provided that taxis would be permitted to share the transit lanes. Preliminary planning began as early as 1973. In the following year, OMPD and the City Department of Transportation conducted traffic counts and traffic circulation studies of the Broadway-Times Square area and formulated the original plan for pedestrian traffic and transit uses for a Broadway Transit mall. From its origin, objectives for the plan were to create a better pedestrian space for shoppers, ticket buyers and theatergoers, to improve traffic flow by eliminating the complex Broadway and Seventh Street intersection and to aid in an economic development strategy for Times Square. Due to the negative response to the Madison Mall proposal, the newly elected Mayor Beame was careful not to associate his administration immediately with the new mall project but became more supportive once the traffic study was completed.

In unrelated action at the time, Portman Properties, a development company, announced plans in 1973 to build a 56-story, 2,000-room hotel on Broadway between 45th and 46th Streets and obtained the necessary zoning approvals from the City Planning Commission and the Board of Estimate. The \$120 million luxury hotel would provide a new 1,500 seat legitimate theater in fulfillment of the zoning bonus requirement. John Portman, an Atlanta architect and developer, designed a dramatic building that would become the star attraction in the area.

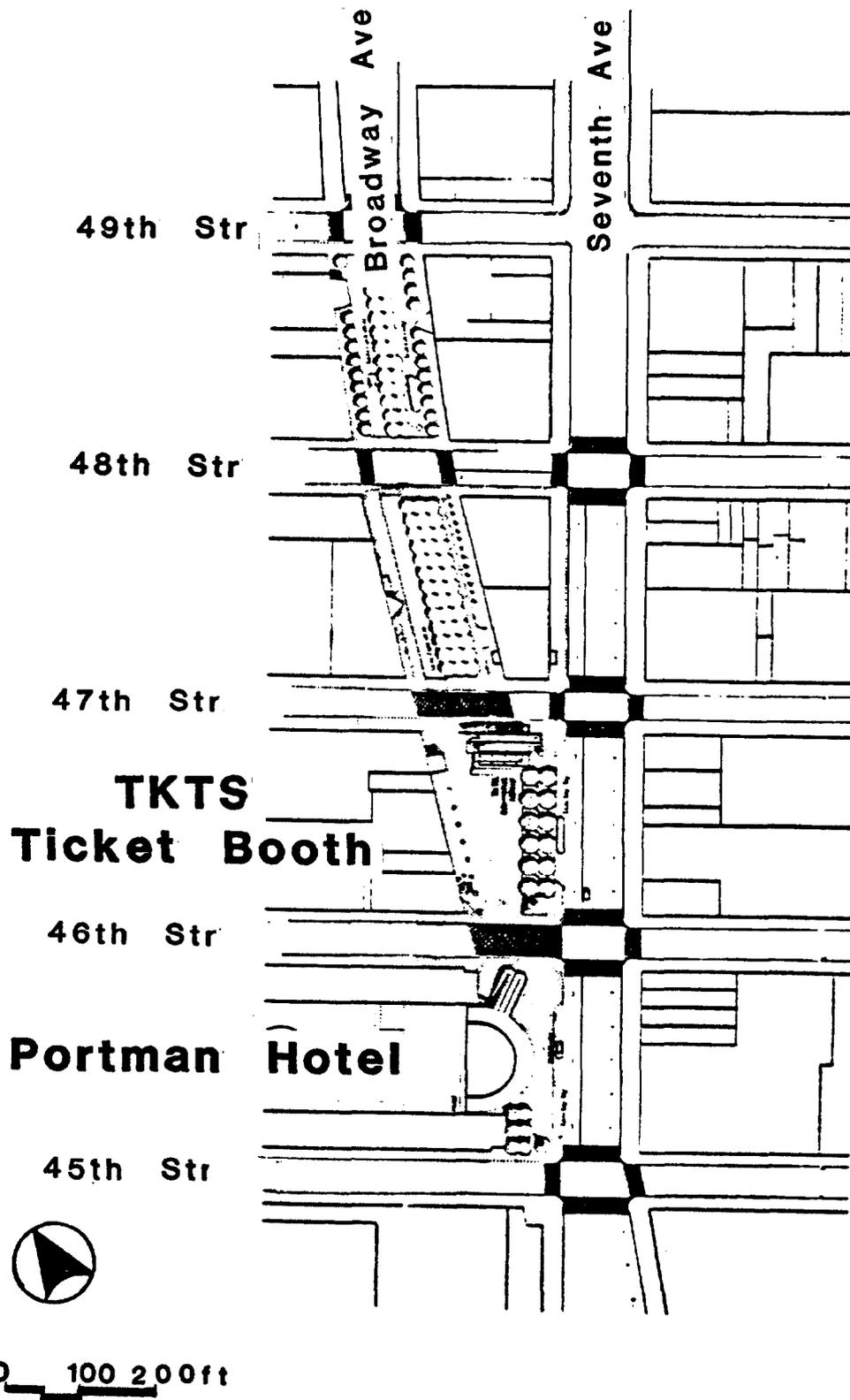
The Community Planning Board (#5), in whose jurisdiction the mall would be sited, unanimously, approved preliminary plans in mid-1975, opening the way for the City to respond to UMTA's SMD solicitation for ARZ proposals.¹ The City submitted three proposals, one of which was the Broadway Plaza project.

The Broadway Plaza Design

The proposal called for the closure to traffic of Broadway between 45th and 48th Streets, and replacing the portion of the street now used by automobiles with new paving. Since crosstown traffic would be allowed to continue along the cross streets, south bound vehicles on Broadway would be redirected via existing crosstown streets to a newly widened Seventh Avenue. Broadway Plaza would consist of three pedestrian plazas (see map on Figure 5-10). Between 45th and 46th Streets, the Portman Hotel would form the southern boundary for the Broadway Plaza. This section of the plaza would include bricked streets and landscaping from the hotel to the Seventh Avenue curb. Taxi lay-bys would be included along the Seventh Avenue curb to service hotel and other patrons. The middle and largest plaza between 46th and 47th Streets would include a pavilion that would house a complete transit,

¹" Prospects Brighten for Broadway Mall," New York Daily News, September 29, 1976.

Figure 5-10
New York City Broadway Plaza Plan



Source: U.S. UMTA 1980

tourist and theater information center along with a new TKTS booth and a police substation. The Plaza would be paved with bricks from the existing building line on Broadway to the west Seventh Avenue curb line, provide tree and other landscaping elements and a recessed bus lay-by along the Seventh Avenue curb. The plaza between 47th and 48 Streets would maintain its retail shops on both sides of the street. As it is within the Broadway right of way, it was designed to include a two-lane taxi and service vehicle roadway, and a separate brick paved pedestrian area (TAMS 1981). Figure 5-11 shows how proposed Broadway Plaza was supposed to look.

A median island on Broadway between 48th and 49th Streets would be used to direct transit services destined for the Broadway Plaza area. Taxis and services vehicles would be directed down the western side of the island, where restrictions would be placed on stopping and parking. The eastern side of the island would be exclusive bus lanes, with corresponding signage and shelters positioned on the island. At the south end of the island, buses would turn east on 48th Street and cross over to Seventh Avenue (TAMS 1981). The transitway would continue across 48th Street and down Seventh Avenue to 45th Street and provide access to the block-long laybys for buses and taxis provided by the two adjacent plazas. Taxis and service vehicles would be permitted on 48th Street on their exclusive roadway and to 49th Street during specific time periods. Through traffic on Broadway would be diverted to Columbus or Seventh Avenue north of 50th Street, and Seventh Avenue between 45th and 47th Streets, would be widened to accommodate new traffic.

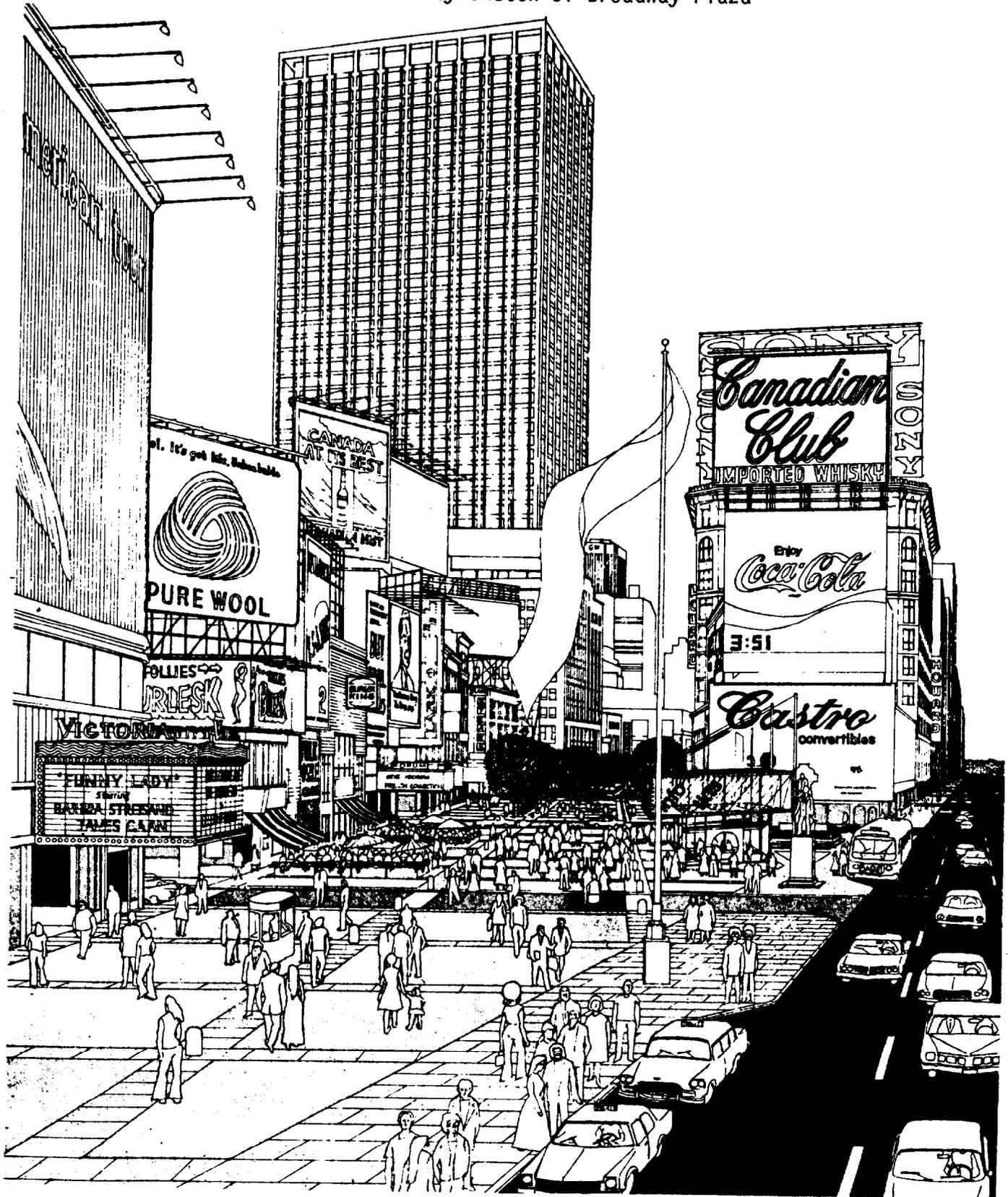
In September 1976, the Administration and Management Research Association (AMRA), on behalf of the city of New York, applied to UMTA under the Office of Service and Methods Demonstration for \$300,000 of Section 3 money for planning and design of the Broadway mall as a demonstration ARZ.¹ AMRA was selected by the city to manage the planning work for the project because it was independently based and could complete preliminary work without the bureaucracy that the project would encounter if done in-house by the city. With a staff of six to seven people, AMRA worked privately, but in cooperation with the Mayor's Office of Midtown Planning and Development (OMPD) and with the city Department of Transportation.

As part of the application process for federal money, a public hearing was held to announce plans for the project and to solicit public opinion. Gerald Schoenfeld of the Shubert Theater, representing members of the League of New York Theater Owners and Producers; Richard Basini, speaking for Broadway Associates, a 100 business interests on Broadway; and representatives from the 42nd Street Redevelopment Corporation were in attendance at the public hearing.¹ They voiced dissenting opinions and said that support would only be given if the zoning ordinances were comprehensively changed to upgrade the midtown area in such ways as to prevent an influx of pornographic theaters and shops, and if a strong maintenance program could prevent drug trafficking, loitering and prostitution in the area.¹

¹Ibid.

Figure 5-11

New York City Sketch of Broadway Plaza



Source: Koffman and Edminister 1977

The SMD Office found the proposal very attractive and in January 1977 UMTA announced that New York City had been added as a fourth demonstration site to the ARZ program and \$500,000 was awarded for the planning and design of the Broadway mall.¹ City officials were hopeful of additional federal funding to supply up to 80 percent of the capital funds that would be needed to design and build the mall, foresaw no obstacles in obtaining approval from the City Planning Commission and the Board of Estimate, and expected project completion by 1979. At the same time, the Regional Transportation Improvement Program for New York, New Jersey and Connecticut was amended to include construction funds for the Broadway mall.² Upon receipt of the UMTA grant, the AMRA staff began planning and design work in conjunction with the OMPD and the Transportation Department.

Phase II - Planning for the Broadway Plaza

In January 1978, Kenneth Halpern was appointed Director of the Mayor's Office of Midtown Planning and Development by the incoming Mayor Koch, and OMPD, along with the City Department of Transportation, were made the lead agencies in the project. Halpern, an architect and the originator of the Broadway Mall idea, with Mayor Koch's support, began to study design alternatives that would make the proposed mall acceptable to the business community. By that time, several factors were bearing on the OMPD. One of the strongest objections to the mall, in the press and from interest groups, was that the mall would create a large open empty space and that it would attract "undesirable elements."³ A second issue was responsibility of maintenance and operation of the mall once completed.⁴ Also in terms of midtown development, the east side of Manhattan was saturated with businesses and housing, while the west side had never reached its potential for development. The Portman Hotel was seen by many as a means to revitalize the convention and theater uses of Times Square and provide an anchor for west side growth. As such, there was considerable public support for the Hotel.⁴ The OMPD contacted the developer of the Portman Hotel and offered the use of space along public right of way for inclusion in the design of the hotel.⁵ Inclusion of the hotel would serve several purposes. First, it would give the south block of the mall a strong focus, while permitting easy access from the hotel to the theater and retail areas. Second, it would allow for joint development

¹ "Giant Step to Good-Times Square: Federal Grant Brings Mall Closer", George Arzt, New York Times, January 27, 1977.

² New York Daily News, September 29, 1976.

³ "Where Does a Mall Pall?", New York Times, February 5, 1977.

⁴ "Broadway is Poised for New Growth; Mall Questioned", Carter Horsley, New York Times, May 10, 1981.

⁵ "Times Square After the Mall", New York Times, May 17, 1982.

The design for the hotel was modified to include a rotunda-like entrance that would project out onto the proposed Broadway Mall, and a band of windows on the third and fourth level retail spaces was added to counter criticism that the former blank north facade was too barren. The cost of construction was estimated at of the area with public and more importantly private money; and third, by combining aspects of the two projects, it was hoped that the Broadway Mall would gain the support of those in favor of the hotel and a constituency for the mall could be built. \$292.5 million, more than twice the amount projected when hotel plans without the mall were announced in 1973.¹ The cost of the construction of Broadway Plaza had also risen to \$6.9 million. Meanwhile, city officials continued to develop funding sources for the project. In October 1978, the city received an additional \$240,000 from UMTA's SMD program to complete architectural and engineering design for the project and to hold public hearings concerning the plans in anticipation of federal funding under Section 3 for 80 percent of the project's costs.² In late 1978, the city entered into contract with Paul Friedberg and Associates, a landscape architect, to prepare a conceptual plan for the project.

In November 1979, the city Department of Transportation held a public hearing to discuss an environmental impact statement, concerning the Broadway Plaza (UMTA 1980) prepared in conjunction with application for federal funding. Tippetts-Abbett-McCarthy-Stratton (TAMS), the same engineering consulting firm that participated in the design of Boston's Downtown Crossing in association with three other firms, was retained by the New York City Department of Transportation in December 1979 to test the feasibility of Friedberg's plan and to prepare the final plans, specifications and estimates for the project (TAMS 1981).

TAMS' evaluation of Friedberg's plan indicated that the closing of Broadway between 45th and 47th Streets and the ensuing diversion of traffic primarily to Seventh Avenue were feasible without causing a significant increase in traffic congestion. In fact, because of the way Seventh Avenue and Broadway converge, the traffic-bearing capacity of the redesigned Seventh Avenue would be equal to that of the current traffic capacities of Seventh and Broadway at 45th Street. Furthermore, TAMS found that after conducting a license plate survey in a car-following mode, a significant percent of the auto traffic on Broadway, in the project area, was through traffic, indicating that a diversion to Seventh Avenue would not be a problem for most auto traffic. From a transit perspective, TAMS found that the level of service provided by the plan would have been essentially unchanged. Overall, though complex, the project was feasible. The TAMS report was released in August 1981.

In 1980, the final environmental impact statement was completed and the City applied to UMTA for \$3 million under Section 3 grant, and to the Federal Highway Administration for \$1.5 million under the Federal

¹"Broadway is Poised for New Growth; Mall Questioned", Carter Horsley, New York Times, May 10, 1981.

²Office of the Mayor Edward Koch, Press Release, October 18, 1978.

Aid Urban System program to assist in financing the project. According to the EIS, the Plaza would "better accommodate pedestrians in the area, improve transit and taxi access, reinforce tourist and theater activity and provide an incentive to business investment." Citizen comments focused on "the areas of circulation patterns, goods delivery, air quality and the management of the Plaza" (UMTA 1980).

The League of New York Owners and Producers and the Automobile Club of New York were unconvinced by TAMS' analyses of traffic flow through the Times Square area. The Automobile Club suggested ways to alleviate additional burdens that would be placed on cross streets north of the plaza and recommended a demonstration closure of Broadway prior to actual construction. The City turned down the proposals primarily because a preconstruction demonstration was not possible. Seventh Avenue could not be widened between 45th and 46th Streets until subway ventilators in the traffic island between Broadway and Seventh Avenue first would have to be reconstructed to accommodate traffic loads in lieu of the pedestrian loads they were intended to carry. The widening of Seventh Avenue was considered to be an essential element of the plan, but, due to its high capital cost, was not envisioned as part of the "test." However, as a response to public concern about management of the Broadway Plaza, the City proposed a tax assessment district, including properties fronting on streets in the area of 40th to 51st Streets from 6th to 8th Avenue as well as the Rockefeller Center, to provide increased maintenance and security services.¹

Because of the hotel's association with the Plaza, the OMPD suggested that the Portman Hotel developer apply for an Urban Development Action Grant (UDAG) as a third mortgage to finance the increased costs of construction. The City, acting as the lead agency in UDAG application, requested a \$30 million loan at the very attractive interest rate of 6 percent. Meanwhile, the City deferred construction of Broadway Plaza until funding for the adjoining hotel was approved.

As part of the site clearing for the hotel construction, it became necessary to demolish three theaters to make room for the hotel. The theaters, Helen Hayes, Morosco and Bijou, had been an established part of Broadway and had a symbolic value for the theater community. The Actors Equity Association, in an effort to save the theaters, requested the National Register of Historic Places to study the eligibility of these theaters for listing on the Register.²

At the same time, the Association initiated a lawsuit against Portman Properties in 1979 accusing the Company of failure to file an environmental impact statement, as is mandated by requirements for federal funding grants, that satisfactorily dealt with the theaters to be torn down. The City had already contended that the theaters were not a historical site in the EIS; however, in the face of the impending lawsuit, Portman Properties was required to submit its own EIS in order

¹ New York Times, May 10, 1981.

² Ibid.

to become eligible for UDAG funds. A new EIS was filed in 1980, (UMTA 1980) and the UDAG funds were allocated for construction; however, preparation of that document held up construction for a year.

Once the UDAG funds were awarded, Actors Equity brought another lawsuit against Portman claiming that the EIS submitted to UDAG had not adequately dealt with alternatives that might not require the demolition of the theaters and argued, therefore, that the funding was null and void. The Association was turned down in their request for an injunction to prevent construction and appealed their case to the U.S. Supreme Court, delaying construction another nine months. Finally, on March, 1982, the Supreme Court refused to hear the case, letting lower court rulings stand, and theater demolitions began immediately. In a very emotional and highly publicized event, actors protesting the demolition of the theaters, in front of the bulldozers, had to be carried away by the police. In an effort to buy time, several days before the case went to the U.S. Supreme Court, the Actors Equity Association also brought suit against the City of New York in State Supreme Court, claiming that Broadway Plaza didn't have a suitable impact statement and since the Plaza was tied to the hotel, there should be an injunction against demolition. However, Broadway Plaza was shown to be within legal guidelines and had no impact on the primary hotel suit. Due to design changes in the hotel to encompass Broadway Plaza, the delay caused by requirements for an EIS study and delays caused by the lengthy lawsuits, the estimated cost of the hotel by the Spring of 1982 had risen by \$40 million dollars. The actual UDAG grant approval to the City of New York was \$21.5 million and the City extended that as a third mortgage to the hotel developer.¹

In an effort to maintain the theater community's support, the city entered into negotiations with the Theater Advisory Council, a group established by the Board of Estimate to advise the city Planning Commission on matters related to special permits and other zoning mechanisms for preserving the theater district. Representatives of the owners, producers and actors sit in the Council. A proposed new zoning ordinance would protect all current theaters from any demolition and/or construction in exchange for a strategy for transferring development rights. Under such a strategy, theater owners would be allowed to sell an estimated 3.9 million square feet of development rights to owners of property throughout a broad area of western midtown.²

By May 1982, a general compromise of principles was reached among the League of New York Theater Owners and Producers and the Theater Development Fund, the sponsor of the TKS pavilion, that they would support the construction of the hotel, but in order to maintain and minimize changes to the Times Square area, would

¹"Final Contracts to be Signed Today for the Portman Hotel", Frank Prial, New York Times, (date not available).

²"Innovative Zoning Plan Could Aid Theaters", Martin Gottlieb, New York Times, September 14, 1983.

withdraw any support from the Broadway Plaza project and inclusion into the special assessment district, even though this meant the loss of a new TKTS booth.¹ A New York Times editorial² characterized the Plaza as ill-conceived and hailed the dropping of the Mall as a good idea.

It became apparent to city officials that the opposition to the Mall was too strong to reverse and at this stage the project would be killed if brought to a vote at the Board of Estimate and the State Legislature, both of which had to approve it.³ In September 1982, the hotel's developer with the concurrence of the city, decided to redesign the front of the hotel, which was supposed to extend onto the Plaza. The Marriott Marquis Hotel is currently under construction and it is expected to be completed in 1985.⁴ As of the Summer of 1983, the city still has not made a public announcement regarding the fate of the Broadway Plaza, and the project is still listed in this year's annual budget.

In the meantime, the problem of the Times Square area has not diminished and the area is still in need of a facelift. The Theater Advisory Council although somewhat afield of its mandate, is currently considering alternate plans which may include street improvements, such as widening of sidewalks, enlarging the TKTS island and expanding the ticket booth by narrowing Broadway and Seventh Avenues, and providing street furniture and amenities without restricting auto traffic.

General Comments

The economic, social and political conditions in New York City are so different from any other city in the U.S. and it is very difficult to draw many conclusions from this case that can be generalized to other situations. Times Square in particular, is a very important site to many people in terms of symbolic value and the resistance to change is too great. During the ten years of the history of the project, three mayors, one Republican and two Democrats, all supporters of the Mall have held office, the City suffered a major fiscal crisis and was able to survive it and recover and rampant inflation escalated project costs from \$4.9 million in 1976 to \$12.6 million in 1980. The project started at an unfortunate time during the peak of the fiscal crisis when money was tight, right after the failure of the

¹"Projected Mall in Times Square Area Losing Support", Paul Goldberger, New York Times, May 5, 1982.

²New York Times, May 17, 1982.

³"Broadway Mall Collapses", Skyline, June 1982.

⁴Frank Prial, New York Times.

Madison Mall, during the first year of a new city administration reluctant to support any new mall. The project was boosted by early support it received from UMTA as a transit mall and subsequently was shifted under the SMD office as the fourth ARZ demonstration project. There were two planners in the OMPD, Kenneth Halpern and Robert Flahive, who played important roles in the project's history. Halpern was the originator of the idea and sought to make it a success. Finally, in 1982, he resigned as director of OMPD to work for Portman Properties overseas.

Because of its location, the project was a very complex one from a construction and traffic engineering point of view (to be built over two subway lines, BMT and IRT and utility lines and one of the busiest intersections in the world). In addition, it involved coordination of a bureaucratic maze of several public agencies (OMPD, City DOT, transit authority and utility companies), several planning and design partners (AMRA, Friedberg, TAMS) and numerous business and labor organizations (League of New York Theater Owners and Producers, Broadway Association, Actors Equity, Taxi Union, the Automobile Club of New York, etc.)

The Broadway Plaza case demonstrates that the implementation process is a political one which involves negotiation between power structures in the city. The city administration, the planners and the Federal Government who were its primary backers, tried to sell the mall idea to a skeptical, conservative and powerful theater community. While there was agreement between the two parties on the goals to be accomplished in the Times Square area regarding facelifting and improvement of economic development conditions, there was disagreement on the means and the implementation strategy. The first party felt that the Plaza was a good idea, well designed and that the strategy of tying the Plaza to the popular Portman Hotel and new TKTS booth was an ingenious idea for ensuring the Plaza's successful operation and at the same time for obtaining the needed support for the project. On the other hand, a minority of the business community was convinced that the Plaza was ill-conceived, badly designed and marketed; the majority of the group was ambivalent. Through this arrangement between hotel developers and the city, the Plaza would be constructed and the hotel would get an attractive front door and good terms for a third mortgage through the UDAG grant. In the end, things didn't materialize as planned. Because of the unfortunate demolition of the three significant theaters, the issue became very emotional. As a result, the hotel lost much of its support among the theater community and it ended up contributing to the demise of the Plaza. The theater interests were torn between those who wanted the hotel to revitalize the area and those who valued the preserved theater environment. There were also mixed feeling, regarding the new ticket booth, since many theater producers maintain that if they did not have the half price sale, they could sell their tickets at full price. Due to delays and needed redesigns, there were substantial cost overruns in the hotel construction. Finally, the strategy backfired and many members of the Times Square area resented the fact that the Plaza was forced upon them. According to those critics the project never adequately addressed the issues of loitering and traffic. See Table 5-5 for a summary of major events.

It is interesting to finally note that the end of the three ARZ proposals that New York City submitted to UMTA's SMD office in 1975, the one selected was faced with great opposition and implementation problems and its completion is in serious doubt, while the other two not selected by the SMD office were successfully implemented by the city. The first one was the Fulton Street Mall in Brooklyn where ground was broken in 1977. The first phase of the eight-block, two-way bus mall was completed in 1981. It cost \$25 million and was funded by UMTA and Community Development funds. The second one was the Nassau Street Mall in Lower Manhattan.

Table 5-5

New York City - Summary of Major Events

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- 1929 - New York Regional Plan Association recommends separation of pedestrian and transit uses from automobiles on parts of Broadway.
 - 1930 - Rockefeller Center development provides for public plazas and pedestrian amenities.
 - 1961 - New York City Zoning Ordinance further encourages the development of public plazas.
 - 1969 - Office of Midtown Planning and Development commissions study which recommends that Broadway be one of the Midtown streets to be closed to traffic as part of a traffic control plan for Midtown Manhattan.
 - 1972 - Madison Avenue is closed to traffic for two weeks but fails to win approval as a permanent mall.
 - 1973 - Preliminary plans for Broadway Plaza begin by the Mayor's Office of Midtown Planning and Development.
 - 1973 - Abraham Beame is elected mayor of New York City.
 - Portman Properties development company announces plans to build hotel on Times Square.
 - 1974 - OMPD and City DOT formulate plan for Broadway Mall.
 - 1975 - The Community Planning Board unanimously approves preliminary plans for Broadway Mall.
 - December, 1975 - New York City responds to UMTA's SMD solicitation with three proposals.
 - 1975-76 - New York City suffers fiscal crisis.
 - August, 1976 - Public hearing for plan finds theater community and merchants voicing dissenting opinions.

- September, 1976 - AMRA applied to UMTA SMD for section 3 planning money (total project cost estimate \$4.5 million).
- January, 1977 - UMTA selects New York City as a demonstration site.
- Broadway Mall included in the Regional TIP.
- January, 1978 - Mayor Ed Koch takes over as new mayor and is a strong supporter for the project; Kenneth Halpern is appointed as Director of the OMPD.
- 1978 - The OMPD ties Broadway Plaza mall into Portman Hotel design.
- October, 1978 - City receives additional \$240,000 from UMTA's SMD program.
- November, 1978 - State announces a \$535,000 grant as part of local match needed to obtain federal money.
- October, 1979 - Draft EIS for the project circulated.
- November, 1979 - Public hearing on the draft EIS.
- Paul Friedberg is contracted to prepare conceptual plan.
- December, 1979 - TAMS is hired to evaluate traffic impacts of Friedberg's plan and prepare contract documents for advertisement by city DOT.
- 1979 - City requests \$30 million UDAG money for the Portman Hotel.
 - 1979 - Actors Equity Association initiates a lawsuit against the Portman Properties for failure to file an EIS that satisfactorily dealt with the theaters to be torn down.
- November, 1980 - Environmental Impact Statement is prepared; City applied to UMTA for \$3.0 million under section 3 and \$1.5 million to FHWA under FAUS program.
- 1980 - UDAG funds are allocated for the Portman Hotel.
 - Actors Equity Association requests an injunction to prevent the hotel construction but is turned down; case is under review by Federal District Court.
- March, 1982 - The U.S. Supreme Court refuses to hear appeal from plaintiffs and three theaters are demolished to clear site for hotel

- Hotel developer, the League of New York Theater Owners and Producers and Theatre Development Fund withdraw their support for the Plaza.

September, 1982 - Hotel developer redesigns entrance without the Plaza.

Tucson - The Auto Restricted Zone Proposal

Tucson is one of the fastest growing cities in the nation. Between 1950 and 1965 the population grew from 45,500 to 234,600. Today, it is the second largest city in Arizona, with a city population of 330,537 (1981 Census) and a metropolitan population of 531,263. The City has a history of annexing suburban territory. Its area increased from 71 square miles in 1964 to 105 square miles in 1983. It has a very low population density of approximately 3,000 persons per square mile. Tucson is located 150 miles south of Phoenix and 60 miles north of the Mexican border. Mexican-Americans account for 24 percent of the City's population creating a bilingual city where two cultures merge.

As the City expanded, population growth shifted primarily toward the east and the Catalina Hills, where commercial development occurred along highway strips and around suburban shopping centers. Retail development in the downtown area has resulted in a decline and is now limited to specialized stores serving inner city lower income clientele. The downtown ranks a distant third as a retail center, to the two major shopping malls. Many of the retail establishments on the eastern part of the CBD have closed and have been left vacant, and those continuing in operation are mainly marginal businesses. Virtually one whole block on Congress Street has abandoned store fronts.

In an effort to maintain a viable downtown, the City embarked upon an urban renewal and development project. Since 1971, a new government complex, and a civic/convention center (the La Placita, an auto restricted shopping area), have been built. The success of the new developments, had a detrimental effect to other adjoining CBD areas. The core area so far has failed to attract the 17,300 downtown employees for after work activities and shopping. Pedestrian counts indicate that pedestrians continue their travel within the City to the renewal area and infrequently cross to older areas, especially in the CBD.

Overall, pedestrian activity in the downtown is limited to the mid-day lunch hour. During and after work hours, pedestrian volumes drop considerably. The University of Arizona is located approximately a mile away from the CBD, and with a student and employee population of 30,000, represents an untapped major market for the downtown area. Presently, few university related persons visit the downtown.

Transportation related problems were identified as the single most important problem area facing government in a 1973 public opinion survey. The downtown incorporates parts of an older village structure of streets that is in contrast with the surrounding newer grid system. There was a heavy private auto orientation in downtown traffic. The transit system was inadequate and presented problems for transit users. The placement and frequency of bus stops was inappropriate and bus shelters were limited in number contributing to the problem of negative image for the downtown (Voorhees 1977, Tucson).

In response to the needs for an improved and attractive downtown, a better image that would attract and keep people in the CBD, increased

pedestrian uses and amenities that would unify the new and old parts of the district and property rehabilitation and development, the City administration appointed a Steering Committee in 1971 to explore the feasibility of alternative transportation modes for the downtown area. The Committee was comprised of city officials and representatives from the business community as well as university faculty. In an UMTA funded study, known as the "Alternate Modes" study, the architectural firm of Gruen Associates and the transportation planning firm of DeLeuw Cather proposed an auto restricted pedestrian zone for downtown Tucson. The possibility of a pedestrian-tramway use of a 3,000 ft. section of Congress Street and a bus-transitway on the adjacent Pennington Street were included in the plan. The originator of the idea was Phil Whitmore, later to become director of the Department of Community Development. In earlier efforts he was also responsible for putting the Urban Renewal Project together. The Gruen effort was the first study to provide recent travel data for the CBD area. The study recommendations, though not officially released until April 1976, seemed to have had some public support.

The Tucson Department of Transportation in cooperation with the Planning Department responded to UMTA's SMD solicitation in 1975 by proposing to convert to pedestrian and transitway two of the main downtown streets - Pennington and Congress. UMTA selected Tucson as one of the five demonstration sites early in 1976.

UMTA's team of architects and planners headed by Moore-Heder further developed the Gruen concept, prepared preliminary plans and identified two related approaches to the problem of increasing street activity. The first was to design all new circulation patterns and pedestrian improvements to connect existing activity generators such as office buildings, parking areas and bus stops. The second approach, related to the first, was to program the traffic free space for an extended time period with business promotions, and public cultural and entertainment events, since the low levels of downtown activities indicated that physical renewal alone would not induce new vitality without a complementary activity program. It was proposed that the City and Trade Bureau would take the responsibilities to manage programmed activities.

The design of the ARZ consisted of a traffic and pedestrian circulation framework, and a street improvement program. The circulation framework would reallocate downtown Tucson streets for separate pedestrian, transit and auto traffic uses. The pedestrian system would include the primary shopping streets and provide connections to the pedestrian systems in the urban renewal area, with plazas and shelters along the routes. The transit system was designed to complement the pedestrian patterns and improve transit service. On streets which would accommodate pedestrians and transit, plans were made to separate the two users as much as possible, through such means as providing shelters that are screened from the actual busway, and restricting bus speeds to 10 miles per hour within pedestrian areas. The auto circulation system would have provided major distribution service around the periphery of the area with access maintained to all existing parking areas. The major changes would have been the elimination of through traffic on Pennington and Congress Streets and

the Church and Stone Streets crossing the downtown. Deliveries were to be allowed on the pedestrian and transit ways except between 11:00 a.m. and 2:00 p.m. See map in Figure 5-12 (Voorhees 1977, Tucson).

The street improvement program included continuous pedestrian facilities that would provide shade, cooling, and places to rest. It was considered that these shelter arcades would entice people to visit and walk on the downtown streets. At some locations, the arcades could have form patios in which social activities could be held. Trees and planters would have been placed throughout the mall area, along with benches and other pedestrian amenities.

The ARZ would have had its main impact on pedestrian accessibility which would have increased due to the elimination of conflicts with crossing traffic. The improved streets were to connect all the major activity generators within the downtown, and walking distances from end to end within the pedestrianized area, would have been about 1,500 feet. The traffic-free streets and busways would have permitted pedestrians to cross streets at their convenience and eliminate waiting at intersections. The proposed routing of buses and design of transit stops would have relieved existing conflicts due to crowding and inadequate stop accommodations. The cost of the total street improvements was estimated to be \$3,789,000.

Part of the activity plan noted earlier included events that ranged from traditional yearly occasions such as the local Rodeo Fiesta to weekly occurrences such as on street vendors, music and displays. In February 1976, just several months after the city applied for an SMD grant and before they received UMTA's response, a cess. According to UMTA's report, no major traffic problems were created. However, there are accounts of poor planning and public relations. Few people were aware of the street closing which created confusion, traffic congestion and anger. The press and a group of merchants turned against the project, blamed the ARZ and subsequently the city administration's dedication to the effort diminished; although an activity coordinator was appointed and agreement to participate with the Moore-Heder effort was to follow.

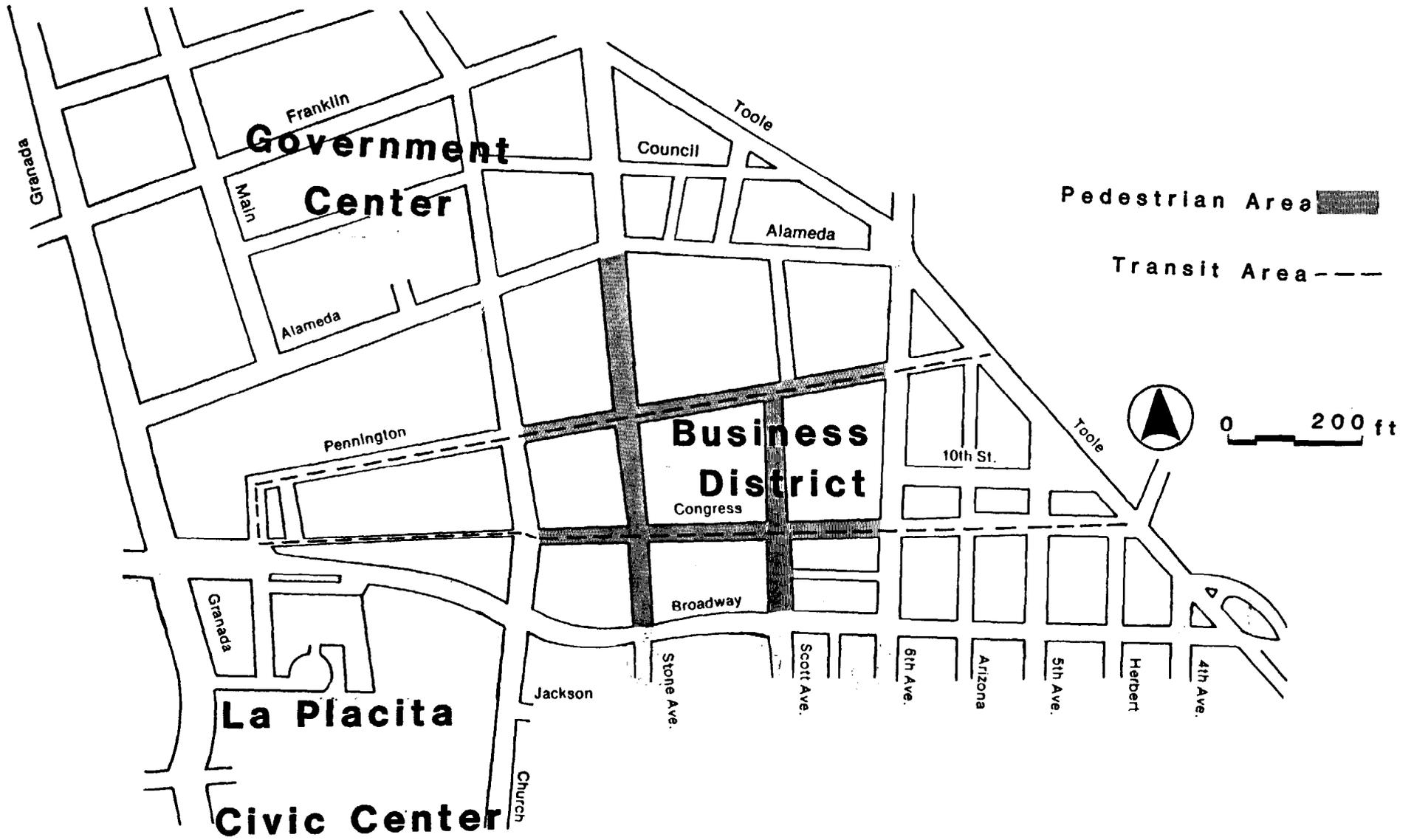
Part of the activity plan noted earlier included events that ranged from traditional yearly occasions such as the local Rodeo Fiesta to weekly occurrences such as on street vendors, music and displays. In February 1976, just several months after the city applied for an SMD grant and before they received UMTA's response, a cess. According to UMTA's report, no major traffic problems were created. However, there are accounts of poor planning and public relations. Few people were aware of the street closing which created confusion, traffic congestion and anger. The press and a group of merchants turned against the project, blamed the ARZ and subsequently the city administration's dedication to the effort diminished; although an activity coordinator was appointed and agreement to participate with the Moore-Heder effort was to follow.

Since then, the downtown's character has changed. Retail activity has declined further. Two principal department stores, J.C. Penney's and Jacome's relocated from the area to the suburbs, leaving only small specialty shops downtown. It has been accepted that the CBD cannot compete with the suburbs in retail activity. On the other hand, the CBD is quite active in residential and office development. Space in La Placita center has been converted mostly into office use. Nearby, the old Santa Fe Railroad Station is undergoing renovations. Transit service and ridership has increased and there is discussion of instituting light rail service between the CBD and the University to be funded using City and State money.

Figure 5-12

Tucson CBD

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Source: Voorhees 1977, Tucson

In 1978, a 48-member Downtown Advisory Commission was appointed by Mayor-Council representing various private interests in the downtown. The Commission was instrumental in developing the El Centro de Tucson Plan which was presented in 1981 and adopted by Mayor and Council. The new plan includes improvements beyond the immediate downtown area and recommends auto restriction in the same area as the original SMD plan. This time the plan has support of the downtown merchant's association. Funding is expected to be primarily local. At this time, however, two important supporters of the ARZ have left the City. They include Whitmore, previously mentioned, who also developed the latest plan, and Dr. Martin Nizlek, previously coordinator of the Gruen effort and later in charge of transit planning in the Department of Transportation of the City. Table 5-6 presents a summary of major events.

The Tucson case represents the least successful case of the 6 cities studied. Tucson is an urban area significantly different from the other SMD demonstration sites. It is characterized by rapid growth and low density, a weak transit system and high dependence on private auto circulation. One of the reasons that Tucson was selected by UMTA as a demonstration site was precisely because it was so different from the other locations. The foundation of the ARZ concept was the linking of CBD activities, but was considered even by UMTA's staff to be a marginal case with little potential for success. Rerouting traffic around the CBD was not fully resolved.

Local support was rather weak. Tucson has a weak mayoral form of government. Louis C. Murphy, a Republican Mayor, has been elected for three consecutive terms and is currently seeking reelection for his fourth term. The Mayor has been supportive of downtown revitalization and responsive to the needs of the merchants with good contacts with the Republican Administration in Washington. However, he has neither opposed nor fully supported the ARZ concept. Around 1975, Council was predominately Democratic and in favor of innovative ideas such as the ARZ concept, while the Mayor and the Republican councilmen were on the conservative side. In a recall election several Democratic members were replaced, losing the majority in Council and with it support for the ARZ. The Downtown Business community was also split on the ARZ issue. Those merchants who were doing well and were active in the community were in favor of the project, while those who were traditionally inactive with marginal business raised vocal opposition after the unsuccessful Rodeo Fiesta test. There was never a great deal of support for transit service in Tucson among appointed or elected officials. It is felt that Whitmore's dynamic and enthusiastic involvement kept the idea going for about 10 years under these conditions.

The ARZ idea was put to the test too quickly, without proper operational coordination and was subsequently hastily dropped without any major effort to save the project. It was during the same period that UMTA encountered opposition to another highway demonstration project in the west. The Diamond Lanes project involving preferential lanes in the Santa Monica Freeway in the Los Angeles areas. This demonstration was interrupted due to public outrage. It might have been because of that event that UMTA became reluctant to exercise any further pressure on Tucson.

Table 5-6

Tucson - Summary of Major Events

1971	- Construction of the Government Center.
	- Downtown Steering Committee to explore alternative transportation modes is formed.
1972-73	- La Placita shopping and office area is built as part of the Urban Renewal Project.
1975	- UMTA study by Gruen Associates recommends auto restriction for two major downtown streets.
December 1975	- The Tucson Department of Transportation responds to UMTA's SMD solicitation.
February 1976	- Demonstration closing of central downtown streets during Rodeo Fiesta results in the project demise.
	- UMTA selects Tucson as a demonstration site.
	- UMTA study team headed by Moore-Heder develops plan.
March 1976	- Diamond Lane demonstration fails in the Santa Monica Freeway in Los Angeles.
1978	- Downtown Advisory Commission is appointed.
1981	- Adopted El Centre de Tucson Plan calls for downtown auto restriction again.

Summary and Discussion

UMTA's experience with the ARZ demonstration program has certainly been an interesting one and one that has provided many useful lessons. Great effort and determination is required in all steps of the process from planning and design to construction and management to ensure successful project completion. Of the six cities originally selected, more than eight years ago, only two have implemented ARZs within the SMD program, and a third one is currently in the construction phase. The originally proposed budgets in 1975 have been exceeded by an average cost overrun of 70%. According to the six criteria for success outlined at the beginning of this chapter, Boston is the most successful of the six cases studied, since it met all conditions.

Boston is the only city to successfully complete an actual full scale ARZ in four years after the SMD award. The project was the result of active participation and collaboration of government agencies and downtown interests. The post-implementation evaluation concluded that the project has achieved its objectives. However, even Boston had its share of problems and setbacks. One reason that it was so successful in the SMD program was because the City had the project on the design board since 1967 and by the time UMTA chose Boston as a demonstration site, popular support had already been built for the project.

Memphis, although it did complete the project, it is believed that it did feel short of meeting the ARZ program goals. The Memphis project essentially involves improvement of transit circulation and streetscape upgrading of an existing mall. The project encountered several construction delays due to lack of coordination between governmental agencies. In Providence, after many delays in reaching agreement, a substantially scaled down design has achieved consensus among interested parties. Construction started this fall. In New York, agreement has still not been reached, as to the goals or the means of accomplishing them, and it is uncertain if the ARZ will even be started in the foreseeable future. Burlington represents an unusual case. It has successfully implemented the ARZ project, but it happened after the City withdrew from the SMD program. Finally, Tucson was the least successful case. It didn't meet any of the conditions set and dropped out of the SMD program in its early stages.

Although the ARZ demonstration program has not yet been completed, some important observations have emerged regarding project implementation that may be of interest to urban decision makers. The Voorhees (1977, Vol. 1) study has identified a list of critical factors that can predict the success of planning and implementation of ARZs. The discussion of the implementation experience of the ARZ demonstration cases will be organized around these factors. Voorhees' key factors can be grouped into four categories: pre-existing activity and characteristics of the area, design issues, transportation impacts, and institutional factors. Table 5-7 summarizes the six ARZ project characteristics, important events and problems that influenced the implementation success to facilitate this discussion.

Table 5-7A

Summary of ARZ Project Characteristics

Completed Projects

City	Site Description	ARZ Plan	Cost Estimates/ Funding Sources & Agencies Involved	Associated Developments & Events (positive impacts)	Implementation Problems
Boston Downtown Crossing	.Population: 641,000 .Office and retail uses .High employment density .High transit use .High pedestrian traffic	.Total to partial elimination of ve- hicles for 6 streets .Improve pedestrian environment and attractiveness of shop- ping district .Revise transit routes .Transit mall (eliminated later)	\$5 million total \$2 million UMTA SMD grant \$1.5 million capital UMTA & FHWA grants \$1.5 million City of Boston Redevelopment Authority .Mayor's Office .Downtown Crossing Assoc.	\$130 million apt/hotel/ retail .Faneuil Hall-Quincy Market .Mayor's involvement	.Instigating support among major retailers at early stages .Agreeing on plan elements
Burlington Church Street Marketplace	.Population: 38,000 .Retail, office uses .Low density .Economically viable .CBD .Good transit system	.Close traffic for 2 blocks .Create a pedestrian mall .Street improvement for 4 blocks .Revise transit routes .New transit terminals	\$6.9 million total \$5.4 million UMTA capital grant \$1.5 City .Church Street Market- place Commission	.Urban Renewal Project .Burlington Square Mall .Pyramid Mall pro- posal .Senator's and Mayor's involvement	.Agreeing on plan elements
Memphis Madison Avenue	.Population: 623,000 .Office, banking and retail uses .Hub of transit system .Low density	.Extend revitalization from existing mall .Shuttle bus service between CBD and Medical Center .Major bus terminal .Re-use of vacant buildings .Street sidewalk improve- ments .Transit marketing	\$1.4 million total \$1 million UMTA SMD grant \$.1 million State funds \$.3 million City devel. fund .Center City Comm. .Memphis Area Transit Authority	\$40 million office investments .Mid-America Mall	.Solving construction problems .Coordinating participants

Table 5-7B

Summary of ARZ Project Characteristics
Incomplete Projects

City	Site Description	ARZ Plan	Cost Estimates/ Funding Sources & Agencies Involved	Associated Developments & Events (negative impacts)	Implementation Problems
Providence Kennedy Plaza	.Population: 156,000 .Financial, retail and governmental center .High employment density	.Create transit mall & pedestrian plaza .Improve transit inter- face .Revise vehicle circu- lation .Improve Plaza's attractiveness	\$7.4 million total \$1 million UMTA SMD grant \$5.1 million capital UMTA grant \$1.3 million City of Providence .Dept. of Planning & Urban Development .Kennedy Plaza Advisory Comm.	.Union Station improvements \$100 million office building \$100 million Capital Center Project .Selection of consultant	.Instigating support .Agreeing on plan elements .Changes in Federal Adminis- tration
New York Broadway Plaza	.Population: 8,000,000 .Theater district and retail uses .High transit use .High pedestrian traffic .High traffic congestion	.Close traffic for 4 blocks .Create transit mall and 3 pedestrian plazas .Revise vehicle circu- lation to improve traffic flow .TKTS tickets booth	\$6.8 million total \$3.0 million UMTA SMD grant \$1.5 million FHWA \$2.3 million NYC's capital budget .Office of Midtown Planning & Develop- ment	\$320 million Portman Hotel .Demolition of Theaters	.Instigating support .Anticipating economic changes .Agreeing on plan elements
Tucson Proposed ARZ	.Population: 330,000 .Rapid growth .Low density .Retail, office and government uses .Low transit use	.Close through traffic on 5 streets .Street improvements .Redesign bus routes and transit stops .Activity/Events	\$3.8 million total \$2.6 million UMTA capital grant \$1.2 million UMTA SMD grant .Department of Commu- nity Development .Trade Bureau	.La Placita Development .Rodeo Fiesta demonstration	.Instigating support

Pre-existing Activity

Four out of the six cities are located in the northeast, one in the south and one in the west. With the exception of Tucson, all cities are the largest urban centers in their respective states. Three have a population of more than 1/2 million inhabitants. All cities, with the exception of Boston, have had declining CBD retail trade due to the competition of suburban malls. High density, traffic congestion and transit infrastructure development were not the key factors in choosing the sites. Half of the cities have had high density with high dependence on mass transit service, and only two had large pedestrian and traffic volumes to warrant an ARZ for that purpose. However, such factors seem to have had an impact in the extreme cases. For example, Boston's success can be attributed to the fact that the downtown possesses an ideal combination of many of the preconditions, in terms of economic vitality, accessibility and transportation infrastructure. The Downtown Crossing case demonstrates that under the appropriate conditions an auto restriction project can be an important activity contributing to the CBD economic revitalization. On the other hand, Tucson's failure to implement an ARZ can be attributed to the fact that the city had a very low density, an economically declining CBD, lack of transit infrastructure and a rather negative attitude toward mass transit. For the cities in between, the situation becomes more complicated and such variables are not adequate to explain the outcome.

Design Issues

Since the funds came from UMTA, all proposals had a transit component which included improvement of the transit services, consolidation and integration of bus routes and establishment of exclusive transitways or terminals. All designs involved improvements in the street furniture, landscaping and some pedestrian amenities. Four cities had a pedestrian mall component. Five plans were developed by a team of consultants selected by UMTA and headed by Moore-Heder Associates. Only New York City's Broadway Plaza was designed by a different consultant. Eventually local planning and architectural firms were hired in all cities for the preparation of the final construction designs. The common concept in all designs was that of linking activity centers and integration as part of a comprehensive urban development strategy. Most of the cases examined had concurrent major urban revitalization programs in their respective areas and the ARZ improvements intended to build upon, extend and solidify those improvements.

Agreement on the size and design of the ARZ was found to be a source of difficulty and a cause of delays for all project cases. Providence in particular, encountered many problems reaching a consensus on the design aspects. In retrospect, project participants feel that the delays had a positive effect of eventually achieving a better design. It seemed at the outset that there was a lot to be gained by maintaining an experimental attitude and flexibility in management and enforcement so that the ARZ may be adapted to the needs of the particular area. For example, during the trial period in Boston, the high pedestrian volume on Washington Street was seen as contributing to pedestrian/bus conflicts. The merchants came around to feeling that

the buses were more of a detriment than a help to their businesses and asked that they be removed.

The role of the experimental design of auto restriction remains another debatable issue among the business community and public officials. Some would argue that a test is important in demonstrating to the public the concept's feasibility and in dissolving unfounded fears. On the other hand, there are those who support the view that a project should be completed before it is open to the public. A test was successful in Boston, although it was not even planned, in that it enabled planners to identify problems and take corrective action. But, it failed miserably in Tucson. Merchants and public officials in the studied cities have learned that a successful mall is not just a street closed to traffic. A lot of attention is increasingly paid to promote outdoor activities and provide sound maintenance and policing.

Transportation Policy Impacts

Auto restrictive zones have been promoted by UMTA, primarily, as a means to improve traffic conditions and encourage public transportation in cities that are receptive to the idea but cannot accomplish it by themselves. All cities have developed an interest in the technique, primarily, as a means of revitalizing their downtowns. These two goals seem mutually compatible. UMTA is offering financial incentives to promote innovative demonstration projects but has the policy of not imposing their views on cities. In most cities studied, auto restriction has been met with resistance by the business community. Concerns stem from the possibility of negative impacts that relate to traffic circulation and congestion, auto accessibility to stores and businesses, loss of on-street parking spaces and attraction of undesirables in the area. In those cases where ARZs were successfully implemented the unpopular aspects of auto restriction were ameliorated to make them more palatable to opposition groups. See cases of Memphis, Burlington and Providence. In the case of ARZs that failed to get implemented, their main problems can be easily traced to the concerns and fears that were impossible to overcome. See cases of Tucson and New York.

Boston is the only case, so far, for which a post-implementation evaluation study was completed and such impacts were systematically measured. The evaluation findings show that auto restriction does not seem to be a serious detriment to auto circulation, as was feared. Successful prior experience has proven to facilitate new efforts. It is important to note that four cities (Boston, Memphis, Providence and New York) have had prior experience with auto restriction. The problems that the latter two cities had can be attributed to negative prior experience with auto restriction. The Westminster mall in Providence, although started as an asset to the downtown, later became a liability. New York City had an unsuccessful experience with the Madison Mall, even though it has recently successfully completed two malls.

Institutional Factors

The institutional and political factors associated with the implementation process proved to be another key factor, perhaps much

more important than originally anticipated . The ARZ program's experience leads to the conclusion that the technical abilities to plan and to build an ARZ project, are insufficient to successfully complete the project. Lack of a single coordinating agency responsible for project implementation may cause delays which are costly in terms of dollars, momentum and support. The Memphis case is an example of the latter.

Planning decisions in a pluralistic society result from a complex dynamic interaction among actors in the community (public, planners, politicians) who have different objectives, perceptions of reality and power to influence events. The outcome of any decision is bound to produce some gainers and some losers. The implementation of an ARZ is expected to create jobs in construction, physically improve the streetscape, enhance the image of downtown and encourage private development. These may translate to political gains for the city administration. Some businesses, like chain shops and fast food restaurants, that depend on high pedestrian volumes, tend to do better under auto restriction, than others that depend on easy auto access. One of the recurring problems is that cities are perhaps attempting to satisfy too many objectives, some of which may even be conflicting.

It is important that private interests be involved in the planning, funding, implementation, and operation of ARZs. Some of the most successful early malls, e.g., the Providence's Westminster Mall was locally initiated and primarily privately funded. In order to be able to implement plans it is essential that such support be organized. The success of the Boston, Memphis and Burlington cases can be attributed to strong support from the political and business community. In Providence, it was not until the city developed a strong citizen participation program that it was able to reach the final project implementation phase. It can be easily argued that one of the reasons that New York City has not been able to implement its plan so far has been the inability to solidify the support of key interest groups. Political influence and connections with Washington also play a very important role in assuring financial support. Burlington and Providence are good examples of this. Gibbons (1981) has summarized it very well "in successful project leaders are strong and active, the middle mass is informed and supportive and the opposition small and unorganized."

Planners can play a major role in the process of implementation, through their traditional skills as technical advisors and designers, leaders and visionaries, as well as mediators of competing interests, using the art of persuasion and creative accommodation. However, they cannot be effective unless there is a strong imperative and political support to back them up. The cases of New York and Tucson demonstrate how difficult it was to convince the conservative downtown community of the value of their innovative plans.

Some Final Comments

The main conclusion is that there are no simple guidelines to be drawn from the case studies discussed above. Although the importance of the above key factors was confirmed, it appears that it is not essential

that all factors be achieved simultaneously for the project to be successful. One single powerful factor may be enough to carry the project to completion. The results from these cases also confirm the cyclical view of planning and implementation as expressed by Barrett and Fudge (1981). Policy is not just drawn up and implemented, but it is continually adapted through a negotiating process.

The experience in the case studies highlight timing and exogenous events as very important ingredients. Their critical importance was best seen in the Broadway Plaza where the process was split into two different time phases during which the relative strength of project support was reversed. The demolition of the three theaters created a negative attitude towards the mall. In the Boston case, timing worked just right for the project. Although downtown retail interests had previously prevented implementation of auto-free zones in Boston, the opening of the Faneuil Hall Market turned merchants into enthusiastic supporters and the project was swiftly implemented. It can also be argued that the proposed Pyramid Mall outside Burlington provided the catalyst for the implementation of the downtown mall. Sometimes patience in implementation and waiting for the right time to act might be the appropriate strategy to follow. See the example of Providence. In other circumstances a delay may prove to be detrimental.

A related lesson learned is that such innovative and complex projects take time to gain support and acceptance. The average implementation time in the six cases, from conception to project completion, was eight years. There is some inertia to be overcome and there is resistance to change. Seeds of ideas are always afloat and are continuously reformulated. It takes a perceptive fertile ground and a promoter to bring them to fruition. Some of the ideas in the cases studied originated back at the beginning of the century. Figure 5-13 depicts a summary of the chronology of all cases.

One must keep in mind that there are several limitations to the study. Such limitations apply to most field studies. They deal with the internal and external validity of the results. The main source of information was individuals involved in the planning and implementation process. There are two problems that have occurred to some extent due to the time lapsed since the beginning of the program. The first is that some of the principal actors were unavailable since they had moved on to new positions. An earnest attempt was made to locate as many of these people as possible, and to interview them by phone. The second problem was the result of fuzzy recollection of sequence of events, dates and roles that actors played. Another source of limitation was the natural bias in the interpretation of events based on the role that individuals played in the project. The latter two problems were compensated for through the use of multiple interviews and crosschecking with other sources, such as newspaper reports and minutes from public meetings. Finally, one must be careful of generalizing from the few cases presented here. The above limitation notwithstanding, this study is the most extensive available to date that focuses on implementation problems of the UMTA ARZ demonstration program.

Figure 5-13A
 Summary of Major Events - Completed Projects

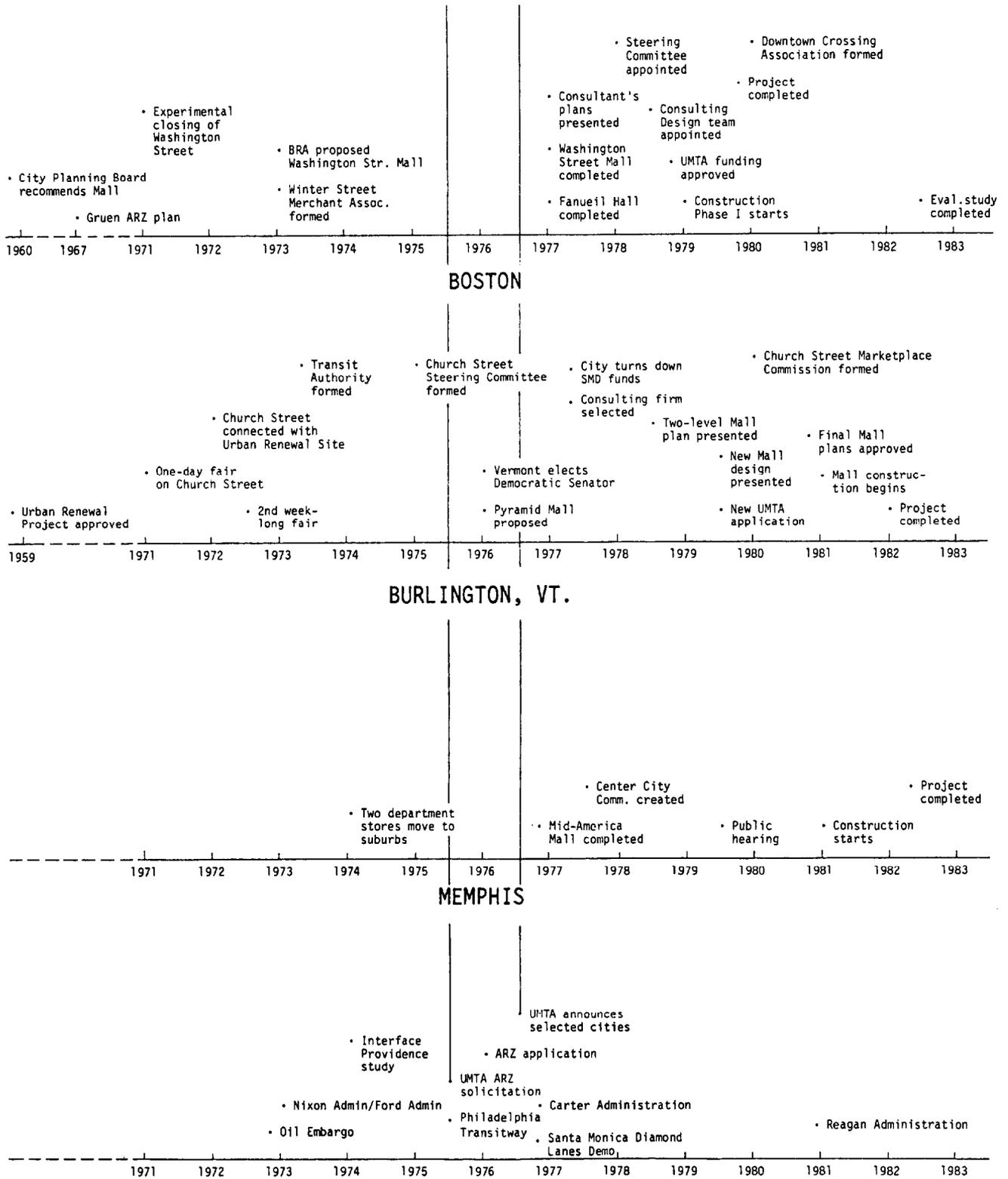
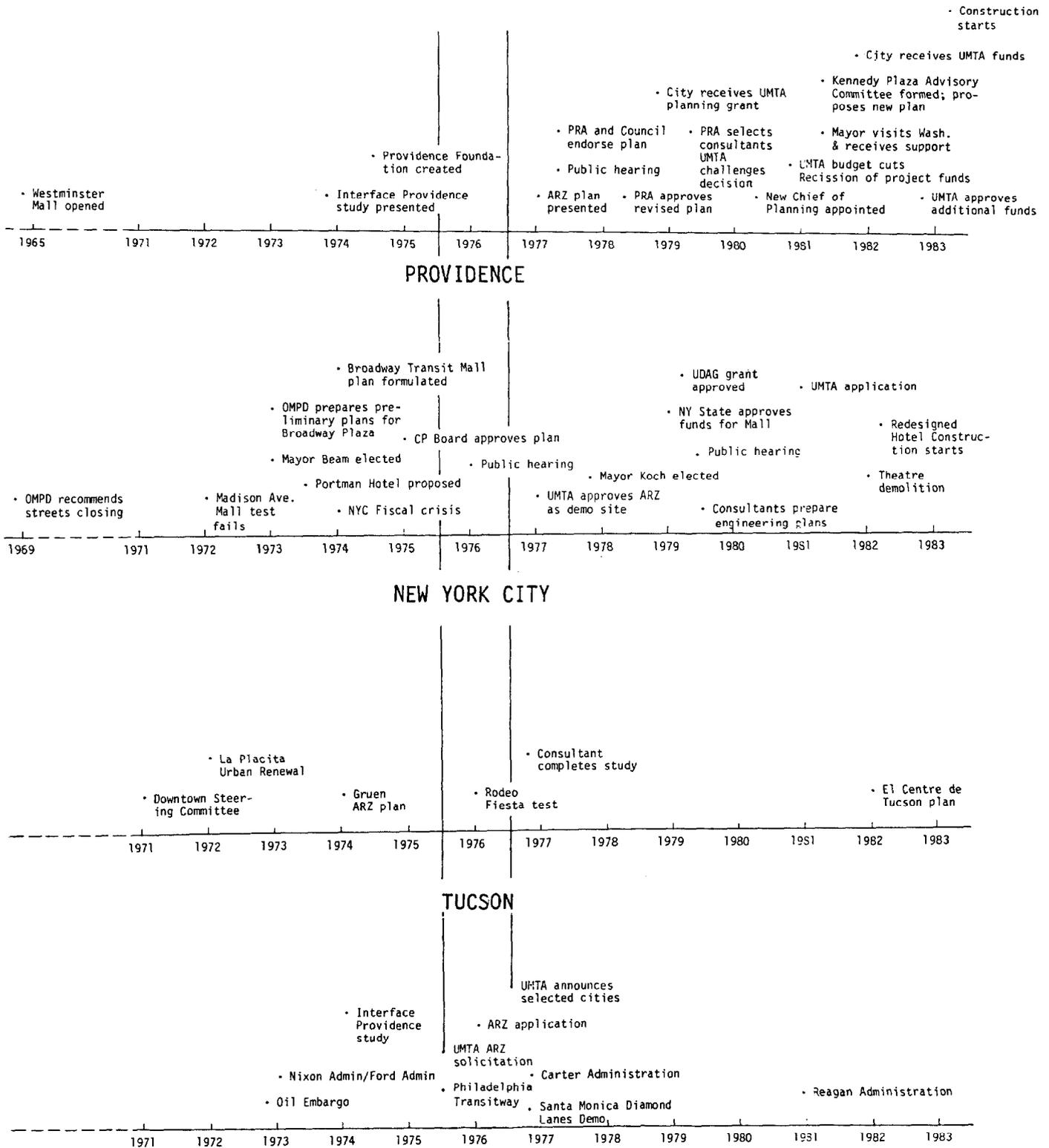


Figure 5-13B

Summary of Major Events - Incomplete Projects



Chapter 6

CONCLUSIONS AND DISCUSSION

In this chapter a summary of the major findings of the study is presented, the limitations of the research are outlined and ways are suggested in which material may be interpreted to further the understanding of the implementation process and to assist planners at the federal and local levels, in managing the implementation of ARZ projects more effectively.

The primary goal of this project was to learn more about the implementation process of ARZ projects. The research design was based on two premises. The first one had to do with the fact that city governments consider the ARZ to be a strategy to revitalize the CBD. Therefore, in order to better understand ARZs it was decided to examine other revitalization strategies and to compare them with ARZs. The second premise was that there is no clear definition of implementation success, so it was important to study not only "successfully" completed projects but other in different stages of completion as well.

Summary of Findings

Description of Projects. One of the contributions that this study has made is to describe ARZ projects and compare them with other CBD revitalization projects. It was found that since 1975, ARZ projects have been receiving serious consideration as a strategy for downtown revitalization. Three quarters of the responding cities in the first survey had considered ARZ projects and 27 percent had implemented one, as opposed to 13 percent of all U.S. cities with populations of more than 50,000 that had implemented ARZs prior to 1977. Public projects which include street improvements, pedestrian amenities, open space and ARZ projects play an important role in the overall strategies for downtown development. They accounted for half of all reported projects, as indicated in the first survey. Respondents see them as necessary actions to encourage and facilitate private investment in the downtown. ARZ projects accounted for 10 percent of all reported projects. One fifth of all the reported projects included private developments such as offices, retail, hotel and multiple types of developments. The rest were mixed projects resulting from public and private collaboration.

The average cost of a project was \$42.5 million ranging from \$50,000 to \$1.5 billion. Public projects cost less in general and ARZs, according to the second survey, average about \$9.1 million. The cost of the average ARZ demonstration (including estimates of projects not implemented) was much less averaging \$5.2 million. Federal funding covered half of the costs of a public project, but in ARZ demonstration cases it covered 75 percent of the total costs.

Forty-five percent of the reported projects were completed at the time of the first survey. Similar rates of completion were reported in the two other phases of the study. An average duration time of 5.4

years was reported for completed projects. In the demonstration cases it was found that projects required at least 8 years from conception to completion, which is a much longer period of time. It is very possible that when respondents replied to this question they were considering different events as defining the beginning of projects. It remains uncertain from the information available how many incomplete projects will ever be successfully completed.

Only half of the respondents on the ARZ survey answered the question on cost and time overruns for completed projects. Delays for most projects averaged 1.75 times as long as had been expected. Similar findings were discovered in the case studies.

In terms of other project characteristics, it is interesting to note that while all SMD ARZ's had a transit component, only 59 percent of the 27 ARZ projects reported in the second survey and 44 percent of the 16 ARZ projects reported the first survey had a transit component. There was no evidence of geographic concentration by type of project. Most selected demonstration cases (4 out of 6), however, were located in the Northeast.

Implementation Process. Generally, implementation success was found, to a large extent, to be a function of political will and positive or negative initiative by powerful interests. The involvement of the mayor a local business association in the project had much more positive impact on the success of the completed projects than on projects not completed. The size of the city was found to have an important impact. In smaller cities the involvement of individuals and groups made a difference in the success of the project. Because of the small subsample sizes within each census group, this relationship should be further tested. It is advisable that subsequent research on implementation problems be either limited to a single census group or conducted at a large enough scale.

Raising funds was the most frequently mentioned problem. In 19 percent of all projects, funding was indicated as a major problem. Acquiring land, agreeing on the plan, coordinating participants and anticipating economic changes were mentioned in 10 percent of the projects.

Implementation problems were found to be related to the type of projects. Public improvement projects are less likely to have reported problems than the other two project types. Those problems that are reported are generally associated with agreeing on a plan or solving construction problems. They have fewer acquisition and support problems than the projects which have private development components.

One of the most interesting and consistent findings is that the completion status of the project has an effect on the type of problem that respondents perceived. Incomplete projects tended to have support problems, while completed projects reported disagreement on plans. One possible interpretation of this result is that planners tend to be more successful in combating "plans" type of problems (agreement on plans, and solving construction problems) if more projects that report such

problems tend to reach the completion stage. It is these types of problems that are considered within the realm of traditional planning. On the other hand, planners tend to be less successful in confronting "support" type of problems (instigating support, coordinating participants and anticipating economic changes) if projects that report such problems remain incomplete. The latter type of problems are considered within the scope of the emerging direction of planning.

The distribution of implementation problems for public development projects are not different with respect to project completion status. However, those for private development projects are different. Completed private development projects are reported to have had no problems, while incomplete ones are reported to have "support" problems. As was indicated earlier, the possible bias of respondents who are removed from the private development sector has to be taken into account. This finding, consistent in other phases of the study, suggests that the perception of implementation problems depends upon the stage that the project is in and poses some interesting questions regarding the definition, identification and management of implementation problems to be addressed in future research efforts.

In the second survey, respondents were asked to evaluate ARZ implementations according to 33 specific problems. The majority of the cities indicated no problems and only problems related to securing funds and lack of support from the private sector were of any significance. Agreeing on a plan and coordinating participants were among the least frequently mentioned problems.

In the six case studies, there were no major problems of acquisition and funding, since UMTA was providing the funds and no acquisition of land was involved. The main problems, at least during some phases of the projects, were instigating support and agreeing on plan elements. Such problems were obviously overcome in the last phase in those projects that were implemented. Occasionally, such events are even remembered as positive ones in terms of having an impact in strengthening the final design overall. Problems in construction and maintenance were reported in those cities that had reached the stage of completion. The case studies illustrated the importance of several already known factors such as organizational, communication and the role of the private sector's support.

Methodological Limitations

This project consisted of a multi-faceted study of a complex phenomenon. It involved extensive surveys and the development of instruments in a field that has limited examples to offer as guidelines. Researchers had to rely to a great extent on intuition and unstructured open ended questionnaires in the design of surveys. Although precautions have been taken to avoid the typical shortcomings inherent in survey research and case studies, it is important to acknowledge some of the limitations here and to suggest that the study results be interpreted with caution. This section seeks to answer two questions: First, how much confidence can be placed in the reliability and validity of the results and second, what generalizations are safe to be drawn.

In the question requesting that three CBD revitalization projects be described in each city, respondents were not given specific instructions on what types of projects to describe. This leaves some doubt as to the reliability of the measurement. However, we do not have any reason to believe that the list of projects obtained in this way is not representative for the purposes of this project.

When it comes to measuring implementation problems operationalization proved to be a much more complex problem, because of the subjective nature of the responses. Statements of problems are expressions of perception colored by personal and organizational expectations, situational circumstances and status of project completion. A comparison of responses regarding CBD problems to objective indicators constructed using census data, verified the above belief. For example, cities appeared healthy as judged by an index of retail sales, yet they were considered by planners to have economic difficulties in their downtowns. No attempt was made to analyze responses in terms of roles and skills of respondents. This leaves the study open to criticism as to whether some of the results may be artifact resulting from the type of survey, the sampling procedure and the respondents biases. The contribution of the first survey lies in the development of a categorical classification of problems, which was lacking from the literature. In the second survey a measure of intensity of problems for ARZ projects was obtained.

Another problem, encountered primarily because of the format of the open-ended questionnaire, was an uneven quality of responses, in terms of conceptualizing problems, articulating experiences and ability to draw lessons. The respondents understanding of planning and implementation issues was variable. Considerable divergence of opinion about terminology was experienced among respondents regarding definition of such terms and problems (causes vs. effects), objectives, strategies, projects vs. plans (studies), initiation and completion of project, project success, etc. For example, cost overruns and delays were frequently cited as implementation problems, completion of specific projects were reported as objectives, and planning studies were listed as CBD revitalization projects. Most of these problems were overcome by editing or deleting some of the responses as discussed in Chapter 3.

City Planning directors were considered by the authors to be the most appropriate and informed individuals to participate in such a survey. Planners by training and job definition should be able to bridge the gap between the decision makers/administrators and engineers and contractors. Several engineers who were contacted declared themselves unable to provide any useful insights into the implementation process.

Although the response rate of 60 percent in the first survey is considered a relatively high rate for this type of survey, it required a lengthy and systematic follow up procedure to be achieved. It is obvious that, although planning directors might be interested in responding, they are busy people and answering questionnaires rates low in their list of priorities.

Subsequent surveys yielded lower rates of return, 28 percent and 35 percent by individuals (as compared with 49 percent and 58 percent rates of return by city). Thus, the original goal of averaging multiple views per project became impossible. This is considered to be a major shortcoming, since a review and comparison of multiple responses for some cities indicates a very low rate of agreement among respondents regarding the importance of events or severity of problems in the same city and project. The average agreement among two respondents occurred in about 25 percent of the questions, while among three respondents it was reduced to less than 10 percent.

The small number of observations in phase III limited the use of multivariate analysis. Information on the last phase of the field surveys is based on a too small number of interviews to allow for any meaningful quantitative analysis. This is due to a decision made with UMTA staff to reduce the number of sources per city in order to increase the number of cases studied. However, the researchers have much greater confidence regarding the validity of the case studies results compared with the previous two phases. Comparison of results between the three data collection efforts should be done with a great deal of caution, since different procedures in the data collection were employed.

To answer the question of generalizability of the results, the city sample in the mail surveys is representative of the U.S. SMSA population in terms of location, size and ARZ existence, thus results can be generalized to other cities. However, it should be kept in mind that the responses represent only opinions of city planners in those cities and therefore, the results are not transferable to the general population. Because of the limited number of the case studies, results from that phase of the project are more difficult to generalize.

Discussion

This study has brought to light the need for greater understanding on the part of planners of the implementation process. It is hoped that we have established the importance of improving and expanding research in this area and have provided some directions for preparing planners to cope in a changing environment. Next, the context of this changing environment will be outlined.

The Context. It has been a consistent finding among various phases of this study that major exogenous events or national economic changes play a significant role in the project's implementation. During the decade that the study covers, the national socio-political situation changed in many crucial ways. That was the time when the nation, in response to the energy crisis and growing environmental consciousness, began looking for pilot projects to curtail CBD auto traffic and to promote mass transit. It was expected that downtown economic problems would also be resolved as a by-product of such projects. During the 70's the average number of ARZ projects per year doubled and several major cities such as Philadelphia, Baltimore, Chicago and Boston implemented important auto restricted projects. Since 1974, the nation has experienced two major recessions and national priorities have

shifted. During this period, political power in Washington has changed hands twice, from a Republican to a Democratic administration and back again. The attitude of the general public has shifted towards a more conservative outlook that reduces the role of the public sector and especially federal funding for local planning and development. At the same time, rampant inflation has escalated construction costs making project implementation even more difficult. While decline in major urban centers, especially in the northeast, that has persisted for the past several decades appears to have bottomed out and has started to reverse itself development in the south and west has continued to grow rapidly. Revitalization in the Central Business District has been the dominant strategy for urban economic development, though not unchallenged (McGrath 1982), especially by some neighborhood groups who charge that CBD projects are undertaken at the expense of neighborhood improvements. In an effort to revitalize their downtowns, cities have undergone dramatic changes in the range and character of development policies. They are expanding their role of strictly providing services or regulating business to one which includes ways to influence their economies through communicating and cooperating with business. Recent urban economic developments have departed from the CBD renewal practices of the 1960's. Local governments have assumed a more important role. Emphasis has shifted away from expensive clearance projects without a firm commitment from the private sector and public capital improvement projects to jobs, coordination, private sector roles and facilitating of private development (Hammer 1979).

Creative approaches to financing (i.e., tax increment financing) have been established and public funds have been used in innovative ways to leverage private capital. CDBG and UDAG funds have been applied to guarantee loans issued by commercial banks and have provided the catalyst for private economic development. At the same time, local governments have experimented with new techniques in the form of bonus zoning, preservation tax credits and transfer of development rights as positive alternatives to traditional land use controls.

CBD office space and employment grew, even in many declining cities, in the 1970's offsetting in part the loss of manufacturing and retail jobs. The boom in office construction, condominium conversions and mixed use developments has been followed by a new emphasis on improvement of urban amenities, including rehabilitation of historic structures, provision of cultural facilities, improvements of open spaces and increased attention to pedestrian needs. These projects have been promoted for the benefit of the local population, as well as means of attracting visitors to the downtown. The growth in convention and hotel facilities and developments like Boston's Faneuil Hall Marketplace, Baltimore's Inner Harbor and Manhattan's South Street Seaport and Market provide evidence of that trend.

The Planner's Role. One institutional pattern that characterizes recent developments is the increasing formal involvement of the private sector into city planning decision making and actions. The importance of public/private partnership is becoming more evident, even though we are experiencing an experimental phase where there is ample confusion over the role and responsibilities of both sectors in the planning, financing, implementing and managing of such projects.

In this period of transition there is an emerging role for planners which requires skills beyond those of preparing comprehensive long range land use plans, emphasizes short range plans and implementation. The skills of negotiation and coordination become essential to deal with the private sector and a redefinition of the role of the public sector is in order. Traditionally, the planner's responsibilities end once a plan, policy or program has been accepted by the decision makers. Planners, in the past, rarely played a continuing role throughout implementation. It is during that phase that dissatisfied segments of the community often create obstacles to project's completion. This is a crucial phase and the planner can play an important role as a mediator in building and maintaining a durable consensus and in resolving disagreements that threaten to impede implementation. This role has so far been overlooked. (Susskind and Ozawa 1983).

A recent survey of planning schools found that the issue of plan-implementation is only seldom seriously addressed in the planner's education. (Alexander 1983). Alexander also concludes that if planners want to make plans that can be implemented they must get skills necessary to participate in the implementation process.

The Implementation Process. This study has found that the traditional view of implementation as one of putting programs into action, as defined by Sabatier and Mazmanian (1981) is not very helpful in understanding the process. Projects take a long time to develop and during this time circumstances change requiring a continuous redefinition. This makes it difficult to distinguish when the policy ends and action starts or when the project has changed so drastically that it must be considered a new project. The implementation process as a policy-action relationship as defined by Barrett and Fudge (1981) proved to be a much more meaningful concept.

According to Barrett and Fudge (1981), there has been a tendency in the implementation literature to de-politicize the policy-action relationship. The case studies' results confirmed the importance of political and institutional factors in explaining implementation success and problems. The influence of actors, roles, skills, interests and motivation and determination discussed earlier in Bolan's work is paramount in getting things done. As Barrett and Fudge point out, informal organizations may play a more crucial role than the traditional structures.

The ARZ Projects. The policy subject matter has been suggested in the literature (Barrett and Fudge 1981; and Bolan and Nuttall 1975) to have an influence on the outcome of the policy-action relationship. The study of the character and history of ARZ projects provides some evidence in support of this view. Auto restriction has been an innovative policy which entails trade-offs among categories of users and even discriminates in terms of inconvenience in favor of pedestrians and transit. Alsthuler states that "change strategies will vary in political acceptability in accordance with the degree to which they inconvenience powerful institutions and large or well-organized blocks of voters" (1979, p. 84).

The downtown business community is, usually, a well-organized body that has traditionally regarded auto restriction as a threat to their livelihood, even though a close look at such experiences has shown that the majority of businesses, small to large, would not necessarily have been adversely affected and indeed would have benefitted from the measure (Loukissas and Garcanz 1978; and Weisbrod 1982). Merchants and other members of the business community have been socialized to accept professional and organizational values and behavior, even if they don't pertain to particular circumstances. The same accusation can be leveled at professional planners, for whom separation of pedestrians from vehicle movements is traditionally associated with good design principles. (For similar argument see Barrett and Fudge 1981). The last and most important group in the implementation process is the politician whose leadership and commitment is the key, if things are to start happening. In most of the case studies, the city council or mayor seemed to support the concept as a demonstration of the city's interest in promoting economic vitality in the downtown. In cases where there was a lack of evident support from the business community, the political leadership put off taking the necessary action.

Policy and Research Recommendations. The final remarks that follow concern some policy and research recommendations. The SMD program has made a significant contribution to the promotion of experimentation and scientific evaluation of innovative programs and deserves credit for that, but it only represents a beginning. It is essential that such efforts involving initial support, systematic monitoring and evaluation and dissemination of results of experimental projects continue if we want to improve our understanding and be able to draw valid and generalizable conclusions. The survey found that only 39 percent of the responding cities have heard of the Boston ARZ demonstration project. Of course, it is recognized that this takes additional resources and there are technical and political difficulties associated with such studies (Loukissas 1984 and Loukissas and Mace 1984). This study has found that it is political realities rather than technical expertise that has hindered the full implementation of the program.

ARZs cannot be considered an innovative program any longer. They have become a well established fixture in revitalized downtowns all over the country. A variety of funding sources exists to help towns that wish to implement ARZs. If the project is a sound one and has the backing of the business sector, then monetary contributions for such a project, from that sector, should be encouraged and expected. There are institutional and legal obstacles that still need to be overcome to make this possible.

This study has been exploratory in many ways. The findings raise some interesting conceptual and methodological issues that deserve to be explored through future research. It is recommended that researchers make more extensive use of the personal informal interview format and field research, as opposed to the technique of mail surveys, in order to improve the validity of responses on the kinds of issues discussed in this study. Given a larger sample of cases with multiple respondents per case and more rigorous research design, some of the hypotheses proposed here can be fully tested. One variable that this study found to provide a better understanding of the implementation problems has

been the status of project completion and hypotheses relating that variable with others deserve greater attention. Project success is another variable that requires more sharp definition and measurement. Finally, the case studies indicated the importance of political and institutional factors in explaining implementation problems. Future research should attempt to incorporate such variables in the quantitative analysis.

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APPENDIXES

APPENDIX A 1

THE PENNSYLVANIA STATE UNIVERSITY

RESEARCH BUILDING B
UNIVERSITY PARK, PENNSYLVANIA 16802

The Pennsylvania Transportation Institute

Area Code 814
865-1891

To: Director of Community Development

As you are well aware, the implementation process is critical to any project's success. Unfortunately, the process is not well understood. As planners, our understanding of implementation comes primarily from individual experiences with a series of projects, some of which are more successful than others. In gaining this experience, we often repeat each other's mistakes. Our purpose in writing to you, as well as to planners in over 100 other cities, is to collect and share experiences with the implementation of CBD revitalization projects. Our goal is to improve the chances of successful implementation.

The Office of Service and Methods Demonstration (SMD) of the Urban Mass Transportation Administration (UMTA) has become acutely aware of the importance of skillful implementation through recent experiences in several cities with the demonstration of auto restricted zone (ARZ) projects. The SMD is interested in finding out the extent to which U.S. cities in general have pursued ARZ plans since 1975 and in documenting their implementation experiences. The Pennsylvania State University has been contracted by UMTA to assist in obtaining this information. This first phase of our study has been designed to focus on the implementation of CBD revitalization projects in general.

Your cooperation in answering the attached questionnaire will provide UMTA with better basis for guiding their future demonstration programs and the results will assist city planners in implementing ARZ or other innovative plans requiring a relatively high degree of public and private cooperation. We do not want you to engage in research to answer these questions; the effort should not take more than 1 hour of your time. If someone else on your staff would be a more appropriate respondent, please forward this material to them.

Please oblige us by returning the completed questionnaire in the enclosed self-addressed envelope by February 1st. We will be happy to send you a summary of our findings; copies of the final report will be available through UMTA next fall. Enclosed is a post card which we would like you to return immediately. Thank you for your cooperation.

Sincerely,



Philippos J. Loukissas
Assistant Professor of
Urban and Regional Planning
Program in Man-Environment Relations
(814) 865-1467

Appendix A 2
CBD REVITALIZATION SURVEY

Please respond to the questions below. While we are interested in accurate responses, we don't intend to take a lot of your time; approximate dates and figures and best guesses will be sufficient. Should you require more space than is provided, feel free to use additional pages. Your cooperation is appreciated.

1. Please list, in order of severity, no more than five problems which have affected your CBD over the past 10 years.
- a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____

2. During the past year, what percentage of your agency's staff time has been spent on CBD projects? _____%

3. Without becoming project specific, please describe your city's CBD revitalization strategy over the past 7 or 8 years.

4. Please use the format below to describe three CBD revitalization projects which your city has undertaken in the past 7 or 8 years. By "CBD revitalization project" we mean not only public physical improvements, but economic development and joint public-private ventures as well. You may include projects which are ongoing or projects which were not completed.

FIRST PROJECT

Project name: _____

Month & year of: initiation _____; adoption _____;
construction start _____; completion _____.

Approximate total cost of project: \$ _____.

% funding: Federal _____; private _____; local _____

Primary project objectives: _____

Major features of the project: _____

Who had primary responsibility for planning the project? _____

Who had primary responsibility for implementing the project? _____

If there were problems during implementation, what were they? _____

Additional Comments: _____

THIRD PROJECT

Project name: _____

Month & year of: initiation _____; adoption _____;
construction start _____; completion _____.

Approximate total cost of project: \$ _____.

% funding: Federal _____; private _____; local _____

Primary project objectives: _____

Major features of the project: _____

Who had primary responsibility for planning the project? _____

Who had primary responsibility for implementing the project? _____

If there were problems during implementation, what were they? _____

How has the project succeeded and/or failed? _____

What, if anything, was learned through implementing this project? _____

Additional Comments: _____

5. Have you heard of UMTA's Service and Methods Demonstration (SMD) ARZ project in Boston?
YES NO (circle one)
6. Have you heard of any other SMD demonstration projects?
YES NO (circle one)
If yes, which ones? _____

7. Has an auto-restricted zone (ARZ) been seriously proposed in the past 7 or 8 years in your CBD? (By an ARZ, we include pedestrian and transit malls as well as projects wherein streets are closed or regular traffic flow is curtailed or restricted during certain parts of the day.)
 YES NO (circle one)
8. Has an ARZ project been formally adopted in your CBD over the same period?
 YES NO (circle one)
9. Has an ARZ project been constructed in your CBD? YES NO (circle one)
 If yes, how many? _____
 What are the names of these projects, and when were they completed?
- a. Name _____ Date _____
- b. Name _____ Date _____
- c. Name _____ Date _____
10. Have any of the ARZ projects been converted back to more traditional streets in your city?
 YES NO (circle one)
 If yes, which ones and when were they converted?
- a. Name _____ Date _____
- b. Name _____ Date _____
11. Please list below the three people who, in your opinion, are the most knowledgeable about the implementation of the most recent ARZ listed in Question 7.
- a. Name _____ Phone # _____
 Title/Agency _____
 Address _____
 Role in Project _____
- b. Name _____ Phone # _____
 Title/Agency _____
 Address _____
 Role in Project _____
- c. Name _____ Phone # _____
 Title/Agency _____
 Address _____
 Role in Project _____
12. Would you be willing, in a few weeks time, to answer some additional questions about the implementation of this ARZ project? YES NO (circle one)
13. Please provide the following information about yourself:
- Name: _____ Phone # _____
- Title: _____
- Agency, Division: _____
- Address: _____
- Role in ARZ Project: _____

Thanks very much for your cooperation. Please use the enclosed self-addressed envelope to return this material.

Appendix A 3

Dear Respondent:

Would you please answer the questions below and return this post card to us?
Thank you.

1. Has an auto-restricted zone (ARZ) been proposed in your CBD in the past 7 or 8 years? Yes___ No___
2. Has an ARZ project been constructed in your CBD over the same period?
Yes___ No___
3. If yes (to question #2), give name and date of completion of most recent one.

Name: _____ Date: _____

4. Please let us know when we may expect a reply from you on the enclosed questionnaire? _____

Please provide the following information about the person who will be responding to the questionnaire.

Name: _____ Agency: _____

Street Address: _____ Phone: _____

City: _____ State: _____ Zip: _____

THE PENNSYLVANIA STATE UNIVERSITY

RESEARCH BUILDING B
UNIVERSITY PARK, PENNSYLVANIA 16802

The Pennsylvania Transportation Institute

Area Code 814
865-1891

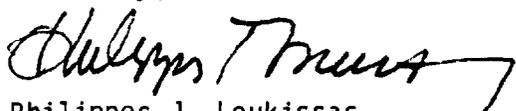
April 7, 1983

Two months ago we contacted you as part of a study sponsored by the Urban Mass Transportation Administration (UMTA) and requested your cooperation by responding to a mail survey regarding Central Business District (CBD) revitalization projects in your city. Since then we have received more than a 50 percent rate of return. Unfortunately, your city was among those that did not respond. We realize that you are very busy and probably the original questionnaire may have been set aside because of other more pressing projects, but your response is very important to our study.

Please oblige us by filling out the attached short version of the questionnaire and returning it as soon as you can. We will be happy to send you a summary of our findings.

Thank you for your cooperation.

Sincerely,



Philippos J. Loukissas
Assistant Professor of Urban and
Regional Planning
Man-Environment Relations Program
(814) 865-1467

PJL/rh

Appendix A5

CBD REVITALIZATION SURVEY (short version)

1. City _____
2. Please list, in order of severity, no more than five problems which have affected your CBD over the past 10 years.
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____

Please briefly describe three CBD revitalization projects which your city has undertaken in the past 7 or 8 years. By "CBD revitalization project" we mean not only public physical improvement, but economic development and joint public-private ventures as well. You may include projects which are ongoing or projects which were not completed.

3. FIRST PROJECT - Name and Description: _____

Date of initiation: _____ Date of completion: _____

Approximate total cost of project \$ _____ Source of funding: _____

If there were problems during implementation, what were they? _____

4. SECOND PROJECT - Name and Description: _____

Date of initiation: _____ Date of completion: _____

Approximate total cost of project \$ _____ Source of funding: _____

If there were problems during implementation, what were they? _____

5. THIRD PROJECT - Name and Description: _____

Date of initiation: _____ Date of completion: _____

Approximate total cost of project \$ _____ Source of funding: _____

If there were problems during implementation, what were they? _____

6. Has an auto-restricted zone (ARZ) been seriously proposed in the past 7 or 8 years in your CBD? (By an ARZ, we include pedestrian and transit malls as well as projects wherein streets are closed, or regular traffic flow is curtailed or restricted during certain parts of the day.)

YES NO (circle one)

7. Has an ARZ project been constructed in your CBD during the same period? YES NO (circle one)

8. If yes, how important was that project to the achievement of CBD goals as compared with other projects, in a scale from 1 to 5? _____

(1 = much more important, and 5 = much less important)

9. Have you heard of any of UMTA's service and methods demonstration (SMD) projects.

YES NO (circle one)

10. Please provide the following information about yourself:

Name _____ Phone # _____

Title _____

Address, Agency, Division _____

Please fold the questionnaire in thirds so that the address is showing and staple it before mailing it.

Thanks very much for your cooperation.

Appendix B1

List of Contacted and Responding Cities in the 1983 and 1975 Survey by Region

Northeast

City Name	City Population 1980	UMTA 1975* Contact	1983** Contact	ARZs since*** 1975	Implemented ARZs (dates)
STATE COLLEGE	36130	2	1	1	.
BURLINGTON	37712	1	1	2	81
LEWISTOWN	40481	2	1	1	.
WHITE PLAINS	46999	1	0	.	.
HARRISBURG	53264	0	0	.	.
DANBURY	60470	1	1	3	.
PORTLAND	61572	2	1	3	75
CAMDEN	84910	0	1	3	.
TRENTON	92124	1	1	3	74
LOWELL	92418	1	1	1	.
CAMBRIDGE	95322	1	0	.	.
ALLENTOWN	103758	0	0	.	.
HARTFORD	136392	1	1	3	.
SPRINGFIELD	152319	1	1	2	71
PROVIDENCE	156804	1	1	2	6583
WORCESTER	161799	2	1	3	.
SYRACUSE	170105	0	0	.	.
ROCHESTER	241741	1	1	1	.
NEWARK	329248	0	1	1	.
BUFFALO	357870	1	0	.	.
PITTSBURGH	423938	0	0	.	74
BOSTON	562994	1	0	.	79
WASHINGTON, D. C.	638333	1	0	.	76
BALTIMORE	786775	0	1	2	70747682
NEW YORK CITY	1428285	1	1	1	.
PHILADELPHIA	1688210	1	0	.	76
QUEENS	1891325	0	0	.	.
BROOKLYN	2230936	1	0	.	.

N=28

*UMTA 1975 contact: 1 = responded, 0 = contacted but not responded, 2 = not contacted

**1983 contact: 1 = full response, 2 = incomplete response, 0 = no response

***ARZs since 1975: 1 = implemented, 2 = proposed only, 3 = not considered, ● = no information available

Appendix B2

List of Contacted and Responding Cities in the 1983 and 1975 Survey by Region

North Central

City Name	City Population 1980	UMTA 1975* Contact	1983** Contact	ARZs since*** 1975	Implemented ARZs (dates)
GRAND FORKS	43765	2	1	2	78
BLOOMINGTON	52044	2	0	.	.
CHAMPAIGN	58133	2	1	3	.
APPLETON	59032	2	1	1	.
FARGO	61383	2	1	3	75
DUBUQUE	62321	2	1	3	70
MUNCIE	77216	2	1	3	75
RACINE	85725	2	0	.	.
GREEN BAY	87899	2	1	3	.
ANN ARBOR	107966	2	1	2	83
EVANSVILLE	130496	0	1	3	71
MADISON	170616	1	0	.	.
ST. PAUL	270230	0	1	2	81
OMAHA	314255	2	1	2	.
TOLEDO	354635	1	0	.	.
MINNEAPOLIS	370951	0	0	.	67
CINCINNATI	385457	0	1	3	.
KANSAS CITY	448159	1	1	1	71
ST. LOUIS	453085	1	0	.	.
COLUMBUS	564871	2	1	1	.
CLEVELAND	573822	1	1	3	.
MILWAUKEE	636212	2	1	1	.
INDIANAPOLIS	700807	0	1	1	.
DETROIT	1203339	2	0	.	.
CHICAGO	3005072	1	0	.	.

N=25

Appendix B3

List of Contacted and Responding Cities in the 1983 and 1975 Survey by Region

South

City Name	City Population 1980	UMTA 1975* Contact	1983** Contact	ARZs since*** 1975	Implemented ARZs (dates)
PASCAGOULA	29318	2	1	3	.
PANAMA	33346	2	0	.	.
MELBOURNE	46536	2	1	3	.
LAKELAND	47406	2	1	3	.
BILOXI	49311	2	1	2	77
OWENSBORO	54450	2	1	1	.
TUSCALOOSA	75211	2	1	1	.
LAKE CHARLES	75226	2	1	3	70
TALLAHASSEE	81548	1	0	.	.
BEAUMONT	118102	2	0	.	.
SAVANNAH	141390	1	0	.	.
DURHAM	157287	1	1	1	.
LUBBOCK	173979	2	1	1	.
MOBILE	200452	1	0	.	.
JACKSON	202895	1	1	3	.
RALIEGH	206597	1	1	2	77
RICHMOND	219214	0	0	.	.
NORFOLK	266979	2	1	2	7476
TAMPA	271523	2	0	.	74
BIRMINGHAM	284413	2	1	1	.
LOUISVILLE	298451	1	1	2	7278
MIAMI	346865	0	0	.	60
CHARLOTTE	350715	0	1	1	.
TULSA	360919	2	1	2	78
FORT WORTH	385164	0	1	1	.
OKLAHOMA CITY	403213	2	1	1	.
ATLANTA	425022	1	0	.	.
EL PASO	425259	2	1	1	.
NASHVILLE	455651	2	1	1	.
JACKSONVILLE	531402	0	1	1	.
NEW ORLEANS	557515	0	1	3	7373
MEMPHIS	646356	1	1	2	7581
SAN ANTONIO	785880	0	0	.	.
DALLAS	904078	0	1	2	657483
HOUSTON	1595138	1	1	1	.

Appendix B4

List of Contacted and Responding Cities in the 1983 and 1975 Survey by Region

West

City Name	City Population 1980	UMTA 1975* Contact	1983** Contact	ARZs since*** 1975	Implemented ARZs (dates)
BELLEVUE	73903	1	1	1	.
PROVO	74108	1	1	3	.
SANTA BARBARA	74414	0	1	1	.
FULLERTON	102034	0	1	2	81
BERKELEY	103328	0	0	.	.
EUGENE	105624	2	1	3	71
SALT LAKE	163033	0	0	.	.
RIVERSIDE	170876	1	1	3	66
SPOKANE	171300	1	1	3	.
COLORADO SPRINGS	215150	2	1	1	.
ANAHEIM	219311	1	0	.	.
SACRAMENTO	275741	0	1	1	69
TUSCON	330537	1	0	.	.
OAKLAND	339337	1	1	3	60
LONG BEACH	361334	1	1	2	8282
HONOLULU	365048	0	0	.	69
PORTLAND	366383	1	1	.	78
DENVER	492365	1	1	2	798082
SEATTLE	493846	0	0	.	73
SAN JOSE	629442	2	1	1	.
SAN FRANCISCO	678974	1	0	.	.
PHOENIX	789704	0	0	.	.
SAN DIEGO	847494	1	1	2	.
LOS ANGELES	2966850	1	1	1	.

N=24

Appendix C

RESPONSES TO QUESTIONNAIRES

CITY	STATE	PHASE I	PHASE II	PHASE III***	
		Q1*	Q2**	Q3**	
ALLENTOWN	PA	0	0	0	
ANAHEIM	CA	0	0	0	
ANN ARBOR	MI	1	1	1	
APPLETON	WI	1	0	0	
ATLANTA	GA	0	0	0	
BALTIMORE	MD	1	0	1	
BEAUMONT	TX	0	0	0	
BELLEVUE	WA	1	1	1	
BERKELEY	CA	0	0	0	
BILOXI	MS	1	1	1	
BIRMINGHAM	AL	1	0	0	
BLOOMINGTON	IN	0	0	0	
BOSTON	MA	0	1	0	1
BROOKLYN	NY	0	0	0	
BUFFALO	NY	2	0	0	
BURLINGTON	VT	1	2	1	1
CAMBRIDGE	MA	0	0	0	
CAMDEN	NJ	1	0	0	
CHAMPAIGN	IL	1	0	0	
CHARLOTTE	NC	1	2	1	
CHICAGO	IL	0	0	0	
CINCINNATI	OH	4	0	0	
CLEVELAND	OH	1	0	0	
COLORADO SPRINGS	CO	1	0	0	
COLUMBUS	OH	4	1	2	
DALLAS	TX	1	0	0	
DANBURY	CT	1	0	0	
DENVER	CO	1	0	1	
DETROIT	MI	0	0	0	
DUBUQUE	IA	4	0	0	
DURHAM	NC	1	0	0	
EL PASO	TX	1	0	0	
EUGENE	OR	1	0	0	
EVANSVILLE	IN	2	0	0	
FARGO	ND	1	2	1	
FORT WORTH	TX	1	0	0	
FULLERTON	CA	1	0	1	
GRAND FORKS	ND	1	1	0	
GREEN BAY	WI	1	0	0	
HARRISBURG	PA	0	0	0	
HARTFORD	CT	1	0	0	
HONOLULU	HI	0	0	0	
HOUSTON	TX	1	1	1	
INDIANAPOLIS	IN	2	0	0	
JACKSON	MS	1	0	0	
JACKSONVILLE	FL	1	0	1	

KANSAS CITY	MO	4	0	0	
LAKE CHARLES	LA	4	0	0	
LAKELAND	FL	1	0	0	
LEWISTOWN	ME	1	0	0	
LONG BEACH	CA	1	1	1	
LOS ANGELES	CA	4	1	1	
LOUISVILLE	KY	1	1	1	
LOWELL	MA	1	1	1	
LUBBOCK	TX	1	1	1	
MADISON	WI	1	0	0	
MANHATTAN	NY	1	0	0	1
MELBOURNE	FL	1	0	0	
MEMPHIS	TN	1	1	2	2
MIAMI	FL	0	0	0	
MILWAUKEE	WI	1	0	0	
MINNEAPOLIS	MN	0	0	0	
MOBILE	AL	0	0	0	
MUNCIE	IN	1	0	1	
NASHVILLE	TN	1	1	0	
NEW ORLEANS	LA	1	0	0	
NEWARK	NJ	4	0	0	
NORFOLK	VA	1	1	2	
OAKLAND	CA	1	0	0	
OKLAHOMA CITY	OK	4	0	0	
OMAHA	NE	4	0	0	
OWENSBORO	KY	1	1	0	
PANAMA	FL	0	0	0	
PASCAGOULA	MS	2	0	0	
PHILADELPHIA	PA	0	0	0	
PHOENIX	AZ	2	0	0	
PITTSBURGH	PA	0	0	0	
PORTLAND	OR	4	1	0	
PORTLAND	ME	1	0	0	
PROVIDENCE	RI	3	1	3	1
PROVO	UT	1	0	0	
QUEENS	NY	0	0	0	
RACINE	WI	0	0	0	
RALEIGH	NC	1	0	0	
RICHMOND	VA	2	0	0	
RIVERSIDE	CA	1	0	0	
ROCHESTER	NY	4	1	1	
SACRAMENTO	CA	4	0	0	
SALT LAKE	UT	2	0	0	
SAN ANTONIO	TX	2	0	0	
SAN DIEGO	CA	1	4	2	
SAN FRANCISCO	CA	2	0	0	
SAN JOSE	CA	4	0	1	
SANTA BARBARA	CA	4	0	0	
SAVANNAH	GA	0	0	0	
SEATTLE	WA	0	0	0	
SPOKANE	WA	1	0	0	
SPRINGFIELD	MA	1	1	0	
ST. LOUIS	MO	0	0	0	

ST. PAUL	MN	1	0	0
STATE COLLEGE	PA	3	0	0
SYRACUSE	NY	1	0	0
TALLAHASSEE	FL	0	0	0
TAMPA	FL	0	0	0
TOLEDO	OH	0	0	0
TRENTON	NJ	1	0	0
TUCSON	AZ	0	0	0
TULSA	OK	1	3	3
TUSCALOOSA	AL	1	0	1
WASHINGTON, D. C.	DC	0	0	0
WHITE PLAINS	NY	0	0	0
WORCESTER	MA	4	0	0

2

*CODES FOR Q1 RESPONSE: 0 = NO RESPONSE
 1 = RESPONSE
 2 = SHORT FORM
 3 = RESPONSE TO DRAFT
 4 = POST CARD ONLY

**ENTRIES ARE NUMBER OF RESPONDENTS TO
 QUESTIONNAIRES 2 AND 3

***CODE FOR FIELD: 1 = FIELD STUDY
 2 = TELEPHONE INTERVIEWS

Appendix D-

CITY MEMBERSHIP PER CENSUS GROUP

DECENTRALIZED AND GROWING

Baltimore
 Bellevue
 Buffalo
 Cleveland
 Denver
 Evansville
 Fullerton
 Hartford
 Long Beach
 Louisville
 Lowell
 Manhattan
 New Orleans
 Oakland
 Portland
 Providence
 Provo
 Richmond
 Salt Lake
 San Francisco
 Spokane
 Springfield
 Syracuse
 Portland
 Appleton
 Birmingham
 St. Paul
 Norfolk
 Milwaukee

CENTRALIZED AND DECAYING

Charlotte
 Dallas
 Fort Worth
 Houston
 Indianapolis
 Jackson
 Jacksonville
 Madison
 Memphis
 Phoenix
 San Antonio
 San Diego
 Colorado Springs
 Tulsa
 Nashville
 El Paso

SMALL

Burlington
 Camden
 Danbury
 Durham
 Raleigh
 Riverside
 Trenton
 Lewistown
 Ann Arbor
 Green Bay
 Champaign
 Muncie
 Fargo
 Grand Forks
 Lakeland
 Melbourne
 Lubbock
 Biloxi
 Tuscaloosa
 Pascagoula
 Owensboro
 Eugene

Appendix E

CBD REVITALIZATION SURVEY - LIST OF LESSONS AND COMMENTS

IT IS IMPORTANT TO HAVE SOUND CRITERIA WHEN EVALUATING PROPOSALS
OVERRUN OF COST WILL DEFINITELY DELAY COMPLETION OF PROJECT
THE IMPORTANCE OF ASSURING MAINTENANCE AND PROMOTIONAL FOLLOW-UP
DETERMINATION, PERSISTENCE, CONFIDENCE AND FLEXIBILITY
CONGRESSMEN CAN HELP

A MORE COMPREHENSIVE PLAN FOR THE AREA WAS NEEDED

A PROJECT OF THIS TYPE HAS TO BE REMOVED FROM DECISION-MAKING BY
SELECTED OFFICIALS AND TECHNICIANS ALLOWED TO MAKE BASIC
DECISIONS

NEEDS MORE TECHNICALLY ORIENTED STAFF

DON'T TRUST THE NEWSPAPER!

TRANSIT OPERATORS WANT SOMETHING FOR NOTHING

IMPORTANCE OF PRIVATE/PUBLIC PARTNERSHIP

THE IMPORTANCE OF GOOD TIMING IN PLANNING ACTIVITIES

NEED FOR THE CITY TO BETTER UNDERSTAND THE ECONOMICS OF PRIVATE
DEVELOPMENT AND FINANCING OPTIONS

DON'T TEAR ANYTHING DOWN UNTIL YOU'VE GOT COMMITMENTS IN PLACE

PLAN FOR A LONGER PERIOD OF TIME THAN IT SHOULD NORMALLY TAKE TO
DO THE PROJECT

BE CAREFUL ON SELECTION OF CONSULTANTS

INFLATION AND RED TAPE COMPLICATED THE PROJECT

ACTIVE SUPPORT AND PARTICIPATION BY AFFECTED (ABUTTING)
BUSINESSES IS NECESSARY TO AVOID IMPLEMENTATION PROBLEMS

MUST HAVE PROJECT MANAGER WITH FULL AUTHORITY

IT IS VERY DIFFICULT TO PREDICT THE SUCCESS OF A PROJECT WHICH
DEPENDS ON FUTURE DEVELOPMENT WHEN THE GOAL IS TO ENCOURAGE
FUTURE DEVELOPMENT

THE IMPORTANCE OF ESTABLISHING REASONABLE COST ESTIMATES AND
INCORPORATING THEM INTO THE GRANT

THAT POLITICAL LEADERSHIP IS ABSOLUTELY CRITICAL

VALUABLE EXPERIENCE GAINED THROUGH THE APPLICATION OF SPECIFIC
PROJECTS, OR PLANNING TECHNIQUES

THE LARGER THE REDEVELOPMENT PROJECT, THE MORE COMPLEX AND TIME CONSUMING NEGOTIATING IT BECOMES

PHASING OF THE CONSTRUCTION AND BE SENSITIVE TO THE NEEDS OF VARIOUS USERS

CITIZEN INVOLVEMENT WAS ESSENTIAL THROUGHOUT

THAT A WIDE VARIETY OF RESOURCES WERE NEEDED TO MAKE IT SUCCEED

THE MAIN ACTORS KNOW HOW TO ACCESS PERTINENT FUNDING SOURCES

IF YOU WANT A QUICK DEVELOPMENT PROJECT, DON'T INVOLVE THE PUBLIC SECTOR

JOINT PUBLIC AND PRIVATE VENTURES WORK

NEED CONCENSIOUS DEVELOPERS TO MAKE THE PROJECT A SUCCESS

STAFF HAS OFTEN BEEN TOO ANXIOUS TO HELP AND SOME PEOPLE HAVE NOT BEEN ABLE TO MEET LEVEL OF PAYMENTS THEY THOUGHT THEY COULD REACH

INDEPENDENT COORDINATOR OVERCOME LACK OF TRUST BETWEEN CITY AND DEVELOPERS

CREDIBILITY OF CITY IS DAMAGED WHEN PROJECTS AREN'T COMPLETED AS PROMISED

PUBLIC COMMITMENT TO CBD MUST BE SHOWN IN ORDER TO LEVERAGE PRIVATE COMMITMENT

DIFFICULTY IN COORDINATING PROJECT THROUGH A VARIETY OF CITY, STATE AND FEDERAL AGENCIES

APPRECIATION OF TIME INVOLVED TO PUT TOGETHER A PROJECT OF THIS MAGNITUDE

PHYSICAL IMPROVEMENTS ALONE ARE NOT ENOUGH TO ALTER THE MORE DEEP ROOTED PROBLEMS ASSOCIATED WITH OLDER DOWNTOWN COMMERCIAL AREAS

BETTER COORDINATION OF PLANS

IMPORTANCE OF BACKING OF A MAJOR PRIVATE FINANCIAL INSTITUTION

NEED FOR STRONG POLITICAL SUPPORT AND CREATION OF DOWNTOWN AND CITYWIDE INTEREST GROUP FOR DOWNTOWN PROJECTS

GOVERNMENT NEEDS TO TAKE THE LEAD IN CERTAIN TYPES OF PROJECTS TO DEMONSTRATE THE FEASIBILITY OF THE PROJECT

SUPPORT FOR A PROJECT CAN ERODE RAPIDLY WHEN PLANNING AND DESIGN ACTIVITIES SPAN SEVERAL YEARS AND POLITICAL SUPPORT SHIFTS DUE TO EXOGENOUS FACTORS

DIFFICULTY IN COORDINATING PUBLIC IMPROVEMENTS WITH PRIVATE DEVELOPMENT

THE USE OF FEDERAL FUNDS COMPLICATED THE WHOLE PROJECT. THE MONEY WAS GOOD BUT THE PROBLEMS EXCEEDED VALUE RECEIVED

Appendix F1

NOTE: Sample letter sent to respondents of first questionnaire in cities where an ARZ was built since 1975. Similar letters were sent to other contact persons.

March 17, 1983

Thank you for completing our first questionnaire and for agreeing to help us again. We appreciate your having taken the time to respond. Although we have not finished compiling the fifty-five responses we have received to date, the data are quite interesting and we will be sending you a summary of the results as soon as we can.

We are asking you to participate in the second round of this study, which is sponsored by the Urban Mass Transportation Administration, because of your experience with the auto restricted zone (ARZ) project named above. Our intention in developing the attached questionnaire has been two-fold: first, to describe the process of implementing ARZ's; and second, to understand some of the relations within this process. Through accomplishing these goals, we hope to prepare those entering the process with a better understanding of it and with a guide to the wise allocation of resources. Your experience, together with that of other planners across the country, is the only means by which these study goals may be achieved.

For your convenience, we have enclosed a copy of the ARZ project description that you sent us. Please oblige us by returning the completed questionnaire by April 9.

Again, your cooperation is greatly appreciated.

Sincerely,



Philippos J. Loukissas
Assistant Professor of Urban and
Regional Planning
Man-Environment Relations Program
(814) 865-1467

PJL/rh

Enclosure

Appendix F2

ARZ IMPLEMENTATION SURVEY

This questionnaire concerns an auto-restricted zone (ARZ) which has been constructed or proposed in your city over the past 7 or 8 years.

1. City _____

2. Project name _____

3. How did the idea for this project originate?

4. Which people, groups, or agencies initially supported the project and which were against it? Very briefly, what were their reasons?

Proponents: _____

Opponents: _____

5. If either the proponent or opponent groups changed over the course of the project, please comment on the reasons and the effects.

6. What were the initial objectives of the project?
(by "objectives", we mean the objective criteria by which the project's success was to be judged)

7. If the project objectives changed over time, please comment on why the changes occurred.

8. Describe the major physical features of the project.

9. Approximate total cost of project: \$ _____.
 %funding: Federal____; (UMTA____;) State____; local____; private____.
10. Did the project run over budget? If so, by how much?
 no____; yes____, by \$_____.
11. During the period of its implementation, how important to the achievement of CBD goals was the completion of this project as compared with other projects? (circle one response)
1. much more important 2. more important 3. equally important
 4. less important 5. much less important
12. What agency had primary responsibility for planning the project and who was the person in charge?

13. What agency had the responsibility for implementing the project and who was the person in charge?

14. If the responsibility or authority for either the planning or the implementation changed during the course of the project, please state briefly why the change occurred and what effect it had on the project

15. Did the project take longer to implement than had been originally anticipated? If so, how long was anticipated and how long did it take?
 no____;
 yes____, we thought it would take _____and it took _____
16. The following events may or may not have occurred during the course of your project. Please list in time ordered sequence no more than ten major events which occurred during the lifetime of the project. You may use the events listed below as many times as necessary and you may include additional ones which we've left out. Associated with each event, we'd like two pieces of information: first, the approximate date (month and year) that the event occurred; and second, we'd like to know if the impact of the event on the project's progress was positive (+), negative (-), or neutral (0).

Possible Events

the involvement of a: legislator, legislative body, business group, citizen's organization, private consulting firm, federal, state, or local agency (please name any organizations or people)

completion or adoption of the: preliminary proposal, final proposal, first design plan revised design plan, final design plan

commitment of funds by: a federal agency, a state agency, the city, or a private organization (please name agency or organization)

an event in another project, mass media coverage

letting of bids or awarding of contracts

start, temporary halt, or end of construction, project abandonment

present stage in process

Having recalled the sequence of events during the planning and implementation of your ARZ project, please list them below.

<u>Event</u>	<u>Date</u>	<u>±.0.±</u>
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

17. If you have any comments which might help us interpret your answer above or which might shed light on the implementation process as it occurred on this project, please make them below.

18. For each of the activities which you listed in number 16, please name the main problem (if there was one) associated with it. Using the scale below, please rate the severity of each problem.

1=very minor problem, 2=minor problem 3=problem of moderate severity
4= severe problem, 5= very severe problem

<u>Event Number</u>	<u>Problem</u>	<u>Severity Rating</u>
1.		1 2 3 4 5
2.		1 2 3 4 5
3.		1 2 3 4 5
4.		1 2 3 4 5
5.		1 2 3 4 5
6.		1 2 3 4 5
7.		1 2 3 4 5
8.		1 2 3 4 5
9.		1 2 3 4 5
10.		1 2 3 4 5

19. What advice would you give to the planning director of a city which had decided to build an ARZ?

20. Briefly describe the organization you work for (or the one you worked for during the ARZ implementation, if its different). Please describe its structure and purpose, the approximate number of employees, and the organization's role in the ARZ implementation.

Name: _____

Structure: _____

Purpose: _____

Role in ARZ project: _____

Number of employees _____

21. Please provide the following information about yourself:

Years with organization _____
Position during implementation of ARZ

Role in ARZ Project _____

During project implementation, about how many hours per week, on average, did you spend working on it? _____

Name _____ phone _____

Present address _____

City, State, Zip _____

22. Your time and effort in completing this questionnaire is greatly appreciated. Would you be willing in another month or two to look over a summary of the results from this questionnaire, state your agreement or disagreement with general statements, and respond to any issues in need of clarification? It will take considerably less time than this one did.

yes_____; no_____.

Please fold the questionnaire in thirds so that the address is showing and staple it before dropping it off in the mail.

Thank you very much.

Appendix G

ARZ IMPLEMENTATION SURVEY (Last Round)

June 9, 1983

Dear Sir or Madam:

This questionnaire is concerned with the Auto Restricted Zone (ARZ) which has been constructed or proposed for your city over the past 7 or 8 years. It is based on the results of earlier surveys mailed to you. If you have responded to those, we sincerely thank you. This last round will take considerably less time to fill out. Please try to return it as soon as possible. This information is collected as part of a study sponsored by the Urban Mass Transportation Administration. All answers will be kept confidential.

Thank you for your cooperation.

Philippos J. Loukissas
Assistant Professor of
Urban and Regional Planning

1. City _____
2. Project Name _____
3. From earlier questionnaires, we have found that some events may have had an impact on the successful completion of an ARZ project. Please indicate the degree of impact the following events may have had on your project.

VN=very negative; N=negative; NI=no impact;
P=positive; VP=very positive; NA=event did not occur

List of Events	Impact					
Involvement of citizens group	VN	N	NI	P	VP	NA
Involvement of legislator	VN	N	NI	P	VP	NA
Involvement of mayor	VN	N	NI	P	VP	NA
Involvement of local business association	VN	N	NI	P	VP	NA
Appointment of overall project coordinator	VN	N	NI	P	VP	NA

Selection of consultant	VN	N	NI	P	VP	NA
Formation of public/private task force or committee	VN	N	NI	P	VP	NA
Creation of special assessment district	VN	N	NI	P	VP	NA
Changes in design	VN	N	NI	P	VP	NA
Change in Federal or State policies	VN	N	NI	P	VP	NA
Change of key government official	VN	N	NI	P	VP	NA
Commitment of funds by Federal agency	VN	N	NI	P	VP	NA
Commitment of funds by private sector	VN	N	NI	P	VP	NA
Mass media coverage	VN	N	NI	P	VP	NA
Public relations efforts during construction	VN	N	NI	P	VP	NA
An event in another related project	VN	N	NI	P	VP	NA
Exogenous events	VN	N	NI	P	VP	NA
Other _____	VN	N	NI	P	VP	NA

4. From earlier questionnaires, we have derived the following list of potential problems that could inhibit the successful completion of an ARZ project. How severe were these problems in the implementation of your ARZ project?

1=no problem; 2=very minor problem; 3=minor problem; 4=moderate problem; 5=severe problem; 6=very severe problem; 7=not applicable

Obtaining design approval	1	2	3	4	5	6	7
Obtaining project and/or contract approval from State	1	2	3	4	5	6	7
Organization and coordination in starting project	1	2	3	4	5	6	7
Delays in getting work from consultants	1	2	3	4	5	6	7
Underestimation of costs	1	2	3	4	5	6	7
Length of time for securing funds	1	2	3	4	5	6	7
Obtaining funds from private and/or public sector	1	2	3	4	5	6	7
Changes in local government	1	2	3	4	5	6	7

Impact of change on traffic patterns	1	2	3	4	5	6	7
Impact of project on CBD activity	1	2	3	4	5	6	7
Land acquisition	1	2	3	4	5	6	7
Priority of project not high enough	1	2	3	4	5	6	7
Complying with regulations	1	2	3	4	5	6	7
Inadequate mass media coverage	1	2	3	4	5	6	7
Exogenous economic changes were not anticipated	1	2	3	4	5	6	7
Responsibility and authority for project not clearly defined	1	2	3	4	5	6	7
Construction difficulties	1	2	3	4	5	6	7
Lack of understanding of public opinion prior to start of project	1	2	3	4	5	6	7
Lack of strong political backing	1	2	3	4	5	6	7
Lack of strong and qualified project manager	1	2	3	4	5	6	7
Lack of manager with good PR skills	1	2	3	4	5	6	7
All agencies and affected parties not involved early enough in process	1	2	3	4	5	6	7
Lack of experienced consultants	1	2	3	4	5	6	7
Finding suitable developer	1	2	3	4	5	6	7
Lack of support of merchants and other affected parties	1	2	3	4	5	6	7
Funding commitments not obtained early	1	2	3	4	5	6	7
Lack of clear goals and objectives	1	2	3	4	5	6	7
Changes not tested on a small scale prototype prior to large scale implementation	1	2	3	4	5	6	7
Projects did not fit larger scale or comprehensive plan	1	2	3	4	5	6	7
Lack of operating funds	1	2	3	4	5	6	7
Other cities who have implemented similar projects were not consulted	1	2	3	4	5	6	7

Private sector did not take major
responsibility for the project 1 2 3 4 5 6 7

Project took a longer period of time
than it should have 1 2 3 4 5 6 7

Other _____
_____ 1 2 3 4 5 6 7

5. Your name _____ Phone # () _____
Address _____
Organization _____

If you did not answer the last questionnaire, please answer the next few questions.

6. Describe the major physical features of the ARZ project.

7. What were the initial objectives of the project? (By "objectives," we mean the objective criteria by which the project success was to be judged.) _____

8. Approximate total cost of the project: _____

9. % funding: Federal _____; UMTA _____; State _____;
Local _____; Private _____.

10. Has the ARZ project been completed? _____ If not, what stage is it in now? _____

Please fold the questionnaire in thirds so that the address is showing and staple it before dropping it off in the mail.

Thank you very much for your time and effort.

Appendix H

Summary Tabulation of Responses to ARZ Implementation Survey Received Through 8/6/83

3. From earlier questionnaires, we have found that some events may have had an impact on the successful completion of an ARZ project. Please indicate the degree of impact the following events may have had on your project.

VN=very negative; N=negative; NI=no impact;
F=positive; VF=very positive; NA=event did not occur

List of Events	Impact					
	VN	N	NI	P	VP	NA
Involvement of citizens group	1	3	5	9	5	3
Involvement of legislator	2	1	4	6	4	10
Involvement of mayor	0	2	3	11	9	2
Involvement of local business association	1	5	0	8	11	2
Appointment of overall project coordinator	0	0	2	5	10	10
Selection of consultant	0	1	3	13	9	1
Formation of public/private task force or committee	0	0	0	12	8	7
Creation of special assessment district	0	1	2	6	3	15
Changes in design	0	3	5	7	3	9
Change in Federal or State policies	1	3	6	2	0	14
Change of key government official	0	1	5	1	0	19
Commitment of funds by Federal agency	2	1	2	3	8	11
Commitment of funds by private sector	0	1	2	6	4	14
Mass media coverage	0	3	5	10	6	3
Public relations efforts during construction	0	0	1	6	6	14
An event in another related project	3	4	1	8	1	10
Exogenous events	1	2	6	3	0	14

N = 27 Cities

4. From earlier questionnaires, we have derived the following list of potential problems that could inhibit the successful completion of an ARZ project. How severe were these problems in the implementation of your ARZ project?

1=no problem; 2=very minor problem; 3=minor problem;
4=moderate problem; 5=severe problem; 6=very severe problem;
7=not applicable

	1	2	3	4	5	6	7
Obtaining design approval	6	5	4	6	1	1	4
Obtaining project and/or contract approval from State	6	2	2	1	1	0	15
Organization and coordination in starting project	6	6	4	6	3	1	1
Delays in getting work from consultants	11	6	4	1	3	0	2
Underestimation of costs	7	3	3	6	2	0	6
Length of time for securing funds	4	1	6	3	4	1	8
Obtaining funds from private and/or public sector	2	3	2	2	2	6	10
Changes in local government	8	1	1	3	0	0	14
Impact of change on traffic patterns	6	4	5	4	3	3	2
Impact of project on CBD activity	7	6	1	5	4	2	2
Land acquisition	6	4	1	2	2	2	10
Priority of project not high enough	10	3	1	4	3	1	5
Complying with regulations	10	3	4	4	0	0	6
Inadequate mass media coverage	15	2	0	2	1	1	6
Exogenous economic changes	8	5	2	0	3	1	8
Responsibility and authority for project not clearly defined	12	2	2	2	3	2	4
Construction difficulties	4	2	3	5	1	2	10
Lack of understanding of public							

opinion prior to start of project	8	8	3	1	2	2	3
Lack of strong political backing	8	4	4	4	1	3	3
Lack of strong and qualified project manager	12	1	2	3	1	1	7
Lack of manager with good PR skills	11	1	3	2	2	1	7
All agencies and affected parties not involved early enough in process	12	4	3	2	2	1	3
Lack of experienced consultants	13	3	2	2	2	0	5
Finding suitable developer	7	0	1	0	0	2	14
Lack of support of merchants and other affected parties	6	4	8	1	5	2	1
Funding commitments not obtained early	9	7	2	4	1	0	4
Lack of clear goals and objectives	12	8	0	1	1	2	3
Changes not tested on a small scale prototype prior to large scale impl.	7	3	2	2	1	0	12
Projects did not fit larger scale or comprehensive plan	15	3	0	0	1	2	6
Lack of operating funds	11	6	1	1	3	0	5
Other cities who have implemented similar projects were not consulted	17	2	0	1	0	0	6
Private sector did not take major responsibility for the project	7	5	5	0	2	4	4
Project took a longer period of time than it should have	8	4	4	1	2	2	6

Appendix I

Cost, Funding Source and Duration of ARZ Projects

<u>Completed ARZs</u>							
Total Cost	Source of Funds					Time Overrun	Cost Overrun
	UMTA	Other Federal*	State	Local	Private		
29,000,000		100%				1 yr (150%)	8,500,000
23,000,000	58%		42%			none	1,000,000
23,000,000		75%	25%			3 yrs (200%)	none
15,000,000	80%			20%		none	none
8,300,000	80%			20%		2 yrs (200%)	none
4,500,000	33%	45%	11%	11%		1 yr (200%)	none
3,500,000		33%		67%		none	none
3,500,000				100%		4 yrs (500%)	no answer
2,817,000		36%	11%	53%		1 yr (150%)	none
2,800,000		100%				none	none
1,800,000				100%		4 yrs (160%)	300,000
1,400,000	69%		7%	24%		2 yrs (200%)	unknown overrun
213,282		30%		70%		4.7 yrs (480%)	no answer
unknown				100%		--	N/A
<u>ARZ's Not Completed</u>							
20,000,000	80%			20%		N/A	N/A
12,000,000	80%		10%	10%		N/A	N/A
10,000,000						N/A	N/A
7,200,000				100%		N/A	N/A
5,000,000						N/A	N/A
1,000,000		100%				N/A	N/A
800,000	80%		10%	10%		N/A	N/A
750,000			100%			N/A	N/A
418,000			60%	16%	24%		N/A

*"Other Federal" in some cases may in fact be UMTA

Appendix J

LIST OF INTERVIEWEES

Boston Downtown Crossing

Bob Callager
Vice President Jordan Marsh
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(617) 357-3072

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Bethany Kendall
Executive V.P. Downtown Crossing Assoc.
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Emily Lloyd
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Cambridge, MA 02142
(617) 354-0167

William Loudon
Cambridge Systematics, Inc.
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Lee Slayton
V.P. Director of Marketing Jordan Marsh
and Chairman of Downtown Crossing Assoc.
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Glen Weisbrod
Senior Associate
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Burlington Church Street Marketplace

Penrose Gearin
Administrator Church Street
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Randall Kamerbeek
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Patrick Robbins
Ex-Head Marketplace Commission
MacAuliff's
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Memphis ARZ

Scott Adams
Center City Commission
12 S. Main Street
Suit 745
Memphis, TN 38103
(901) 526-6840

Don Paight (formally associated with
the Memphis Center City Commission)
Director of the Downtown
Development Program (present position)
257 Main Street, Rm 215
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Providence Kennedy Plaza

Martha Bailey
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Providence, RI 02903

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New York City Broadway Plaza cont.

Fred Kent
President
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Tucson ARZ Proposal

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Director of Transportation
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