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Bus Service Evaluation Methods
A Review

November 1984

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Prepared by
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Prepared for
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Distributed in Cooperation with
Technology Sharing Program
Office of the Secretary of Transportation

DOT-I-84-49

FOREWORD

Many transit systems are interested in service evaluation and the measurement of performance. To assist these systems, UMTA's Office of Planning Assistance funded in 1979 a report on service evaluation techniques. The report, Bus Service Evaluation Procedures: A Review, was a summary of service evaluation techniques used by transit systems in the United States and Canada. It was a popular report and has been used by many transit operators to improve their evaluation programs.

This document represents an update of the 1979 report. It is a summary of the survey responses from 109 transit systems in the United States and Canada. We believe that this update will be as popular as its predecessor with transit operators who are interested in service evaluation.

Additional copies of this report are available from the National Technical Information Service (NTIS), Springfield, Virginia, 22161 at cost.

Further information on this UMTA project can be obtained from Brian McCollom, Office of Methods and Support (URT-41),(202) 426-9271.

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ACKNOWLEDGEMENTS

The author would like to express his appreciation to the many transit agencies that contributed information regarding their bus service evaluation methods and procedures. Without their assistance and cooperation, this report could not have been written.

Staff members at the Metropolitan Transit Authority of Harris County (METRO) also provided invaluable assistance to the project. In particular, the author would like to thank Wanda Brandon and Robert Bush who played very important roles in the collection and tabulation of much of tha data contained in this report. In addition, the work of METRO word processors -- Irma Gonzalez, Norma King, Sandra Lord, Adriana Moreno, and Denise Tellish -- should also be recognized.

Funding for this project was provided through the Section 8 Special Studies Program of the Urban Mass Transportation Administration (UMTA). The author appreciates the important assistance rendered by Brian McCollum of UMTA's Office of Methods and Support who reviewed the drafts and provided valuable suggestions to improve the report.

Finally, appreciation and thanks are extended to John Attanucci of Multisystems, Inc. and Alan Castaline of the Massachusetts Bay Transportation Authority for sharing their experiences in related research and for reviewing the original project design.

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1.0 INTRODUCTION

In recent years the U.S. transit industry has experienced increasing fiscal pressures that have been caused by dramatic rises in transit operating costs, decreased federal assistance, and the reluctance of communities to increase local tax bills to support public transit services. In response to these fiscal pressures that have constrained transit systems' abilities to maintain or improve existing service levels, many agencies have begun to carefully re-examine the manner in which their limited resources are allocated by developing more rational approaches to improve system efficiency and effectiveness.

The Metropolitan Transit Authority of Harris County (METRO) in Houston, Texas, has recently undertaken such a project to improve the efforts made by the agency to evaluate the efficiency, effectiveness and productivity of the transit services provided in its jurisdiction. Houston METRO has received support for the development of a prototype bus service evaluation program through the Section 8 Special Studies Program of the Urban Mass Transportation Administration (UMTA). A necessary first step in this project was a review of current bus service evaluation practices within the U.S. and Canadian transit industries. Other key project steps include the development and implementation of a line ridership data collection/analysis system and a program of service standards and planning guidelines.

The review of industry service evaluation practices provided METRO with very useful information that has been used extensively in the development of service standards and a data collection/analysis system. This report on the industry review is intended to assist other transit agencies in a similar manner by providing them with information on the "state of the art" in bus service evaluation and performance monitoring.

The report is comprised of four chapters, including this brief introductory chapter. Chapter 2 describes the basic objectives of the industry review, the methodology employed in the review, and the various classification schemes that were employed. Chapter 3 contains a description of the performance criteria that are most often used to monitor and evaluate bus service performance by the agencies that were examined in the review. Chapter 4 contains several discussions that relate to the general organization of service evaluation activities, the costs and results of these activities, and the problems most frequently encountered in bus service evaluation.

The four chapters of the report are followed by an extensive collection of appendices which provide more specific information on each system that participated in the industry review. Appendix A contains a summary of each agency's evaluation efforts that describes these efforts and identifies the specific criteria that are used in the monitoring/evaluation process. Appendix B contains a series of matrices that indicate the manner in which each of the criteria examined in the review is utilized by the participating agencies. Appendix C contains tables for each of the criteria that describe the service standards that each agency has developed to evaluate the criteria. The tables in Appendix C also include information on the data collected to measure performance and identify major responsibility centers for evaluation activities.

2.0 PROJECT OVERVIEW

The approach used in the industry review of bus service evaluation practices is described in this chapter. The methodology employed to contact transit systems and to conduct the interviews is discussed in the first section of the chapter. This is followed by a discussion of the objectives of the industry review. The classification scheme that was used to categorize the review responses is described in the final section of this chapter.

2.1 The Industry Review's Methodology

Beginning in December 1981, the Service Evaluation Unit of METRO's Service Planning Division contacted 345 transit systems that operate fixed-route bus services in the U.S. and Canada to obtain information on their current and proposed bus service evaluation practices. The list of agencies that were contacted was obtained from A Directory of Regularly Scheduled, Fixed-Route Local Public Transportation Service in Urbanized Areas over 50,000 Population which was published by UMTA's Office of Transportation Management in August 1981. In addition, ten large Canadian systems were also selected for potential interviews. Initial requests for information were mailed to these agencies in December with follow-up calls to solicit responses or to obtain additional information being made between January and August, 1982. The responses to the review were analyzed during the fall and winter months with the initial draft report completed in April 1983. Each of the systems that participated in the review was sent portions of the draft report so that the information could be checked for accuracy. Because of the lag time between the collection of the original information and the draft report's preparation it was very possible for important changes to have taken place at certain agencies. Altogether, about one-third of the agencies participating in the review provided updated or corrected information after reviewing the draft report. Subsequently, these updates were incorporated into the final report that is presented here.

A total of 109 transit systems responded to the request for information which represents about 32 Percent of the 345 agencies that were originally contacted. Of the 236 systems that did not respond, a significant number, about 61 Percent, were very small systems with less than 16 peak period buses in operation on a daily basis. Appendix D contains a listing of the systems that did participate in the industry review along with their mailing addresses and the names and telephone numbers of the contact persons who provided the information contained in the report.

In order to assess the representativeness of the systems participating in the review the distribution of these agencies based upon their sizes and geographical locations was compared to that of the original group of 345 systems that were initially contacted. On the basis of geography, Table 1 indicates that the distribution of responses by UMTA Region varied from a low of 17 Percent in Region 2 to a high of 42 Percent for the systems in Region 10. Half of the ten Canadian systems that were contacted responded with information on their bus service evaluation practices.

As shown in Table 2, the study group had a higher percentage of "Large" systems than does the industry as a whole. This "over-representation" was not considered to be a significant problem since the main purpose of the inventory was to give METRO ideas for the development of an effective evaluation system. However, since another objective of the review was to identify any industry patterns that may exist in the evaluation of bus services considerable care was taken to examine systems of similar size together so that the over-representation of large agencies would not bias the analysis.

2.2 Industry Review Project Objectives

The industry review of bus service evaluation practices had a number of informational objectives. These objectives concerned the systems' uses of different performance criteria, their development and/or application of service standards. The project's specific objectives are outlined below.

1. What performance criteria are examined in the course of monitoring or evaluating bus services?

2. What service standards are currently utilized or in the process of development/implementation?

3. What is the official status of any service standards that are used to evaluate bus services?

4. What data are collected and used to evaluate the various performance criteria that are utilized?

5. What are the data collection and review/report cycles for each of the performance criteria that are evaluated?

6. What specific departments or individuals are responsible for collecting and analyzing the evaluation data that is collected?

TABLE 1

NUMBER OF SURVEYS DISTRIBUTED AND RETURNED BY STATE AND UMTA REGION

REGION 1

Connecticut	3/12
Maine	1/ 2
Massachusetss	3/16
New Hampshire	0/ 1
Rhode Island	0/ 1
Vermont	N/A
	7/32 (22%)

REGION 2

New Jersey	0/ 8
New York	3/16
Puerto Rico	1/ 1
	4/24 (17%)

REGION 3

Delaware	1/ 1
District of Columbia	1/ 1
Maryland	1/ 2
Pennsylvania	4/17
Virginia	2/ 6
West Virginia	0/ 4
	9/31 (29%)

REGION 4

Alabama	2/ 4
Florida	6/17
Georgia	1/ 7
Kentucky	3/ 4
Mississippi	0/ 2
North Carolina	4/11
South Carolina	0/ 3
Tennessee	3/ 5
	19/53 (36%)

REGION 5

Illinois	4/18
Indiana	3/11
Michigan	3/12
Minnesota	2/ 6
Ohio	7/19
Wisconsin	3/10
	22/76 (29%)

REGION 6

Arkansas	1/ 2
Louisiana	2/11
New Mexico	0/ 1
Oklahoma	0/ 2
Texas	9/20
	12/36 (33%)

REGION 7

Iowa	3/ 6
Kansas	1/ 3
Missouri	1/ 6
Nebraska	1/ 2
	6/17 (35%)

REGION 8

Colorado	1/ 4
Montana	1/ 1
North Dakota	0/ 1
South Dakota	0/ 2
Utah	1/ 2
Wyoming	N/A
	3/10 (30%)

REGION 9

Arizona	1/ 2
California	16/38
Hawaii	0/ 1
Nevada	0/ 2
	17/43 (40%)

REGION 10

Alaska	0/ 1
Idaho	0/ 1
Oregon	1/ 3
Washington	4/ 7
	5/12 (42%)

CANADA 5/10..... (50%)

TABLE 2

U.S. INDUSTRY AND STUDY GROUP COMPARISON BY SYSTEM-SIZE (PEAK VEHICLES)

	400 or more Buses	100-399 Buses	Under 100 Buses	Total
Study Group	14 Systems (13%)	28 Systems (27%)	62 Systems (60%)	104
Industry	27 Systems (8%)	46 Systems (14%)	262 Systems (78%)	335

7. What are the costs that are associated with bus service evaluation and monitoring activities?

8. What benefits and positive results have been obtained through bus service evaluation efforts?

9. What have been the major problems encountered in attempts to get policy support for service evaluation and to implement evaluation findings?

10. What plans or projects are there to improve or expand bus service evaluation activities?

2.3 The Classification of Performance Criteria and Service Standards

There were twenty performance criteria that generated the most information from the 109 transit systems participating in the review. These criteria were categorized into three basic classifications to reflect different evaluative foci. Each of these classifications and the performance criteria that they contain are described below.

Route Design Criteria

1. Bus Stop Spacing
2. Route Coverage
3. Route Deviation
4. Route Length
5. Route Duplication
6. Route Structure

Each of these six performance criteria relates to the basic structure and design of a transit system's route network. Factors such as the location of transit services, the structure and configuration of transit routes, and patron accessibility to transit services, are measured by these criteria.

Service Quality Criteria

1. Vehicle Loads
2. Vehicle Headways
3. Schedule Adherence
4. Passenger Safety
5. Bus Shelter Placement
6. Passenger Transfers
7. Missed Trips
8. Span of Service
9. Public Complaints

Each of these nine performance criteria are used to monitor or evaluate the amount and level of service that is provided by a transit agency. These criteria address such issues as passenger convenience, service reliability, passenger comfort and safety, and patron satisfaction with public transit.

Economic and Productivity Criteria

1. Passengers per Vehicle Hour
2. Cost Recovery
3. Passengers per Vehicle Mile
4. Passengers per Trip
5. Cost per Passenger

Each of these five performance criteria are used to monitor or evaluate the financial and ridership performance of individual transit lines or services.

In addition to developing a classification scheme to categorize various performance criteria based on their foci, a second classification system was used to categorize the agencies based upon the manner in which each performance criteria was monitored or evaluated. Five categories were used in this classification.

Formal Service Standard - An official policy objective(s) that is used to evaluate a particular performance criterion by establishing specific benchmarks that identify acceptable and unacceptable performance levels as well as the range of remedies that are required to address unsatisfactory performance. The formality of the standard is a reflection of its status within an agency as official policy and the existence of a formalized performance evaluation and review process for the criterion. Due to the standard's official status a major effort is normally made to adhere to its requirements under most situations and conditions.

Informal Service Standard - A specific performance objective(s) that is used to evaluate a performance criterion. The performance objective(s) has no official or policy status within an agency and is used as an internal guideline only. The standard's informal nature may result in less than universal application under various situations or conditions at the discretion of the department or manager responsible for the evaluation activity.

Proposed Service Standard - This is the situation in which a transit system is either in the process of developing a service standard to evaluate a performance criterion or it is currently involved in securing approval for recently developed standards or the implementation of standards that have recently been approved. Most of the agencies with "proposed" standards envision that the standards will receive formal status in the near future. Some systems, however, were unclear or undecided as to the exact status that their standards would eventually possess.

Criterion Monitoring - This is the situation in which a transit system does not currently possess (or is in the process of developing) a service standard to evaluate a performance criterion. However, despite the lack of a

standard, the agency does track or monitor the performance criterion by collecting/analyzing pertinent data and calculating various indicators and statistics on a more or less regular basis. Transit systems that monitor performance criteria frequently use such general terms as "minimize" or "maximize" which indicate a desire to improve some aspect of performance, but fail to set acceptable performance levels that are quantifiable or measurable.

No Response - A fifth category was applied to situations in which the criterion was not monitored or evaluated and where systems did not provide sufficient information on their utilization of a criterion. Since the major focus of the review was more upon the application of service standards (i.e., evaluation) than the monitoring of criteria, some agencies may have failed or neglected to provide information on their monitoring of specific criteria if they did not possess a standard for evaluation.

3.0 PERFORMANCE CRITERIA AND SERVICE STANDARDS DEVELOPMENT

This chapter examines the U.S. (and Canadian) transit industry's utilization of 20 performance criteria in the evaluation of local bus services. The discussion for each criterion describes the type of service standards that are employed by the industry review's respondents and the range of requirements that are specified by the standards. In addition, there are several tables associated with the discussions which differentiate by system size and indicate the types of data and the frequency of data collection/ analysis. Additional information of specific criteria and individual agency responses are contained in Appendices A, B, and C.

3.1 Route Design Criteria

As discussed in Chapter 2 there were six performance criteria examined in the inventory that can be classified as Route Design Criteria. Each of the criteria is related to some route network design consideration.

Bus Stop Spacing - Utilization of this design criterion was reported by almost two-thirds (68 agencies) of the responding systems. There were 29 agencies that reported the existence of formal service standards and another 21 systems where the standards possessed informal status. There were three agencies that indicated they were developing, or in the process of implementing, service standards while 15 systems indicated that they monitored the "Bus Stop Spacing" criterion without the use of a specific standard for evaluation.

The service standards that have been developed to evaluate bus stop spacing establish minimum and/or maximum spacing distances between bus stops. Most of the standards employed require different spacing distances that are based upon the operating characteristics of different services (example: local vs. express) or the characteristics of the areas in which bus stops are located. These factors are population density, land use, and an area's location relative to the central city or business district. Spacing requirements ranged from one block in heavily populated areas and major activity centers to over one mile for commuter lines operating in less densely populated suburban or rural areas. Most existing standards required that bus stops serving local lines should be spaced between 400 feet (one block) and 1/4 mile with only a few agencies permitting local service bus stops to be separated by 1/2 mile or more. These were mostly medium-sized systems (100 to 399 peak vehicles) that operate services in rural or low-density suburban areas.

The data that are collected to evaluate and monitor this criterion consist of information on population

densities, the operational characteristics of bus lines serving an area, and the number of passengers who regularly use a bus stop location. Population density data are most often obtained from U.S. Census reports. Passenger demand at various stops is usually determined through boarding/alighting surveys conducted by traffic checkers, supervisors, bus operators, or other agency personnel. Smaller agencies are less likely to employ regular traffic checkers and are more prone to rely upon temporary employees, other agency personnel, outside consultants, or even community volunteers. These data can also be collected by automatic passenger counting systems and several agencies indicated that they were either using such machines on a limited basis or were planning to test them in the future. The data required to evaluate or monitor bus stop spacings are usually analyzed quite infrequently even though data collection is often collected on a regular, sometimes daily, basis. For a number of systems information on passenger usage of specific stops is obtained from Section 15 riding checks even though additional data is frequently required because of the small sample of trips that are surveyed for Section 15 reports. Annual reviews were noted most frequently by the responding agencies, but many systems were somewhat vague about their exact review cycles. These systems often indicated "infrequent" or "as needed" to describe their evaluations.

Route Coverage - This design criterion was reported by 65 systems which represents 60 Percent of the 109 agencies that were studied. Of the 65 systems reporting utilization of the criterion, there were 28 systems that had formal service standards and 17 agencies with informal or unofficial standards. Another nine systems were either developing or beginning to implement their standards while 14 agencies indicated that they monitored route coverage without the use of a standard for evaluation.

The general focus of the route coverage standards that were reported was to insure that bus services are geographically distributed within a community so that patron accessibility to those services can be maximized within the resource constraints of the agency. Standards governing this criterion are of two basic types. First, some standards require that the spacing between bus routes be maintained at distances ranging between 1/2 mile and two miles depending upon such factors as the residential density of an area, the proximity of an area to the central business district, and/or the type bus services or routes in operation within an area. Half-mile spacings are usually required in areas with high density and close proximity to the CBD. Wider spacings of one mile or more are generally reserved for commuter or express-type routes that serve less densely populated rural or suburban areas. By establishing "ideal" spacing distances between bus routes transit agencies attempt to insure that routes do not overlap

coverages and that transit services are well-distributed throughout a service area.

The second type of standards that govern route coverage specifically focus upon passenger accessibility. These standards require that a minimum percentage of the residents of an area (50 to 95 Percent) should live within a specified distance from a transit stop (1/4 to 1/2 mile) depending upon the residential density of the area or its location. In general these standards require that for urban or high-density areas served by local routes between 85 to 95 Percent of area residents should live within a 1/4-mile walk of transit. The requirements for suburban or low density areas are generally 50 to 60 Percent of residents within 1/2-mile of bus service.

The data that are collected to assess route coverage are U. S. Census population data; land use data obtained from local sources; and input from the public in the form of requests for service, complaints, public hearings, etc. Most of the systems possessing standards for this criterion indicated that there was little need for them to carefully review these data on a frequent basis due to the stability of route networks, travel patterns, and land-use in their communities. Annual reviews were noted most frequently for those agencies that were able to provide a specific response concerning their evaluation cycle.

Route Deviation - This design criteria was reported by 47 transit systems participating in the review which represents 43 Percent of the entire group. Of these systems, 19 possessed formal standards and six agencies had informal standards. There were five systems that reported the development or implementation of standards was being undertaken and an additional 17 agencies indicated that monitoring of the criterion took place without the application of a standard for evaluation.

The service standards that were reported place various limits or conditions upon bus routing to control the extent to which buses in regular service leave major arterial streets to serve residential pockets or activity centers. Several different types of controls or limitations are employed in standards designed to evaluate this criterion. First, some standards limit route deviations to a maximum number of minutes (five to eight minutes) of additional travel time for a bus trip. Second, other standards limit such deviations by requiring that travel distances by transit not exceed automobile travel distances for the same trip by more than 20 to 40 Percent. Third, mileage limits are utilized by other agencies which permit a maximum of one mile of deviation per route. Fourth, there are other standards which limit increases in average travel times per passenger to a maximum of 10 to 25 Percent as a result of any deviations along a route. Fifth, route deviation is also controlled by limiting transit travel times to a

maximum of twice the automobile travel time for the same trip regardless of the number of such route deviations that exist. Sixth, some standards place an absolute limit to the number of route deviations that will be allowed per route by requiring that no more than two will be permitted. Finally, some agency standards require that route deviations must not lower the average productivity of a line or that the deviated segment(s) of route should have a higher productivity rating than that for the line as a whole. It is important to note that several smaller systems possess standards that either encourage considerable route deviation or permit it in order to serve activity centers or to correct route coverage deficiencies that exist in the transit network.

The data that are used to evaluate this criterion are distance and running time measurements, passenger counts, and population and employment data. Distance and time measurements are most often collected by traffic checkers, supervisors, or other agency personnel. Passenger counts are usually obtained from boarding/alighting surveys and corner checks conducted by the same personnel with bus operators being used by some smaller systems. In addition riders are sometimes surveyed to determine their travel patterns, and field observations are also employed to obtain passenger data. Population and employment data are usually obtained from U.S. Census reports and local records. These data are normally collected continuously as part of an agency's regular data collection activities, but the data are generally reviewed infrequently with annual examinations reported most often by those agencies that possessed specific review cycles.

Route Length - This design criterion was reported by 36 agencies or 33 Percent of the 109 systems that were studied. Of these 36 systems reporting the utilization of this criterion there were seven agencies with formal service standards and nine systems that reported standards with informal status. There were three systems that were either developing or implementing standards with another 17 agencies indicating that they monitored the criterion without the application of an evaluative standard.

The standards employed to evaluate this criterion place upper limits on distance or travel times for transit trips and bus routes. The standards for large systems generally limit round-trip travel times to a maximum of about three to four hours duration. Medium-sized agencies' standards limit round-trip travel times to two hours and one-way travel distances to 20 miles. Small systems limit round-trip travel times to an average of about 75 minutes. Most of the standards reported by small agencies appeared to be derivatives of existing headway and/or timed-transferring policies.

The data that are collected to evaluate this criterion are running time and distance measurements collected rather infrequently by traffic checkers, supervisors and other personnel. Semi-annual and annual reviews were noted most often by those agencies reporting established evaluation cycles.

Route Duplication - There were 33 transit agencies, or 30 Percent of the 109 agencies that were studied, that reported the utilization of this criterion to control the amount of route duplication within their route networks. There were nine systems that possessed formal standards and six systems reporting unofficial or informal standards. Another three systems were either developing or implementing standards while 21 agencies indicated that they monitored the criterion without the use of a specific evaluative standard.

The standards reviewed in the study are designed to control the duplication of bus routings in order to insure that transit services are adequately distributed geographically within a service area. By insuring that overlapping coverages for different bus routes are minimized, services can be more widely dispersed within an area. Almost all of the standards that were reviewed limit route duplication to approaches to major activity centers such as the central business district. Some standards go a step further by seeking to restrict such duplication to a maximum number or percentage of route miles.

The data that are collected to evaluate this criterion are obtained through analyses of route or system maps and various mileage calculations and comparisons. Some small agencies also indicated that they used overload reports as well. Analyses and reviews are conducted infrequently with annual reviews noted most often by agencies that reported formal review cycles.

Route Structure - This design criterion was reported by 35 agencies or 32 Percent of the study group. There were 6 systems with formal standards and two agencies with informal standards. Another two systems were proposing or implementing standards and a total of 25 systems reported that they monitored the criterion without employing an evaluative standard.

The standards employed to evaluate this criterion attempt to regulate the structure of bus routes by minimizing the number of branches, turnbacks, and the degree of terminal looping permitted on bus routes. Only two agencies place specific limits on the amount of branching that will be permitted on routes. These systems limit the number of branches to two. Other standards are more general in nature and indicate that such devices as branching, terminal loops, and turnbacks will be minimized and permitted only where cost savings will be realized. Some of

these standards place additional limitations on turnbacks by restricting them to peak period operations only. Finally, a number of systems have requirements that branches should be assigned different route numbers and designations to minimize confusion for riders faced with a multitude of branches carrying the same route identification.

The data that are collected consist of passenger counts, population data, and input from the public and bus operators. The data are normally collected continuously and reviewed infrequently with annual reviews noted most often for those systems with regular cycles.

3.1.1 Route Design Standards Development

Table 3 indicates the percentage of systems in each of the three system size groupings that have already developed and implemented service standards to evaluate route design criteria or are in the process of doing so. Each section of the table ranks the six design criteria examined in Section 3.1.0 based upon the percentage of agencies that have focused upon them for service standards development. Below each of the size group rankings is the average percentage (per criteria) for each group of agencies.

The average percentage (36 Percent) for large systems in the table is considerably higher than the percentages for the medium-sized systems (26 Percent) or the small-sized group of agencies (24 Percent). This suggests that large systems may more thoroughly "evaluate" route design criteria than agencies of smaller size. A possible explanation for this is that because of their larger service areas, complex route networks and more widely dispersed activity centers and travel patterns, the larger systems perceive a greater need to evaluate these criteria. Another possible explanation is that larger agencies are also much better staffed and equipped from a resource and personnel perspective to collect and analyze the data required for such evaluations. A number of systems noted that insufficient personnel and/or resources had prevented them from expanding or improving their evaluation efforts.

3.2.0 Service Quality Criteria

As discussed in Chapter 2 there were nine performance criteria studied in the inventory that can be classified as Service Quality criteria. Each of these criteria covers some particular aspect of passenger comfort, convenience, safety, and confidence in a system's bus services.

Vehicle Loads - A total of 77 agencies or 71 Percent of the 109 systems studied indicated that they utilized this criterion for performance monitoring or evaluation. There were 45 agencies that possessed formal service standards and 18 systems that possessed standards that were informal or

TABLE 3

RANKING OF ROUTE DESIGN CRITERIA BY PERCENTAGE

OF AGENCIES APPLYING OR DEVELOPING STANDARDS

LARGE SYSTEMS N=19		
Rank	Criterion	Percent
1.	Route Coverage	(77)
2.	Bus Stop Spacing	(58)
3.	Route Deviation	(42)
4.	Route Length	(16)
5.5	Route Duplication	(11)
5.5	Route Structure	(11)
	ALL CRITERIA	36

MEDIUM SYSTEMS N=28		
Rank	Criterion	Percent
1.	Bus Stop Spacing	(57)
2.	Route Coverage	(43)
3.	Route Deviation	(25)
4.	Route Structure	(14)
5.	Route Length	(11)
6.	Route Duplication	(7)
	ALL CRITERIA	26

SMALL SYSTEMS N=62		
Rank	Criterion	Percent
1.	Bus Stop Spacing	(42)
2.	Route Coverage	(40)
3.	Route Deviation	(24)
4.	Route Length	(21)
5.	Route Duplication	(13)
6.	Route Structure	(6)
	ALL CRITERIA	24

ALL SYSTEMS N=109		
Rank	Criterion	Percent
1.	Bus Stop Spacing	(49)
2.	Route Coverage	(47)
3.	Route Deviation	(28)
4.	Route Length	(17)
5.	Route Duplication	(11)
6.	Route Structure	(9)
	ALL CRITERIA	27

unofficial. Another six systems were in the process of developing or implementing service standards while eight agencies indicated that they monitored vehicle loads without applying any standards for evaluation.

The service standards that were examined generally reflected agencies' desires to prevent excessive passenger loads on vehicles, especially during peak operating periods when demand is heaviest. Limits are placed on individual bus loads or upon average loads during specific time periods. These maximum permissible "load factors" are expressed either as decimal ratios or percentages that are based upon the seated capacity of a vehicle and the actual number of passengers on board. For example, load factors of 1.00 and 100 Percent both indicate that every seat in a vehicle is occupied and there are no standees. Factors of 1.50 and 150 Percent indicate that the vehicle is carrying half-again as many passengers as it has seats. These standards normally reflect different loading requirements for different operating periods. In addition, a significant number of medium and large-sized agencies (as well as a few small systems) also included specific requirements for different types of transit services as well as operating periods into their standards. The highest load factors were allowed on short-haul services such as shuttles and feeder lines where peak loads between 150 and 175 Percent are permitted. The lowest loading requirements were for highway express services during all periods and for base or off-peak local arterial services where 100 Percent was the maximum acceptable load. Most peak period standards for local service limit average loads to between 125 and 150 Percent with larger systems generally permitting higher average loads than other smaller agencies. A number of systems had separate standards or requirements for the peak 30 to 60 minutes of service as well as for the peak period(s) as a whole with higher loads permitted during these half-hour to one hour periods. Some agencies also specified minimum loading requirements that are designed to insure that ridership productivity does not fall below some acceptable level of performance. Finally, a few specify maximum standing times for those riders who are on fully loaded vehicles.

The data that are collected to monitor or evaluate this criterion are usually obtained from traffic checker, supervisor, or (with some smaller systems) bus operator passenger counts that identify loads at locations called "maximum load points". Both riding checks and corner checks are employed to collect this data with some limited applications of Automatic Passenger Counting systems. A few systems do not use their own personnel to collect much of these data. Instead they employ consultants, hire temporary workers, use other government agencies or their employees, or accept assistance from community groups and volunteers. Where agency personnel are used to collect such passenger

data, the data are usually collected on a continuous or on-going basis. Where non-agency personnel are used, collection cycles are much less frequent, usually annually. Data on passenger loads are reviewed monthly, quarterly, semi-annually, and annually, and the agency responses were fairly evenly divided between these different cycles. However, systems that have their own data collection and analysis capabilities and collected data continuously were more likely to conduct more frequent reviews.

Vehicle Headways - This criterion was reported by 76 agencies participating in the review which represents 75 Percent of the total number of systems. There were 39 systems with formal service standards and another 18 agencies that possessed informal standards. A total of four systems were in the process of developing or implementing service standards while 15 systems indicated that they monitored vehicle headways without the application of any evaluative standards.

The standards that were reviewed usually establish maximum "policy" headways that provide for a basic, minimum level of service and are not dependent upon ridership productivity. Many systems clearly indicated that their standards are intended to ensure that headways during base periods do not become too lengthy to provide adequate accessibility despite the fact that ridership may be relatively low. Such policy headways range from 15 to 30 minutes for peak periods and 15 to 60 minutes for base operating periods. The 15 minute maximums were reported only by some large systems with 30 (peak) and 60 (base) minute maximums utilized by smaller agencies. In addition to differentiating between operating periods many systems also possess specific policy headways for different types of services and days of operation. At these systems shorter headways are required for local services and special services, such as shuttles, than for commuter services. Longer policy headways are also required for weekend operations where ridership is generally less than on weekdays. It should be noted that larger systems, which have more varied mixes of services, are much more likely to have standards that make distinctions between types of service and the days of operation. Finally, a number of agencies also incorporate provisions calling for the use of clock headways whenever possible in their service standards.

The data that are utilized to evaluate policy headways are comprised largely of scheduling information and passenger counts (where headways are linked to ridership demand. Ridership data are collected using traffic checkers, supervisors, automatic systems, etc. with generally infrequent evaluations. Semi-annual and annual reviews were noted most often by those agencies responding that they possessed formal cycles for such evaluations.

Schedule Adherence - This service quality criterion was reported by 92 agencies or 84 Percent of the 109 systems that were studied as part of the review. There were 42 systems with formal standards and 13 systems that reported the utilization of informal or unofficial standards. Another five agencies were in the process of developing or implementing service standards to evaluate the criterion while 32 systems indicated that they monitored schedule adherence without the aid of an evaluative standard.

Almost all of the standards reported provided definitions for "on-time" operation as well as the minimum acceptable percentages of on-time arrivals/departures. Definitions of on-time operation displayed considerable variation between systems. However, the average range was about zero minutes early to five minutes behind schedule. A few bus systems permitted buses to depart from timepoints early by as much as three minutes, but the vast majority of agencies strictly prohibit "running hot" as it is called in transit operations jargon. The minimum acceptable percentages of on-time arrivals and/or departures that are included in schedule adherence standards also vary considerably between systems. Smaller agencies tended to possess more simple standards that do little to differentiate between operating periods, day of operation, headways, or type of service. For agencies that applied simple system-wide objectives schedule adherence requirements ranged between 90 and 100 Percent. For those standards that possess different requirements the most stringent objectives (90 to 100 Percent) were for off-peak weekday operations and weekend/holiday services when headways are greater. Requirements for peak period services and lines with frequent service were less demanding (80 to 90 Percent). The wisdom of differentiating objectives for schedule adherence is based upon two factors. First, schedules are generally much more difficult to maintain during peak periods when traffic and passenger boardings are heaviest and most likely to cause scheduling delays. Second, patron perceptions of reliability and the timeliness of service are assumed to be dependent, in part, upon the frequency of service. Where headways are relatively short a passenger waiting for a tardy vehicle will not, as a rule, have to wait as long as might be the case where longer headways apply. For this reason lower requirements may be placed on short headway service than on lines with longer headways because patrons are potentially inconvenienced more by late arrivals in the latter category.

The data that are collected to evaluate schedule adherence are generally obtained through traffic checkers or supervisors who conduct riding checks (usually traffic checkers) and corner checks (both traffic checkers and supervisors). These schedule checks are often performed in conjunction with the collection of ridership data such as boardings/alightings by stop and load counts. Other

schedule adherence data collection methods included requiring bus operators to call in via telephone or bus radio at each terminal to report their arrival time and the use of Automatic Vehicle Monitoring or Automatic Passenger Counting Systems that are capable of recording actual arrival times or monitoring the location of vehicles. Data on schedule performance are generally collected on a continuous basis with monthly to quarterly reviews noted most frequently.

In terms of service standards development the criterion of schedule adherence ranked first among small and medium-sized agencies in the study, but only fourth among large systems (See Table 4). A possible explanation for these differences in the rankings of the Schedule Adherence criterion between the three agency-size groupings for all Service Quality criteria is that larger agencies generally employ shorter headways. It is not uncommon for lines to possess headways of less than five minutes on many large systems during peak periods. The relationship between headway and rider perceptions of service reliability were already discussed previously and it is not necessary to repeat the discussion here. However, the existence of narrower headways may have contributed to the low ranking assigned schedule adherence standards by larger systems compared to smaller agencies. It should be noted though that even though only 42 Percent of the "large" group have developed standards compared to 52 Percent and 55 Percent of the "medium" and "small" groups, respectively, that all of the remaining large agencies indicated that they monitored the criterion by periodically collecting and reviewing schedule adherence data. On the other hand only 14 Percent and 27 Percent of the medium and small systems, respectively, reported that monitoring of the criterion was routinely performed.

Passenger Safety - This performance criterion which focuses upon the elements of vehicle accidents and/or passenger injuries was reported by 63 transit systems or 58 Percent of the 109 agencies that participated in the study. There were 25 systems that reported the employment of formal standards and eight systems that possessed informal ones. Another two systems were in the development or implementation stage while 28 systems indicated that they monitored the criterion without the aid of a specific standard(s) for evaluation. This latter figure for systems that monitor the criterion of passenger safety is undoubtedly low due to the fact that the study's questions tended to emphasize the existence or absence of standards and did not directly focus upon the use of the criteria for monitoring purposes only. This potential limitation of the review was noted in a previous section of this report. Safety is a universal concern in the transit industry and is certainly monitored by all agencies in some way.

The standards that were reviewed established objectives that seek to limit the number of passenger accidents (per million passengers); the number of vehicle accidents (per hundred thousand miles); or the number of vehicle accidents that a bus operator is allowed to have during a specific period of time. The requirements for each type of standard varied considerably between systems. The ranges of these requirements are presented below.

Preventable Accidents (Per 100,000 vehicle miles):	0.7 to 3.0
Total Accidents (Per 100,000 vehicle miles):	4.0 to 8.0
Passenger Accidents (Per million passengers):	6.0 to 10.0

About one-third of the systems reporting standards to evaluate the issue of safety did not establish minimum numerical objectives. Instead, these agencies established objectives that were tied to their previous year's performance or to the national average for the indicator(s) that they utilize. Such standards required that the indicators should improve or remain constant from the previous year's levels or that the indicators should perform at a level within 10 to 25 Percent of the national average for those indicators. As noted above, several systems also attempt to limit the number of vehicle accidents per driver. Those bus operators having a specified number of chargeable accidents are discharged while those who have more than the minimum number of non-chargeable accidents are subjected to re-training.

The data that are used to evaluate passenger safety are obtained from accident reports and investigations. These data are combined with operational data such as passenger counts and vehicle mileage statistics to produce the required indicators that measure performance. Accident and injury data are collected continuously with most agencies indicating that their data are reported and reviewed on a monthly basis.

Bus Shelter Locations - A total of 56 transit systems, or 51 Percent of the 109 agencies examined, reported the use of this criterion in the monitoring/evaluation of system performance. There were 20 agencies that reported formal service standards and ten systems that possessed informal standards. Another five agencies were either developing or implementing standards to evaluate the location of bus stop shelters while 21 systems indicated that they monitored the criterion without employing any evaluative standards.

The standards that were reported generally establish a minimum number of daily passenger boardings that are necessary to qualify a location for a shelter with the average minimums being about 100 for large and medium-sized systems and about 65 boardings per day for the small system group. Some standards have provisions to locate shelters at transfer points; at locations that are used by significant

numbers of elderly or handicapped riders; and at major activity centers, such as hospitals, regardless of the number of passenger boardings. Several larger agencies utilized point scales in their standards which attempt to prioritize potential shelter locations based upon a scoring system that takes into consideration such factors as passenger boardings, route headways, the extent of elderly and handicapped usage, and the type of activity that generates ridership at the locations. Finally, some of the standards also include provisions for bus stop benches and bus stop pads where paving is lacking. The average ridership requirement for a bus stop bench is 50 daily boardings at a location.

The data that are used to evaluate bus stop shelter locations are passenger boarding counts (by stop) and data on the number of elderly and handicapped boardings. These data are obtained through conventional collection methods such as riding checks and point or corner checks and combined with other data such as route headways. Other important data sources are passenger comments and requests for shelters as well as field observations made by agency personnel to determine the physical suitability of sites considered for shelters. These data are usually collected continuously with semi-annual to annual reviews noted most often.

Based upon the rankings in Table 4 it is apparent that the large and medium-sized agencies in the study place more of an emphasis on employing standards to evaluate the location of shelters than the small systems do. This criterion ranked third among the large agencies and fourth among medium systems, but only seventh in the group of small agencies. The most probable explanation for this variance is that in small systems (and communities) the service area is much more limited in size with fewer locations where shelters would be effective and necessary to improve patron convenience, comfort, and satisfaction.

Passenger Transfers - This criterion was reported by 58 transit systems or 53 Percent of the 109 agencies that were examined in the industry review. There were 17 systems with formal standards and 11 agencies with informal standards. There were two systems that were in the standards development or implementation phase while a total of 28 agencies reported that they monitored the criterion without the use of a standard for evaluation.

The standards reported in the study normally attempt to control the amount of passenger transferring by placing an upper limit to the number of transfers that should be required to complete a trip via transit or to the percentage of passengers who should be required to transfer between buses. The requirements for the maximum number of transfers on any trip ranged between one and three. Small systems

TABLE 4

RANKING OF SERVICE QUALITY CRITERIA BY PERCENTAGE OF AGENCIES APPLYING OR DEVELOPING STANDARDS

LARGE SYSTEMS N=19		
Rank	Criterion	Percent
1.	Vehicle Loads	(100)
2.	Vehicle Headways	(68)
3.	Bus Stop Shelters	(47)
4.	Schedule Adherence	(42)
5.5	Passenger Safety	(37)
5.5	Span of Service	(37)
7.	Passenger Transfers	(32)
8.	Missed Trips	(26)
9.	Public Complaints	(5)
	ALL CRITERIA	44

MEDIUM SYSTEMS N=28		
Rank	Criterion	Percent
1.	Schedule Adherence	(71)
2.	Vehicle Loads	(68)
3.	Vehicle Headways	(57)
4.	Bus Stop Shelters	(46)
5.	Passenger Safety	(36)
6.	Missed Trips	(32)
7.5	Passenger Transfers	(25)
7.5	Span of Service	(25)
9.	Public Complaints	(11)
	ALL CRITERIA	41

SMALL SYSTEMS N=62		
Rank	Criterion	Percent
1.	Schedule Adherence	(52)
2.	Vehicle Loads	(50)
3.	Vehicle Headways	(48)
4.	Passenger Safety	(31)
5.	Passenger Transfers	(29)
6.	Missed Trips	(24)
7.	Bus Stop Shelters	(23)
8.	Span of Service	(19)
9.	Public Complaints	(11)
	ALL CRITERIA	32

ALL SYSTEMS N=109		
Rank	Criterion	Percent
1.	Vehicle Loads	(63)
2.	Vehicle Headways	(56)
3.	Schedule Adherence	(55)
4.5	Bus Stop Shelters	(33)
4.5	Passenger Safety	(33)
6.	Passenger Transfers	(28)
7.	Missed Trips	(27)
8.	Span of Service	(24)
9.	Public Complaints	(10)
	ALL CRITERIA	37

tended to utilize the one transfer maximum, while larger agencies permitted two or three transfers. For the standards that place upper limits to the overall "transfer rate" in a system most indicated that no more than a 20 to 30 Percent rate was acceptable. Some agencies took their standards an additional step by limiting the amount that riders should be required to wait at a bus stop to make a transfer that is expressed as a percentage of the connecting line's headway. Finally, some agencies sought to minimize or control transferring and/or passenger waiting time through such scheduling and routing techniques as timed-transfers, through-routing, and route extensions.

The data that are collected and used to evaluate this criterion are passenger counts, transfer counts, and passenger waiting times which are obtained from riding checks, operator reports, rider surveys, and special transfer studies. Data are frequently collected on a daily basis (with the exception of rider surveys and special counts or studies), but reviews are generally infrequent with semi-annual to annual reviews reported most often.

Missed Trips - There were 51 transit agencies in the study that reported the use of this criterion to monitor or evaluate service reliability from the perspective of missed trips. This represented about 47 Percent of 109 agencies participating in the industry review. A total of 18 systems reported that their standards were formal while nine agencies possessed informal or unofficial standards. A single system reported that it was developing a standard and 23 other agencies monitor the criterion without the aid of a standard for evaluation.

The standards reported for this criterion require that at least 90 Percent of a system's schedule trips should operate with most of the standards' requirements in the 95 Percent range. There was one smaller system reporting that it permitted no more than ten missed trips per month.

The data that are collected to evaluate this criterion are obtained from regular agency records and reports such as dispatcher logs, starters' reports, and maintenance records. These data are usually reported on a daily basis with reviews and evaluations of missed trips conducted on monthly to annual cycles. Monthly evaluation cycles were reported most often.

Span of Service - This criterion was reported by 44 systems or 40 Percent of the 109 agencies that participated in the review. There were 14 agencies that possessed formal standards and none that reported informal standards. Three systems indicated that they were developing or implementing standards while 18 agencies reported that they monitored the span of service criterion without the application of an evaluative standard.

Most of the standards that were reported establish basic minimum operating periods for bus operations and services. Some systems (mostly those in the medium and large-size groups) possess different standards or requirements for different types of lines while other agencies specify different minimum operating hours for weekday, Saturday, and Sunday/holiday services. The most important differences in these standards are the required hours of evening and night operations. Larger agencies tended to possess more generous evening/night operating hours (Range: 10pm to 3am) than small systems (Range: 7pm to 9pm). Early morning operating requirements are more consistent with 5am to 6am being used by most standards in which minimum service spans are specified. While most systems' standards established minimum or base service periods other agencies tied operating hours to ridership productivity. The major focus for these standards are to evaluate early AM and late PM service periods. These minimum productivity requirements are used, sometimes in conjunction with standards that establish a minimum base operating period, to extend or contract a line's span of service based upon ridership demand. Finally, a third type of service standard that was reported by three agencies required services to operate so that persons seeking to leave or reach certain areas within specific time ranges can do so successfully via transit.

The data that are collected for this criterion are varied and dependent upon the standard's exact requirements. Where minimum operating periods are specified in the standard only route schedules and time tables need to be reviewed to insure that they conform to the standard. On the other hand, those standards that apply productivity requirements require ridership data that are obtained from traffic checkers, supervisors, bus operators, and other passenger data sources. In addition, most systems included public comments and patron suggestions as important data sources. The cycles for data collection and analysis vary considerably. Agencies that employ standards with simple base operating period requirements rely on reviews of schedules that are conducted whenever schedules are changed or revised. For those systems that possess productivity requirements, ridership data are usually collected continuously as a part of the agency's regular data collection efforts. However, since schedules are fairly constant over periods of time these data are reviewed to determine standards compliance infrequently with annual reporting cycles noted most often.

Public Complaints - This criterion was reported by 60 transit systems, or 55 Percent of the 109 agencies participating in the study. There were six agencies that possessed formal service standards to evaluate the criterion and five systems that reported informal standards. There were 49 agencies that reported they monitored the number and

type of such complaints without the application of any standard for evaluation.

The service standards that were reported place limits to the number of complaints that should be received per driver, per day, per month, per revenue hour, and/or per passenger. Given the relatively small number (11) of standards reported this would suggest little consistency in the type of standards employed for this criterion's evaluation. Public comments and complaints are received daily by agencies via the mail, telephone, or personal visits and they are reviewed using different cycles ranging from monthly to annual.

3.2.1 Service Quality Standards Development

As shown in Table 4 the large (44 Percent) and medium (41 Percent) groups of agencies are more reliant upon service standards to evaluate service quality than the group of small systems (32 Percent) that were examined. This pattern is similar to the one displayed by the route design standards discussed in the previous section with two exceptions. First, medium-sized systems appear to be more similar to large agencies than to small systems in terms of service standards development. Second, the overall average percentage in Table 4 for all agencies (37 Percent) is significantly higher for Service Quality Criteria than it is for Route Design Criteria (29 Percent). This suggests that, on the whole, agencies are more likely to rely upon service standards to assist in the evaluation of Service Quality Criteria than they are for the Route Design Criteria examined in the review. It is possible that transit systems, because of their dependence upon public perceptions of service quality in order to increase or maintain ridership display a greater interest in these criteria. Route Design Criteria, while capable of influencing patron satisfaction by rationalizing routings and improving accessibility, do not influence transit riders as directly as criteria that affect service quality.

3.3.0 Economic and Productivity Criteria

The transit agencies participating in the review of industry service standards were asked to report on the methods they use to monitor and evaluate economic and ridership performance at the route level. The five criteria reported with the greatest frequency in terms of service standards development, were : (1) Passengers Per Vehicle Hour; (2) Passengers Per Vehicle Mile; (3) Passengers Per Trip; (4) Cost Recovery; and (5) Cost Per Passenger. These criteria reflect five key variables that are required for a comprehensive assessment of ridership productivity and financial performance. The variables are vehicle hours, vehicle miles, passengers, line revenues, and operating costs. Several other criteria such as Revenue Per Mile and

Subsidy Per Passenger were also reported by systems. However, none of them were reported with the same frequency and have not been included in this analysis.

It is important to repeat that the standards reported in this review for economic and productivity criteria reflect performance objectives, requirements, and evaluations for individual routes or groups of services rather than for the transit system as a whole. A number of the standards reported explicitly link their line performance objectives and requirements to the attainment of a desired system-wide performance level. However, system level evaluations were not the focus of this inquiry. Instead, the emphasis is placed on discovering how agencies compare the performance of individual lines and determine when lines are performing satisfactorily.

Passengers Per Vehicle Hour - This ridership productivity criterion was reported by 77 agencies in the study or 71 Percent of the 109 agencies that participated. There were 30 systems that possessed formal route-level standards and 13 agencies that had informal or unofficial standards. Another six agencies were in the process of developing or implementing their standards while 28 systems indicated that they monitored the criterion without the aid of a service standard for evaluation.

Several different indicators are commonly developed to provide measurement of this criterion depending upon the exact ridership and vehicle hour variables that are employed. There are two common methods of counting passengers. The first variable, unlinked passenger trips, involves counting each time a person boards a bus as a trip or passenger carried. The second variable, linked passenger trips, does not count transfers and reflects only the number of complete trips made by riders regardless of the number of times they must transfer buses to reach their final destination. There are also two common ways of reporting the vehicle hours for a line. The first is to count only the hours that buses actually spend "in-service" and exclude "deadhead" or non-revenue hours that are not capable of generating ridership. This variable is often referred to as service or revenue hours. The second variable is called total vehicle hours and includes non-revenue hours for vehicles assigned to each line. Most of the standards reported used the unlinked (total) passenger trips and service hours variables to establish performance requirements and objectives. Some standards were based upon linked passenger trips, but total vehicle hours were seldom used to replace service hours in the development of indicators and performance objectives.

In general, the standards reported in the review establish different performance requirements for different types of services (e.g., commuter vs. local), time periods,

and/or days of operation. Three basic types of standards are employed by the agencies participating in the review. First, about half of the reported standards require lines to achieve a specific minimum percentage (50 to 100 Percent) of the system-wide or (line) group average. Failure to achieve minimum acceptable performance levels will result in a review of the service and efforts to improve performance. Second, about a third of the reported standards require that lines achieve minimum productivity levels that are not directly linked to system or group performance levels. These minimums ranged from 8 to 40 (Total) Passengers Per Vehicle (Service) Hour (PVH) and varied depending upon the type of service and the day of operation under consideration. Requirements are less demanding for rural-oriented services than urban lines and more demanding for commuter type services than for traditional local services. Most standards required minimum productivity between 20 and 25 PVH for local services on weekdays with lower requirements for weekends. Finally, a third type of standard employs techniques that rank lines based upon their performance and establishes minimum performance levels such as deciles and quartile rankings to identify satisfactory and unsatisfactory performers. These standards specify that lines in the lowest 10 to 25 Percent of a ranking should be reviewed. Often these ranks are based on a single indicator, but a number of standards included other indicators along with PVH to create composite ranking systems that reflect a range of criteria.

The data that are collected to evaluate this criterion are passenger counts that are derived from regular methods such as traffic checker counts, bus operator reports, and automatic counting systems. Some systems indicated that their ridership statistics were estimates that were derived from revenue data. Information on vehicle hours are obtained from schedules' analyses and summaries and are updated using maintenance records or dispatcher logs to account for lost service due to breakdowns, etc. Ridership data are usually collected on a regular, often daily, basis even though the amounts of data that are collected may vary widely. Some systems employ sampling plans that enable them to collect less data than what would be obtained from daily total counts of every passenger on every line. The reporting cycles for these systems also varied considerably. They ranged from weekly reports to annual evaluations with monthly to quarterly cycles reported most often.

Passengers Per Vehicle Mile - This performance criterion was reported by 69 agencies in the review or 63 Percent of the 109 systems that participated. There were 17 agencies with formal standards. Another seven agencies were in the process of developing or implementing their standards and 34 systems indicated that they monitored the criterion without the use of a standard for evaluation.

The standards reported for this criterion are very similar to the standards that are employed to evaluate the Passengers Per Vehicle Hour criterion with most of the standards based upon the unlinked (total)passenger trips and revenue (service) miles variables. Over four-fifths of the standards reported were of two basic types. First, some standards establish minimum Passenger Per Vehicle Mile (PVM) ratios to identify satisfactory line performance. These minimum PVM ratios are either applied to all lines in common or separate ratios are applied to different groups of lines (e.g. express vs. local). In addition, some standards include specific requirements for different time periods and days of operation to reflect different productivity expectations. The general range for these minimum required ratios was 0.75 to 3.00 Passengers Per Vehicle Mile with most in the 1.0 to 2.5 range. Second, other standards require that individual lines must perform at a level that exceeds a specific percentage of the system average ratio or the ratio for all lines within a certain classification or group. These minimum percentages of the system or group average ranged from 60 to 80 Percent. The remaining one-fifth of the reported standards were based upon ranking systems that included cut-off points to identify sub-par performers. These cut-off points were commonly the lowest decile or quartile of the ranked lines. Sometimes these rankings are based upon several criterion of which the Passengers Per Vehicle Mile criterion is only one. Such composite scoring/ranking techniques allow systems to take additional criteria into account when evaluating the overall performance of a service.

The data that are collected are passenger counts and line mileage totals. Passenger counts are obtained from several sources such as traffic checkers, registering fareboxes, bus operators, etc. Mileage data are generally available from scheduling data and maintenance records or dispatcher's logs that detail lost mileage or trips due to breakdowns, etc. Ridership data are usually collected continuously, often on a daily basis, with reporting cycles ranging from weekly to annual. Most agencies employed either monthly or quarterly evaluation or reporting cycles for this criterion.

Cost Recovery - This financial performance criterion was reported by 67 systems in the study or about 61 Percent of the 109 agencies that were examined. There were 27 agencies with formal service standards and 11 systems that reported standards with informal status. Another seven agencies indicated that they were in the developmental or implementation stage for their standards while 22 systems reported monitoring of the criterion without an evaluative standard.

Cost recovery is defined as the percentage of direct operating costs for a line that are recovered through the

fares paid by its ridership. Direct operating costs in transit normally include such expenses as operator and maintenance wages, supervision, fuel, oil, tires, etc. that are required to put buses into service. Capital costs and general administrative expenses for such support functions as accounting and marketing are generally excluded from the calculation of direct operating costs. The standards that were reported were quite varied in terms of their specific requirements with five basic types of standards being employed by agencies. First, some standards establish minimum acceptable cost recovery rates for different types of lines and services that ranged from 10 to 100 Percent. The 100 Percent requirement was applied by certain agencies to commuter and suburban express-type services or to lines that operate outside of the agency's geographical jurisdiction. Second, other standards require that all lines in the system, irrespective of service type, must attain a minimum cost recovery rate ranging from 15 to 30 Percent. Third, there were standards reported which require that individual lines must achieve a cost recovery rate that is within a certain percentage of the system's average rate as a whole. These standards' requirements ranged from 50 to 95 Percent of the system average. Fourth, some standards include this criterion with several others to create composite performance indexes. Individual lines are then required to achieve composite scores that are at least 80 Percent of the average composite score for all lines in order to be judged as performing satisfactorily. Finally, some standards ranked all lines based upon the criterion and specify that lines located within the lowest quartile of the ranking will be classified as sub-par performers.

Smaller agencies were much less likely to employ the more complex composite scoring and ranking methods and more likely to establish minimum cost recovery rates for all lines. All agencies classified as "small" in the study that reported standards for this criterion established a minimum rate or require lines to attain a specific percentage of the system-wide average. Small agencies were also less likely to differentiate between different types of services.

The data required to monitor and evaluate this criterion are line revenue counts and operating costs. Line revenue data are generally obtained from the use of special vault checks, registering fareboxes, or from estimates based on ridership counts using average fare conversion factors. Cost data are derived from financial and accounting records, sometimes with the assistance of special cost allocation models. These data are often collected daily even though some systems may employ cycles as long as three months. Monthly and quarterly reporting cycles for evaluations were noted most often.

Passengers Per Trip - This ridership productivity criterion was reported by 42 transit agencies or about 39

Percent of the 109 agencies examined in the study. There were 16 systems that reported formal service standards and five agencies indicated that they possessed informal or unofficial standards. There was a single system reporting that it was developing a standard to evaluate the criterion while 20 agencies reported that they monitored the criterion and did not apply a standard for evaluation.

The most common type of standard reported in the study for this criterion establishes a minimum required passenger load for individual transit trips ranging from two to eleven riders with most specifying five riders per trip as the minimum. About 40 Percent of the reported standards were of this type. Another 20 Percent of the standards establish minimum "average" passenger loads for all trips on a line. Unlike the first type of standard that was discussed these standards focus upon average productivity rather than upon individual trip loads. All, except one, of these standards are applied to express services only and require average productivities of 20 to 30 passengers. The remaining standard required at least 15 passengers per trip averages for all lines in the system. In addition to these two types of standards other systems employ standards which established composite rankings that included other criteria or rank lines based solely upon the Passengers Per Trip criterion. These standards (about 20 Percent of those reported) specify that lines ranked in the lowest 20 to 25 Percent or having "scores" that are less than 75 Percent of the average score for all lines must be reviewed for service performance improvements. In the remaining standards individual lines are required to achieve productivities that equal or exceed 80 Percent of the system-wide average productivity for the criterion.

The data that are collected to evaluate this criterion are ridership counts obtained from traffic checkers, bus operators, and other personnel or from mechanical aides such as registering fareboxes. Depending upon the standards' requirements these data may be collected on a trip by trip basis if exact trip loads are needed. The data are usually collected continuously, daily in most cases, with reviews conducted monthly to annually. Monthly and quarterly cycles were reported most often. It should be noted that most of the standards reviewed utilized the unlinked (total) passenger trips variable rather than linked (revenue) passengers to develop their indicators and statistics.

Cost Per Passenger - This financial criterion was reported by 43 systems or 39 Percent of the 109 systems that were examined in the industry review. There were seven systems that possessed formal service standards and a single agency that reported informal status for its standard. Another two systems indicated that they were either implementing or developing standards to evaluate the criterion while 33 agencies reported that they monitored the criterion without the use of an evaluation standard.

Of the seven formal and informal standards reported, there were several different types of requirements. Several of the standards employ composite scoring and ranking techniques that include other criteria. These standards require that lines must rank above the lowest quartile in the ranking of line performances or achieve at least 75 Percent of the average composite performance score in order to be graded as acceptable performers. Other standards involved the ranking of lines solely upon the Cost Per Passenger criterion and require performance above the lowest quartile; the establishment of fixed performance objectives between $1.25 and $2.00 per passenger; or requirements that individual lines should not exceed 140 Percent of the system average. One standard specified that performance must improve continually and that a lack of improvement will trigger the review process for a line.

The data that are collected to evaluate this criterion are passenger counts conducted by bus operators, traffic checkers, surveyors, or through the analysis of passenger revenue. Operating costs are obtained from financial and accounting records. These data are usually collected continuously with daily collection reported most often. Evaluations or reviews are conducted monthly to quarterly. The calculations used to develop the indicators required to evaluate the criterion are most commonly based on the unlinked (total) passenger trips variable rather than linked (revenue) ridership.

3.3.1 Economic and Productivity Standards Development

Table 5 contains the rankings for each of the five criteria in this group that are examined in the study based upon the extent of actual service standards utilization. The average percentages for large (35 Percent), medium (35 Percent), and small (25 Percent) systems in Table 5 suggest that large and medium-sized agencies are more active in the development of service standards to evaluate these criteria. This is fairly consistent with the patterns displayed by standards reported for the Route Design and Service Quality criteria.

TABLE 5

RANKING OF ECONOMIC AND PRODUCTIVITY BY PERCENTAGE

OF AGENCIES APPLYING OR DEVELOPING STANDARDS

LARGE SYSTEMS		N=19
Rank	Criterion	Percent
1.	Cost Recovery	(47)
2.5	Passengers/Hour	(42)
2.5	Passengers/Mile	(42)
4.5	Passengers/Trip	(21)
4.5	Cost/Passenger	(21)
	ALL CRITERIA	35

MEDIUM SYSTEMS		N=28
Rank	Criterion	Percent
1.	Passengers/Hour	(57)
2.	Cost Recovery	(46)
3.5	Passengers/Mile	(36)
3.5	Passengers/Trip	(36)
5.	Cost/Passenger	(0)
	ALL CRITERIA	35

SMALL SYSTEMS		N=62
Rank	Criterion	Percent
1.	Passengers/Hour	(40)
2.	Cost Recovery	(35)
3.	Passengers/Mile	(27)
4.	Passengers/Trip	(13)
5.	Cost/Passenger	(10)
	ALL CRITERIA	25

ALL SYSTEMS		N=109
Rank	Criterion	Percent
1.	Passengers/Hour	(45)
2.	Cost Recovery	(41)
3.	Passengers/Mile	(32)
4.5	Passengers/Trip	(20)
4.5	Cost/Passenger	(9)
	ALL CRITERIA	29

4.0 THE ADMINISTRATION OF BUS SERVICE EVALUATION ACTIVITIES

This chapter concludes this report on transit industry bus service evaluation practices by examining these activities from an organizational perspective. There are six sections within this chapter with each one devoted to some aspect of the organization and administration of bus service evaluation activities. Section 1 discusses the status of service standards and the utilization of formal and informal standards. Section 2 examines service standards' development and the pattern of proposals to develop service standards. Section 3 discusses the basic organization of service evaluation activities in terms of departmental or individual responsibilities and their degree of centralization or decentralization. Section 4 discusses the cost reported for bus service evaluation efforts. Section 5 focuses upon the benefits and positive results that have been obtained by agencies examined in the industry review. Section 6 examines the various problems that transit agencies reported concerning attempts to improve their evaluation capabilities or to implement the results of their service evaluation activities.

4.1 Formality vs. Informality: The Status of Service Standards

The service standards reported by agencies participating in the industry review have either formal or informal status. The basic differences between these two types of standards were initially discussed in Chapter 2. Definitions for the two classifications of standards were provided and the discussion for individual criteria included information on the distribution of reported standards based upon their status as formal or informal.

The differences that exist between the two types of service standards are important for the organization and administration of a bus service evaluation program for two basic reasons. First, formal service standards are, as a rule, more strictly adhered to than informal standards because they are presented as expressions of official policy. These standards represent public commitments and are viewed as such by agency officials, staff, etc. Second, the "official" nature of formal standards generally results in a much more structured and consistent evaluation process for bus services.

Table 6 contains information on the proportion of formal service standards vs. informal standards for each criterion examined in the review. An examination of these ratios may provide an indication of the orientation that systems of different sizes have toward the application of formal service standards to evaluate each of the three groups of performance criteria. It is important to note that proposed standards reported for each criterion were

TABLE 6

SERVICE STANDARDS FORMALITY RATES

(in percentages)

PERFORMANCE CRITERIA	LARGE SYSTEMS	MEDIUM SYSTEMS	SMALL SYSTEMS	ALL SYSTEMS
Bus Stop Spacing	50%	87%	48%	58%
Route Coverage	75	80	48	62
Route Deviation	60	86	77	76
Route Length	---	100	42	44
Route Duplication	100	50	17	33
Route Structure	100	75	33	75
ALL DESIGN CRITERIA	61%	82%	49%	60%
Vehicle Loads	78%	82%	61%	76%
Vehicle Headways	58	87	63	68
Schedule Adherence	88	83	69	71
Bus Stop Shelters	50	82	64	67
Passenger Safety	60	100	68	76
Passenger Transfers	60	50	65	61
Missed Trips	25	89	67	68
Span of Service	40	67	67	61
Public Complaints	100	100	29	55
ALL QUALITY CRITERIA	64%	83%	64	69%
Passengers per Hour	100%	71%	59%	70%
Cost Recovery	86	58	74	71
Passengers per Mile	100	50	50	61
Passengers per Trip	100	80	63	76
Cost per Passenger	100	---	80	86
ALL ECONOMIC/ PRODUCTIVITY CRITERIA	96%	66%	61%	70%
ALL CRITERIA	70%	79%	59%	67%

excluded from the calculations because most systems were uncertain of the eventual status for their proposals and the results of their early implementations or tests. The ratios reflect only those standards for which the agency reported a definite status.

As shown in Table 6 it is clear that the proportion of formal standards far exceeds the extent to which informal standards are applied. About two-thirds of all standards reported had formal or official status. The percentage varies for each the system-size groupings with the medium group reporting the highest percentage of formal standards (79 Percent) and the small group the lowest (59 Percent). When percentages are compared for the three groups of criteria without respect for the size of the systems reporting the standards the Service Quality and Economic/Productivity criteria have the highest percentages of formal standards with 69 Percent and 70 Percent, respectively. Route Design criteria exhibited the lowest "formality" rate with only 60 Percent of the reported standards possessing formal status.

The high formality rate for medium-sized agencies is interesting. Despite the fact that large systems seem to be more likely to develop service standards (including proposals and recent implementations) medium-sized agencies have higher formality rates for both Route Design and Service Quality criteria. (See Chapter 3.) This pattern is in direct contrast to the extremely high formality rate that was calculated for the large agencies' Economic/Productivity standards. This rate (96 Percent) is considerably higher than the rates calculated for medium (66 Percent) and small (61 Percent) systems. This might suggest that large systems tend to place more importance upon the evaluation of financial and ridership performance using formal standards than the evaluation of other criteria. Medium-sized agencies, on the other hand, appear to favor formal standards more strongly than informal standards in the evaluation of Route Design and Service Quality criteria rather than Economic/Productivity criteria. Small systems displayed a pattern that was different from that exhibited by the large and medium-sized groupings of agencies. These systems that reported formal and informal service standards displayed higher formality rates for Service Quality (64 Percent) and Economic/Productivity (61 Percent) criteria than for Route Design criteria (49 Percent).

4.2 Service Standards Development

A significant number of agencies that participated in the industry review of bus service evaluation practices indicated that they were in the process of developing proposals for specific standards; seeking management and/or board approval of recently developed standards; or testing the application of newly developed standards prior to formal

implementation. Altogether 23 of the 109 systems participating in the study reported that they were involved in the development of standards to evaluate specific criteria. Of these 23 systems, eight were large systems, six were medium-sized, and nine were classified as small agencies. These development efforts involved 19 of the 20 performance criteria examined in the industry review with a total of 74 separate standards proposals being reported by the 23 agencies. The only criterion that did not generate any such development efforts was the Public Complaints Criterion.

Among the six Route Design criteria the two that produced the most development interest were the Route Coverage and Route Deviation criteria with six and five proposals respectively. For the nine criteria in the Service Quality group there were three that had at least five standards proposals: Vehicle Loads (six), Bus Stop Shelter Placement (six), and Schedule Adherence (five). Finally, there were three of the Five Economic/Productivity criteria that had at least five agencies reporting standards development. These criteria were Passengers Per Vehicle Mile (seven), Passengers Per Vehicle Hour (six), and Cost Recovery (six).

From the perspective of agency size the three groups of systems differ somewhat in the extent of service standards development and the criteria that are selected for evaluation. A comparison was made among the three size groups in which the average number of such proposals per system per criterion were calculated. One factor for each combination of system size and criterion group was computed by dividing the number of proposed standards for each criterion group by the total number of criteria in the group times the total number of systems in each size group. These factors could have a range from 0 to 1.0. A value of 0 would indicate that no development work was being undertaken for criteria within that group by systems of the same size classification. A value of of 1.0, on the other extreme, would indicate that all of the systems within a size group were involved in standards development for all of the criteria in a specific class of criteria. As shown in Table 7 the factors that were calculated range in value from 0.022 to 0.0084.

A number of interesting observations can be made from reviewing Table 7 and the factors it contains. First, there is a significant difference in the overall factors computed for "All Criteria" with small agencies exhibiting much less standards development (Factor = 0.025) than large (Factor = 0.066) and medium systems (Factors = 0.059). This pattern is consistent when the focus changes from all criteria to each group of criteria with small agencies possessing lower factors than either large or medium agencies. Second, there is not significant variation in the factors computed for

TABLE 7

PERFORMANCE CRITERIA	LARGE AGENCIES	MEDIUM AGENCIES	SMALL AGENCIES	ALL AGENCIES
Route Design	0.075	0.030	0.024	0.034
Service Quality	0.047	0.071	0.022	0.030
Economic/Productivity	0.084	0.071	0.032	0.042
All Criteria	0.066	0.059	0.025	0.034

"All Agencies" between the three groups of criteria. The lowest factor is 0.030 (Service Quality) and the largest is 0.042 (Economic/Productivity). Third, for large agencies there appears to be much more development activity for Route Design (Factor = 0.075) and Economic/Productivity (Factor = 0.084) standards than for Service Quality standards (Factor = 0.047). Fourth, standards development efforts are more active among medium-sized systems for Service Quality and Economic/Productivity criteria (Factors = 0.071) than for Route Design criteria (Factor = 0.030).

4.3. The Organization of Bus Service Evaluation Activities

An important objective of the industry review was to examine the organization and administration of bus service evaluation and monitoring activities. Based upon this review it appears that bus service evaluation is not widely recognized as a distinct transportation management function within the industry. Responsibility for the various tasks and activities that are required to conduct evaluations of bus service performance criteria is generally decentralized within the agency with no single department having total responsibility for all criteria. In some instances separate departments have considerable responsibility for certain criteria and rely little upon other departments for assistance or coordination. In other cases departments within an agency cooperate and share the responsibility for the monitoring and evaluation of performance criteria. One department may be required to collect performance data that is then forwarded to another department for processing. The processed data may then be sent to another department where it is assessed and evaluated. An exception to this pattern occurs within a number of small systems where staff sizes do not lend itself readily to a great deal of decentralization. These agencies tend to centralize activities within one or two departments such as operations, finance, or the office of the director of general manager.

Many different organizational structures were reported by transit systems to describe the administration of their bus service evaluation activities. It is possible, however, to identify several general patterns that were observed. Separate discussions are provided for each of the three groups of criteria.

Route Design Criteria - It is common for planning departments to assume the major responsibility for the evaluation activities relating to Route Design criteria. Agency planners are responsible for obtaining the population and land-use data that are required to evaluate Route Design criteria and they are frequently the 'lead' department in the administration of other data collection efforts such as passenger surveys, cordon counts, etc. that are required on a special or infrequent basis. Planning departments work quite closely with other areas such as scheduling,

transportation, and marketing because they frequently provide supportive data to conduct evaluations of Route Design criteria and their functions are likely to be impacted by Route Design decisions. Where separate planning departments do not exist at some smaller agencies the evaluation of these criteria is normally the responsibility of the agency's schedulers and/or transportation department. In some agencies these responsibilities are assumed by an administrative staff or by the system's executive office's staff.

Service Quality Criteria - Depending upon the specific criteria under consideration different departments are charged with responsibility for performance evaluations. Vehicle Loads, Vehicle Headways, and Span of Service criteria are usually the responsibility of an agency's schedulers and/or planners. Where planners have responsibility for conducting evaluations they rely to a large extent upon data that are obtained by the scheduling department. Bus Stop Shelter Placement and Passenger Transfer criteria are often the evaluation responsibility of an agency's planning area which may rely upon data that are collected by transportation and scheduling departments. The service reliability criteria of Schedule Adherence and Missed Trips are often the responsibility of transportation or scheduling departments with occasional support from maintenance records to evaluate the Missed Trips criteria. The Passenger Safety criterion is normally the responsibility of an agency's safety and/or training department which is often part of the transportation area. Finally, the Public Complaints criterion is usually evaluated by an agency's customer service, information, and/or marketing department.

Economic and Productivity Criteria - The two functional areas that are most often assigned major responsibilities for evaluating bus services' financial and ridership performance are planning and finance/accounting. The major responsibility for data collection, however, often falls to transportation and, sometimes, scheduling departments. Even those systems that rely upon revenue-based ridership estimation methods usually involve bus operators or other transportation personnel in the collection of these data. A common example of this is the use of bus operators to record the meter readings from revenue-registering fareboxes. Vehicle mileage and operating hours data are normally compiled by scheduling departments for each sign-up or service change with the mileage and hours lost due to breakdowns, missed trips, etc. usually reported by an agency's transportation or maintenance area.

The analysis and reporting of Economic and Productivity criteria performance was the most centralized activity examined in the industry review. Most agencies

rely heavily upon their planning departments to perform this function. Of the large and medium-sized systems almost 60 Percent reported that their planning area had these responsibilities while another 30 Percent indicated that they were shared between their planning and scheduling departments which, in many cases, were combined in a single department. The remaining large and medium agencies assigned the responsibility to their scheduling area. For systems classified as small agencies these responsibilities were not centralized to the same extent with only about 30 Percent of the agencies placing the responsibility within a planning and/or scheduling department. Most small agencies relied upon transportation (12 Percent), finance (18 Percent), the general manager's office (13 Percent), or an outside agency such as a Metropolitan Planning Organization (MPO) or municipal government (13 Percent).

Many agencies reported that they rely quite heavily upon outside elements to conduct service evaluation activities or to provide needed support. This assistance is obtained from local governments and planning organizations, state government, or private consulting and research firms. Many agencies employ management companies to operate their transit systems or to provide managerial support for certain functions and activities, including service evaluation data collection/analysis. In some cases, these management firms also develop and implement performance standards and evaluation guidelines for the transit system.

4.4. The Costs of Service Evaluation Activities

Costs are always a major concern to any organization and this is especially true in the transit industry which has experienced spiralling operating costs in recent years. Transit agencies were asked in the study to estimate the annual cost required to monitor or evaluate each of the performance criteria that they utilize. Less than 40 Percent of these agencies could provide dollar estimates of their total bus service monitoring and evaluation costs and only about 25 Percent were able to estimate their personnel costs in terms of manhours expended on monitoring and evaluation activities. Finally, only a few systems were able to estimate costs by criterion and most of these estimates were incomplete which made meaningful comparisons of costs impossible to achieve.

There are several reasons for this lack of explicit bus service evaluation cost data. First, the decentralized organization of service evaluation activities made it difficult to accurately report costs because, in many cases, a single department or individual at any agency was responsible for fulfilling the study's requests for information. Obtaining such detailed cost data on service evaluation and performance monitoring may have been very difficult for one department or individual because of the

fragmented nature of these activities within the agency. Second, very few transit personnel who perform evaluation or monitoring tasks are assigned to those task 100 Percent of the time. Their workdays will find them involved in a variety of activities, only some of which are of a service monitoring or evaluation nature. An example is the transportation supervisor who may routinely collect data on schedule adherence in addition to performing a multitude of other duties such as notifying bus operators of detours, coordinating vehicle replacement for breakdowns, and providing control at accident locations. Unless an agency requires such personnel to account for their working hours by the activity performed during those hours it is extremely difficult to accurately estimate the staff hours that have been expended for a specific activity. Third, an important limit upon an agency's ability to track monitoring and evaluation costs by individual criteria is the fact that data collection and analysis requirements are similar for a number of criteria. For instance, riding checks are used by a number of agencies to measure passenger loads, estimate ridership productivity, monitor schedule adherence, and identify locations appropriate for shelter installations. With the same data being used to fulfill a number of objectives relating to different criteria it is difficult for an agency to allocate the costs for data collection and analysis between the various criteria. Overall costs could be calculated under such conditions, but not specific criterion monitoring/evaluation costs. Fourth, a number of systems indicated that they rely quite heavily upon other public agencies such as local and state governments to conduct many service evaluations and performance assessments. Few systems that receive such assistance are able to estimate the exact value of this assistance in dollars and personnel or the cost that would be incurred by the agency if this support was not provided.

4.5. The Effectiveness of Bus Service Evaluation Activities

An important objective of the industry review was to gather information concerning the effectiveness of bus service evaluation efforts being undertaken by U.S. and Canadian transit systems. Agencies were first asked to describe the manner in which they quantified and measured the productivity gains that are obtained through their service evaluation and monitoring activities. None of these systems were able to provide such information beyond a general statement that they had been able to eliminate some unproductive services and that they felt that their efforts were worthwhile. Most agencies simply stated that productivity gains were not quantified or systematically measured to assess the effectiveness of their programs. A number of systems indicated that this was perceived as a general weakness of their programs that they were interested in correcting because of the need to compare costs and benefits. This absence of quantitative data is consistent

with the lack of information that was obtained on program costs which was discussed in Section 4.4.

Since little quantitative data on program effectiveness was available transit agencies were asked to state an opinion of the "perceived" effectiveness of their service evaluation and monitoring programs. A scaling technique was employed to measure the perceived effectiveness of these programs in improving four service-related factors. The factors that were assessed were: (1) Service Delivery; (2) Service Equity; (3) Ridership Productivity; and (4) Operating Costs. Systems were asked to provide a rating or score for each of these factors ranging from one through ten with the higher scores reflecting a greater degree of perceived effectiveness for a particular factor.

Of the 109 agencies participating in the study there were 65 (60 Percent) that responded to the scaling question on these four factors. Of these 65 systems there were 38 small agencies, 15 medium-sized systems, and 12 large agencies.

As shown in Table 8, all of the average factor ratings range between 6.3 and 7.7. This would suggest that transit agencies are, on the whole, fairly confident that their evaluation and monitoring efforts are effective in improving the four factors examined despite the lack of quantitative data or attempts to conduct cost-benefit analyses. The highest ratings were generally received by the Service Delivery and Operating Costs factors. Of the three system-size groups the medium-sized group of agencies reported the highest average rating score for all of the factors. It is interesting to note that the Ridership Productivity factor experienced the lowest scores for each of the three system-size groups.

While the scores contained in Table 8 suggest that transit systems have positive perceptions of the effectiveness of their bus service evaluation and monitoring activities there would also appear to be considerable room for improving this performance. Many agencies indicated that they realized their efforts could and should be improved to increase effectiveness. Some of these improvements are discussed in the next section which focuses upon the problems that agencies have encountered in the area of bus service evaluation and monitoring.

4.6 Problems Encountered in Bus Service Evaluation

The transit agencies that participated in the study were asked to describe the problems that they have experienced and desired improvements that would help to increase the effectiveness of their evaluation and

TABLE 8

SERVICE FACTORS	LARGE AGENCIES	MEDIUM AGENCIES	SMALL AGENCIES	ALL AGENCIES
Service Delivery	6.9	7.6	7.5	7.4
Service Equity	7.4	7.3	6.5	6.8
Ridership Productivity	6.3	7.0	6.5	6.5
Operating Costs	7.1	7.7	7.4	7.3
All Factors (Average)	6.9	7.4	7.0	7.0

monitoring activities. Based upon the agencies' responses it was determined that most of these problems could be grouped into five basic categories: (1) political constraints; (2) budgetary constraints; (3) inadequate performance data; (4) data processing limitations; and (5) inadequacy of current indicators and performance standards.

Constraints created by the political environment were the most common problem cited by transit agencies. Political constraints were defined as influence that is exerted on service decisions by various interest groups and other government entities such as municipal governments. The transit systems were sometimes frustrated because these constraints make it difficult to routinely eliminate or reduce unproductive services. On the other hand, some agencies mentioned that they are sometimes forced to implement new services that are unproductive because of political considerations. Finally, these political constraints were felt to act as deterrents to the development and implementation of formal service standards and evaluation guidelines or procedures. Some agencies felt that their policy boards and/or upper management are wary of making such formal commitments because of political considerations. Altogether, about 25 Percent of the 109 agencies studied information that indicated that political constraints were their most significant problem from the perspective of the bus service evaluation function.

Budgetary and financial constraints were reported as significant problems by about 8 Percent of the agencies studied in the review. The problems assumed two general forms. First, capacity constraints created by limitations to the number of vehicles that an agency can afford to operate restrict service expansions that might be justified by the results of performance evaluations. Second, there are also limitations on the resources that are available to expand or improve the quality of bus service evaluation efforts. The personnel that are required for most data collection and analysis activities are viewed as support personnel which are often given a lower budgetary priority than "line" personnel such as bus operators and mechanics. Other service evaluation and monitoring resources and inputs such as data processing systems and funds to conduct special studies and research are often viewed in a similar light.

Inaccurate or insufficient performance data and inadequate data processing capabilities were reported as major problems by about 7 Percent of the agencies in the study. Most of these systems emphasized the lack of sufficient, high quality data as a significant problem. Those agencies that were concerned over their data processing capabilities were desirous of developing more automated techniques that did not rely upon labor intensive processes or were capable of providing more readily usable data for analysis.

Dissatisfaction with existing performance indicators and/or service standards was reported by only about 3 Percent of the 109 agencies in the review. These systems felt that the performance indicators that they currently employed did not provide enough information or that their standards were out-dated and in need of revision. This particular problem was actually more widespread than is indicated by the 3 Percent response noted above. In Section 4.2 a discussion on service standards development was presented in which it was noted that a total of 23 agencies (or 21 Percent of the total systems studied) were actively involved in the development or implementation of service standards. Most of these systems did not report their dissatisfaction with existing indicators or standards as major problems because it had been addressed through their current or planned development and revision efforts.

APPENDICES

APPENDIX A

Appendix A contains a list of the transit agencies that were studied in the industry review and a two-page informational summary for each system. The list of agencies contains the addresses and names of the contact persons who provided the information that is contained in the report. The summaries include a list of facts concerning each system that indicate their size and scope of operations and they also contain very basic descriptions of the agencies' bus service evaluation activities. This appendix is quite lengthy due to the large number of agencies (109) that were interviewed. For this reason, the summaries have been arranged alphabetically, first by state and then by the formal name of each agency within a state. For reasons of simplicity, the five Canadian systems have been placed together at the end of the appendix. The list of agency addresses and contact persons is arranged similarly.

Alabama

BIRMINGHAM-JEFFERSON COUNTY TRANSIT AUTHORITY
P. O. Box 10212
Birmingham, AL 35202-0212
Dave McKay, Director of Operations Planning

MONTGOMERY AREA TRANSIT SYSTEM
P. O. Box 84
Montgomery, AL 36101
Mr. Paul W. Queen, General Manager

Arizona

PHOENIX TRANSIT SYSTEM
P. O. Box 4275
Phoenix, AZ 85030
Mr. Robert T. Cox

Arkansas

CENTRAL ARKANSAS TRANSIT
P. O. Box 3572
Little Rock, AK 72203
Ms. Deborah Benner, Ms. Dana Mayes

California

ARCATA AND MAD RIVER TRANSIT
736 F Street
Arcata, CA 95521
Ms. Sharon Batini, Manager

CITY OF FRESNO TRANSIT
2223 "G" Street
Fresno, CA 93706
Kenneth O. Berry, Transit Planner

GOLDEN EMPIRE TRANSIT DISTRICT
3101 16th Street
Bakersfield, CA 93301
Mr. Emery M. Rendes

GOLDEN GATE TRANSIT
P. O. Box 3474
San Rafael, CA 94912
Mr. Alan Zahradnik, Senior Planner

INTRACITY TRANSIT
P. O. Box 642
Modesto, CA 95353
Mr. Larry Shankland, Transit Manager

LONG BEACH TRANSIT
P. O. Box 731
Long Beach, CA 90801
Mark Malone, Planning Analyst

ORANGE COUNTY TRANSIT DISTRICT (OCTD)
P. O. Box 3005
Garden Grove, CA 92642
Mr. Edmund Buckley, Service Development Manager

RIVERSIDE TRANSIT AGENCY
1825 Third Street
Riverside, CA 92507
Kenneth H. Kaufher, AGM

SACRAMENTO REGIONAL TRANSIT DISTRICT
P. O. Box 2110
Sacramento, CA 95801
Ms. Pilka Robinson

SAN DIEGO TRANSIT CORPORATION
P. O. Box 2511
San Diego, CA 92112
Mr. Jeff Martin, Transit Planner

SANTA CLARA COUNTY TRANSIT
1555 Berger Drive
San Jose, CA 95112
Mr. James Lightbody

SOUTH COAST AREA TRANSIT
P. O. Box 1146
Oxnard, CA 93032
Mr. Brian Loew, Senior Transportation Planner

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT (SCRTD)
425 South Main Street
Los Angeles, CA 90013
Mr. Leo Bevon, Planning Manager

STOCKTON METROPOLITAN TRANSIT DISTRICT
1533 East Lindsay Street
Stockton, CA 95205
Mr. Leroy E. Neva, General Manager

CITY OF THOUSAND OAKS
401 West Hillcrest
Thousand Oaks, CA 91360
Ms. Carol Williams, Public Works Department

TORRANCE TRANSIT SYSTEM
3031 Torrance Boulevard
Torrance, CA 90503
Mr. Ray Schmidt, President

Colorado

REGIONAL TRANSPORTATION DISTRICT
350 South Sante Fe Drive
Denver, CO 80223
Mr. James G. Oliver, Director of Planning & Scheduling

Connecticut

CONNECTICUT TRANSIT (HARTFORD DIVISION)
53 Vernon Street
Hartford, CT 06106
Ms. Helen Kemp, Senior Planner

CONNECTICUT TRANSIT (NEW HAVEN DIVISION)
470 James Street
New Haven, CT 06506
Mr. David F. Brandt, Superintendent of Schedules

CONNECTICUT TRANSIT (STAMFORD DIVISION)
Station Place
Stamford, CT 06902
Mr. James Crowley, General Manager

Delaware

DELAWARE ADMINISTRATION FOR REGIONAL TRANSIT
P. O. Box 1670
Wilmington, DE 19899
Mr. Arthur N. Gaudet, Deputy Administrator

District of Columbia

WASHINGTON METROPOLITAN TRANSIT AUTHORITY
600 Fifth Street, N.W.
Washington, DC 20001
Mr. David H. Semendinger, Head of Schedule Branch

Florida

BREVARD TRANSPORTATION AUTHORITY
460 South Harbor City Boulevard
Melbourne, FL 32901
Mr. Pat Davidson

EAST VOLUSIA TRANSPORTATION AUTHORITY (VOTRAN)
950 Big Tree Road
South Daytona, FL 32019
Mr. Scott Allen

MTA MIAMI
3300 N.W. 32nd Avenue
Miami, FL 33152
Mr. David Fialkoff

PALM BEACH COUNTY TRANSPORTATION AUTHORITY (COTRAN)
Department of Airports Building S-1440
West Palm Beach, FL 22406-1429
Mr. Irving Cure, Director

ST. PETERSBURG MUNICIPAL TRANSIT SYSTEM
P. O. Box 2842
St. Petersburg, FL 33731
Ms. Margaret S. Swenson

Georgia

METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY
401 West Peachtree, N.E.
Atlanta, GA 30365
Ms. Ann F. Johnson, Manager of Transportation

Illinois

BLOOMINGTON - NORMAL PUBLIC TRANSIT
104 East Oakland Avenue
Bloomington, IL 61701
Mr. Larry Martell, Treasurer

CHAMPAIGN - URBANA MASS TRANSIT
801 East University
Champaign, IL
Mr. Rob Patton

DECATUR PUBLIC TRANSIT SYSTEM
61 Industry Court
Decatur, IL 62523
Mr. James C. Wagner, Resident Manager

ROCK ISLAND COUNTY METROPOLITAN MASS TRANSIT DISTRICT
2000 Third Avenue
Rock Island, IL 61201
Mr. Wayne G. Shouse, General Manager

Indiana

FORT WAYNE PTC
801 Leesburg Road
Ft. Wayne, IN 46808
Mr. Jim Blitz

HAMMOND INTERCITY SYSTEM
7324 Indianapolis Boulevard
Hammond, IN
Mr. J. Christopher Huff

SOUTH BEND PUBLIC TRANSPORTATION CORPORTATION (TRANSPO)
P. O. Box 1437
South Bend, IN 46624
Mr. Joseph H. Griffith, Assistant General Manager

Iowa

IOWA CITY TRANSIT
410 East Washington Street
Iowa City, IA 52204
Mr. Mike Prior

METROPOLITAN TRANSIT AUTHORITY
1100 MTA Lane
Des Moines, IA 50309
Mr. Forest D. Swift, General Manager

SIOUX CITY TRANSIT SYSTEM
2505 Fourth Street
Sioux City, IA 51101
Mr. W. N. Davis, Manager

Kansas

TOPEKA METROPOLITAN TRANSIT AUTHORITY
201 North Kansas
Topeka, KS 66603
Mr. James S. Daniel, City Planner

OWENSBORO TRANSIT SYSTEM
P. O. Box 847
Owensboro, KY 42301
Ms. Cissy Gregson, Transit Planner

Kentucky

TRANSIT AUTHORITY OF NORTHERN KENTUCKY
11th and Lowell Streets
Newport, KY 41071
Mr. Mark F. Donaghy

TRANSIT AUTHORITY OF RIVER CITY (TARC)
1000 West Broadway
Louisville, KY 40203
Mr. Perry S. Jacobs, Supervisor for Research

Louisiana

LOUISIANA TRANSIT MANAGEMENT
P. O. Box 7314, Independence Station
Shreveport, LA 71101
Mr. Eugene Eddy, Resident Manager

NEW ORLEANS PUBLIC SERVICE, INC.
P. O. Box 60340
New Orleans, LA 70160
Mr. Roy L. Chenevert, Staff Assistant to the General Manager

Maine

GREATER PORTLAND TRANSIT DISTRICT
P. O. Box 1097
Portland, ME
Mr. Richard Paffrath, Assistant General Manager

Maryland

MASS TRANSIT ADMINISTRATION
1515 Washington Boulevard
Baltimore, MD 21230
Mr. Morris L. Wilson, Director of Operations Planning & Scheduling

Massachusetts

BROCKTON AREA TRANSIT
1442 Main Street
Brockton, MA 02401
Mr. Ray Ladous

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)
45 High Street
Boston, MA 02110
Mr. Alan H. Castaline, Manager of Scheduling

UNIVERSITY OF MASSACHUSETTS TRANSIT SERVICE (UMASS)
University Bus Garage, University of Massachusetts
Amherst, MA 01003
Mr. William C. Barrett, Director of Transportation

Michigan

BATTLE CREEK TRANSIT
P. O. Box 1717
Battle Creek, MI 49016
Mr. Jerry Hutchison, Transit Planner

GRAND RAPIDS AREA TRANSIT AUTHORITY (GRATA)
333 Wealthy Street, S.W.
Grand Rapids, MI 49503
Mr. Steve Kautz, Planning Supervisor

SOUTHEASTERN MICHIGAN TRANSPORTATION AUTHORITY (SEMTA)
First National Building, 660 Woodward Avenue
Detroit, MI 48226
Mr. Mark Fedorowicz, Transportation Planner

Minnesota

DULUTH TRANSIT AUTHORITY
2402 West Michigan
Duluth, MN 55806
Mr. Jim Heilig, Director of Planning

METROPOLITAN TRANSIT COMMISSION
801 American Center Building
St. Paul, MN 55101
Mr. David A. Lee, Director of Research

Missouri

BI-STATE DEVELOPMENT AGENCY
707 North First Street
St. Louis, MO 63101
Mr. James Troupe, Jr., Manager of Operations

Montana

BILLINGS METROPOLITAN TRANSIT
510 North Broadway
Billings, MT 59103
Mr. Troy Harkey, Transit Manager

Nebraska

METRO AREA TRANSIT
2615 Cuming
Omaha, NE 68131
Ms. Sue Aschinger-Riley, Planner II

New York

CAPITAL DISTRICT TRANSPORTATION AUTHORITY
110 Watervliet Avenue
Albany, NY 12206
Mr. Charles Cohn, Senior Planner

NIAGARA FRONTIER TRANSIT METRO SYSTEM, INC.
181 Ellicott Street
Buffalo, NY 14203
Mr. J. M. Heinen, Vice President

REGIONAL TRANSIT SERVICE, INC.
1372 East Main Street
Rochester, NY 14609
Mr. Charles N. Switzer, Manager of Schedules

North Carolina

CHAPEL HILL COMMUNITY TRANSIT
306 North Columbia Street
Chapel Hill, NC 27514
Mr. Robert J. Godding, Director of Transportation

CHARLOTTE TRANSIT SYSTEM
707 N. Brevard Street
Charlotte, NC 28202
Mr. Eric Meyerson, Director of Schedules

FAYETTEVILLE AREA SYSTEM OF TRANSIT
426 Mayview Street
Fayetteville, NC 28306
Mr. Eddie Cook

HIGH POINT TRANSIT SYSTEM (HI TRAN)
716 W. Kivett Drive
High Point, NC 27260
Mr. John R. Montgomery, General Manager

Ohio

ALLEN COUNTY REGIONAL TRANSIT AUTHORITY
72 Town Square, Station D
Lima, OH 45801
Ms. Linda S. Hunkins, Executive Director

CANTON REGIONAL TRANSIT AUTHORITY
1600 Gateway Boulevard, S.E.
Canton, OH 44707
Mr. Jim Rosa, Operations General Manager

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY
615 Superior Avenue, N.W.
Cleveland, OH 44113
Mr. Donald G. Yuratovac

MAPLE HEIGHTS TRANSIT
5501 Dunham Street
Maple Heights, OH 44137
Mr. Richard Rotzow, Director

QUEEN CITY METRO
6 East Fourth Street
Cincinnati, OH 45202
Mr. Hank R. Sokolnicki, Operations Analyst

RICHLAND TRANSIT SYSTEM, INC.
166 West Sixth Street
Mansfield, OH 44902
Mr. Jonathan A. Walbert, Manager

WESTERN RESERVE TRANSIT AUTHORITY
604 Mahoning Avenue
Youngstown, OH 44502
Ms. Shelley Banfield

Oregon

LANE TRANSIT DISTRICT
P. O. Box 2710
Eugene, OR 97402
Mr. Stefano Viggiano

Pennsylvania

ALTOONA METRO TRANSIT (AMTRAN)
3301 Fifty Avenue
Altoona, PA 16602
Mr. Philip Fry, General Manager

ERIE METROPOLITAN TRANSIT AUTHORITY
127 East Fourteenth Street
Erie, PA 16512
Mr. Thomas W. Burke, General Manager

LEHIGH AND NORTHAMPTON TRANSPORTATION AUTHORITY (LANTA)
Twelfth and Cumberland Streets
Allentown, PA 18103
Mr. Armando Greco, Executive Director

RED ROSE TRANSIT AUTHORITY
45 Erick Road
Lancaster, PA 17601
Mr. Reed M. Rodman, Executive Director

Puerto Rico

METROPOLITAN BUS AUTHORITY
P. O. Box 1029
Hata Rey, PR 00919
Mr. Nicolas Velazquez, Acting President and General Manager

Tennessee

CHATTANOOGA AREA REGIONAL TRANSPORTATION AUTHORITY
1617 Wilcox Boulevard
Chattanooga, TN 37406
Mr. Mark I. Pritchard, Assistant General Manager

MEMPHIS AREA TRANSIT AUTHORITY
P. O. Box 122
Memphis, TN 38101
Mr. Donald C. Burgess, Special Operations Assistant

METROPOLITAN TRANSIT AUTHORITY
60 Peabody Street
Nashville, TN 37210
Mr. Ron Ristau, Mr. Dick Alexander

Texas

ABILENE TRANSIT SYSTEM
1189 South 2nd Street
Abilene, TX 79602
Mr. Robert T. Babbitt, Resident Manager

BROWNSVILLE URBAN SYSTEM
700 South Iowa Avenue
Brownsville, TX 78520
Mr. Ernesto Avales, Administrative Assistant

CITIBUS
P. O. Box 2000
Lubbock, TX 79457
Mr. Clyde Shannon

CITY OF CORPUS CHRISTI TRANSIT SYSTEM
P. O. Box 9277
Corpus Christi, TX 78469
Mr. Thomas A. Niskala, Transit General Manager

CITY TRANSIT SERVICE OF FORT WORTH
P. O. Box 1477
Fort Worth, TX 76101
Mr. John P. Bartosiewicz, Resident Manager

DALLAS TRANSIT SYSTEM
101 North Peak Street
Dallas, TX 75226
Mr. Gary Husstudler

METROPOLITAN TRANSIT AUTHORITY OF HARRIS COUNTY (METRO)
P. O. Box 61429
Houston, TX 77208

VALLEY TRANSIT COMPANY, INC.
P. O. Box 1870
Harlingen, TX 78551
Mr. R. R. Farris, Vice President

VIA METROPOLITAN TRANSIT
P. O. Box 12489
San Antonia, TX 78212
Mr. Don Kiolbassa

Utah

UTAH TRANSIT AUTHORITY
P. O. Box 31910
Salt Lake City, UT 84110
Mr. Charles Preston, Manager of Maintenance Administration

Virginia

GREATER RICHMOND TRANSIT COMPANY
P. O. Box 27323
Richmond, VA 23261
Mr. Henry C. Church, General Manager

TIDEWATER REGIONAL TRANSIT
509 East 18th
Norfolk, VA 23501
Mr. Richard C. Clair, Operating Manager

Washington

PIERCE TRANSIT
P. O. Box 5738
Tacoma, WA 98405
Ms. Mary Jo Porter, Director of Transit Development

SEATTLE METRO
821 Second Avenue
Seattle, WA 98104
Mr. David K. Browne, Senior Transit Planner

SPOKANE TRANSIT AUTHORITY FOR REGIONAL TRANSPORTATION
P. O. Box 2233
Spokane, WA 99201
Mr. Charles Davis, Transit Planner

YAKIMA TRANSIT
129 North Second Avenue
Yakima, WA 98901
Mr. Daniel R. Newton, Manager

Wisconsin

MADISON METRO TRANSIT
1101 East Washington Avenue
Madison, WI 53703
Mr. Thomas A. Drengson

MILWAUKEE COUNTY TRANSIT SYSTEM
4212 West Highland Boulevard
Milwaukee, WI 53208
Mr. Don Koser, Transit Planner

WAUKESHA METRO TRANSIT
201 Delafield Street, Room 200
Waukesha, WI 52186
Mr. Robert C. Johnson, Transit Coordinator

Canada

CALGARY TRANSIT
801 36th Avenue, N.E.
Calgary, Alberta, CANADA T2P 2M5

EDMONTON TRANSIT
P. O. Box 2610
Edmonton, Alberta, CANADA T5J 3R5
Ms. Nancy Corscadden

GREATER VANCOUVER TRANSIT SYSTEM - METRO TRANSIT OPERATING CO.
850 S.W. Marine Drive
Vancouver, British Columbia, CANADA V6P 5Z1
Mr. V. L. Sharman, Director of Operational Planning & Service Liaison

O-C TRANSPO
1500 St. Laurent Boulevard
Ottowa, Ontario, CANADA K1G 0Z8
Mr. Gerry Hyndman, Planner

TORONTO TRANSIT COMMISSION
1900 Yonge Street
Toronto, Ontario, CANADA M4S 1Z2
Dr. Juri Pill, Executive Director of Planning

AUTHORITY BIRMINGHAM-JEFFERSON COUNTY TRANSIT AUTHORITY

P. O. Box 10212

Birmingham, AL 35202-0212

(205) 322-7701

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,118
POPULATION OF SERVICE AREA	502,853
TOTAL NUMBER OF BUSES	156
NUMBER OF PEAK PERIOD BUSES	79
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Available
NUMBER OF REVENUE BUS MILES (FY80)	Not Available
NUMBER OF BUS ROUTES	26
SIZE OF TRAFFIC CHECKER FORCE	5 part-time

REVIEW OF EVALUATION PROCESS

BJCTA currently is conducting an evaluation designed to develop service standards under provisions of the FY 1983 Unified Work Program. Section 8 funds are being used to develop a cost allocation formula, service design measures, and economic aid productivity measures. In January 1983, a regular route monitoring program using traffic checkers was begun. Between two and four routes are checked weekdays, and two routes are checked on Saturday, which allows each route to be checked twice a year.

BIRMINGHAM-JEFFERSON COUNTY TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	(3)	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Budgetary constraints and lack of sufficient funding has been a problem.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Cost Recovery			Vehicle Headways
			Schedule Adherence
			Missed Trips
			Public Complaints
			Passengers Per Hour
			Passengers Per Mile
			Cost Per Passenger
			Vehicle Loads
			Passenger Transfers

AUTHORITY MONTGOMERY AREA TRANSIT SYSTEM

P.O. BOX 84

Montgomery, AL 36101

(205) 262-7321

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	48
POPULATION OF SERVICE AREA	152,650
TOTAL NUMBER OF BUSES	31
NUMBER OF PEAK PERIOD BUSES	28
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	5,466,390
NUMBER OF REVENUE BUS MILES FY80)	983,402
NUMBER OF BUS ROUTES	18
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

M.A.T.S. uses Duncan fareboxes which register money, passengers by category, transfers, and passes. Operators record these readings prior to starting each trip. From this data, a weekly summary is prepared by clerks which shows revenue, miles, operator hours, and revenue per mile for each route. When any route shows a loss in revenue per mile or fails to improve at the system rate, the route is analyzed trip by trip to determine which trips are not productive.

MONTGOMERY AREA TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
(No comparison information at this time)

PROBLEMS ENCOUNTERED
Unable to improve service evaluation at this time due to severe cuts in local funding. Have also experienced a lay-off of personnel and cuts in present schedules and service.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		Route Deviation
	Recovery Time		Vehicle Headways
	Vehicle Loads		Safety
	Schedule Adherence		Missed Trips
	Accessibility		Passengers Per Hour
	Passenger Transfers		Passengers Per Mile

AUTHORITY PHOENIX TRANSIT SYSTEM

P. O. Box 4275

Phoenix, AZ 85030

(602) 256-3117

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	166
POPULATION OF SERVICE AREA	410,000
TOTAL NUMBER OF BUSES	247
NUMBER OF PEAK PERIOD BUSES	194
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	13,745,233
NUMBER OF REVENUE BUS MILES (FY80)	6,780,064
NUMBER OF BUS ROUTES	47
SIZE OF TRAFFIC CHECKER FORCE	7

REVIEW OF EVALUATION PROCEDURES

The main method of monitoring the system's effectiveness, productivity, and quality is through the use of data collectors. On-board surveys are used for Section 15 reports, running time and passenger load checks, and revenue surveys. Schedule adherence is also monitored through monthly stationary checks. The Planning and Marketing Department is responsible for seeing that these functions are carried out. Complaints are also handled by this department. Revenue and mileage factors are monitored by the Accounting Department and reported monthly, with the Controller and Superintendent of Transportation working to improve any problem areas. Passenger and driver safety is continuously monitored by the Safety Director.

PHOENIX TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	(4)	5	6	7	8	9	10
EQUITY.....	1	2	(3)	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	(5)	6	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
One problem encountered is the fixed cost associated with union contracts which cannot be controlled through service adjustments, etc. Another problem is created by the time it takes to have schedule adjustments approved by City Council and others. Current plans include a better utilization of data collectors for gathering needed information, along with the installation of an MIS system to provide faster analysis.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Bus Stop Spacing
			Route Duplication
			Schedule Adherence
			Accessibility
			Bus Stop Shelters
			Safety
			Public Complaints
			Passengers/Hour
			Passengers/Mile
			Cost Recovery
			Cost/Passenger

AUTHORITY CENTRAL ARKANSAS TRANSIT

P.O. Box 3572

Little Rock, AR 72203

(907) 263-8227

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	90
POPULATION OF SERVICE AREA	212,500
TOTAL NUMBER OF BUSES	85
NUMBER OF PEAK PERIOD BUSES	49
NUMBER OF UNLINKED PASSENGER TRIPS FY80)	2,936,840
NUMBER OF REVENUE BUS MILES (FY80)	11,468,694
NUMBER OF BUS ROUTES	18 reg-8 express
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

The Authority utilizes passenger surveys, trip surveys, line counts, and sampling.

The Operations Department is directly responsible for surveying procedures.

CENTRAL ARKANSAS TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS

(No comparison information at this time)

PROBLEMS ENCOUNTERED

Unable to improve service evaluations at this time due to severe cuts in local funding. Have also experienced a lay-off of personnel and cuts in present schedules and service.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY

None Reported

AUTHORITY ARCATA AND MAD RIVER TRANSIT

736 F Street

Arcata, CA 95521

(707) 822-3775

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	8.5
POPULATION OF SERVICE AREA	13,462
TOTAL NUMBER OF BUSES	5
NUMBER OF PEAK PERIOD BUSES	3
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Available
NUMBER OF REVENUE BUS MILES (FY80)	92,000
NUMBER OF BUS ROUTES	3
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Arcata operates one inter- and two intra-city routes on a pulse system. Drivers count the number of free passengers riding, and loading surveys and origin-destination surveys are conducted. Quarterly reports on system-wide cost and ridership data are submitted to the City Council, and a five-year plan is developed.

ARCATA AND MAD RIVER TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Cost Recovery	Bus Stop Spacing		Route Deviation
Vehicle Headways	Route Length		Safety
	Recovery Time		Passenger Transfers
	Route Duplication		Missed Trips
	Vehicle Loads		Public Complaints
	Schedule Adherence		Passengers/Mile
	Accessibility		
	Vehicle Spares		
	Cost per Passenger		
	Passengers/Hour		
	Bus Stop Shelters		

AUTHORITY CITY OF FRESNO TRANSIT

2223 "G" Street

Fresno, CA 93706

(209) 488-1393

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	81
POPULATION OF SERVICE AREA	300,000
TOTAL NUMBER OF BUSES	103
NUMBER OF PEAK PERIOD BUSES	68
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	Not Available
NUMBER OF REVENUE BUS MILES (FY81)	3,325,000
NUMBER OF BUS ROUTES	17
SIZE OF TRAFFIC CHECKER FORCE	(use light duty operators)

REVIEW OF EVALUATION PROCESS

Fresno Transit contracts with transit measurement companies to collect ridership information by using the E-Z Data system. In the past, this has been done approximately every 18 months. Revenue data is collected daily through registering fareboxes. The Management Analyst of The City of Fresno produces a monthly report on Fresno Transit, which is distributed throughout the government. The city governing body has the responsibility for approving all changes that are greater than 5% of the existing service. Otherwise, the staff of the Transit Department has the final say.

CITY OF FRESNO TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
Not Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Span of Service		Bus Stop Spacing
	Schedule Adherence		Route Length
	Accessibility		Vehicle Headways
	Passengers/Hour		Bus Stop Shelter
	Passengers/Mile		Safety
	Cost per Passenger		Missed Trips
	Cost Recovery		Public Complaints

AUTHORITY GOLDEN EMPIRE TRANSIT DISTRICT

3101 16th Street

Bakersfield, CA 93301

(805) 324-9874

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	170 (District Boundary)
POPULATION OF SERVICE AREA	230,475
TOTAL NUMBER OF BUSES	40
NUMBER OF PEAK PERIOD BUSES	28
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,174,900
NUMBER OF REVENUE BUS MILES (FY80)	1,058,019
NUMBER OF BUS ROUTES	24
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The authority's Planning Department is responsible for service evaluation. The evaluation process used measures system and route performance against various criteria and standards. An annual update of the short range transit plan includes extensive evaluations. Monitoring is continuous with periodic field checks and surveys.

GOLDEN EMPIRE TRANSIT DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	(10)
EQUITY.....	1	2	3	4	5	6	7	8	9	(10)
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	(10)
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS

None

PROBLEMS ENCOUNTERED

More buses needed, but no space to store buses at present. New facility planned.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Span of Service		Route Deviation
Vehicle Loads	Route Length		Route Duplication
Vehicle Headways			Route Structure
Schedule Adherence			Public Complaints
Accessibility			
Safety			
Passenger Transfers			
Cost Recovery			

AUTHORITY GOLDEN GATE TRANSIT

P.O. Box 3474

San Rafael, CA 94912

(415) 457-3110

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	476.5
POPULATION OF SERVICE AREA	629,300
TOTAL NUMBER OF BUSES	265
NUMBER OF PEAK PERIOD BUSES	242
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	10,780,775
NUMBER OF REVENUE BUS MILES (FY80)	7,764,037
NUMBER OF BUS ROUTES	50
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

Golden Gate Transit prepares a monthly report on bus service containing the following information for each bus route by time period, direction, and county of origin-destination: 1) passengers carried, 2) passenger miles, 3) vehicle miles-revenue and deadhead, 4) fare revenue, 5) operating expense, 6) operating deficit, 7) deficit per passenger, and 8) deficit per mile.

Bus operators record passengers carried on each trip. This information is transmitted to the Data Processing Department and input to a computer program containing other data such as trip mileage as assigned by the Scheduling Department, and passenger trip length as determined by periodic passenger surveys conducted by the Planning Department. The program also contains a methodology for computing and allocating operating expense to each bus trip. A computer report is produced which summarizes the daily trip data by month.

GOLDEN GATE TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	(10)
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
On-going monitoring must sometimes be augmented with detailed analysis due to the fact that evaluation of certain service adjustments require a greater level of detail (specific data on specific trips). Evaluation of past performance at a level of greater detail can be difficult. The system is trying to improve the accuracy of its trip level data collection and processing effort. Reports are often late and therefore out of date.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Schedule Adherence
Vehicle Spares			Bus Stop Shelters
Cost Recovery			Safety
			Public Complaints
			Cost per Passenger

AUTHORITY INTRACITY TRANSIT

P.O. Box 642

Modesto, CA 95353

(209) 577-5298

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	32
POPULATION OF SERVICE AREA	140,000
TOTAL NUMBER OF BUSES	20
NUMBER OF PEAK PERIOD BUSES	16
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,200,000
NUMBER OF REVENUE BUS MILES (FY80)	980,000
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	"everyone is involved"

REVIEW OF EVALUATION PROCEDURES

The authority collects and analyzes data through the following sources: 1) Person-to-person surveys of bus patrons; 2) Registering fareboxes; 3) Transfer matrices are developed quarterly on a route by route basis; 4) Cost analysis is performed monthly on a per route and systemwide basis; 5) Comparison of daily passenger counts with farebox readings and the cost analysis to determine what factors contribute to a heavy vs poor ridership route.The correlation of data is performed by the Transit manager.

INTRACITY TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS

None

PROBLEMS ENCOUNTERED

None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Headways	Route Length		Vehicle Spares
Bus Stop Shelters	Passengers/Hour		Missed Trips
Safety			Public Complaints
Passenger Transfers			Passengers/Mile
Cost Recovery			Cost/Passenger

AUTHORITY LONG BEACH TRANSIT

P. O. Box 731

Long Beach, CA 90801

(213) 591-8753

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	50
POPULATION OF SERVICE AREA	490,000
TOTAL NUMBER OF BUSES	180
NUMBER OF PEAK PERIOD BUSES	130
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	18,302,000
NUMBER OF REVENUE BUS MILES (FY80)	6,284,000
NUMBER OF BUS ROUTES	16
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Long Beach Transit is a city-owned operation. The Board is appointed by the City Council, and the City Council is responsible for approving route changes.

The Finance Department of LBT prepares a monthly report detailing ridership, revenue, and mileage information, and distributes it to the Scheduling and Planning Departments. A system-wide ridership count has been conducted annually in the past by consultants. This information is used in the annual preparation of a short-range transit plan.

LONG BEACH TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	(6)	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Passenger Transfers	Recovery Time	Cost Recovery
	Passengers/Mile	Vehicle Loads	Cost/Passenger
	Passengers/Hour	Schedule Adherence	Route Duplication
		Accessibility	Vehicle Headways
			Safety
			Bus Stop Shelters
			Public Complaints

AUTHORITY ORANGE COUNTY TRANSIT DISTRICT (OCTD)

P. O. Box 3005

Garden Grove, CA 92642

(714) 971-6200

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	746
POPULATION OF SERVICE AREA	2,100,000
TOTAL NUMBER OF BUSES	477
NUMBER OF PEAK PERIOD BUSES	359
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	24,987,278
NUMBER OF REVENUE BUS MILES (FY80)	13,514,979.94
NUMBER OF BUS ROUTES	62
SIZE OF TRAFFIC CHECKER FORCE	6

REVIEW OF EVALUATION PROCESS

Once a year, the Service Development Department of Orange County Transit publishes a Service Improvement Program booklet which includes myriad facts and figures outlining the system, its performance, and recent and proposed changes. Origin Destination surveys have been conducted every three years. Schedule adherence and ridership data are collected through on-board ride checks year-round. Route performance is derived through the monitorization of ridership, revenue, vehicle miles, vehicle hours, and cost.

ORANGE COUNTY TRANSIT DISTRICT (OCTD)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None

PROBLEMS ENCOUNTERED
State law requires at least twenty percent recovery of cost, which is quite difficult when attempting to add new service or increase existing service.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Span of Service		Route Structure
Route Deviation			
Recovery Time			
Vehicle Headways			
Schedule Adherence			
Accessibility			
Bus Stop Shelters			
Passenger Transfers			
Missed Trips			
Passengers/Hour			
Cost Recovery			

AUTHORITY RIVERSIDE TRANSIT AGENCY

1825 Third Street

Riverside, CA 92507

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,300
POPULATION OF SERVICE AREA	Approx. 550,000
TOTAL NUMBER OF BUSES	96
NUMBER OF PEAK PERIOD BUSES	65
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,456,784
NUMBER OF REVENUE BUS MILES (FY80)	2,584,970
NUMBER OF BUS ROUTES	13
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCESS

Progress towards agency objectives is reported quarterly to the Board of Directors for review. Monthly operating reports, prepared by the Operating Department, are used by the Planning Department in preparing a Quarterly Productivity Report. Monthly operational costs and revenue figures are summarized into a quarterly format and are then furnished to the Planning Department by the Accounting Department and are also used in formulating the Quarterly Productivity Report.

RIVERSIDE TRANSIT AGENCY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	(6)	7	8	9	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	(5)	6	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
A number of RTA's contract operator services have consistently performed at levels below minimum acceptable standards. Increased marketing efforts and attempts at reducing operating costs have failed to improve these services. As a result, continued monitoring, reduction or elimination of certain services may be required. Evaluation of some contract operated rural services has been made more difficult because of poor reliability. Before an honest evaluation of these services can be conducted, a reliable service with the proper sized vehicles must be instituted. New equipment for these services has been ordered. Performance standards along with goals and objectives are reevaluated at the end of each fiscal year to assure that they remain appropriate measures.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Recovery Time	Bus Stop Spacing		Route Deviation
Accessibility	Route Duplication		Span of Service
Passengers/Hour	Vehicle Headways		Route Length
Cost Recovery	Vehicle Spares		Route Structure
Cost/Passenger			Vehicle Loads
			Schedule Adherence
			Safety
			Public Complaints

AUTHORITY SACRAMENTO REGIONAL TRANSIT DISTRICT

P.O. BOX 2110

Sacramento, CA 95810

(916) 444-7591

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		385.4
POPULATION OF SERVICE AREA		382,000
TOTAL NUMBER OF BUSES		219
NUMBER OF PEAK PERIOD BUSES		187
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		18,800,000
NUMBER OF REVENUE BUS MILES (FY80)		9,856,000
NUMBER OF BUS ROUTES		70
SIZE OF TRAFFIC CHECKER FORCE	Full-Time 2 /	Part-Time 6

REVIEW OF EVALUATION PROCEDURES

Performance Indicator Reports (PIRS), based upon thirteen performance indicators, are prepared each month. These reports are prepared by each functional department and are reviewed by general management and the Board of Directors. The Systems Department is responsible for the collection, summarization and transmittal of PIRS.

SACRAMENTO REGIONAL TRANSIT DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	(6)	7	8	9	10
EQUITY.....	1	2	3	4	(5)	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	(6)	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Finding useful performance criteria that are measurable has been a problem.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Passengers/Mile
Route Deviation			Cost per Passenger
Span of Service			
Route Length			
Recovery Time			
Vehicle Headways			
Schedule Adherence			
Bus Stop Shelters			
Safety			
Vehicle Spares			
Missed Trips			
Public Complaints			
Passengers/Hour			

AUTHORITY SAN DIEGO TRANSIT

P.O. Box 2511

San Diego, CA 92112

(714) 238-0100

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	258
POPULATION OF SERVICE AREA	1,146,377
TOTAL NUMBER OF BUSES	343
NUMBER OF PEAK PERIOD BUSES	206
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	34,619,632
NUMBER OF REVENUE BUS MILES (FY80)	11,657,699
NUMBER OF BUS ROUTES	28
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

San Diego Transit has a formal route evaluation program which includes four categories and a composite score for each route and the system as a whole. The four categories are percent revenue hours, total passengers per trip, farebox recovery, and peak load factor. A report is generated that discusses the performance of the system and those routes falling below standard. This program is performed quarterly. The system is evaluated annually to see how well service standards are being met. Informally, the system is evaluated in much greater detail due to the availability of an extensive amount of route and system data obtained from daily farebox audit sheets, monthly reports, monthly performance indicator reports, origin and destination surveys (conducted every other year), and the passenger counting program. The service evaluation program is the responsibility of the Planning Department and is performed by the Transit Planner - Program Implementation.

SAN DIEGO TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Headways	Recovery Time		Route Duplication
Accessibility	Passenger Transfers		Schedule Adherence
Bus Stop Shelters			Missed Trips
Vehicle Spares			Public Complaints
Passengers/Mile			Passengers/Hour
Cost Recovery			Cost per Passenger

AUTHORITY SANTA CLARA COUNTY TRANSIT

1555 Berger Drive

San Jose, CA 95112

(408) 299-4384

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		250
POPULATION OF SERVICE AREA		1,280,000
TOTAL NUMBER OF BUSES		654
NUMBER OF PEAK PERIOD BUSES		380
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		31,660,000
NUMBER OF REVENUE BUS MILES (FY80)		16,121,241
NUMBER OF BUS ROUTES		69
SIZE OF TRAFFIC CHECKER FORCE	Part-Time	3

REVIEW OF EVALUATION PROCEDURES

Santa Clara's route evaluation process is divided into two categories - regular route and express route evaluation. Both have a different evaluation methodology and productivity improvement process. The basic evaluation procedure is that each route is evaluated against performance criteria for that type of service, those found to be substandard are placed on probationary status. A report on the probationary routes is generated and specific steps are followed to improve productivity.

SANTA CLARA COUNTY TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Schedule Adherence	Missed Trips		Recovery Time
Safety			
Passengers/Hour			
Passengers/Mile			
Cost per Passenger			

AUTHORITY SOUTH COAST AREA TRANSIT (SCAT)

P.O. BOX 1146

Oxnard, CA 93032

(805) 483-3959

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	Not Reported
POPULATION OF SERVICE AREA	250,000
TOTAL NUMBER OF BUSES	43
NUMBER OF PEAK PERIOD BUSES	25
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,375,354
NUMBER OF REVENUE BUS MILES (FY80)	1,285,344
NUMBER OF BUS ROUTES	13
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

Performance evaluation of the SCAT system is conducted by personnel in the Maintenance, Planning and Personnel/Training Departments. Each department head is responsible for supervising all performance monitoring and evaluation procedures for department activities. The SCAT Board of Directors establishes performance measures, standards, and goals on an annual basis. Based upon the Board's direction, the department heads formulate procedures to collect data on all phases of transit operations subject to performance measurement. Each month, the department heads prepare summary reports to the SCAT General Manager and Board of Directors concerning operational performance. These reports provide the basis for annual reviews of SCAT transit services as well as internal management procedures. These annual reviews are subsequently used to formulate policies designed to improve the performance of SCAT employees and services.

SOUTH COAST AREA TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY....	1	2	3	(4)	5	6	7	8	9	10
EQUITY.....	1	(2)	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	(4)	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	(6)	7	8	9	10

COMMENTS:

None

PROBLEMS ENCOUNTERED:
The most significant problem associated with the transformation of evaluative findings into actual service alterations is application of local policies to the demands of special interest groups. Another area of concern is the false perception that mobilhome parks generate significant ridership for transit, when such routing is under utilized. The areas of policy considerations takes into account a broad range of local perspectives which are considered at the time of providing public transit services. Perspectives take into account the makeup of a board of directors and its original establishment of the transit agency.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Recovery Time	Route Duplication		Vehicle Spares
	Vehicle Headways		
	Accessibility		
	Bus Stop Shelters		

AUTHORITY SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT (SCRTD)

425 South Main Street

Los Angeles, CA 90013

(213) 972-6000

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,280
POPULATION OF SERVICE AREA	7,000,000
TOTAL NUMBER OF BUSES	2,732
NUMBER OF PEAK PERIOD BUSES	2,036
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	397,000,000
NUMBER OF REVENUE BUS MILES (FY81)	89,961,000
NUMBER OF BUS ROUTES	223
SIZE OF TRAFFIC CHECKER FORCE	35

REVIEW OF EVALUATION PROCESS

SCRTD relies on riding checks for collection of all its ridership data. The checker collects information on boardings, alightings, fares paid, and actual time. This information is used by the Schedule Department and the Service Analysis Section (SAS). In addition to the riding checks, a fare survey is conducted three to four times a year. A one percent sample of the trips is taken and the results are used to estimate ridership.

The SAS produces a line summary for each line on an approximate six-month cycle. These summaries include information on cost, revenue, and ridership. In addition, a line profile is produced annually and incorporates additional information on transit dependence, system integrity factors, and economic factors. Together, the summaries and profiles are used to rank the routes and indicate where improvements can be made.

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT (SCRTD)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Schedule Adherence		Cost Recovery
Vehicle Load			Cost/Passenger
Vehicle Headways			Route Deviation
Accessibility			
Route Spacing			
Passengers/Hour			

AUTHORITY STOCKTON METROPOLITAN TRANSIT DISTRICT

1533 East Lindsay St.

Stockton, CA 95205

(209) 948-5566

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	82
POPULATION OF SERVICE AREA	200,400
TOTAL NUMBER OF BUSES	58
NUMBER OF PEAK PERIOD BUSES	42
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	2,800,000
NUMBER OF REVENUE BUS MILES (FY81)	1,567,000
NUMBER OF BUS ROUTES	10 plus special trippers
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Specific information regarding evaluation procedures was not provided.

STOCKTON METROPOLITAN TRANSIT DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing		Safety	Route Structure
Route Deviation			Passenger Transfers
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Bus Stop Shelters			
Passengers/Hour			
Cost Recovery			

AUTHORITY CITY OF THOUSAND OAKS

401 West Hillcrest,

Thousand Oaks, CA

(805) 497-8611

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	49
POPULATION OF SERVICE AREA	95,000
TOTAL NUMBER OF BUSES	2 intra-city/2 interconnecting
NUMBER OF PEAK PERIOD BUSES	5
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	115,843
NUMBER OF BUS ROUTES	4
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The City of Thousand Oaks is a moderately small municipal entity with one person being charged with monitoring the bus system. Monitoring and evaluating the system includes riding the routes for observation of schedule adherence, bus stop placement, fare problems, problems with entering and departing buses, etc.; monthly statistical studies are done to monitor revenue and operating costs, and complaints.

CITY OF THOUSAND OAKS

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS:

Since the City has just initiated such evaluation efforts, it would be difficult to rate such items.

PROBLEMS ENCOUNTERED:

See Above

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Cost Recovery			Bus Stop Spacing
			Schedule Adherence
			Bus Stop Shelters
			Public Complaints
			Passengers Per Hour
			Passengers Per Mile
			Cost Per Passenger

AUTHORITY TORRANCE TRANSIT SYSTEM

3031 Torrance Blvd.

Torrance, CA 90503

(213) 328-5310

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	55
POPULATION OF SERVICE AREA	842,000
TOTAL NUMBER OF BUSES	48
NUMBER OF PEAK PERIOD BUSES	25
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,521,300
NUMBER OF REVENUE BUS MILES (FY80)	1,202,500
NUMBER OF BUS ROUTES	8
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

The Los Angeles County Transportation Commission has adopted a Transit Coordination and Service Program for L.A. County transit operators. This program monitors seven indicators all of which Torrance Transit supplies to the Commission as an integral part of its short range transit plan.

The LACTC audits Torrance's data and compares the performance indicators with those of other L.A. County operators. Torrance Transit estimates total boardings using a fare formula.

TORRANCE TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Route Length	Vehicle Loads		Route Deviation
Recovery Time	Schedule Adherence		Span of Service
Vehicle Headways	Public Complaints		Safety
Vehicle Spares			Passenger Transfers
Missed Trips			Passengers/Hour
Cost Recovery			Passengers/Mile
Cost per Passenger			

AUTHORITY REGIONAL TRANSPORTATION DISTRICT

350 S. Santa Fe Drive

Denver, CO 80223

(303) 777-8600

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,284
POPULATION OF SERVICE AREA	1,600,000
TOTAL NUMBER OF BUSES	781
NUMBER OF PEAK PERIOD BUSES	524
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	42,750,000
NUMBER OF REVENUE BUS MILES (FY80)	24,200,000
NUMBER OF BUS ROUTES	130
SIZE OF TRAFFIC CHECKER FORCE	9

REVIEW OF EVALUATION PROCEDURES

The RTD currently evaluates all routes in the system on a quarterly basis. The Planning and Schedules Division segregates the routes by service type and then ranks them in order of passengers per hour, per mile, and per trip, based upon information from the traffic checkers. The routes in the lowest quartile are subject to service changes and/or marketing activity. Any service changes or deletion takes place after a marketing promotion, and can be implemented only after a review process.

REGIONAL TRANSPORTATION DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
Denver has not had any difficulty in reducing non-peak service, but the elimination of poorly performing routes has met with considerable resistance.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Recovery Time	Vehicle Headways	Route Deviation	Span of Service
Vehicle Loads	Safety		Route Duplication
Accessibility	Passenger Transfers		Schedule Adherence
Passengers/Hour			Vehicle Spares
Passengers/Mile			Missed Trips
Cost per Passenger			Public Complaints

AUTHORITY CONNECTICUT TRANSIT (HARTFORD DIVISION)

53 Vernon Street

Hartford, CT 06106

(203) 522-8101

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	402.3
POPULATION OF SERVICE AREA	631,281
TOTAL NUMBER OF BUSES	382
NUMBER OF PEAK PERIOD BUSES	212
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	18,134,000
NUMBER OF REVENUE BUS MILES (FY80)	11,891,297
NUMBER OF BUS ROUTES	57
SIZE OF TRAFFIC CHECKER FORCE	3

REVIEW OF EVALUATION PROCESS

Although specific information concerning evaluative procedure was not provided, the Stamford, New Haven, and Hartford divisions of Connecticut Transit are all managed by H.N.S. Management Company. Each division utilizes basically the same evaluation technique and performance criteria. However, certain standards may vary due to differences in service areas and operating characteristics. (See New Haven.)

CONNECTICUT TRANSIT (HARTFORD DIVISION)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Span of Service		Route Duplication
Route Deviation	Recovery Time		Route Structure
Vehicle Loads	Passengers/Hour		Public Complaints
Vehicle Headways	Passengers/Mile		Cost per Passenger
Schedule Adherence	Cost Recovery		
Accessibility			
Bus Stop Shelters			
Safety			
Vehicle Spares			
Missed Trips			

AUTHORITY CONNECTICUT TRANSIT (NEW HAVEN DIVISION)

470 James Street

New Haven, CT 06506

(203) 624-0151

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	578
POPULATION OF SERVICE AREA	725,500
TOTAL NUMBER OF BUSES	184
NUMBER OF PEAK PERIOD BUSES	104
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	11,158,000
NUMBER OF REVENUE BUS MILES (FY80)	4,083,586
NUMBER OF BUS ROUTES	30
SIZE OF TRAFFIC CHECKER FORCE	2

REVIEW OF EVALUATION PROCESS

Two traffic checkers conduct load and ride checks on all trips on a routine basis. Downtown supervisors provide daily on-time checks. Road supervisors provide spot checks on operations and schedule adherence. E-Z Data has been in use since 1972.

Monthly operations and financial reports contain on-time performance, ridership, revenue, and productivity figures which are then compared to set targets. The Planning, Operations, and Scheduling Departments jointly conduct a comprehensive study of each route every two years. Six months to one year after each service change a follow-up report is prepared to measure results.

CONNECTICUT TRANSIT (NEW HAVEN DIVISION)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
None

PROBLEMS ENCOUNTERED
Only financial constraints have been a problem. A separate form of subsidy revenue, not dependent on political fluctuation or approval, would be beneficial.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Span of Service		Route Duplication
Route Deviation	Recovery Time		Route Structure
Vehicle Loads	Passengers/Hour		Public Complaints
Vehicle Headways	Passengers/Mile		Cost/Passenger
Schedule Adherence	Cost Recovery		
Accessibility			
Bus Stop Shelters			
Safety			
Vehicle Spares			
Missed Trips			

AUTHORITY CONNECTICUT TRANSIT (STAMFORD DIVISION)

Station Place

Stamford, CT 06902

(203) 327-7433

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	Not Reported
POPULATION OF SERVICE AREA	Not Reported
TOTAL NUMBER OF BUSES	Not Reported
NUMBER OF PEAK PERIOD BUSES	37
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	Not Reported
NUMBER OF BUS ROUTES	Not Reported
SIZE OF TRAFFIC CHECKER FORCE	Not Reported

REVIEW OF EVALUATION PROCEDURES

Although specific information concerning evaluative procedures was not provided, the Hartford, New Haven and Stamford Divisions of Connecticut Transit are all managed by H.N.S. Management Company. Each division utilizes basically the same evaluation technique and performance criteria, however certain standards may vary due to differences in service areas and operating characteristics. (See New Haven)

CONNECTICUT TRANSIT (STAMFORD DIVISION)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Span of Service		Route Duplication
Route Deviation	Recovery Time		Route Structure
Vehicle Loads	Passengers/Hour		Public Complaints
Vehicle Headways	Passengers/Mile		Cost per Passenger
Schedule Adherence	Cost Recovery		
Accessibility			
Bus Stop Shelters			
Safety			
Vehicle Spares			
Missed Trips			

AUTHORITY DELAWARE ADMINISTRATION FOR REGIONAL TRANSIT (DART)

P.O. Box 1670

Wilmington, DE 19899

(302) 658-8960

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		200
POPULATION OF SERVICE AREA		390,000
TOTAL NUMBER OF BUSES		100
NUMBER OF PEAK PERIOD BUSES		90
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		8,197,000
NUMBER OF REVENUE BUS MILES (FY80)		2,369,654
NUMBER OF BUS ROUTES		22
SIZE OF TRAFFIC CHECKER FORCE	(Augmented with part-time help when needed)	1

REVIEW OF EVALUATION PROCEDURES

At present there is no formal evaluation program; however, one is being developed along with formal service standards. Data collection includes:

- Ridership by route, run, trip
- Passengers by category and fare zone
- Peak load checks
- Schedule Adherence

These data are used in the development of schedules. A Comprehensive Operational Analysis conducted in 1980 resulted in a revision of the entire DART system.

DELAWARE ADMINISTRATION FOR REGIONAL TRANSIT (DART)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not applicable at this time. The comprehensive Operational Analysis was very effective but it was a one-time-only study.

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Spares	Bus Stop Spacing	Passengers/Hour	Schedule Adherence
	Recovery Time	Passengers/Mile	Public Complaints
	Vehicle Loads	Cost Recovery	
	Vehicle Headways		
	Bus Stop Shelters		

AUTHORITY WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA)

600 Fifth Street NW

Washington, D.C. 20001

(202) 637-1234

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,400
POPULATION OF SERVICE AREA	2,481,489
TOTAL NUMBER OF BUSES	1,716
NUMBER OF PEAK PERIOD BUSES	1,525 a.m. / 1,514 p.m.
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	(average weekday) 1,939,530
NUMBER OF REVENUE BUS MILES (FY80)	(average weekday) 143,666
NUMBER OF BUS ROUTES	371
SIZE OF TRAFFIC CHECKER FORCE	27 Traffic Clerks - 3 Supervisors

REVIEW OF EVALUATION PROCEDURES

WMATA monitors its transit service by use of a checking force of twenty-seven clerks. Quarterly reports are prepared that give a month-by-month review of numerous indicators. Evaluation is conducted by the office force which then makes recommendations whether trips should be added or deleted and determines when running times should be adjusted. The Traffic Branch of Schedules has the responsibility for conducting traffic checks and for posting these checks for analytical use. The Transit Route Development Branch evaluates the completed postings and makes recommendation to the Schedule branch for revisions.

WASHINGTON METRO AREA TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
WMATA is regulated by eight jurisdictional governments, each with conflicting viewpoints. This can make service adjustments difficult to implement on a rational basis. They plan to develop a system-wide service evaluation program and to obtain agreement to this program from all jurisdictions.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Safety		Vehicle Spares Vehicle Load Re Schedule Adherence Passenger Transfers Missed Trips

AUTHORITY BREVARD TRANSPORTATION AUTHORITY

460 South Harbor City Blvd.

Melbourne, FL 32901

(305) 727-2497

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	80
POPULATION OF SERVICE AREA	70,000
TOTAL NUMBER OF BUSES	16
NUMBER OF PEAK PERIOD BUSES	14
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	163,804
NUMBER OF REVENUE BUS MILES (FY80)	320,457
NUMBER OF BUS ROUTES	12
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The authority regularly conducts bus route costing analyses and monitors ten performance indicators.

BREVARD TRANSPORTATION AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	(5)	6	7	8	9	10
EQUITY.....	1	2	3	4	(5)	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	(5)	6	7	8	9	10

COMMENTS
Presently reviewing standards

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Route Deviation
			Span of Service
			Route Length
			Route Duplication
			Route Structure
			Vehicle Loads
			Vehicle Headways
			Schedule Adherence
			Safety
			Public Complaints

AUTHORITY EAST VOLUSIA TRANSPORTATION AUTHORITY (VOTRAN)

950 Big Tree Road

S. Daytona, FL 32019

(904) 761-7600

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	236
POPULATION OF SERVICE AREA	150,000
TOTAL NUMBER OF BUSES	40
NUMBER OF PEAK PERIOD BUSES	28
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,237,574
NUMBER OF REVENUE BUS MILES (FY80)	1,423,474
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

At the end of each month VOTRAN prepares a "summary of revenues and expenditures". This statement analyzes the revenues and expenditures associated with the three modes of service which VOTRAN operates and compares revenues and expenditures to monthly and annual budget figures. In addition, VOTRAN monitors eight basic measures of efficiency and effectiveness.

Service evaluation is the responsibility of the Administration, Operations, and Maintenance departments. The department heads are responsible for the maintenance of records pertaining to their functional areas. The Administrative Department analyzes the data and prepares monthly evaluations.

EAST VOLUSIA TRANSPORTATION AUTHORITY (VOTRAN)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
VOTRAN has encountered no significant problems in implementing the findings of service evaluations to date. Anticipates that any future cut-back in federal operating assistance will prohibit the continued current level of transit service.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Span of Service			Schedule Adherence
Recovery Time			Vehicle Spares
Safety			Passengers/Hour
Passenger Transfers			Passengers/Mile
			Cost Recovery
			Cost/Passenger

AUTHORITY MTA MIAMI

3300 NW 32 Avenue

Miami, FL 33152

(305) 638-6127

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		500
POPULATION OF SERVICE AREA		1,600,000
TOTAL NUMBER OF BUSES		505
NUMBER OF PEAK PERIOD BUSES		439
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Passengers per day	202,000
NUMBER OF REVENUE BUS MILES (FY80)		24,000,000
NUMBER OF BUS ROUTES		87
SIZE OF TRAFFIC CHECKER FORCE		4

REVIEW OF EVALUATION PROCEDURES

Miami Metrobus collects ridership data through the use of Traffic Analysts, as well as through operator involvement. The Traffic Analysts collect boarding/alighting information by stop on selected routes each day. The operators report the farebox readings for every run during the day. This information is analyzed by the Operations Planning Department and a Monthly Management Report is prepared.

MTA MIAMI

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		Route Structure
	Span of Service		Passengers/Mile
	Route Length		Cost per Passenger
	Vehicle Loads		
	Vehicle Headways		
	Schedule Adherence		
	Accessibility		
	Route Spacing		
	Passenger Transfers		
	Vehicle Spares		
	Missed Trips		

AUTHORITY PALM BEACH COUNTY TRANSPORTATION AUTHORITY (COTRAN)

Department of Airports Building S-1440

West Palm Beach, FL 22406-1429

(306) 686-4555

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	650
POPULATION OF SERVICE AREA	425,000
TOTAL NUMBER OF BUSES	72
NUMBER OF PEAK PERIOD BUSES	48
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	3,379,364
NUMBER OF REVENUE BUS MILES (FY81)	2,969,093
NUMBER OF BUS ROUTES	17
SIZE OF TRAFFIC CHECKER FORCE	2

REVIEW OF EVALUATION PROCESS

CONTRAN has recently installed computerized Duncan fareboxes in part of its fleet, and should have the entire fleet equipped by the end of 1984. When this program is finished, they will be able to generate computer printouts detailing ridership/revenue information. This data will be further supplemented by operator-supplied information on fare type. Together with the service standards developed, this information allows COTRAN to undertake comprehensive analysis of the system.

PALM BEACH COUNTY TRANSPORTATION AUTHORITY (COTRAN)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Route Deviation	Bus Stop Shelters	Span of Service
Route Length	Route Duplication		Safety
Recovery Time	Route Structure		Public Complaints
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Accessibility			
Passenger Transfers			
Vehicle Spares			
Missed Trips			
Passengers/Mile			
Cost Recovery			
Cost per Passenger			

AUTHORITY ST. PETERSBURG MUNICIPAL TRANSIT SYSTEM

P. O. Box 2842

St. Petersburg, FL 33731

(813) 893-7487

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	68
POPULATION OF SERVICE AREA	266,113 (1976)
TOTAL NUMBER OF BUSES	62
NUMBER OF PEAK PERIOD BUSES	49
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	6,731,132
NUMBER OF REVENUE BUS MILES (FY80)	2,488,646
NUMBER OF BUS ROUTES	35
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Service evaluation is an on-going total program with no formal structure. Supervisors in Bus Operations monitor quality and service, routing, and schedule adherence. One supervisor doubles as a scheduler and route analyst. Marketing and Planning personnel receive complaints and forward them to Bus Operations for action. The Superintendent develops public informational materials to enhance productivity. Support Operations analyzes the physical aspects of the system (shelters, benches, bus stops, buses) relying on citizen input, maintenance cost figures, etc.

St. Petersburg recently hired a Route Schedule Analyst, who is now involved in evaluating the route and service design of the system. This should result in a more formal method of evaluating future changes in the system, in light of the standards developed through this analysis.

ST. PETERSBURG MUNICIPAL TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None

PROBLEMS ENCOUNTERED
As a Department with the government of the City of St. Petersburg, some service recommendations are not politically feasible.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Span of Service	Accessibility		Bus Stop Spacing
Vehicle Loads	Passengers/Mile		Schedule Adherence
Vehicle Headways			Bus Stop Shelters
Passenger Transfers			Safety
Vehicle Spares			Public Complaints
			Passengers/Hour

AUTHORITY METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY (MARTA)

401 W. Peachtree Street NE

Atlanta, GA 30365

(404) 586-5050

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	799
POPULATION OF SERVICE AREA	1,112,600
TOTAL NUMBER OF BUSES	(+62 rail) 927
NUMBER OF PEAK PERIOD BUSES	(+48 rail) 711
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	99,012,000
NUMBER OF REVENUE BUS MILES (FY80)	34,657,100
NUMBER OF BUS ROUTES	144
SIZE OF TRAFFIC CHECKER FORCE	18

REVIEW OF EVALUATION PROCEDURES

MARTA collects ridership information through a force of traffic checkers. This data is supplemented by information gathered by operators concerning ridership outside the service area. The information is then analyzed by the Transportation Analysis/Support Department, and a monthly report is prepared. MARTA is currently investigating the purchase of an automated passenger counting system to increase their analysis capabilities.

METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Loads			Route Deviation
Vehicle Headways			Route Structure
Schedule Adherence			Accessibility
Passengers/Hour			Missed Trips
Passengers/Mile			

AUTHORITY BLOOMINGTON - NORMAL PUBLIC TRANSIT SYSTEM

104 E. Oakland

Bloomington, IL 61701

(309) 828-9722

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	22.3
POPULATION OF SERVICE AREA	80,000
TOTAL NUMBER OF BUSES	27
NUMBER OF PEAK PERIOD BUSES	16
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	670,000
NUMBER OF REVENUE BUS MILES (FY80)	674,466
NUMBER OF BUS ROUTES	8
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Transportation Department is responsible for monitoring the quality of service and customer complaints with the cooperation of the Maintenance Department.

Daily operator passenger counts from trip sheets are tabulated by dispatchers. Statistical analyses are interpreted by the Accountant and Transportation Superintendent to determine the productivity and effectiveness of service.

Transportation and Maintenance Departments are responsible for evaluating service quality and rider satisfaction through routine on-street supervision and the investigation of customer complaints.

BLOOMINGTON - NORMAL PUBLIC TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
None Indicated

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Route Length	Public Complaints		Route Deviation
			Schedule Adherence
			Passengers/Hour
			Cost Recovery

AUTHORITY CHAMPAIGN-URBANA MASS TRANSIT

801 East University Avenue

Champaign, IL 61801

(217) 384-8188

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	35
POPULATION OF SERVICE AREA	110,000
TOTAL NUMBER OF BUSES	50
NUMBER OF PEAK PERIOD BUSES	42
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	3,200,000
NUMBER OF REVENUE BUS MILES (FY80)	1,500,000
NUMBER OF BUS ROUTES	10
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Specific information regarding the evaluation process was not provided.

CHAMPAGNE-URBANA MASS TRANSIT

Properties perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Schedule Adherence			
Missed Trips			
Passengers Per Hour			
Cost Recovery			

AUTHORITY DECATUR PUBLIC TRANSIT SYSTEM

61 Industry Court

Decatur, IL 62523

(217) 424-2817

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	36
POPULATION OF SERVICE AREA	92,000
TOTAL NUMBER OF BUSES	27
NUMBER OF PEAK PERIOD BUSES	21
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,237,291
NUMBER OF REVENUE BUS MILES (FY80)	580,167
NUMBER OF BUS ROUTES	13
SIZE OF TRAFFIC CHECKER FORCE	2

REVIEW OF EVALUATION PROCEDURES

Supervisors check schedule adherence. Ridership and revenue data by route are obtained from daily trip sheets. Costs per route are analyzed on a monthly basis. Maintenance and Transportation Superintendents are directly responsible for the accomplishment of their service goals. Office Managers are responsible for performing statistical analyses and reporting performance.

DECATUR PUBLIC TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	3	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Service evaluations are fairly adequate. The human factor is incorporated in evaluations.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			
Route Deviation			
Span of Service			
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Accessbility			
Passenger Transfers			
Missed Trips			
Passengers/Hour			
Passengers/Mile			
Cost Recovery			

AUTHORITY ROCK ISLAND COUNTY METROPOLITAN MASS TRANSIT DISTRICT

2000 Third Avenue

Rock Island, IL 61201

(309) 788-6806

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	120
POPULATION OF SERVICE AREA	120,000
TOTAL NUMBER OF BUSES	50
NUMBER OF PEAK PERIOD BUSES	24
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,241,429
NUMBER OF REVENUE BUS MILES (FY80)	1,201,011
NUMBER OF BUS ROUTES	6 plus trippers
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

Daily on time performance is monitored through regular operator bus radio reports. One operator supervisor is responsible for the review of all drivers during the year. Routes are monitored daily for revenue and ridership. The Assistant Manager is responsible for evaluation of productivity issues. All issues related to effective productivity and quality of bus service are the responsibility of the General Manager with input from the Assistant Manager and Operations Supervisor.

ROCK ISLAND COUNTY METROPOLITAN MASS TRANSIT DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	(3)	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
There is to be found no single measure of service evaluation that works completely.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
		Route Deviation	
		Recovery Time	
		Route Duplication	
		Route Structure	
		Vehicle Loads	
		Vehicle Headways	
		Schedule Adherence	
		Accessibility	
		Bus Stop Shelters	
		Passenger Transfers	
		Passengers/Hour	

AUTHORITY FORT WAYNE PTC

801 Leesburg Rd.

Fort Wayne, IN 46808

(219) 432-4546

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	160
POPULATION OF SERVICE AREA	230,000
TOTAL NUMBER OF BUSES	98
NUMBER OF PEAK PERIOD BUSES	66
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	4,000,098
NUMBER OF REVENUE BUS MILES (FY80)	1,700,000
NUMBER OF BUS ROUTES	27
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Three staff members and consultants are responsible for evaluation. Evaluation standards are in the process of being updated. Performance is reviewed weekly.

No information regarding specific departmental responsibility.

FORT WAYNE PTC

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY

Being Reviewed

AUTHORITY HAMMOND INTERCITY SYSTEM

7324 Indianapolis Boulevard

Hammond, IN 46302

(219) 853-6513

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	31
POPULATION OF SERVICE AREA	99,344
TOTAL NUMBER OF BUSES	6
NUMBER OF PEAK PERIOD BUSES	5
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	310,296
NUMBER OF REVENUE BUS MILES (FY80)	23,200
NUMBER OF BUS ROUTES	5
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The Hammond Intercity System currently purchases services from the Gary Public Transportation Corporation through a lease agreement. Purchase of service includes buses, maintenance, insurance, drivers (and their supervision), and all quality control evaluation.

HAMMOND INTERCITY SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY

None Reported

AUTHORITY SOUTH BEND PUBLIC TRANSPORTATION CORPORTATION (TRANSPO)

P. O. Box 1437

South Bend, IN 46624

(219) 232-9901

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	130
POPULATION OF SERVICE AREA	153,000
TOTAL NUMBER OF BUSES	58
NUMBER OF PEAK PERIOD BUSES	44
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	3,617,000
NUMBER OF REVENUE BUS MILES (FY80)	1,642,610
NUMBER OF BUS ROUTES	15
SIZE OF TRAFFIC CHECKER FORCE	(part-time) 1

REVIEW OF EVALUATION PROCESS

TRANSPO's Board of Directors formally adopted a set of service standards and evaluation procedures in May 1983. Ridership on all routes will be surveyed and evaluated at least once a year. The staff will review each route in relation to the system average. Depending upon the level of ridership in relationship to the average, a route will be reviewed by the Grants and Planning Committee and/or the Board to determine what action if any should be undertaken. The same process applies to any new service established.

SOUTH BEND PUBLIC TRANSPORTATION CORPORTATION (TRANSPO)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			
Span of Service			
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Cost Recovery			

AUTHORITY IOWA CITY TRANSIT

410 E. Washington Street

Iowa City, IA 52240

(319) 356-5151

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	16
POPULATION OF SERVICE AREA	50,000
TOTAL NUMBER OF BUSES	19
NUMBER OF PEAK PERIOD BUSES	15
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	2,100,000
NUMBER OF REVENUE BUS MILES (FY81)	760,000
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The system has no evaluation program or standards as such.

IOWA CITY TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
None Reported			

AUTHORITY METROPOLITAN TRANSIT AUTHORITY

1100 MTA Lane

Des Moines, IA 50309

(515) 283-8111

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	103.8
POPULATION OF SERVICE AREA	338,048
TOTAL NUMBER OF BUSES	105
NUMBER OF PEAK PERIOD BUSES	76
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	5,588,432
NUMBER OF REVENUE BUS MILES (FY80)	2,292,955
NUMBER OF BUS ROUTES	15
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCESS

Each year, the Planning and Transportation Departments conduct a passenger count where the following are counted on a per-trip basis: Day 1, all passengers; Day 2, all passengers; Day 3, passengers using passes; Day 4, Elderly and Handicapped; Day 5, passengers using tickets; Saturday, all passengers.

Planning prepares a monthly statistical report. This is made available to the Transportation Department, Management, and the Joint Board of Transit Trustees.

METROPOLITAN TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Problems in placing service evaluation findings into practice are rarely of an operational nature. Usually there is political reluctance toward service modifications in particular jurisdictions. There are no plans to make any major changes in service evaluation efforts.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Vehicle Loads		
	Schedule Adherence		
	Safety		
	Passenger Transfers		
	Passengers/Hour		
	Passengers/Mile		
	Cost Recovery		

AUTHORITY SIOUX CITY TRANSIT SYSTEM

2505 Fourth Street

Sioux City, IA 51101

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	86
POPULATION OF SERVICE AREA	91,300
TOTAL NUMBER OF BUSES	30
NUMBER OF PEAK PERIOD BUSES	23
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,722,000
NUMBER OF REVENUE BUS MILES (FY80)	573,082
NUMBER OF BUS ROUTES	13
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Various key performance measures are calculated periodically and compared annually. Change or lack of change in these performance measures indicate system efficiency or inefficiency.

Service evaluation is a joint effort by Sioux City Transit and SIMPCO, the Metro planning agency. No single individual or agency is responsible for evaluation efforts, rather those efforts are organized and carried out by a committee-like team.

SIOUX CITY TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS

PROBLEMS ENCOUNTERED

System has not encountered any serious problems in placing evaluation findings into practice.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Passenger Transfers	Bus Stop Spacing		Vehicle Headways
	Route Length		Public Complaints
	Accessibility		
	Safety		
	Cost Recovery		

AUTHORITY LOUISIANA TRANSIT MANAGEMENT

P.O. Box 7314 - Independence Station

Shreveport, LA 71107

(318) 424-4411

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		280
POPULATION OF SERVICE AREA		250,000
TOTAL NUMBER OF BUSES		57
NUMBER OF PEAK PERIOD BUSES		51
NUMBER OF UNLINKED PASSENGER TRIPS (FY 81)	w/charter	5,809,586
NUMBER OF REVENUE BUS MILES (FY 81)		2,006,244
NUMBER OF BUS ROUTES		19
SIZE OF TRAFFIC CHECKER FORCE		0

REVIEW OF EVALUATION PROCEDURES

LTM evaluates routes against one another, and utilizes the performance indicators listed below.

No information regarding organization or departmental responsibility was provided.

LOUISIANA TRANSIT MANAGEMENT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Passengers Per Mile

AUTHORITY NEW ORLEANS PUBLIC SERVICE INC.

P.O. Box 60340

New Orleans, LA 70160

(504) 586-2501

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		Not Reported
POPULATION OF SERVICE AREA		586,000
TOTAL NUMBER OF BUSES		473
NUMBER OF PEAK PERIOD BUSES		392
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		83,264,000
NUMBER OF REVENUE BUS MILES (FY80)		13,300,082
NUMBER OF BUS ROUTES		47
SIZE OF TRAFFIC CHECKER FORCE	(includes provision for streetcars)	6

REVIEW OF EVALUATION PROCEDURES

The system utilizes three performance criteria to monitor and evaluate line and service levels. No information concerning organization or departmental responsibility was provided.

NEW ORLEANS PUBLIC SERVICE INC.

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Accessibility		Missed Trips
	Cost Recovery		

AUTHORITY

GREATER PORTLAND TRANSIT DISTRICT
P.O. Box 1097
Portland, ME 04104
(207) 774-3778

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	37
POPULATION OF SERVICE AREA	99,129
TOTAL NUMBER OF BUSES	63
NUMBER OF PEAK PERIOD BUSES	47
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	3,577,185
NUMBER OF REVENUE BUS MILES (FY80)	1,326,745
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The District has only one official service standard at present. Drivers record the number of riders by trip and fare category. Line supervisors make random checks on the performance of drivers. All complaints are investigated.

GREATER PORTLAND TRANSIT DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
The Board of Directors has been reluctant to further refine and develop service standards due to the political nature of the District.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Public Complaints

AUTHORITY MASS TRANSIT ADMINISTRATION

1515 Washington Blvd.

Baltimore, MD 21230

(301) 539-6281

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1098.7
POPULATION OF SERVICE AREA	1,813,165
TOTAL NUMBER OF BUSES	966
NUMBER OF PEAK PERIOD BUSES	722
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	119,332,606
NUMBER OF REVENUE BUS MILES (FY80)	27,795,644
NUMBER OF BUS ROUTES	54
SIZE OF TRAFFIC CHECKER FORCE	41

REVIEW OF EVALUATION PROCEDURES

The MTA uses street supervisors to monitor service on a daily basis. These supervisors are assigned to the Transportation Department and are responsible for the performance of bus service in designated sections of the service area or for individual lines. Point passenger checks are conducted by forty-one checkers under the Scheduling Department. The information is fed into a computer and analyzed by the Planning and Scheduling Department.

In addition, each transit analyst and traffic planner in the Research and Planning Department is assigned to one of six districts that comprise the service area. They are responsible for preparing a route profile for each line in their district.

MASS TRANSIT ADMINISTRATION/Baltimore

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY	1	2	3	4	(5)	6	7	8	9	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS

Not Reported

PROBLEMS ENCOUNTERED

None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Loads	Bus Stop Spacing		Recovery Time
Safety	Missed Trips		Vehicle Headways
Passenger Transfers			Schedule Adherence
			Public Complaints
			Passengers/Mile
			Cost Recovery

AUTHORITY BROCKTON AREA TRANSIT

1442 Main Street

Brockton, MA 02401

(617) 580-1170

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	50
POPULATION OF SERVICE AREA	130,000
TOTAL NUMBER OF BUSES	45
NUMBER OF PEAK PERIOD BUSES	36
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	1,400,000
NUMBER OF BUS ROUTES	17
SIZE OF TRAFFIC CHECKER FORCE	In-House or Contract Students

REVIEW OF EVALUATION PROCESS

Service evaluation is performed by the Metropolitan Planning Organization and Transportation Improvement Committee. This evaluation is based upon passenger counts taken by the operators, and on revenue amounts from the registering fareboxes. Brockton is moving toward a management by objectives (MBO) system, and this will require a more formalized evaluation procedure.

BROCKTON AREA TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Passenger/Mile	Route Length		Vehicle Headways
	Vehicle Loads		Schedule Adherence
	Accessibility		Passenger Transfers
	Safety		Vehicle Spares
	Cost Recovery		Missed Trips
			Public Complaints
			Passengers/Hour

AUTHORITY MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)

45 High Street

Boston, MA 02110

(617) 722-3430

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		1,043
POPULATION OF SERVICE AREA		2,800,000
TOTAL NUMBER OF BUSES	(+50 trolley)	1,137
NUMBER OF PEAK PERIOD BUSES	(+19 trolley)	763
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	(weekday total)	350,000
NUMBER OF REVENUE BUS MILES (FY80)	(+.8 mill)	22,200,000
NUMBER OF BUS ROUTES	(+3)	150
SIZE OF TRAFFIC CHECKER FORCE		7

REVIEW OF EVALUATION PROCESS

The planning responsibilities at MBTA are housed in several groups. The Service Committee is composed of representatives from Planning, Scheduling, Community Relations, and other areas. It reviews the quarterly Service Performance Report, evaluates all proposals for service changes, and makes recommendations concerning substandard services to the Director of Operations and the General Manager. The Service Committee receives support from the Service Planning unit in the Operations Directorate which is chaired by Manager of Service Planning. The Service Planning unit has the responsibility for researching and preparing analyses of proposals for route changes which can be implemented at the time of the quarterly sign-ups. The Scheduling and Operations Planning Offices are responsible for monitoring the performance of individual routes, and for preparing periodic reports, usually on a quarterly basis.

MBTA is in the process of reevaluating many of their adopted standards. Some of them are not utilized, are inappropriate, or are no longer necessary.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	(5)	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing		Route Deviation	
Span of Service		Passenger Transfers	
Route Length		Missed Trips	
Recovery Time			
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Accessibility			
Route Spacing			
Bus Stop Shelters			
Public Complaints			
Passengers/Hour			
Passengers/Mile			
Cost Recovery			

AUTHORITY UNIVERSITY OF MASSACHUSETTS TRANSIT SERVICE (UMASS)

University Bus Garage, University of Massachusetts

Amherst, MA 01003

(413) 545-0056

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	47.75
POPULATION OF SERVICE AREA	55,497
TOTAL NUMBER OF BUSES	38
NUMBER OF PEAK PERIOD BUSES	26
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	3,500,000
NUMBER OF REVENUE BUS MILES (FY80)	566,270
NUMBER OF BUS ROUTES	12
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Bus routes are evaluated on a passenger per mile and passenger per hour basis. Further analysis is based on cost per passenger. No analysis of revenues is necessary because bus service is free.

Responsibility for data collection lies with line supervisors, analysis and evaluation responsibility lies with the Operations Manager and Director of Transportation whose recommendations are passed on to the Transit Advisory Committee.

UNIVERSITY OF MASSACHUSETTS TRANSIT SERVICE (UMASS)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	(5)	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS

No programmed effort to compare benefits and costs of evaluation has been made.

PROBLEMS ENCOUNTERED

The major obstacle to implementing service adjustments is the political reality of reducing service. Even when service reductions are clearly justified by low ridership and high costs per passenger, affected constituents become very vocal and are more often than not able to sustain the route even if it is not efficient to do so.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Span of Service	Route Duplication		Bus Stop Spacing
Route Length	Passengers/Mile		Route Deviation
Schedule Adherence			Route Structure
Missed Trips			Bus Stop Shelters
Passengers/Hour			Passenger Safety
Vehicle Loads			Passenger Transfers
			Public Complaints

AUTHORITY BATTLE CREEK TRANSIT

P. O. Box 1717

Battle Creek, MI 49016

(616) 966-3474

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	32
POPULATION OF SERVICE AREA	80,000
TOTAL NUMBER OF BUSES	23
NUMBER OF PEAK PERIOD BUSES	15
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,100,000
NUMBER OF REVENUE BUS MILES (FY80)	556,213
NUMBER OF BUS ROUTES	9
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Battle Creek collects most system-wide data on revenue, cost, levels of service, and ridership. Performance indicators are derived and any unusual operating trends reviewed. This is currently done on an informal basis by the Manager and Planner. Specific data is also compiled for all transit routes and trends examined for any significant change in operations. BCT has recently developed a cost allocation model, and is in the process of developing a revenue program for each of its linehaul routes. This has primarily been the responsibility of the Planners with guidance from the Manager. The planners will relay each month's report to the operations supervisor for his information. BCT hopes to establish a scheduled performance evaluation program in the near future whereby all routes will be evaluated bi-annually against selected service standards and recommendations for any necessary service changes will be formally presented to the Manager and the governing board.

BATTLE CREEK TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	(2)	3	4	5	6	7	8	9	10
EQUITY.....	1	(2)	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	(2)	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	(2)	3	4	5	6	7	8	9	10

COMMENTS

Evaluation efforts still in the developmental stage. Formal evaluation program has not yet been established.

PROBLEMS ENCOUNTERED

BCT currently does not have the manpower to monitor whether coach operators are collecting ridership data on a consistent and accurate basis. A method whereby management can adequately monitor data collection to insure an acceptable level of accuracy needs to be established.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Vehicle Loads	Passengers/Hour	
	Vehicle Headways	Passengers/Mile	
	Schedule Adherence	Cost Recovery	
	Bus Stop Shelters		
	Passenger Transfers		

AUTHORITY GRAND RAPIDS AREA TRANSIT AUTHORITY (GRATA)

333 Wealthy Street, S.W.

Grand Rapids, MI 49503

(616) 456-7514

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	161
POPULATION OF SERVICE AREA	(est.) 374,700
TOTAL NUMBER OF BUSES	110
NUMBER OF PEAK PERIOD BUSES	79
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	4,705,967
NUMBER OF REVENUE BUS MILES (FY80)	2,659,355
NUMBER OF BUS ROUTES	16
SIZE OF TRAFFIC CHECKER FORCE	2

REVIEW OF EVALUATION PROCESS

GRATA monitors and evaluates service through an expanded framework of performance indicators developed by GRATA staff, providing information on several components of performance. Evaluation and reporting on system-wide ridership and cost-based measures, and analysis of accident statistics are performed on a monthly basis. Summary reports and analysis of all evaluation measures are completed annually.

GRAND RAPIDS AREA TRANSIT AUTHORITY (GRATA)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	(6)	7	8	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	(2)	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	(4)	5	6	7	8	9	10

COMMENTS

The program has proven valuable in evaluating potential service/ operational changes.

PROBLEMS ENCOUNTERED

The Transit Authority Board is comprised of representatives from six cities in the metro area and Kent County. One consideration which must be taken into account when making service changes is the political impacts on each member unit of government. A second consideration is the social impact of a service, i.e., should transit service be provided to a group or groups of economically, mobility, etc., disadvantaged persons even though this service will reduce the transit system's efficiency.

The Transit Authority does not consider the evaluation of these impacts as a problem for determining service changes or a problem with its performance evaluation procedures. Rather, these are impacts which must be taken into consideration but cannot be adequately quantified. Therefore, when evaluating service changes, the performance evaluation is one of several elements upon which the Board bases its decision.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Schedule Adherence		Safety	Passengers/Mile
Accessibility			Cost Recovery
			Cost per Passenger

AUTHORITY SOUTHEASTERN MICHIGAN TRANSPORTATION AUTHORITY (SEMTA)

First National Building, 660 Woodward Avenue

Detroit, MI 48226

(313) 256-8600

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,000
POPULATION OF SERVICE AREA	4,043,000
TOTAL NUMBER OF BUSES	329
NUMBER OF PEAK PERIOD BUSES	273
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	11,196,998
NUMBER OF REVENUE BUS MILES (FY80)	12,135,000
NUMBER OF BUS ROUTES	51
SIZE OF TRAFFIC CHECKER FORCE	13

REVIEW OF EVALUATION PROCESS

Data at SEMTA is collected by traffic checkers on a daily basis. The driver data is collected at terminals and returned to the Operations Department weekly. The information is used to develop the monthly performance indicators in the Service and Marketing Report.

The Service and Marketing Committee is a multi-disciplinary committee which reviews and acts on the data. The Directors of Operations and Planning as well as the Managers of Scheduling and Service Planning are members of the committee. Once the committee has reviewed the data, it has the authority to take necessary actions to remedy problems.

SOUTHEASTERN MICHIGAN TRANSPORTATION AUTHORITY (SEMTA)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS

No comparisons of the costs and benefits of service evaluation are presently made and none are anticipated.

PROBLEMS ENCOUNTERED

None Reported.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Vehicle Loads	Bus Stop Shelters	Passenger Safety
Passengers/Mile	Span of Service		Cost Recovery
	Schedule Adherence		Passengers/Trip
	Missed Trips		Cost/Passenger
	Vehicle Headways		Passenger Transfers
			Public Complaints
			Route Deviation

AUTHORITY DULUTH TRANSIT AUTHORITY

2402 W. Michigan

Duluth, MN 55806

(218) 722-4426

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	97
POPULATION OF SERVICE AREA	133,000
TOTAL NUMBER OF BUSES	101
NUMBER OF PEAK PERIOD BUSES	77
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	6,791,950
NUMBER OF REVENUE BUS MILES (FY80)	2,293,469
NUMBER OF BUS ROUTES	28
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The main responsibility for route evaluation lies with the Planning Department, although other departments are also involved. The transit system is assisted by the MPO in the collection of data and the evaluation of service.

DULUTH TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Any time any change is discussed there is considerable comment from the public, most of which is negative. This creates a situation whereby the policy groups become gun shy about making changes that are not systemwide. The only way to alleviate this is for the system to be in such a dire situation that everyone agrees changes must be made. This fact is not controllable by the system. The real problem is equity. To some people equity is having the same headways and hours of service on all routes that would serve all parts of the city, regardless of ridership.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Route Structure
Route Deviation			Safety
Vehicle Loads			Passenger Transfers
Vehicle Headways			
Schedule Adherence			
Accessibility			
Bus Stop Shelters			
Cost Recovery			
Cost Per Passenger			

AUTHORITY METROPOLITAN TRANSIT COMMISSION

801 American Center Bldg.

St. Paul, MN 55102

(612) 221-0939

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,500
POPULATION OF SERVICE AREA	2,100,000
TOTAL NUMBER OF BUSES	1,070
NUMBER OF PEAK PERIOD BUSES	850
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	92,700,000
NUMBER OF REVENUE BUS MILES (FY80)	(total miles) 30,300,000
NUMBER OF BUS ROUTES	126
SIZE OF TRAFFIC CHECKER FORCE	6 checkers + 1 supervisor

REVIEW OF EVALUATION PROCEDURES

The MTC conducts on-going service evaluation through the Research Department, and through the Service Planning and Scheduling Department. Systemwide route profiles are published quarterly, detailing ridership, revenue per passenger, and subsidy per passenger. Performance indicator reports monitor a wide range of information relating to productivity, manpower utilization, service quality, and budget variance on a monthly basis.

METROPOLITAN TRANSIT COMMISSION

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
They are least successful in implementing major changes in operating practices (eg mid-day storage of buses at foreign garages, closing of low service garages on weekends, etc) which may offer modest, but unknown, cost savings.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Vehicle Loads		Schedule Adherence
	Vehicle Headways		Passenger Transfers
	Accessibility		Public Complaints
	Bus Stop Shelters		Passengers/Mile
	Safety		Cost Recovery
	Vehicle Spares		Cost per Passenger
	Missed Trips		

AUTHORITY BI-STATE DEVELOPMENT AGENCY

707 N. First St.

St. Louis, MO 63101

(314) 982-1458

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	365
POPULATION OF SERVICE AREA	2,500,000
TOTAL NUMBER OF BUSES	896
NUMBER OF PEAK PERIOD BUSES	617
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	76,320,400
NUMBER OF REVENUE BUS MILES (FY80)	23,944,384
NUMBER OF BUS ROUTES	141
SIZE OF TRAFFIC CHECKER FORCE	12

REVIEW OF EVALUATION PROCEDURES

Bi-State collects ridership and revenue information on a quarterly basis for each individual route by trip. Two types of passenger counts are utilized to gather this trip information, quick and full counts. For the quick counts, operators are required to keep a count of passengers per trip using a cyclometer. The full count requires the additional tally of passengers at the city limit and/or the state line. On days days that neither of these counts are being taken, ridership/revenue information is gathered from registering fareboxes. The Research and Budget Department is responsible for determining systemwide average fare and performing analysis of ridership data. They are assisted by Passenger Revenue and Cash Investments, which provide revenue data by station for the days of the passenger count. An evaluation is conducted annually on each route. Those that fall below the average of ridership/revenue indicators for their category are subject to increasing levels of scrutiny.

BI-STATE DEVELOPMENT AGENCY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Passengers/Hour			Accessibility
Passengers/Mile			
Cost Recovery			
Cost per Passenger			

AUTHORITY BILLINGS METROPOLITAN TRANSIT

510 N. Broadway

Billings, MT 59103

(406) 245-8989

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	20,912
POPULATION OF SERVICE AREA	66,798
TOTAL NUMBER OF BUSES	26
NUMBER OF PEAK PERIOD BUSES	13
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	706,000
NUMBER OF REVENUE BUS MILES (FY80)	450,000
NUMBER OF BUS ROUTES	13
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The system has only recently begun to monitor its efficiency of operation. Driver-collected passenger data is periodically augmented by more detailed surveys performed by community volunteers. Financial data is supplied by the City Finance Department. The Transit Operations Supervisor and Transit Secretary compile data and prepare a monthly operations summary which is analyzed by the Transit Manager.

BILLINGS METROPOLITAN TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY	1	2	(3)	4	5	6	7	8	9	10
EQUITY.....	(1)	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	(3)	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	(5)	6	7	8	9	10

COMMENTS

Program is in its infancy - results should improve dramatically when operational and service adjustments are made based on the data.

PROBLEMS ENCOUNTERED

Currently, Finance Department reports are used, and data is not exactly in the form preferred.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Schedule Adherence	Safety Public Complaints		Bus Stop Spacing Route Deviation Span of Service Route Length Route Duplication Route Structure Vehicle Loads Vehicle Headways Accessibility Bus Stop Shelters Passenger Transfers Missed Trips Passengers/Hour Passengers/Mile

AUTHORITY METRO AREA TRANSIT

2615 Cuming

Omaha, NE 68131

(402) 341-7560

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	127
POPULATION OF SERVICE AREA	402,989
TOTAL NUMBER OF BUSES	223
NUMBER OF PEAK PERIOD BUSES	164
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	12,639,531
NUMBER OF REVENUE BUS MILES (FY80)	6,484,878
NUMBER OF BUS ROUTES	30
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

Section 15 data used to monitor systemwide performance is reported monthly, quarterly, and annually. Daily maximum load checks are evaluated by the Planning Department. Schedule adherence/load checks are performed daily by the Scheduling Department. The Planning Department also performs special checks as necessary.

METRO AREA TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Currently, the system does not possess a stringent set of criteria. An attempt is being made to draw a bottom line in order to justify cut-backs to the public.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		Route Length
	Route Deviation		Safety
	Span of Service		Public Complaints
	Route Duplication		Passengers/Hour
	Route Structure		Cost/Passenger
	Vehicle Headways		
	Schedule Adherence		
	Accessibility		
	Vehicle Spares		
	Passengers/Mile		
	Cost Recovery		

AUTHORITY CAPITAL DISTRICT TRANSPORTATION AUTHORITY

110 Watervliet Avenue

Albany, NY 12206

(518) 457-1785

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,219
POPULATION OF SERVICE AREA	579,100
TOTAL NUMBER OF BUSES	236
NUMBER OF PEAK PERIOD BUSES	186
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	15,824,622
NUMBER OF REVENUE BUS MILES (FY80)	5,732,286
NUMBER OF BUS ROUTES	66
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Operators report passengers per trip for all runs. Each month, nine days of recordings are sampled and computerized. This and other data are used to develop monthly performance reviews. The Planning and Development Department is responsible for evaluation, and works along with the Transportation and Accounting Departments in collecting and assembling data. Surveys and direct observations are used to confirm driver reports.

CAPITAL DISTRICT TRANSPORTATION AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	(6)	7	8	9	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
The Capital District has three distinct cities within its service area, making it difficult to have a single set of specific standards. Broad informal standards will be tightened and hopefully can be developed into effective and useable guidelines.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Passengers/Hour
			Passengers/Mile

AUTHORITY NIAGARA FRONTIER TRANSIT METRO SYSTEM, INC.

181 Ellicott St.

Buffalo, NY 14203

(716) 855-7224

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	463
POPULATION OF SERVICE AREA	1,384,000
TOTAL NUMBER OF BUSES	486
NUMBER OF PEAK PERIOD BUSES	393
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	46,960,736
NUMBER OF REVENUE BUS MILES (FY80)	10,497,643
NUMBER OF BUS ROUTES	46
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

Niagara Frontier Transit monitors and analyzes service through its Schedule Department. Service on each route is independently evaluated to determine if the service is adequate and necessary. Checks and reports of Traffic Checkers, Street Supervisors, and data obtained in performing rides required by Section 15 are used. The Finance Department develops statistics concerned with revenue, ridership, miles and hours on a routine basis and as necessary to develop statistics for reports and analytical purposes.

NIAGARA FRONTIER TRANST METRO SYSTEM, INC.

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	(6)	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Political factors have required the curtailment of efforts to adjust, reduce, or eliminate service in accordance with evaluation findings.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Bus Stop Spacing
			Schedule Adherence
			Missed Trips
			Public Complaints
			Passengers/Hour
			Passengers/Mile
			Cost Recovery
			Cost per Passenger

AUTHORITY REGIONAL TRANSIT SERVICE, INC.

1372 E. Main Street

Rochester, NY 14609

(716) 288-6050

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,467
POPULATION OF SERVICE AREA	879,815
TOTAL NUMBER OF BUSES	254
NUMBER OF PEAK PERIOD BUSES	199
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	25,831,363
NUMBER OF REVENUE BUS MILES (FY80)	6,844,669
NUMBER OF BUS ROUTES	44
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

A continuing process of service planning, monitoring, and evaluation is administered through the Rochester-Genesee Regional Transportation Authority (RGRTA)/Regional Transit Service (RTA) Service Evaluation Committee. Service standards represent minimum levels of acceptable performance for each route. Members of the Service Evaluation Committee include the Executive Director, General Manager, Directors of Finance, Community Relations, Operations, Public Information, and Planning and Development.

REGIONAL TRANSIT SERVICE, INC.

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	(10)
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
The measures of effectiveness chosen to monitor have so far been effective in anticipating recent service changes.

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Route Deviation
Vehicle Headways			Safety
Schedule Adherence			Vehicle Spares
Accessibility			Missed Trips
Bus Stop Shelters			
Passengers/Hour			
Passengers/Mile			
Cost Recovery			

AUTHORITY CHAPEL HILL COMMUNITY TRANSIT

306 N. Columbia Street

Chapel Hill, NC 27514

(919) 942-5174

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		10.39
POPULATION OF SERVICE AREA		40,000
TOTAL NUMBER OF BUSES		38
NUMBER OF PEAK PERIOD BUSES		26
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		Not Reported
NUMBER OF REVENUE BUS MILES (FY80)		720,000
NUMBER OF BUS ROUTES		9
SIZE OF TRAFFIC CHECKER FORCE	(use students or PT drivers)	0

REVIEW OF EVALUATION PROCEDURES

Chapel Hill collects data such as ridership and revenue, and uses performance indicators to monitor and evaluate service.

CHAPEL HILL COMMUNITY TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		
	Vehicle Loads		
	Vehicle Headways		
	Schedule Adherence		
	Accessibility		
	Passengers Per Mile		

AUTHORITY CHARLOTTE TRANSIT SYSTEM

707 N. Brevard Street

Charlotte, NC 28202

(704) 374-2420

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	Not Reported
POPULATION OF SERVICE AREA	320,000
TOTAL NUMBER OF BUSES	110
NUMBER OF PEAK PERIOD BUSES	91
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	9,265,654
NUMBER OF REVENUE BUS MILES (FY80)	3,654,364
NUMBER OF BUS ROUTES	27
SIZE OF TRAFFIC CHECKER FORCE	2

REVIEW OF EVALUATION PROCESS

The traffic checking staff performs semi-annual checks of the entire system. Data is compiled, and routes ranked according to productivity. Weak routes are then evaluated and recommendations are prepared by the Schedule Director to improve productivity.

CHARLOTTE TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	(3)	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			
Route Deviation			
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Bus Stop Shelters			

AUTHORITY FAYETTEVILLE AREA SYSTEM OF TRANSIT

426 Mayview Street

Fayetteville, NC 28306

(919) 484-5166

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	30.9
POPULATION OF SERVICE AREA	168,643
TOTAL NUMBER OF BUSES	26
NUMBER OF PEAK PERIOD BUSES	14
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	1,230,440
NUMBER OF REVENUE BUS MILES (FY81)	825,318
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Specific information regarding the evaluation process was not provided.

FAYETTEVILLE AREA SYSTEM OF TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
None Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
None Reported			

AUTHORITY HIGH POINT TRANSIT SYSTEM (HI TRAN)

716 W. Kivett Drive

High Point, NC 27260

(919) 889-7433

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	32
POPULATION OF SERVICE AREA	63,000
TOTAL NUMBER OF BUSES	17
NUMBER OF PEAK PERIOD BUSES	12
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	872,400
NUMBER OF REVENUE BUS MILES (FY80)	458,415
NUMBER OF BUS ROUTES	15
SIZE OF TRAFFIC CHECKER FORCE	(hire temps once/year) 0

REVIEW OF EVALUATION PROCESS

A route and schedule survey is conducted once a year for one weekday and one Saturday, using temporary on-board checkers to obtain on/off counts. Detailed surveys are performed on specific routes as needed (about 4 - 6 per year) whenever route changes are proposed, or for marketing purposes. The Accountant is responsible for compiling data collected on a monthly basis. This information is used for management purposes with some of the data is reviewed by the Policy Board (City Council). All cost and ridership data are compiled by month and then reviewed by the General Manager. Schedule adherence is monitored by the Information Specialist; accidents are monitored by the Assistant General Manager; Driver Supervisors are responsible for ridership data; and complaints are handled by the Secretary.

HIGH POINT TRANSIT SYSTEM (HI TRAN)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	(3)	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	(5)	6	7	8	9	10

COMMENTS

The system serves High Point's poor. Thus, it is hard to imagine taking equity into consideration in allocation of service. Equity is more of a consideration in terms of whether service is cut or not.

PROBLEMS ENCOUNTERED

Sometimes a problem exists in getting good data, if the person gathering the data does not understand what it will be used for. This is the reason the General Manager puts in as much time on evaluation as he does. Also, policymakers do not always understand the data, and may want to make a decision other than recommended in spite of conclusive data. However, the data definitely help here. Once of APTA's Policy Boards courses might help this situation.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Route Structures		Bus Stop Spacing
	Vehicle Headways		Route Length
			Recovery Time
			Route Duplication
			Schedule Adherence
			Accessibility
			Bus Stop Shelters
			Safety
			Passenger Transfers
			Vehicle Spares
			Missed Trips
			Public Complaints
			Passengers/Hour
			Passengers/Mile
			Cost Recovery
			Cost per Passenger

AUTHORITY ALLEN COUNTY REGIONAL TRANSIT AUTHORITY

72 Town Square

Lima, OH 45801

(419) 222-2782

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	Not Reported
POPULATION OF SERVICE AREA	70,295
TOTAL NUMBER OF BUSES	11
NUMBER OF PEAK PERIOD BUSES	8
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	314,332
NUMBER OF REVENUE BUS MILES (FY80)	337,183
NUMBER OF BUS ROUTES	10
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Full system on/off counts and trial checks are performed by ATT management every few years. Staff assists in data collection and evaluation. Monthly route productivity reports are routinely reviewed by the General Manager, MPO, and various staff. Occassional trip-by-trip analyses are made for special projects (drivers record passengers - error of less than 3%). Periodic surveys and "Tell Us Where to Go" campaigns are also conducted.

ALLEN COUNTY REGIONAL TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS

Concern for equity has been very expensive and not very productive in several route extensions. Outside factors (cost of gas) has more effect than plans.

PROBLEMS ENCOUNTERED

Not enough time to identify problems, recut schedules and runs, develop graphics, etc. Also a lack of consistent direction from the policy board.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Route Deviation		Route Structure
	Route Length		Schedule Adherence
	Recovery Time		Vehicle Spares
	Route Duplication		Passengers/Hour
	Vehicle Headways		Passengers/Mile
	Accessibility		
	Passenger Transfers		
	Missed Trips		
	Public Complaints		
	Cost per Passenger		

AUTHORITY CANTON REGIONAL TRANSIT AUTHORITY

1600 Gateway Boulevard, S.E.

Canton, OH 44707

(216) 454-6132

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	566.85
POPULATION OF SERVICE AREA	289,000
TOTAL NUMBER OF BUSES	51
NUMBER OF PEAK PERIOD BUSES	39
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	4,625,000
NUMBER OF REVENUE BUS MILES (FY80)	1,641,000
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	(MPO) 0

REVIEW OF EVALUATION PROCESS

Canton RTA analyses each of its routes on an approximately semi-annual basis. Revenue information is collected on a route-by-route basis through registering fareboxes. From this information, ridership is estimated. A monthly report is prepared by the Executive Director and the Operations General Manager and is submitted to the Board. This report details ridership and revenue by route, as well as system-wide information. The Operations Planning Department is responsible for developing all route changes, which must be ratified by the Board.

CANTON REGIONAL TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	(4)	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
Not reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Span of Service			Route Length
Accessibility	Bus Stop Spacing		Route Structure
			Schedule Adherence
			Bus Stop Shelters
			Safety
			Public Complaints

AUTHORITY GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY

615 Superior Avenue NW

Cleveland, OH 44113

(216) 566-5100

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	515
POPULATION OF SERVICE AREA	1,600,000
TOTAL NUMBER OF BUSES	1,033
NUMBER OF PEAK PERIOD BUSES	665
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	108,700,000
NUMBER OF REVENUE BUS MILES (FY80)	25,800,000
NUMBER OF BUS ROUTES	90
SIZE OF TRAFFIC CHECKER FORCE	12

REVIEW OF EVALUATION PROCEDURES

The Service Development Department of the Cleveland RTA is responsible for monitoring the effectiveness and productivity of all routes. This data is collected and analyzed on a quarterly basis for the ridership data. Service Development is also responsible for conducting an opinion poll on the public rating of the RTA. This survey consists of eight elements and is taken annually. Assisting Service Development is the Operations Division. This division is responsible for collecting all of the data concerning the quality of the service provided. Most of this data is gathered on a daily basis and reported to the Board monthly. This evaluatory effort has allowed Service Development to identify the least productive services. The RTA has had the policy for the last several years of deleting these services when adding a like amount of expanded service. This results in an increased ridership with a constant level of service.

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS

Political considerations have impeded the full realization of benefits which could have been derived in these areas from service evaluation efforts.

PROBLEMS ENCOUNTERED

As a result of political considerations, service standards and performance criteria are not uniformly applied in all instances. In addition, the Board of Trustees has not yet adopted a concise set of goals and objectives.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
		Passengers/Hour	Schedule Adherence
			Safety
			Missed Trips
			Public Complaints

AUTHORITY MAPLE HEIGHTS TRANSIT

5501 Dunham Street

Maple Heights, OH 44137

(216) 662-6075

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	33.3
POPULATION OF SERVICE AREA	170,000
TOTAL NUMBER OF BUSES	33
NUMBER OF PEAK PERIOD BUSES	17
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,557,186
NUMBER OF REVENUE BUS MILES (FY80)	Not Reported
NUMBER OF BUS ROUTES	3
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Maple Heights Transit is under contract from Greater Cleveland MTA and receives financial support from them. At one time, Maple Heights had a set of informal standards, but since the establishment of the GCRTA, GCRTA has mandated the standards that Maple Heights must acheive. As a result, Maple Heights monitors its performance and GCRTA evaluates it and may make changes in the service.

MAPLE HEIGHTS TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Maple Heights monitors all categories except: Recovery Time Accessibility Vehicle Spares

AUTHORITY QUEEN CITY METRO

Six East Fourth Street

Cincinnati, OH 45202

(513) 632-7541

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	414
POPULATION OF SERVICE AREA	631,920
TOTAL NUMBER OF BUSES	405
NUMBER OF PEAK PERIOD BUSES	381
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	5,743,809
NUMBER OF REVENUE BUS MILES (FY80)	12,094,424
NUMBER OF BUS ROUTES	41
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

Queen City Metro is currently proposing an evaluation program utilizing three measures: Passengers per hour, revenue per hour, and revenue-cost ratio. Each route will be judged against other routes of the same type. Data will be collected monthly and aggregated quarterly for review by the Service Planning and Scheduling Departments.

QUEEN CITY METRO

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS

Present standards are not adhered to since new goals were adopted by the authority. It is anticipated that it will take a number of months before the above are improved.

PROBLEMS ENCOUNTERED

Problems encountered deal mainly with obtaining support from the city and neighborhood organizations. However, with proper communication of these standards to the affected parties, hopefully these problems will be minimized.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
		Passengers/Hour	Passenger Transfers
		Cost Recovery	

AUTHORITY RICHLAND TRANSIT SYSTEM

166 West Sixth Street

Mansfield, OH 44902

(419) 522-4504

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	17
POPULATION OF SERVICE AREA	55,000
TOTAL NUMBER OF BUSES	12
NUMBER OF PEAK PERIOD BUSES	9
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	215,000
NUMBER OF REVENUE BUS MILES (FY80)	234,163
NUMBER OF BUS ROUTES	10
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

Key route specific and system-wide performance indicators are tabulated at the end of each month and evaluated at the end of each year.

RICHLAND TRANSIT SERVICE

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	(6)	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Span of Service	Route Structure		Route Length
Recovery Time	Passengers/Mile		Route Duplication
Vehicle Headways			Bus Stop Shelters
Schedule Adherence			Safety
Accessibility			Passenger Transfers
Vehicle Spares			Public Complaints
Missed Trips			Cost per Passenger

AUTHORITY WESTERN RESERVE TRANSIT AUTHORITY

604 Mahoning Avenue

Youngstown, OH 44502

(216) 744-8433

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,836
POPULATION OF SERVICE AREA	141,000
TOTAL NUMBER OF BUSES	76
NUMBER OF PEAK PERIOD BUSES	28
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	Not Reported
NUMBER OF BUS ROUTES	14
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

Adequacy of existing service is judged through the use of eleven performance indicators. The system is proposing to institute a monitoring system and develop survey techniques to estimate service needs.

WESTERN RESERVE TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
A firm method for determing ridership data should be established in order to identify routes and trips that need modification, and judge overall performance.

Will appropriate efforts to maintaining bus stop locations and shelters throughout the city. Currently most stop signs and shelters are in the CBD.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Route Structure	Bus Stop Spacing	Route Deviation	Span of Service
Vehicle Headways	Passengers/Hour	Vehicle Loads	Bus Stop Shelters
Schedule Adherence			Safety
			Missed Trips
			Public Complaints
			Passengers/Mile

AUTHORITY LANE TRANSIT DISTRICT

P.O. Box 2710

Eugene, OR 97402

(503) 687-5581

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	110
POPULATION OF SERVICE AREA	230,000
TOTAL NUMBER OF BUSES	62
NUMBER OF PEAK PERIOD BUSES	50
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	4,100,000
NUMBER OF REVENUE BUS MILES (FY80)	3,200,000
NUMBER OF BUS ROUTES	37
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

In order to see whether or not goals are met, LTD established a set of performance objectives that measure the progress of Lane Transit activities. LTD conducts an annual evaluation of all routes to determine how well each route is performing, relative to all other routes in the LTD system.

LANE TRANSIT DISTRICT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	(5)	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
A major problem in implementing service changes has been the opposition of those adversely affected by the change. The public hearing process generally attracts those negatively affected by the change and therefore presents a distorted view of public reaction to the change. To counter this we must have accurate, complete information on areas where service is to be deleted or reduced. We have also, at time, conducted surveys of those affected by the change and included that in the public hearing process.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Vehicle Loads		Route Structure
Route Deviation	Accessibility		Missed Trips
Span of Service	Passenger Transfers		Public Complaints
Route Length			
Recovery Time			
Vehicle Headways			
Schedule Adherence			
Bus Stop Shelters			
Safety			
Vehicle Spares			
Passengers/Hour			
Cost Recovery			

AUTHORITY ALTOONA METRO TRANSIT (AMTRAN)

3301 - Fifth Avenue

Altoona, PA 16602

(814) 944-4074

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	8.9
POPULATION OF SERVICE AREA	74,396
TOTAL NUMBER OF BUSES	31
NUMBER OF PEAK PERIOD BUSES	26
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,495,960
NUMBER OF REVENUE BUS MILES (FY80)	564,589
NUMBER OF BUS ROUTES	12
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

AMTRAN has no established criteria or service standards

ALTOONA METRO TRANSIT (AMTRAN)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
None Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
None Reported			

AUTHORITY ERIE METROPOLITAN TRANSIT AUTHORITY

127 E. Fourteenth Street

Erie, PA 16512

(814) 459-4287

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	60
POPULATION OF SERVICE AREA	230,000
TOTAL NUMBER OF BUSES	77
NUMBER OF PEAK PERIOD BUSES	70
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	6,232,290
NUMBER OF REVENUE BUS MILES (FY80)	1,918,871
NUMBER OF BUS ROUTES	13
SIZE OF TRAFFIC CHECKER FORCE	5

REVIEW OF EVALUATION PROCEDURES

Monitoring and evaluating the effectiveness, productivity and quality of the bus services is performed by the EMTA Board, the managerial staff, the supervisors and dispatchers and other personnel.

Since this property is small, many of the service and evaluation programs are performed under the personal attention of the individuals and personnel aforementioned.

ERIE METROPOLITAN TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	(5)	6	7	8	9	10
EQUITY.....	1	2	3	4	(5)	6	7	8	9	10
RIDERSHIP.....	1	2	(3)	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	(4)	5	6	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		Route Length
	Vehicle Headways		Recovery Time
	Accessibility		Route Structure
			Schedule Adherence
			Safety
			Public Complaints

AUTHORITY LEHIGH AND NORTHAMPTON TRANSPORTATION AUTHORITY (LANTA)

Twelfth and Cumberland Streets

Allentown, PA 18103

(215) 435-6771

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	750
POPULATION OF SERVICE AREA	500,000
TOTAL NUMBER OF BUSES	65
NUMBER OF PEAK PERIOD BUSES	51
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	5,179,164
NUMBER OF REVENUE BUS MILES (FY80)	151,858
NUMBER OF BUS ROUTES	30
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

LANTA has done extensive work toward the development of a service evaluation program and a draft of its recommended policies and service standards was approved in early 1982. Each route is now scheduled to be reviewed to identify and correct poorly performing lines or segments. Recommendations for corrections will be made in a timely manner, and a major system evaluation will be conducted at least once every five years.

LEHIGH AND NORTHAMPTON TRANSPORTATION AUTHORITY (LANTA)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10	Not Reported
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10	Not Reported

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Span of Service			
Recovery Time			
Route Duplication			
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Accessibility			
Bus Stop Shelters			
Safety			
Passenger Transfers			
Vehicle Spares			
Missed Trips			
Public Complaints			
Passengers/Hour			
Cost Recovery			

AUTHORITY RED ROSE TRANSIT AUTHORITY

45 Erick Road

Lancaster, PA 17601

(717) 397-4246

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	300
POPULATION OF SERVICE AREA	200,000
TOTAL NUMBER OF BUSES	38
NUMBER OF PEAK PERIOD BUSES	33
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	2,357,444
NUMBER OF REVENUE BUS MILES (FY80)	1,234,587
NUMBER OF BUS ROUTES	17
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

RRTA is in the process of establishing formal goals and objectives to evaluate service. Operating ratio, subsidy per passenger and passengers per hour will be measured, and changes made based on comparison of actual performance to the Goal. Other factors to be looked at on a monthly basis include Revenue/Hour, Expenses/Hour, Passengers/Mile. This will all be automated with a micro-computer. The above method has basically been used in the past but in an informal manner. Other goals and objectives will also be monitored to evaluate quality of service, eg. accidents/mile, percent of trips on-time, miles/roadcall. The actual performance will be the responsibility of the Director of Transportation and Planning, Director of Maintenance or other dependent on the particular objective.

RED ROSE TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	(10)
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
None Reported

PROBLEMS ENCOUNTERED
In prior years and probably in the future, the major obstacle has been political and citizen appreciation to proposed service cutbacks and eliminations. The establishment of formal goals and objectives may help to alleviate opposition and will also improve evaluation efforts.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Recovery Time		
	Schedule Adherence		
	Safety		
	Passengers/Hour		
	Cost Recovery		

AUTHORITY METROPOLITAN BUS AUTHORITY

P.O. Box 1029

Hato Rey, Puerto Rico 00919

(809) 765-7001

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	192
POPULATION OF SERVICE AREA	1,200,000
TOTAL NUMBER OF BUSES	333
NUMBER OF PEAK PERIOD BUSES	282
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	36,379,782
NUMBER OF REVENUE BUS MILES (FY80)	10,665,288
NUMBER OF BUS ROUTES	43
SIZE OF TRAFFIC CHECKER FORCE	12

REVIEW OF EVALUATION PROCEDURES

The Metropolitan Bus Authority conducts monitoring bus service activities in the Urban Area it serves. In general terms, the process consists of:

1) A constant route check program guided to obtain route performance data. This information is collected by the Checker Force through various oriented check types (boarding and alighting, fixed point, speed and delays, etc.).
2) Summary and Analysis of the information collection by Planning & Schedule personnel.
3) Analysis and evaluation by the Service Analyst and the Planning Director.
4) Submission of evaluation results and recommendations report to the Technical Development Area Director.
5) Final recommendations and decision making by the top company management.

METROPOLITAN BUS AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	(4)	5	6	7	8	9	10

COMMENTS
None

PROBLEMS ENCOUNTERED
The transit user's acceptance of service adjustments is a common problem found in the implementation of service evaluation recommendations. Generally, the public's reaction to route changes is not the expected due to lack of information and knowledge of bus service operation.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing		Passengers/Hour	Route Deviation
Span of Service			Accessibility
Route Length			Bus Stop Shelters
Route Duplication			Public Complaints
Vehicle Headways			Passengers/Mile
Schedule Adherence			

AUTHORITY CHATTANOOGA AREA REGIONAL TRANSPORTATION AUTHORITY

1617 Wilcox Blvd.

Chattanooga, TN 37406

(615) 629-1411

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	175
POPULATION OF SERVICE AREA	280,000
TOTAL NUMBER OF BUSES	71
NUMBER OF PEAK PERIOD BUSES	54
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	4,125,000
NUMBER OF REVENUE BUS MILES (FY81)	2,245,000
NUMBER OF BUS ROUTES	22
SIZE OF TRAFFIC CHECKER FORCE	Part-time 25

REVIEW OF EVALUATION PROCEDURES

CARTA monitors its performance through on the street sampling of particular trips for ridership and on-time performance. Every trip is monitored every two years as part of the Comprehensive Operational Analysis (COA) process. Other trips are sampled on an as needed basis. Major responsibility for evaluation efforts rest with Director of Operations who is assisted by three Road Supervisors and one Research Assistant. These are part-time functions here.

CHATTANOOGA AREA REGIONAL TRANSPORTATION AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None Reported

PROBLEMS ENCOUNTERED
The staff has been successful in convincing the Board of necessary service reductions from the results of the evaluation process. CARTA is a regional authority comprised of several member governments. There are a few services presently operated now that are below service standard, but to discontinue them would eliminate service entirely to a member municipality of the authority. This is the only problem we have ever encountered and there is little that can be done about it.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Route Deviation	Bus Stop Spacing		Vehicle Headways
	Vehicle Loads		
	Schedule Adherence		
	Passengers/Hour		
	Cost Recovery		

AUTHORITY MEMPHIS AREA TRANSIT AUTHORITY

P.O. Box 122

Memphis, TN 38101

(901) 528-2881

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	320
POPULATION OF SERVICE AREA	725,000
TOTAL NUMBER OF BUSES	313
NUMBER OF PEAK PERIOD BUSES	217
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	24,372,687
NUMBER OF REVENUE BUS MILES (FY80)	10,250,000
NUMBER OF BUS ROUTES	51
SIZE OF TRAFFIC CHECKER FORCE	(use temporaries occasionally)

REVIEW OF EVALUATION PROCEDURES

Each route in the transit system is judged as a separate entity. Route ridership, revenue, and costs are used as performance measures. Once route costs and ridership have been calculated, the route or segment of the route is reviewed as to its relative performance.

Adequacy of existing and new service is judged also by reviewing seven other performance criteria.

MEMPHIS AREA TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Route Structure
Span of Service			Accessibility
Vehicle Headways			
Schedule Adherence			
Bus Stop Shelters			
Passengers/Hour			

AUTHORITY METROPOLITAN TRANSIT AUTHORITY

60 Peabody St.

Nashville, TN 37210

(615) 242-1622

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	590
POPULATION OF SERVICE AREA	(1980) 477,811
TOTAL NUMBER OF BUSES	150
NUMBER OF PEAK PERIOD BUSES	116
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	11,174,455
NUMBER OF REVENUE BUS MILES (FY80)	4,942,602
NUMBER OF BUS ROUTES	39
SIZE OF TRAFFIC CHECKER FORCE	3

REVIEW OF EVALUATION PROCEDURES

MTA reviews eight performance criteria to evaluate its service. Monthly performance indicators are generated to measure the productivity of each route over a three month period and data is compared with the previous year's productivity.

METROPOLITAN TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	(5)	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Route Structure
Vehicle Loads			Accessibility
Vehicle Headways			
Schedule Adherence			
Bus Stop Shelters			
Passengers/Hour			
Passengers/Mile			
Cost Recovery			

AUTHORITY ABILENE TRANSIT SYSTEM

1189 South 2nd Street

Abilene, TX 79602

(915) 676-6402

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	30
POPULATION OF SERVICE AREA	100,000
TOTAL NUMBER OF BUSES	17
NUMBER OF PEAK PERIOD BUSES	13
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	282,842
NUMBER OF REVENUE BUS MILES (FY80)	308,512
NUMBER OF BUS ROUTES	11
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCESS

Abilene Transit monitors ridership by route and ridership by trip on a daily basis. Passengers per mile and hour are measured weekly. Ridership by location is monitored according to UMTA sampling requirements. Ridership by location by time of day is monitored as needed. Quality of service is monitored through passenger complaints, citizen complaints, and ride checks.

ABILENE TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Route Duplication
			Public Complaints
			Passengers/Hour
			Passengers/Mile
			Route Structure
			Schedule Adherence
			Passenger Transfers
			Missed Trips

AUTHORITY BROWNSVILLE URBAN SYSTEM

700 S. Iowa Avenue

Brownsville, TX 78520

(512) 541-4881

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	28.85
POPULATION OF SERVICE AREA	84,997
TOTAL NUMBER OF BUSES	26
NUMBER OF PEAK PERIOD BUSES	16
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	667,069
NUMBER OF BUS ROUTES	10
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

System has a Statistics and Accounting Division which prepares a monthly system report. This monthly report is distributed to the management staff for analysis and evaluation.

BROWNSVILLE URBAN SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	8	9	(10)
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	(10)
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
Biggest problem is establishing the validity of data because of the lack of employee training in the acquisition of such data. Training sessions have been established and several cross-checks to validate data have been developed.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Loads	Route Deviation		Bus Stop Spacing
Vehicle Headways	Route Duplication		Route Length
Schedule Adherence			Route Structure
Vehicle Spares			Bus Stop Shelters
Missed Trips			Safety
Public Complaints			

AUTHORITY CITIBUS

P.O. Box 2000

Lubbock, TX 79457

(806) 762-6411

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	91.5
POPULATION OF SERVICE AREA	178,272
TOTAL NUMBER OF BUSES	41
NUMBER OF PEAK PERIOD BUSES	27
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,181,544
NUMBER OF REVENUE BUS MILES (FY80)	900,302
NUMBER OF BUS ROUTES	12
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

°Title VI related reports generated annually with the operations and planning departments.

°Semi-annual route analyses generated as above

°Annual Comprehensive Operational Analyses - as above with General °Manager consultant and contracted survey team.

°Monthly Review of operational statistics with Transit Advisory Board.

CITIBUS

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Accessibility	Vehicle Headways		Bus Stop Spacing
Passenger Transfers			Schedule Adherence
Passengers/Hour			Bus Stop Shelters
Passengers/Mile			
Cost Recovery			

AUTHORITY CITY OF CORPUS CHRISTI TRANSIT SYSTEM

P. O. Box 9277

Corpus Christi, TX 78469

(512) 884-3011

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	111.5
POPULATION OF SERVICE AREA	235,400
TOTAL NUMBER OF BUSES	49
NUMBER OF PEAK PERIOD BUSES	32
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	1,440,920
NUMBER OF REVENUE BUS MILES (FY80)	1,238,963
NUMBER OF BUS ROUTES	18
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Corpus Christi collects ridership and revenue data daily on a route-by-route basis through registering fareboxes. This information is compiled into monthly, quarterly, and annual reports used for internal purposes. Surveys are also conducted. The General Manager is responsible for reviewing service and recommending any modifications. The City Council has to ratify any major service changes.

CITY OF CORPUS CHRISTI TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	(2)	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	(4)	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	(8)	9	10

COMMENTS
Budget squeeze forces service-sensitive actions.

PROBLEMS ENCOUNTERED
Public reaction to service reductions translates into political action which means compromise.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		Schedule Adherence
	Span of Service		Bus Stop Shelters
	Vehicle Loads		Safety
	Vehicle Headways		
	Missed Trips		
	Passengers/Hour		
	Cost Recovery		

AUTHORITY CITY TRANSIT SERVICE OF FORT WORTH

P. O. Box 1477

Fort Worth, TX 76101

(817) 870-8050

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	400
POPULATION OF SERVICE AREA	400,000
TOTAL NUMBER OF BUSES	135
NUMBER OF PEAK PERIOD BUSES	104
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	6,100,000
NUMBER OF REVENUE BUS MILES (FY80)	3,000,000
NUMBER OF BUS ROUTES	31
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

A monthly "Financial and Operating Report" is preduced which provides patronage and revenue statistics for individual transit routes in the system.

CITY TRANSIT SERVICE OF FORT WORTH

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

No Response

COMMENTS

PROBLEMS ENCOUNTERED

No information provided

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Schedule Adherence			Passengers Per Hour
Passenger Safety			Cost Recovery
			Passengers Per Mile
			Passengers Per Trip

AUTHORITY DALLAS TRANSIT SYSTEM

101 N. Peak St.

Dallas, TX 75226

(214) 827-3400

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	375
POPULATION OF SERVICE AREA	950,000
TOTAL NUMBER OF BUSES	560
NUMBER OF PEAK PERIOD BUSES	434
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	32,585,756
NUMBER OF REVENUE BUS MILES (FY81)	12,929,271
NUMBER OF BUS ROUTES	73
SIZE OF TRAFFIC CHECKER FORCE	6

REVIEW OF EVALUATION PROCEDURES

Dallas has recently installed new registering fareboxes in half of its fleet, and should have all of its buses equipped by the end of 1983. This will give the Planning Department a daily listing of revenue and passengers per bus and for the total system. Before these fareboxes were installed, DTS used traffic checkers to gather ridership information twice a month. This new equipment will allow for more comprehensive data to be included in the monthly report.

DALLAS TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Route Length		Route Deviation
Vehicle Loads	Recovery Time		Route Duplication
Vehicle Headways	Vehicle Spares		
Schedule Adherence			
Accessibility			
Bus Stop Shelters			

AUTHORITY METROPOLITAN TRANSIT AUTHORITY OF HARRIS COUNTY (METRO)

P. O. Box 61429

Houston, TX 77208

(713) 739-4000

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,275
POPULATION OF SERVICE AREA	1,900,000
TOTAL NUMBER OF BUSES	772
NUMBER OF PEAK PERIOD BUSES	386
NUMBER OF UNLINKED PASSENGER TRIPS (FY82)	25,723,968
NUMBER OF REVENUE BUS MILES (FY82)	51,875,000
NUMBER OF BUS ROUTES	72
SIZE OF TRAFFIC CHECKER FORCE	13

REVIEW OF EVALUATION PROCESS

Houston METRO is currently involved in the development of a service evaluation program. This program will include a route-level data collection system and an explicit set of service standards and planning guidelines. Most of this development work is being undertaken by the Service Evaluation Section of the Service Planning Department.

METROPOLITAN TRANSIT AUTHORITY OF HARRIS COUNTY (METRO)

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	(3)	4	5	6	7	8	9	10
EQUITY.....	1	2	(3)	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	(3)	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	(3)	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
Due to the major problems that have plagued the agency in the maintenance area since 1979, we have had few opportunities through 1982 to increase or improve services. In addition, the emphasis in the agency upon the maintenance area has resulted in a lack of attention or concern for the performances of individual lines and service evaluation in general. However, this situation is changing as maintenance capabilities are improved and preparations are made for service expansion with more attention being placed on ridership performance and service quality.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Schedule Adherence	Bus Stop Shelters	Bus Stop Spacing	Passenger Transfers
Passenger Safety		Route Coverage	Missed Trips
		Route Deviation	Passengers/Hour
		Route Length	Cost/Passenger
		Route Structure	
		Vehicle Loads	
		Vehicle Headways	
		Span of Service	
		Cost Recovery	
		Passengers/Mile	
		Passengers/Trip	

AUTHORITY VALLEY TRANSIT COMPANY, INC.

P.O. Box 1870

Harligen, TX 78551

(512) 423-4710

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	Not Reported
POPULATION OF SERVICE AREA	400,000
TOTAL NUMBER OF BUSES	49
NUMBER OF PEAK PERIOD BUSES	45
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	Not Reported
NUMBER OF BUS ROUTES	39
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

Each run is monitored on a constant basis. Information from the driver's daily reports is assembled by the bookkeeping staff the following day. This information consists of the number of station tickets, number of cash fares, number of transfers, number of passes, and number of student fares. The reports also show when and where these tickets were picked up, thus allowing for tracing to other drivers.

The Vice President then uses this information to draw statistical comparisons on each run to evaluate efficiency and effectiveness.

VALLEY TRANSIT COMPANY, INC.

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	(9)	10
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	(9)	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	(10)

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Vehicle Roads		Bus Stop Spacing
			Route Length
			Route Duplication
			Vehicle Headways
			Schedule Adherence
			Bus Stop Shelters
			Safety
			Vehicle Spaces
			Public Complaints

AUTHORITY VIA METROPOLITAN TRANSIT

800 W. Myrtle

San Antonio, TX 78212

(512) 227-5371

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		1,197.37
POPULATION OF SERVICE AREA		961,688
TOTAL NUMBER OF BUSES		524
NUMBER OF PEAK PERIOD BUSES		363
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		31,875,778
NUMBER OF REVENUE BUS MILES (FY80)		14,654,426
NUMBER OF BUS ROUTES		76
SIZE OF TRAFFIC CHECKER FORCE	Full time schedule/checkers	2

REVIEW OF EVALUATION PROCEDURES

Service monitoring is primarily handled by the Operations and Schedule Departments. The Finance Department tabulates daily farebox receipts and applies a formula to the revenue to calculate passengers by line. The weekly revenue reports are used as a primary indicator for passenger usage. Total passenger counts are made by the bus operators, by individual trip for all line service, at least three days annually.

Schedule adherence is checked everyday by the dispatcher. The Chief Dispatcher compiles this information on a daily delay-to-service report and also on a monthly percentage-on-time report. All data is analyzed and evaluated by both Operations and Schedules. A committee comprised of personnel from Operations, Schedules, Marketing, Planning and Safety meets weekly to discuss any service problems and make recommendations on corrective action to the General Manager.

VIA METROPOLITAN TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	(10)
EQUITY.....	1	2	3	4	5	6	7	(8)	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	(9)	10

COMMENTS
None

PROBLEMS ENCOUNTERED
Some lines with low productivity cannot be eliminated due to service obligations to the residents of the area the line is serving. The only recourse is to curtail to minimum service and attempt to market this service to generate ridership.

Public meetings are held to receive input from the residents. The service is then designed to fit their needs and still compliment the entire system. Making these types of adjustments are possibly the hardest. Also, coordinating schedules of the entire system to obtain maximum transfer effectiveness is difficult.

VIA will soon be implementing an Operational Planning Department that will be staffed with select personnel to handle service evaluation and changes.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Passengers/Hour		Route Deviation
Vehicle Loads			Recovery Time
Vehicle Headways			Route Duplication
Schedule Adherence			Passenger Duplication
Accessibility			Passenger Transfers
Safety			Public Complaints
Passengers/Mile			Cost Per Passenger

AUTHORITY UTAH TRANSIT AUTHORITY

P.O. Box 31810

Salt Lake City, UT 84110

(801) 262-5626

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,581
POPULATION OF SERVICE AREA	850,000
TOTAL NUMBER OF BUSES	350
NUMBER OF PEAK PERIOD BUSES	249
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	11,200,000
NUMBER OF BUS ROUTES	100
SIZE OF TRAFFIC CHECKER FORCE	3

REVIEW OF EVALUATION PROCEDURES

Utah Transit reviews seven performance indicator ratios to indicate strong and/or weak points. All routes are evaluated once a year. This analysis is conducted by the Market Research Division. After collection of all data, a review session is held with the Planning and Scheduling Division and the Directors of Marketing, at which time corrective measures are delineated.

Comparative evaluation of routes is made on the basis of total ridership, passengers per service mile, and passengers per trip. In addition, an overall route ranking is made based on a composite of these measures. Nine operational standards are utilized to evaluate the system annually.

UTAH TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Recovery Time
Vehicle Headways			Route Structure
Schedule Adherence			Accessibility
Safety			
Passenger Transfers			
Passengers/Hour			
Passengers/Mile			
Cost Recovery			

AUTHORITY UTAH TRANSIT AUTHORITY

P.O. Box 31810

Salt Lake City, UT 84110

(801) 262-5626

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,581
POPULATION OF SERVICE AREA	850,000
TOTAL NUMBER OF BUSES	350
NUMBER OF PEAK PERIOD BUSES	249
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY80)	11,200,000
NUMBER OF BUS ROUTES	100
SIZE OF TRAFFIC CHECKER FORCE	3

REVIEW OF EVALUATION PROCEDURES

Utah Transit reviews seven performance indicator ratios to indicate strong and/or weak points. All routes are evaluated once a year. This analysis is conducted by the Market Research Division. After collection of all data, a review session is held with the Planning and Scheduling Division and the Directors of Marketing, at which time corrective measures are delineated.

Comparative evaluation of routes is made on the basis of total ridership, passengers per service mile, and passengers per trip. In addition, an overall route ranking is made based on a composite of these measures. Nine operational standards are utilized to evaluate the system annually.

UTAH TRANSIT AUTHORITY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Recovery Time
Vehicle Headways			Route Structure
Schedule Adherence			Accessibility
Safety			
Passenger Transfers			
Passengers/Hour			
Passengers/Mile			
Cost Recovery			

AUTHORITY GREATER RICHMOND TRANSIT COMPANY

P.O. Box 27323

Richmond, VA 23261

(804) 358-3871

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	70
POPULATION OF SERVICE AREA	250,000
TOTAL NUMBER OF BUSES	208
NUMBER OF PEAK PERIOD BUSES	154
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	21,241,217
NUMBER OF REVENUE BUS MILES (FY81)	5,300,000
NUMBER OF BUS ROUTES	38
SIZE OF TRAFFIC CHECKER FORCE	(part-time) 4

REVIEW OF EVALUATION PROCEDURES

GRTC evaluates service based on fourteen performance criteria and standards of service.

The performance of each GRTC route is evaluated annually on the basis of two factors, ridership and financial performance.

GREATER RICHMOND TRANSIT COMPANY

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Route Deviation
Span of Service			Route Structure
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Accessibility			
Bus Stop Shelters			
Passengers/Hour			
Cost Recovery			

AUTHORITY TIDEWATER REGIONAL TRANSIT

509 East Eighteenth Street

Norfolk, VA 23501

(804) 627-9291

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	1,200
POPULATION OF SERVICE AREA	870,000
TOTAL NUMBER OF BUSES	176
NUMBER OF PEAK PERIOD BUSES	123
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	14,249,906
NUMBER OF REVENUE BUS MILES (FY81)	6,840,164
NUMBER OF BUS ROUTES	51
SIZE OF TRAFFIC CHECKER FORCE	(full-time) 2

REVIEW OF EVALUATION PROCEDURES

Service evaluation is the responsibility of the Service Development Department under the supervision of the Transportation Planner.

Tidewater utilizes thirteen performance indicators which are divided into two categories; level of service, and economic performance. Monthly, quarterly and annual reports are generated from these indicators. Most of the data collection and supervision is carried out by the Transportation Surveyors and Transportation Technician. Analysis, evaluation and reporting are carried out by the Transportation Planner, Schedule Analyst, Superintendent of Schedules, and Research Analyst.

TIDEWATER REGIONAL TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Loads			Missed Trips
Vehicle Headways			Passengers/Hour
Schedule Adherence			Cost Recovery
Accessibility			
Bus Stop Shelters			
Safety			
Public Complaints			
Cost per Passenger			

AUTHORITY PIERCE TRANSIT

P.O. Box 5038

Tacoma, WA 98405

(206) 593-4525

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	275
POPULATION OF SERVICE AREA	422,000
TOTAL NUMBER OF BUSES	175
NUMBER OF PEAK PERIOD BUSES	149
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	Not Reported
NUMBER OF REVENUE BUS MILES (FY81)	5,438,236
NUMBER OF BUS ROUTES	39
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

Pierce Transit has no comprehensive service evaluation program at present.

PIERCE TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY

None Reported

AUTHORITY SEATTLE METRO

821 Second Avenue

Seattle, WA 98104

(206) 447-6561

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	2,128
POPULATION OF SERVICE AREA	1,720,000
TOTAL NUMBER OF BUSES	917
NUMBER OF PEAK PERIOD BUSES	861
NUMBER OF UNLINKED PASSENGER TRIPS (FY81)	65,981,987
NUMBER OF REVENUE BUS MILES (FY81)	34,260,942
NUMBER OF BUS ROUTES	145
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

METRO Staff have recently recommended (1982) service evaluation criteria that strike a balance between overly complex, warrant-like standards and simple measurements of system performance. These standards replaced previous criteria developed in 1977. The agency collects extensive ridership and schedule-adherence data through its use of APC-equipped vehicles. Monthly performance reports are prepared that assist in the regular evaluation of bus services.

SEATTLE METRO

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

No Response

COMMENTS

PROBLEMS ENCOUNTERED

None reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Vehicle Loads	Bus Stop Shelter	Route Coverage	Passenger Safety
Schedule Adherence		Route Deviation	Passenger Transfers
Passengers Per Hour			Missed Trips
Passengers Per Trip			Public Complaints

AUTHORITY SPOKANE TRANSIT AUTHORITY FOR REGIONAL TRANSPORTATION

P. O. Box 2233

Spokane, WA 99201

(509) 328-9194

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	360
POPULATION OF SERVICE AREA	304,533
TOTAL NUMBER OF BUSES	80
NUMBER OF PEAK PERIOD BUSES	75
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	7,490,400
NUMBER OF REVENUE BUS MILES (FY80)	1,991,182
NUMBER OF BUS ROUTES	16 (Through-routes)
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCESS

Spokane Transit doe not currently have a service evaluation program. The Authority is in the process of developing a monitoring program which will provide system and passenger information suitable for evaluation purposes. As the first step in the formation of an evaluation program the START Governing Board has adopted a set of service standards that will provide a basis for evaluation once information becomes available.

SPOKANE TRANSIT AUTHORITY FOR REGIONAL TRANSPORTATION

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

Not reported

COMMENTS

PROBLEMS ENCOUNTERED

None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing			Route Length
Route Coverage			
Route Deviation			
Vehicle Loads			
Vehicle Headways			
Schedule Adherence			
Passenger Transfers			
Span of Service			

AUTHORITY YAKIMA TRANSIT

129 N. Second

Yakima, WA 98901

(509) 575-6175

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		11.8
POPULATION OF SERVICE AREA		51,000
TOTAL NUMBER OF BUSES		16
NUMBER OF PEAK PERIOD BUSES		12
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		881,000
NUMBER OF REVENUE BUS MILES (FY80)	(Projected)	593,000
NUMBER OF BUS ROUTES		8
SIZE OF TRAFFIC CHECKER FORCE		0

REVIEW OF EVALUATION PROCEDURES

Yakima Transit monitors and evaluates service based upon several performance indicators. Specific information concerning organization and evaluative procedure was not provided.

YAKIMA TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		
	Span of Service		
	Route Length		
	Vehicle Loads		
	Schedule Adherence		
	Accessibility		
	Passenger Transfers		
	Vehicle Spares		
	Missed Trips		

AUTHORITY MADISON METRO TRANSIT SYSTEMS

1101 E. Washington Avenue

Madison, WI 53703

(608) 266-4904

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	72.8
POPULATION OF SERVICE AREA	225,000
TOTAL NUMBER OF BUSES	199
NUMBER OF PEAK PERIOD BUSES	141
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	12,052,297
NUMBER OF REVENUE BUS MILES (FY80)	3,904,562
NUMBER OF BUS ROUTES	18
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

System performance information is regularly collected by Metro and the Madison DOT. Farebox revenue and vehicle mileage is recorded on a daily basis. Madison DOT staff determine ridership and system performance measures. Actual ridership counts are taken daily for two weeks out of the year. A separate passenger accounting system is also used on some routes.

MADISON METRO TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
			Span of Service
			Vehicle Loads
			Schedule Adherence
			Passengers/Hour
			Passengers/Mile
			Cost Recovery
			Cost per Passenger

AUTHORITY MILWAUKEE COUNTY TRANSIT SYSTEM

4212 W. Highland Blvd.

Milwaukee, WI 53208

(414) 344-4550

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	242
POPULATION OF SERVICE AREA	965,000
TOTAL NUMBER OF BUSES	628
NUMBER OF PEAK PERIOD BUSES	530
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	85,607,627
NUMBER OF REVENUE BUS MILES (FY80)	20,958,755
NUMBER OF BUS ROUTES	60
SIZE OF TRAFFIC CHECKER FORCE	9

REVIEW OF EVALUATION PROCEDURES

The Planning and Research Department is responsible for evaluating the service offered by Milwaukee Transit. As part of this, the "Route Design Guidelines" serve as a general direction for operating policy. These guidelines are also instrumental in preparing the five-year transit service plan, which is updated on an annual basis.

Data is collected by a number of departments, such as Accounting (revenue/cost), Scheduling (on/off counts, max loads) and Claims (accident reports).

MILWAUKEE COUNTY TRANSIT SYSTEM

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
None Reported

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Span of Service		Route Duplication
Route Deviation	Vehicle Headways		Route Structure
Route Length			Schedule Adherence
Recovery Time			Safety
Vehicle Loads			Passenger Transfers
Accessibility			Vehicle Spares
Bus Stop Shelters			Public Complaints
Passengers/Hour			Cost per Passenger
Cost Recovery			

AUTHORITY WAUKESHA METRO TRANSIT

201 Delafield St, Rm 200

Waukesha, WI 53186

(414) 547-2201

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	15
POPULATION OF SERVICE AREA	51,000
TOTAL NUMBER OF BUSES	11
NUMBER OF PEAK PERIOD BUSES	9
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	(system began operation 8/81)
NUMBER OF REVENUE BUS MILES (FY80)	(system began operation 8/81)
NUMBER OF BUS ROUTES	10
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

METRO is a new system that began 8/31/81 and had not developed a formal service evaluation program. The system will conduct a detailed system evaluation as of March 1982, and intends to develop a set of service standards.

METRO Currently measures the effectiveness and productivity of bus service by collecting and evaluating data concerning ridership, revenue, vehicle miles and hours, and missed trips. From this data, some performance statistics are derived. The responsibility for this program lies with the Transit Coordinator and General Manager.

WAUKESHA METRO TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	7	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Do not really have enough experience to complete this section.

PROBLEMS ENCOUNTERED
Changes will not be made until after March 1982 service evaluation; therefore, cannot answer this question.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		
	Vehicle Loads		
	Vehicle Headways		
	Schedule Adherence		
	Accessibility		
	Missed Trips		

AUTHORITY CALGARY TRANSIT

801 36th Avenue NE

Calgary, Alberta T2P 2M5

(403) 268-2111

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	188.8
POPULATION OF SERVICE AREA	595,000
TOTAL NUMBER OF BUSES	646
NUMBER OF PEAK PERIOD BUSES	526
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	52,421,546
NUMBER OF REVENUE BUS MILES (FY80)	24,932,000
NUMBER OF BUS ROUTES	88
SIZE OF TRAFFIC CHECKER FORCE	4

REVIEW OF EVALUATION PROCEDURES

Public transportation in Calgary is provided by the Transportation Department of the city government. Evaluation is conducted by the Transportation Planning Division and the Calgary Transit Division. Transportation Planning handles the long-term planning needs, as well as changes in the current route structure. Calgary Transit is responsible for scheduling, planning vehicle needs, and analyzing operational effectiveness.

These two divisions come together in the Current and Senior Transit Tlanning Teams. The Current Team reviews proposed changes in routing and scheduling, advertising campaigns, transit surveys, and other items relating to improving transit. Their recommendations are forwarded to the Senior Team for review before being sent to City Council for adoption.

CALGARY TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	(7)	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	9	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	7	8	9	10

COMMENTS
Not Reported

PROBLEMS ENCOUNTERED
The main problem encountered is the lack of availability of buses. They currently plan to investigate the use of automated passenger counting systems to supply additional data not available with the current system.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Route Length	Bus Stop Spacing		Schedule Adherence
Vehicle Loads	Route Deviation		Passenger Transfers
Vehicle Headways	Bus Stop Shelters		Vehicle Spares
Accessibility			Public Complaints
Cost Recovery			Passengers/Hour
			Cost per Passenger

AUTHORITY EDMONTON TRANSIT

P.O. Box 2610

Edmonton, Alberta T5J 3R5

(403) 428-5647

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	125
POPULATION OF SERVICE AREA	505,773
TOTAL NUMBER OF BUSES	718
NUMBER OF PEAK PERIOD BUSES	601
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	94,273,000
NUMBER OF REVENUE BUS MILES (FY80)	31,409,000
NUMBER OF BUS ROUTES	100
SIZE OF TRAFFIC CHECKER FORCE	0

REVIEW OF EVALUATION PROCEDURES

The Service Evaluation unit at Edmonton is responsible for conducting on-board ridership and schedule adherence surveys. This data is collected by an automatic passenger counting system. Ten routes are surveyed at each sign-up, which takes place five times a year. During 1982, Edmonton was trying to complete the evaluation of all routes to establish baseline data. After this is completed, a re-evaluation plan for the routes will be determined.

EDMONTON TRANSIT

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY	1	2	3	4	5	(6)	7	8	9	10	
EQUITY.....	1	2	3	4	5	6	7	8	9	10	Not Reported
RIDERSHIP.....	1	2	3	4	5	(6)	7	8	9	10	
OPERATING COSTS.....	1	2	3	4	5	(6)	7	8	9	10	

COMMENTS

Not Reported

PROBLEMS ENCOUNTERED

Edmonton sees the need to design a method to summarize previously collected ridership information.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Route Deviation	Cost per Passenger	Route Structure
Span of Service	Recovery Time		Schedule Adherence
Vehicle Loads	Vehicle Spares		Public Complaints
Vehicle Headways			Passengers/Hour
Accessibility			Passengers/Mile
Bus Stop Shelters			Cost Recovery

AUTHORITY GREATER VANCOUVER TRANSIT SYSTEM - METRO TRANSIT OPERATING CO.

850 S.W. Marine Drive

Vancouver, British Columbia, V6P 5Z1

(604) 324-0324

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	470
POPULATION OF SERVICE AREA	1,120,000
TOTAL NUMBER OF BUSES	865
NUMBER OF PEAK PERIOD BUSES	726 a.m. / 767 p.m.
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	84,000,000
NUMBER OF REVENUE BUS MILES (FY80)	672,107
NUMBER OF BUS ROUTES	123
SIZE OF TRAFFIC CHECKER FORCE	18

REVIEW OF EVALUATION PROCESS

The Scheduling and Analysis Department is responsible for the development of schedules and the allocation of manpower and vehicles required by the various operating centers. The actual service levels are set by the terms of the Annual Operating Agreement between Vancouver and METRO.

Fifteen traffic checkers monitor passenger loads and schedule adherence on a daily basis. The analysis section uses this data to evaluate service quality and reliability.

GREATER VANCOUVER TRANSIT SYSTEM - METRO TRANSIT OPERATING CO.

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	(8)	9	10
EQUITY.....	1	2	3	4	5	6	(7)	8	9	10
RIDERSHIP.....	1	2	3	(4)	5	6	7	8	9	10
OPERATING COSTS.....	1	2	(3)	4	5	6	7	8	9	10

COMMENTS

Until new equipment is received in Spring of 1982, peak period needs identified in the monitoring process cannot be met.

PROBLEMS ENCOUNTERED

The present three-party Annual Operating Agreement has lengthened the approval process for operating changes. Vancouver is also faced with a severe shortage of equipment that (until delivery in Spring 1982) has limited the response to known severe overloading situations. The size of the checking staff for the service area is not adequate to provide a reasonable coverage. Consideration is being given to the introduction of mechanical data collection.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
	Bus Stop Spacing		Route Deviation
	Span of Service		Route Length
	Route Duplication		Route Structure
	Vehicle Loads		Schedule Adherence
	Vehicle Headways		Passenger Transfers
	Accessibility		Missed Trips
	Bus Stop Shelters		Public Complaints
	Vehicle Spares		Passengers/Hour
			Recovery Time

AUTHORITY OTTAWA-CARLETON REGIONAL TRANSIT COMMISSION (O-C TRANSPO)

1500 St. Laurent Blvd.

Ottawa, Ontario K1G 0Z8

(613) 741-6440

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)	147
POPULATION OF SERVICE AREA	486,600
TOTAL NUMBER OF BUSES	760
NUMBER OF PEAK PERIOD BUSES	686
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)	97,424,000
NUMBER OF REVENUE BUS MILES (FY80)	27,490,308
NUMBER OF BUS ROUTES	104
SIZE OF TRAFFIC CHECKER FORCE	1

REVIEW OF EVALUATION PROCEDURES

OC Transpo collects ridership information through an automated passenger counting system. In 1982, sixty-six vehicles were equipped with the necessary micro-processors. In addition, system-wide origin-destination surveys are conducted approximately every two years. Based upon this data the Operational Planning Department develops a Five Year Strategic Plan. This plan is updated on an annual basis.

OTTAWA-CARLETON REGIONAL TRANSIT COMMISSION (O-C TRANSPO)

Property's perceived effectivenesss of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY	1	2	3	4	5	(6)	7	8	9	10
EQUITY.....	1	2	3	4	5	6	7	8	(9)	10
RIDERSHIP.....	1	2	3	4	5	6	(7)	8	9	10
OPERATING COSTS.....	1	2	3	4	5	6	(7)	8	9	10

COMMENTS

OC Transpo is emphasizing its Automated Data Collection system as the tool for service evaluation. The system is now just reaching an effective level of maturity and positive returns from the system should result in 1982.

PROBLEMS ENCOUNTERED

None Reported

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Bus Stop Spacing	Route Deviation		Route Duplication
Span of Service			Missed Trips
Vehicle Loads			Public Complaints
Schedule Adherence			Passengers/Hour
Accessibility			Passengers/Mile
Bus Stop Shelters			Cost per Passenger
Safety			
Passenger Transfers			
Vehicle Spares			
Cost Recovery			

AUTHORITY TORONTO TRANSIT COMMISSION

1900 Yonge Street

Toronto, Ontario, M4S 1Z2

(416) 481-4252

DESCRIPTION

SIZE OF SERVICE AREA (Sq. Miles)		244
POPULATION OF SERVICE AREA		2,100,000
TOTAL NUMBER OF BUSES	(+151 trolley)	1,329
NUMBER OF PEAK PERIOD BUSES	(+241 streetcars & 111 trolley)	1,168
NUMBER OF UNLINKED PASSENGER TRIPS (FY80)		586,279,000
NUMBER OF REVENUE BUS MILES (FY80)		48,656,525
NUMBER OF BUS ROUTES		120
SIZE OF TRAFFIC CHECKER FORCE		42

REVIEW OF EVALUATION PROCESS

Toronto's evaluation consists of two basic processes: on-going evaluation of ridership on existing routes in relation to specific loading standards; and an annual comparative evaluation of requested new services and existing routes in relation to specific service criteria.

These processes are carried out by the Service Planning Department with input from the Operational Planning Department (scheduling issues), Treasury Department (economic analysis), and Transportation Department (operational reliability and feasibility issues).

TORONTO TRANSIT COMMISSION

Property's perceived effectiveness of evaluation efforts in improving service delivery, promoting equity in service distribution, increasing ridership, and reducing operating costs.

SERVICE DELIVERY.....	1	2	3	4	5	6	7	8	9	(10)
EQUITY.....	1	2	3	4	5	6	7	8	9	(10)
RIDERSHIP.....	1	2	3	4	5	6	7	(8)	9	10
OPERATING COSTS.....	1	2	3	4	5	(6)	7	8	9	10

COMMENTS

TTC's service evaluation program is not oriented solely to decreasing operating costs. Rather its prime objective is to ensure effective use of resources which allows services to be added when justified or to be restructured when performing poorly.

PROBLEMS ENCOUNTERED

Delay in implementation occurs at times due to the time needed to obtain official approval of certain changes from the affected local municipality. Once approval has been obtained, it takes another two and one-half months to schedule and implement the service.

PERFORMANCE CRITERIA UTILIZED

FORMAL STANDARD	INFORMAL STANDARD	PROPOSED STANDARD	MONITOR CRITERIA ONLY
Route Deviation	Bus Stop Spacing	Span of Service	Route Structure
Route Duplication			Schedule Adherence
Vehicle Loads			Passenger Transfers
Vehicle Headways			Public Complaints
Accessibility			
Cost Recovery			
Passengers/Mile			

APPENDIX B

Appendix B contains three sets of matrices that identify the manner in which each of the twenty performance criteria is used to monitor or evaluate bus services at the agencies reviewed in the study. There is a separate set of matrices for each of the three transit system size groups. The letters F, I, P, and M are used in the matrices as codes which indicate if the agency possesses a standard to evaluate a criterion (and the type of standard) or if it only monitors the criterion without the use of a standard. Blanks indicate that an agency either does not evaluate or monitor a criterion or that it did not provide information concerning the criterion's monitoring/evaluation. The agencies in each matrix are arranged alphabetically by state and by the name of the locality served by the system.

MATRIX I

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (LARGE SYSTEMS)

I - Informal Standard
M - Monitor Only
F - Formal Standard
P - Proposed Standard

	ROUTE DESIGN						SERVICE QUALITY									ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure	Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints	Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
Los Angeles, CA	F	F	M				F	F	M							F	M	F		M
Denver, CO	F	F	P		M		F	I	M		P	I	M	M	M	F		F	F	F
Washington, D.C.							I		M		I	M	P							
Miami, FL	I	I		I			I	I	I		M	I	I	I				M		M
Atlanta, GA	M	M	M			M	F	F	F				M			F	F			
Baltimore, MD	I						F	M	M		F	F	I	M	M		F	M	M	
Boston, MA	M	F	F	M			F	F	F	M	M	F	F	M	F	F	F	F	M	
St. Paul/Minneapolis, MN		I					I	I	M	I	I	M	I		M		M	M		M
St. Louis, MO	F	F					F	F	F							F	F	F	F	F
Cleveland, OH							F	F	M		M		M		M	P				
Dallas, TX	F	F	M	I	M		F	F	F	F										
Houston, TX	P	P	P	P	P	P	F	F	F	P	F	M	M	P	M	M	P	P	P	M
Seattle, WA		P	P				F		F	I	M	M	M		M	F			F	
Milwaukee, WI	F	F	F		M	F	F	F	I	F	M	M		I	M	F	I			M
Calgary, AL (Can)	I	F	I				F	F	M	I		M			M	M	F			M
Edmonton, AL (Can)	F	F	I			M	F	F	M	F			M		M	M	P	M		F

MATRIX I (Cont'd)

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (LARGE SYSTEMS)

I - Informal Standard
M - Monitor Only
F - Formal Standard
P - Proposed Standard

	ROUTE DESIGN							SERVICE QUALITY										ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure		Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints		Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
Ottawa-Carleton, ONT (Can)	I	F	M	M	M			F		F	F	F	F	M	F	M		M	F	M		M
Toronto, ONT (Can)	I	F	F		F	M		F	F	M			M	M	P	M			F	F		
Vancouver, B.C. (Can)	I	I	M	M	M	M		I	I	M			M	M	I	M		M	P	P		P

MATRIX II

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (MEDIUM SYSTEMS)

I - Informal Standard
M - Monitor Only
F - Formal Standard
P - Proposed Standard

	ROUTE DESIGN						SERVICE QUALITY									ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure	Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints	Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
Phoenix, AZ	M	M			M				M		M				M	M	M	M		M
Long Beach, CA		P			M		P	M	P	M	M	I			M	I	M	I		M
Orange County, CA	F	F	F			M	F	F	F	F		F	F	M		F	F		F	
Sacramento, CA	F	M	F	F			F	F	F	F	F		F	F	F	F		M		M
San Diego, CA		F			M			F	M	F	F		F		F	M	F	M	F	M
San Rafael, CA	F						I		I	M	F				M		F		M	M
Santa Clara, CA							F		F		F		F			F			F	
Hartford, CT	F	F	F		M	M	F	F	F	F	F	I	F	M	M	I	I	I	I	M
New Haven, CT	F	F	F		M	M	F	F	F	F	F	I	F	M	M	I	I	I	I	M
Jacksonville, FL	P	P	P	P			P	P	P	P	M	P		P			I	I		M
Louisville, KY	I						F	F	F	M	M		F		M	F		M	F	
New Orleans, LA		I					M						M			M	I	M		M
Detroit, MI	F		M				I	I	I	P	M	M	I	I	M		M	F	M	M
Omaha, NE	I	I	I	M	I	I	I	I	I	I	M			I	M	I	I	M	M	M
Albany, NY																M		M		
Buffalo, NY	M						M	M	M				M		M	M	M	M		M

MATRIX II (Cont'd)

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (MEDIUM SYSTEMS)

I - Informal Standard
M - Monitor Only
F - Formal Standard
P - Proposed Standard

	ROUTE DESIGN						SERVICE QUALITY									ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure	Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints	Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
Rochester, NY	F	F	M				F		F	F	M	M	F	F		F	M	P	F	
Cincinnati, OH												M				P	P			
Hato Rey, PR	F	M	M	F	F			M	F	M				F	M	P		P	M	
Memphis, TN	F	M				F	F	F	F	F				F		F			F	
Nashville, TN	F	M				F	F	F	F	I						F	F	F	F	
Ft. Worth, TX									F		F					M	M	M		M
San Antonio, TX	F	F	M		M		F	F	F		F	M			M	F	F	F		M
Salt Lake City, VT	F	M				M	F	F	F		F	F				F	F	F	F	
Norfolk, VA		F					F	F	F	F	F	F	M		F	M	M	M	M	M
Richmond, VA	F	F	M			F	F		F	F				M		F	F			
Tacoma, WA																				
Madison, WI							M		M					M		M	M	M		M

MATRIX III

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (SMALL SYSTEMS)

I - Informal Standard
M - Monitor Only
F - Formal Standard
P - Proposed Standard

	ROUTE DESIGN						SERVICE QUALITY									ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure	Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints	Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
Birmingham, AL	I						M	M	M			M	M		M	M	M	M		M
Montgomery, AL	I	M	M				I	M	I		M	I	M			M		M	M	
Little Rock, AR																				
Arcata, CA	I	I	M	I	I		I	F	I		M	M	M			I	M	M		
Bakersfield, CA	F	F	M	I	M	M	F	F	F		F	F			M		F			
Fresno, CA	M	I		M				M	I	M	M		M	I	M	I	I	I	M	I
Modesto, CA				I				F		F	F	F	M		M	I	F	M		M
Oxnard, CA		F						I		I						F	F	F		F
Riverside, CA	P	F	M	M	I	M	P	P	F	F	M	M		M	M	F	F	P		F
Stockton, CA	F	F	F			M	F	F	F	F	F	M				F	F		F	
Thousand Oaks, CA	M								M	M					M	M	M	M		M
Torrance, CA		M	M	F	M		I	F	I		M	M	F	M	M	M		M		
Stamford, CT	F	F	F		M	M	F	F	F	F	F	I	F	M	M	I	I	I	I	M
Wilmington, DE	F						I	I	F	I					P	P	P	P	M	
Daytona Beach, FL									M		F	F		F		M	M	M		M
Melbourne, FL			M	M	M	M	M	M			M				M	F	P	F		F

MATRIX III (Cont'd)

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (SMALL SYSTEMS)

I - Informal Standard
M - Monitor Only
F - Formal Standard
P - Proposed Standard

	ROUTE DESIGN						SERVICE QUALITY									ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure	Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints	Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
St. Petersburg, FL	M	I					F	F	M	M	I	F		F	M	M		I		
W. Palm Beach, FL	F	F	I	P	P	M	P	F	F	P	F	F	F	F	M		F	F		
Bloomington, IL				F				M	M						I	M	F			
Champagne-Urbana, IL									F				F			F	F			
Decatur, IL	F	F	F				F	F	F			F	F	F		F	F	F	M	
Rock Island, IL		P	P	M	P	P	P	P	P	P		P				P				
Ft. Wayne, IN																				
Hammond, IN																				
South Bend, IN	F						F	F	F			M		F	M	F		F	F	
Des Moines, IA							I		I		I	I				I	I	I	M	
Iowa City, IA																				
Sioux City, IA	I	I		M		M		M			I	F			M		I		I	
Topeka, KS																M	M	M		M
Newport, KY	F		P	M	M	F	F	F	F	F	F	M	M	M	F	F	F	I	F	
Owensboro, KY	M	M		M		M				M	M					M	M	M	M	
Shreveport, LA																		M		

MATRIX III (Cont'd)

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (SMALL SYSTEMS)

I - Informal Standard
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	ROUTE DESIGN						SERVICE QUALITY									ECON./PROD.				
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure	Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints	Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger
Portland, ME															M				F	
Amherst, MA	M		M	F	I	M	I		I	M	M	M	F	F	M	F		I	M	P
Brockton, MA		I		I				M	M		I	M	M		M	M		F		
Battle Creek, MI							I	I	I	I		I				P	P	P		
Grand Rapids, MI		M						M	I		F						M	M	M	M
Duluth, MN	F	F	F			M	F	F	F	F	M	M					F		F	F
Billings, MT	M	M	M	M	M	M	M	M	F	M	I	M	M	M	I	M		M		
Chapel Hill, NC	I	I					I	I	M									I		
Charlotte, NC	F		F				F	F	F	F	F		F			F				
Fayetteville, NC																				
High Point, NC	M	M		M	M	I		I	M	M	M	M	I		M	M	M	M		M
Canton, OH	I	F		M		M			M	M	M			F	M					
Lima, OH	I	I	I	I	I	M		I	M	M		I	I		I					
Mansfield, OH		F		M	M	M		F	F	M	M	M	F		M			M	M	M
Maple Heights, OH	M		M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M		M
Youngstown, OH	I		F			F	F	F	F	M	F		I	M	M	I	M	M	I	

MATRIX III (Cont'd)

SUMMARY OF PERFORMANCE CRITERIA UTILIZATION BY INDIVIDUAL TRANSIT AGENCY (SMALL SYSTEMS)

I - Informal Standard
M - Monitor Only
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P - Proposed Standard

	ROUTE DESIGN							SERVICE QUALITY										ECON./PROD.					
	Bus Stop Spacing	Route Coverage	Route Deviation	Route Length	Route Duplication	Route Structure		Vehicle Loads	Vehicle Headways	Schedule Adherence	Bus Stop Shelter	Passenger Safety	Passenger Transfers	Missed Trips	Span of Service	Public Complaints		Passengers Per Hour	Cost Recovery	Passengers Per Mile	Passengers Per Trip	Cost Per Passenger	
Eugene, OR	F	I	F	M		M		F	F	F	F	F	F	M	M	M		F	F				
Allentown, PA		F	F		F			F	F	F	I	F	F	F	M	F		F	F		M		
Altoona, PA																							
Erie, PA	I	I		M		M			I	M		M				M							
Lancaster, PA										I		I						I	I				
Chattanooga, TN	I		F					F	I	I								I	I				
Abilene, TX					M	M				M			M	M		M		M		M			
Brownsville, TX	M		I	M	I	M		F	F	F	M	F		F		F							
Corpus Christi, TX	I							I	I	M	M	M		M	I			I	M				
Harlingen, TX	M			M	M			M	M	M	M	M	M			M			M		M		
Lubbock, TX	M								I	M	M		F					F	F	F	M		
Spokane, WA	F	F	F	M				F	F	F			F		F								
Yakima, WA	I	I		M				I		I			I	I	I								
Waukesha, WI	I	I						I	I	I				I		M							

APPENDIX C

Appendix C contains a set of 20 tables, one for each of the performance criteria examined in the industry review. Each of the tables provides a description of the standards reported by individual agencies that are used to evaluate the criterion. In addition to these standards' description, the tables also contain information on the type of data collected for evaluations, the evaluation/reporting cycle, and the major department(s) responsible for data collection and/or analysis of the criterion's performance. In each table, the agencies are arranged alphabetically by state and then by the formal name of the transit system.

ROUTE DESIGN

STANDARDS

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Birmingham - Jefferson County Transit Authority Birmingham, AL	INFORMAL STANDARD Bus stops are spaced every 2 blocks	Not Reported	Continuously reviewed	Not Reported
Montgomery Area Transit System Montgomery, AL	INFORMAL STANDARD Buses will stop at every intersection	Not Reported	Not Reported	Not Reported
Arcata and Mad River Transit Authority Arcata, CA	INFORMAL STANDARD - Bus stops are spaced every 4 blocks in the downtown area. - Bus stops are spaced no more than ¼ mile in other areas.	Not Reported	Not Reported	Not Reported
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD Bus stops should be no farther apart than 2 normal city blocks (where population densities warrant).	- Daily passenger counts by stop - Field observations	Annual reviews	- Planning - Operations
Golden Gate Bridge Highway and Transportation District San Rafael, CA	FORMAL STANDARD Bus stops should be spaced between ¼ mile and ½ mile apart.	- Coach stop list - Mileage logs - Passenger boarding surveys.	Reviewed as permitted by funding for data collection.	- Planning - Operations
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - In areas with at least 5,000 persons per square mile, bus stops will be spaced 750 - 900 feet apart. Lower density areas will have stops spaced 1,300 feet apart. - The minimum spacing for arterial express service bus stops is ½ mile regardless of population density or development.	- Population density data (census) - Field observations	Annual reviews	Service Development
Riverside Transit Agency Riverside, CA	PROPOSED STANDARD Stops should be spaced a maximum of 650 feet apart in the CBD and residential areas.	- Bus stop list - Section 15 boarding/ alighting surveys	Reveiwed as needed	- Operations - Planning

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sacramento Regional Transportation District Sacramento, CA	FORMAL STANDARD The minimum distance between stops should be 800 feet.	Not Reported	Not Reported	- Maintenance - General Administration
Southern California Rapid Transit District Los Angeles, CA	FORMAL STANDARD Specific requirements not reported.	Not Reported	Semi-annual reviews	- Schedules - Service Analysis
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD - Minimum spacing in general service areas is 700 feet. - Buses in low density areas or on special limited routes should stop when hailed by riders. - Stops in industrial or commercial areas are determined by patron concentrations.	Not Reported	Not Reported	Not Reported
Regional Transportation District Denver, CO	FORMAL STANDARD Urban spacing: 500 - 700 feet or every 2 blocks Rural spacing: 900 - 1,500 feet.	Not Reported	Not Reported	Not Reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD The minimum spacing between bus stops is 700 feet.	- Maps - Field observations	Reviewed as needed	Schedules and Planning Dept.
Delaware Administration for Regional Transit Wilmington, DE	INFORMAL STANDARD Urban: 10 - 12 stops per mile (maximum spacing) Suburban: 5 stops per mile (maximum spacing)	Not Reported	Not Reported	Not Reported
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD Stops should be spaced every 2 blocks in incorporated areas.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Jacksonville Coach Company Jacksonville, FL	PROPOSED STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD Stops should be spaced 8 per mile in residential areas and 10 per mile in commercial areas.	Not Reported	Not Reported	Not Reported
Decatur Public Transit System Decatur, IL	FORMAL STANDARD Stops should be placed at all major activity centers and should be spaced 2 blocks apart in urban areas.	Not Reported	Not Reported	Not Reported
South Bend Public Transportation Corporation South Bend, IN	FORMAL STANDARD - Buses will stop at any safe intersection when hailed. - Bus stop signs will be posted at least every 4 blocks.	Not Reported	Not Reported	Not Reported
Sioux City Transit System Sioux City, IN	INFORMAL STANDARD Buses make stops upon request or upon being hailed.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD The minimum distance between bus stops is 700 feet.	Not Reported	Annual reviews	Transportation Department
Transit Authority of River City Louisville, KY	INFORMAL STANDARD Stops are normally spaced about 1 block or every 1/10 mile.	riding checks (daily)	Continuous reviews	Scheduling Dept.
Mass Transit Administration Baltimore, MA	INFORMAL STANDARD - 5 Dwelling Units or more per acre = 400-800 ft. spacing. - 1.5 Dwelling Units or more per acre = 750-1,200 ft. spacing. - Less than 1.5 D.U. per acre = 1,500 ft. spacing	Street surveys (daily)	Not Reported	Research, Planning and Scheduling Departments

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Southeastern Michigan Transportation Authority Detroit, MI	FORMAL STANDARD Bus stops every two blocks.	Field observation	Annual reviews	Operations
Duluth Transit Authority Duluth, MN	FORMAL STANDARD Residential Areas: 700 - 1,500 feet spacing except where hills with a 6% slope or greater exist or where two major boarding points exist one block. Commercial Areas: Stops should be controlled by accessibility considerations rather than a specific standard.	Not Reported	Annual reviews	Research and Development Department
Metro Area Transit Omaha, NE	INFORMAL STANDARD - CBD: 300 feet or every intersection - Urban: 6 - 8 stops per mile - Suburban: 2 - 5 stops per mile	Not Reported	Annual reviews	- Planning - Transportation - Engineering
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD Urban (8 per mile minimum); P&R (hail a ride) Suburban (6 per mile minimum); CBD (every intersection); Crosstown (8 per mile minimum).	Not Reported	Reviewed as necessary	Community and Public Information Department
Charlotte Transit System Charlotte, NC	FORMAL STANDARD Bus stops should be at least 700 feet apart.	- Riding checks - Supervisor Reports	Semi-annual reviews.	- Scheduling - Operations
Chapel Hill Community Transit System Chapel Hill, NC	INFORMAL STANDARD A bus stop should be located within ¼ mile of 90% of Chapel Hill residents.	Not Reported	Not Reported	Not Reported
Allen County Regional Transit Authority Lima, OH	INFORMAL STANDARD Stops should be spaced 1 - 2 blocks apart depending upon the area.	Observations by staff.	Not Reported	Not Reported

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Canton Regional Transit Authority Canton, OH	INFORMAL STANDARD Residential areas - 2 blocks maximum	Not Reported	Semi-annual reviews	Not Reported
Western Reserve Transit Authority Youngstown, OH	INFORMAL STANDARD Bus stops should be a minimum of 700 feet apart.	Not Reported	Not Reported	Scheduling Dept.
Lane Transit District Eugene, OR	FORMAL STANDARD Stops should be spaced every 2 blocks.	- Route maps - Traffic engineering data	Reviewed as needed	Planning Dept.
Erie Metropolitan Transit Authority Erie, PA	INFORMAL STANDARD Bus stops are generally located every block.	Not Reported	Not Reported	Not Reported
Metropolitan Bus Authority Hato Rey, PR	FORMAL STANDARD Maximum stop spacing - 400 meters	Field inspection	Semi-annual reviews	Marketing Dept.
Chattanooga Area Regional Transit Authority Chattanooga, TN	INFORMAL STANDARD Bus stops should be spaced no more than 2 blocks apart with specific locations determined by each municipality.	Bus stop logs	Not Reported	Not Reported
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD General Service Areas - No less than 700 feet or 2 blocks. Outlying Areas - 2 block spacing Ind/Comm Areas - Locations determined by passenger concentrations	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD General Service Areas - Not closer than 700 feet Low Density Areas - No fixed criteria; vehicles will stop when hailed. Comm/Ind. Areas - Controlled by patron concentrations.	- On/off surveys - Rider surveys - Land use analysis - Community meetings - Running time checks - Driver surveys	Not Reported	Transportation and Marketing Departments
Corpus Christi Transit System Corpus Christi, TX	INFORMAL STANDARD Stops should be spaced 2 blocks apart.	Not Reported	Not Reported	Not Reported
Dallas Transit Dallas, TX	FORMAL STANDARD Stops should be spaced no closer than 400 feet and no further apart than 1,500 feet.	Public input	As needed	Operations Dept.
Metropolitan Transit of Harris County Houston, TX	PROPOSED STANDARD High density area (over 4,000 persons/sq. mile) - 500 to 700 feet or 8-10 stops per mile. Medium density area (2,000-4,000 persons/sq. mile) - 700 to 1,100 feet or 5-8 stops per mile. Low density area (less than 2,000 person/sq. mile) - 1,000 to 1,500 feet or 3-5 stops per mile. Buses will stop at all major activity centers, at all signalized intersections, and at all intersecting bus lines.	- Population density data - boarding/alighting surveys - Public requests	Annual reviews are proposed.	- Service Planning - Scheduling Dept. - Public Facilities
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD - No more than 8 stops per mile in non-CBD areas. - Every block in CBD	Not Reported	Not Reported	- Operations Dept. - Scheduling Dept.
Utah Transit Authority Salt Lake City, TX	FORMAL STANDARD The distance between stops will not be closer than 2,000 feet in most situations. Spacing may be closer if warranted by passenger concentrations.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD Commercial/Business Areas - Maximum 12/mile Residential Areas - Maximum 9/mile	Not Reported	Not Reported	Not Reported
Spokane Transit Authority for Regional Transportation	FORMAL STANDARD - Indicated that they have established fixed bus stop locations with spacing determined by land use activities, operational concerns and rider characteristics. - Buses formerly stopped at any corner on demand.	- Land use activities - Rider characteristics	Not Reported	Not Reported
Yakima Transit Yakima, WA	INFORMAL STANDARD 7 stops per mile is the general rule.	Not Reported	Not Reported	Not Reported
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD Residential - 8 per mile average PLUS - Regular, school, and feeder routes: 600 - 1,250 feet - Express routes: terminals, major trip generations, and at intersecting routes. - Freeway Flyer: Terminals, one mile or more on line haul - Shuttles/Contract: No standard	Not Reported	Not Reported	Not Reported
Waukesha Metro Transit Waukesha, WI	INFORMAL STANDARD Recommended spacing ranges between 600 and 1,250 feet.	Not Reported	Not Reported	Transit Coordinator
Calgary Transit Calgary, AL (Canada)	INFORMAL STANDARD The maximum desirable spacing is 1,000 feet.	Route speed	Not Reported	- Transit Planning - Service Control (Inspectors)

PERFORMANCE CRITERION - BUS STOP SPACING

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Edmonton Transit Edmonton, AL (Canada)	FORMAL STANDARD Spacing should be consistent with the 1,300 feet accessibility standard.	Not Reported	Reviewed as required	Not Reported
Metro Transit Operating Company Vancouver, BC (Canada)	INFORMAL STANDARD The ideal spacing is 750 - 800 feet and should not exceed 1,200 feet in urban areas. In undeveloped areas this guideline must be examined in relation to the specific area being served.	Not Reported	Not Reported	Schedules and Analysis Dept.
Ottawa - Carleton Transit Commission Ottawa, ONT. (Canada)	INFORMAL STANDARD 5 stops per kilometer is normal bus stop spacing	Not Reported	Not Reported	Not Reported
Toronto Transit Commission Toronto, ONT. (Canada)	INFORMAL STANDARD Spacing will vary between 400 and 1,500 feet with an average of 750 feet, except in the downtown area where spacings may be less than 400 feet.	- Site inspections - Public requests - Safety Considerations	On-going reviews	- Operational Planning

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Fresno Transit Fresno, CA	INFORMAL STANDARD The maximum spacing between bus routes is one mile.	Not Reported	Reviewed with each service change or about 3 times per year.	Service Planning Department
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD 90% of the service area's population should be within ¼ mile of an existing transit route.	Census data	Annual reviews	Planning Dept.
Long Beach Transit Long Beach, CA	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - In residential areas with at least 7,500 persons per square mile and/or a high proportion of transit dependents service should be provided within ¼ mile of all area residents. - In residential areas with at least 5,000 persons per square mile service should be provided within ½ mile of all area residents.	Population data (census)	Annual Reviews	Service Development Department
Riverside Transit Agency Riverside, CA	FORMAL STANDARD - The maximum spacing between routes should be ½ mile. - At least 70% of all residents should live within ¼ mile of transit service.	Not Reported	Annual reviews	Planning Dept.
San Diego Transit San Diego, CA	FORMAL STANDARD At least 50% of total population of service area should be within ¼ mile of a bus stop.	Census data	Annual reviews	Planning Dept.
South Coast Area Transit Oxnard, CA	INFORMAL STANDARD - In urban areas routes should be spaced no more than ½ mile apart. - In rural areas spacing is determined by population concentrations.	- Census data - U.S. Geological survey maps	Annual reviews	Planning Dept.

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Southern California Rapid Transit District Los Angeles, CA	FORMAL STANDARD - The maximum spacing (in at least one direction) for areas with more than 8,000 persons per square mile is ½ mile.	Population density	Semi-annual reviews	- Schedules - Service analysis
Stockton Metropolitan Transit District Stockton, CA	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Regional Transportation District Denver, CO	FORMAL STANDARD There should be a maximum walking distance of ¼ mile to the nearest bus route.	Not Reported	Not Reported	Not Reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD Routes are spaced a maximum of ½ mile apart with closer spacing in densely populated areas.	- Maps - Population data	Review as needed	Schedules
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD There should be a ¼ mile maximum walk for patrons to reach a bus route.	Not Reported	Not Reported	Not Reported
Jacksonville Coach Company Jacksonville, FL	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD Route spacing ranges from ½ mile to 1½ miles depending upon area population and employment densities. Closer spacing is used in economically disadvantaged areas.	Population/Employment density data	Not Reported	Not Reported
St. Petersburg Muncipal Transit System St. Petersburg, FL	INFORMAL STANDARD Bus routes are spaced about ¼ mile apart.	Route maps	Not Reported	Field Supervisor
E. Volusia Transportation Authority S. Daytona, FL	FORMAL STANDARD Service must be provided to each city within the tax district with the route structure based upon ridership levels.	- Requests from public - Ridership statistics	Semi-annual reviews	- General Manager - Director of Operations

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED STANDARD - Service will be provided within ¼ mile of 95% of residents in areas with densities over 3 dwelling units per acre. - The ratio of route miles to square miles in an area will vary between 0.33; 1.00 to 2.1 depending upon density and either family income or transit dependency.	- Population density - Population characteristics	Not Reported	Not Reported
Decatur Public Transit System Decatur, IL	FORMAL STANDARD Bus routes should be spaced about ½ mile in urban areas.	Not Reported	Not Reported	Not Reported
Sioux City Transit System Sioux, City, IA	INFORMAL STANDARD 90% of the system's residents should be within	Not Reported	Not Reported	Not Reported
New Orleans Public Service, Inc. New Orleans, LA	INFORMAL STANDARD Attempts to maintain a maximum walk to transit of 4 blocks in heavy density area and 8 blocks in less densely populated areas.	Population density	Not Reported	Not Reported
Brockton Area Transit Brockton, MA	INFORMAL STANDARD 95% of population within 2 blocks of service	Not Reported	Not Reported	Not Reported
Massachussetts Bay Transportation Authority Boston, MA	FORMAL STANDARD Service should be provided to within at least ½ mile of at least 90% of all residents in areas with a population density over 4,000 persons per square mile.	- Census data - Maps w/route structure	Not Reported	Service Planning Office
Duluth Transit Authority Duluth, MN	FORMAL STANDARD - A maximum of ½ mile spacing should exist in areas where population density and ridership demands are sufficient to insure cost-effective operation. - In areas with high density and low income or auto ownership closer spacing should be implemented or more frequent service provided.	- Population density - Area auto ownership - Area income data - Passenger data	Annual reviews	Research and Development

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Commission St. Paul, MN	INFORMAL STANDARD - Service should be provided within ¼ mile of the"great majority" of riders. - Spacing of ½ mile recommended in central cities where warranted by demand.	Not Reported	Not Reported	Service Planning and Scheduling Departments
Metro Area Transit Omaha, NE	INFORMAL STANDARD Urban: ½ mile route spacing Suburban: 1 mile or closer where terrain inhibits walking.	- Population density - Area Topography	Annual reviews	Planning
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD ¼ mile walk to transit in high density areas or 5 minute drive in auto in low density areas.	Not Reported	Reviewed as needed	Planning and Development Dept.
Chapel Hill Community Transit System Chapel Hill, NC	INFORMAL STANDARD 100% of area households should be within ¼ mile of a transit line.	Not Reported	Not Reported	Not Reported
Allen County Regional Transit Authority Lima, OH	INFORMAL STANDARD Routes should be spaced no more than 6 - 8 blocks apart.	- Route map analysis	Reviewed as needed	Not Reported
Canton Regional Transit Authority Canton, OH	FORMAL STANDARD 90% of service area residents should live within 2 blocks of transit.	Not Reported	Semi-annual reviews	Not Reported
Richland Transit System, Inc. Mansfield, OH	FORMAL STANDARDS - Routes should be spaced 2 - 3 blocks apart. - 90% of urban residents should live within ¼ mile of a transit line.	- Route Maps - Census population	Reviewed with every major route change	Not Reported
Lane Transit District Eugene, OR	INFORMAL STANDARD (FY81) 85% of urban residents should live within ¼ mile of transit service.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Erie Metropolitan Transit Authority Erie, PA	INFORMAL STANDARD Routes are generally spaced ¼ mile apart.	Not Reported	Not Reported	Not Reported
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD - 80% of Urban route miles outside of CBD should be spaced at least ½ mile apart when not encumbered by physical barriers. - 90% of urban residents should live within ¼ mile of a transit line. - No major residential or activity center in market area should be more than ¼ mile from a transit line.	Not Reported	Not Reported	Not Reported
Dallas Transit Dallas, TX	FORMAL STANDARD Within 6 miles of CBD - ½ mile spacing Within 7 -10 miles of CBD - ½ to 1 mile spacing More than 10 miles from CBD - no standard	Maps	Reviewed as needed	Planning Dept.
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSING STANDARD High density area (over 4,000 persons/sq. mile) - At least 90% of area residents should live within ¼ mile of a transit stop. Medium density areas (2,000-4,000 persons/sq. mile) - At least 60% of area residents should live within a ¼ mile of a transit stop. Low density areas (less than 2,000 persons/sq. mile) - At least 75% of area residents should live within a 10 mile or 20 minute drive from a transit stop.	- Population density data - Area maps - Route network maps	Annual reviews are proposed	Service Planning Department
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD Routes should be separated by ½ mile intervals with special attention given to each area's population density and auto ownership level.	- Population data - Population characteristics	Not Reported	Planning Dept.

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Tidewater Transportation District Norfolk, VA	FORMAL STANDARD All subareas within the service area with a density greater than or equal to 15 dwelling units per acre should be within ¼ mile of a bus route.	Population density	Annual reviews	Not Reported
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD Person/Acre — Maximum Distance to Transit Line Over 19.0 — Service within ¼ mile of 90% of population. 5.1 to 19.0 — Service within ½ mile of 90% of population. Under 5.0 — No set standard	Population density	Not Reported	Not Reported
Municipality of Metropolitan Seattle Seattle, WA	PROPOSING STANDARD Specifics not reported.	Not Reported	Not Reported	Not Reported
Spokane Transit Authority for Regional Transportation Spokane, WA	FORMAL STANDARD - Within the city provide service within ¼ mile walking distance of 90% of all households. - Outside of the city provide service within ½ mile walking distance of the majority of households, to be determined by routing, service, and demographic considerations.	Not Reported	Not Reported	Not Reported
Yakima Transit Yakima, WA	INFORMAL STANDARD ¼ mile spacing is general rule.	Not Reported	Not Reported	Not Reported
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD - ½ mile spacing for medium and high density areas (1,045 - 7,561 D.U. per square mile) - 1 mile for low density areas (340 - 1,070 D.U. per square mile). - Routes may abe spaced at less than the above intervals if social, economic, and demand factors warrant. - These standards apply only to regular service.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE COVERAGE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Waukesha Metro Transit Waukesha, WI	INFORMAL STANDARD Routes should be spaced so that ¼ mile walking distance to transit service is provided to area residents.	Not Reported	Annual reviews	Transit Coordinator
Calgary Transit Calgary, AL (Canada)	FORMAL STANDARD Routes should be spaced so that the maximum distance to reach service is 1,500 feet.	Not Reported	Not Reported	Transit Planning
Edmonton Transit Edmonton, AL (Canada)	FORMAL STANDARD Routes should be spaced so that the maximum walking distance to access transit is 1,300 feet.	Not Reported	Not Reported	Not Reported
Metro Transit Operation Company Vancouver, BC (Canada)	INFORMAL STANDARD Radial lines - ½ mile spacing Crosstown lines - 1 to 2 mile spacing Provide Sun/Hol. service within 800 meters of at least 35% of all residents and open public services/ facilities within urban area on a 60 minute headway (or 30 minutes if 30% RC can be achieved).	Not Reported	Not Reported	Schedules and Analysis Department
Toronto Transit Commission Toronto, ONT. (Canada)	FORMAL STANDARD Passenger access indexes are calculated that take into account: 1) Walking distance from existing service 2) Number of persons in various strata to be measured. 3) Frequency of service available in area.	- Passenger walking distance - Number of persons - Schedules analysis	Reviewed whenever route changes are contemplated	Service Planning Department

PERFORMANCE CRITERION - ROUTE DEVIATION

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Orange County Transit District Garden Grove, CA	FORMAL STANDARD Route deviantions to serve major activity centers should be provided (or continued) when they can generate a net revenue to cost ratio of at least 25%.	Passenger statistics (riding checks) and demand analysis	Annual reviews	Service Development Department
Sacramento Regional Transportation District Sacramento, CA	FORMAL STANDARD A maximum of 2 deviations per route are normally allowed and each deviation must achieve a pre-determined level of increased productivity based upon the type of activity responsible for the deviation.	Passenger statistics from riding checks	Annual reviews	- Planning Dept.
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD Bus route lengths between major transit generators should not exceed auto travel distance between the same points by more than 33%.	Not Reported	Not Reported	Not Reported
Regional Transportation District Denver, CO	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD Transit travel distances should not exceed the auto travel distance between the same two points by more than 33%.	Area/route Maps	Bi-annual reviews evaluations	Schedules and Planning Dept.
Palm Beach County Transportation Authority W. Palm Beach, FL	INFORMAL STANDARD There should be a maximum of one deviation per bus route.	Not Reported	Not Reported	Not Reported
Jacksonville Coach Company Jacksonville, FL	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED STANDARD Route lengths will be no greater than 1.4 times the minimum distance between terminals.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE DEVIATION

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Decatur Public Transit System Decatur, IL	FORMAL STANDARD Route paths should be less than 1.2 times the straight line distance between two points.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	PROPOSAL Route lengths should not exceed auto travel distance by more than 33%.	Not Reported	Annual reviews	Scheduling Dept.
Massachussetts Bay Transportation Authority Boston, MA	FORMAL STANDARD - Deviations will not exceed 8 minutes per round trip or increase passenger travel time by more than 25%. - Market potential must not reduce the line's economic or productivity performance below the existing level.	- Ride checks - Actual distance and travel time measurements	Not Reported	- Service Planning - Scheduling Dept. - Traffic Improvement Office
Duluth Transit Authority Duluth, MA	FORMAL STANDARD Coefficient of directness should not exceed 1.3 times auto distances.	Trip surveys	Annual reviews	Research and Development
Metro Area Transit Omaha, NE	INFORMAL STANDARD - Travel distance on a route should not be more than 20% longer than an auto trip. - Deviations should be avoided, but when authorized shall not exceed 8 minutes per round trip.	Not Reported	Annual reviews with daily checks for detours	- Planning Dept. - Transportation Dept.
Charlotte Transit System Charlotte, NC	FORMAL STANDARD Routes shall not exceed a coefficient of directness of 1.33.	Map measurements	Semi-annual reviews	Scheduling Dept.
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD - Direct service should be provided on the trunk of a route. - The coefficient of directness for any route should not exceed 1.33.	Not Reported	Not Reported	Schedules

PERFORMANCE CRITERION - ROUTE DEVIATION

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Lane Transit District Eugene, OR	FORMAL STANDARD Deviations from the shortest route will occur when: - It serves a major trip generator - It serves a concentration of seniors or disabled. - It remedies a significant coverage deficiency.	Area/route maps	Reviewed every 3-5 years or as needed	Planning
Lehigh and Northampton Transit Authority Allentowne, PA	FORMAL STANDARD Travel times via transit should not exceed 1.5 times auto travel time for any trip.	Not Reported	Annual review	Not Reported
Metropolitan Bus Authority Hate Rey, PR	FORMAL STANDARD Routes should follow major arterials connecting trip generators according to established travel patterns.	- Map analysis - Field inspections	As needed	Planning and Scheduling Dept.
Chattanooga Area Regional Transit Authority Chattanooga, TN	FORMAL STANDARD Transit travel times should not exceed auto travel times for the same trip by more than 30%.	Not Reported	Not Reported	Not Reported
Brownsville Urban System Brownsville, TX	INFORMAL STANDARD Bus routes should follow the most direct path possible.	System map (on-going)	Periodic review	- Service Coordinator
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD - Transit lines will normally operate on major arterial streets. - Route deviations to serve residential neighborhoods or activity centers must generate ridership that exceeds 75% of the line's overall productivity in terms of passengers per vehicle mile.	- Route/area maps - Passenger counts - Public input	Reviews with every new service addition are proposed.	- Service Planning Department
Municipality of Metropolitan Seattle Seattle, WA	PROPOSING STANDARD Specifics not reported.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE DEVIATION

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Spokane Transit Authority for Regional Transportation Spokane, WA	FORMAL STANDARD Transit travel time shall not exceed twice auto travel time between any two locations in the service area.	Not Reported	Not Reported	Not Reported
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD Route deviations should not exceed 1.2 times the auto distance between the route terminals	Not Reported	Not Reported	Not Reported
Calgary Transit Calgary, AL (Canada)	INFORMAL STANDARD Bus routes should follow the most direct path to downtown.	Not Reported	Not Reported	Transit Planning
Edmonton Transit Edmonton, AL (Canada)	INFORMAL STANDARD Bus routes should be as direct as possible.	Not Reported	Not Reported	Not Reported
Toronto Transit Commission Toronto, ONT (Canada)	FORMAL STANDARD Routes are not generally diverted off major arterials to serve heavy traffic generators. Some exceptions are made based upon patron convenience and increased ridership resulting from such a deviation.	Not Reported	On-going reviews	Service Planning

PERFORMANCE CRITERION - ROUTE LENGTH

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Arcata and Mad River Transit Authority Arcata, CA	INFORMAL STANDARD Due to the pulse scheduling system route lengths are limited by the 55 minute running time requirement.	Not Reported	Not Reported	Not Reported
Golden Empire Transit District Bakersfield, CA	INFORMAL STANDARD Route lengths are constrained by a one-hour maximum round trip running time limitation.	Field observations	On-going reviews	Planning Dept.
Intracity Transit Modesto, CA	INFORMAL STANDARD Route lengths are limited by the system's 30 minute maximum headway standard.	- Mileage data - Stop lists	Reviewed whenever new services are planned or schedules rewritten.	Transit Manager
Sacramento Regional Transportation District Sacramento, CA	FORMAL STANDARD Trip running times shall not exceed one hour.	Schedules analysis	Annual reviewed	- Planning - Scheduling
W. Palm Beach County Transportation Authority W. Palm Beach, FL	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Jacksonville Coach Company Jacksonville, FL	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD Maximum round-trip running time of 4 hours is allowed.	Not Reported	Not Reported	Not Reported
Bloomington-Normal Transit System Bloomington, IL	FORMAL STANDARD Routes of 15 or 30 minutes are maintained to facilitate scheduling.	Running time and distance measurements.	Reviewed as needed	Transportation Superintendent
Brockton Area Transit Brockton, MA	INFORMAL STANDARD Route lengths are constrained by pulse scheduling requirements (40 minute round trips).	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE LENGTH

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
University of Massachusetts Transit Service Amhurst, MA	FORMAL STANDARD One-way running times are not to exceed 35 minutes.	Not Reported	Annual reviews	Director of Transportation
Metropolitan Bus Authority Hato Rey, PR	FORMAL STANDARD Routes should not exceed 20 miles in length or 2 hours running time (round trip).	- Observed running times - Mileage measurements - Field inspections	Semi-annual reviews	- Planning - Scheduling
Dallas Transit Dallas, TX	INFORMAL STANDARD Routes should be no longer than 45 minutes in running time (one-way).	Schedules analysis	Quarterly reviews	- Planning - Scheduling
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD Maximum Route Lengths (one-way) Local Radial: 17 miles or 1¼ hours. Crosstown: circumferential (30 miles or 2 hours) Non-circumferential (17 miles or 1¼ hours). Through-routed lines: 40 miles or 2½ hours. Limited Radial: 22 miles or 1¼ hours.	- Distance/time measurements	Reviews whenever route changes or new services are implemented is proposed	- Service Planning Department

PERFORMANCE CRITERION - ROUTE DUPLICATION

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Arcata and Mad River Transit Authority Arcata, CA	INFORMAL STANDARD No route duplication is permitted.	Not Reported	Not Reported	Not Reported
Riverside Transit Agency Riverside, CA	INFORMAL STANDARD Duplication more than 2 to 3 miles outside of the CCD is avoided.	Not Reported	On-going review	- Operations Dept. - Planning Dept.
Palm Beach County Transportation Authority W. Palm Beach, FL	PROPOSING STANDARD Specifics unreported.	Not Reported	Not Reported	Not Reported
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSAL No more than 20% of route miles will be within ½ mile, excluding major generators, transfer points, and CBD route miles.	Not Reported	Not Reported	Not Reported
University of Massachusetts Transit Service Amherst, MA	INFORMAL STANDARD No duplication is permitted except within campus and CBD.	Not Reported	Annual reviews	Director of Transportation
Metro Area Transit Omaha, NE	INFORMAL STANDARD There should be a maximum of one route per arterial except on approaches to the CBD or major activity center.	Not Reported	Annual reviews	Planning Dept.
Lehigh and Northampton Transit District Allentown, PA	FORMAL STANDARD At least 80% of non-CBD urban route miles should be spaced at least ½ mile apart when not emcumbered by physical barriers.	Not Reported	Not Reported	Not Reported
Metropolitan Bus Authority Hato Rey, PR	FORMAL STANDARD Not more than 50% of any route's length should duplicate service provided by another route(s).	Route maps	Semi-annual reviews	- Planning - Scheduling

PERFORMANCE CRITERION - ROUTE DUPLICATION

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Brownsville Urban System Brownsville, TX	INFORMAL STANDARD There should not be any route duplication	System map	Evaluated with every service change.	Service Coordinator
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD - There will be a maximum of one loacl radial line per arterial except on approached to a major activity center/transit center or where such duplication is required due to street configurations. - No more than 40% of a regular local line's length will duplicate the route of any other regular local line. - Limited, Crosstown, and Commuter routes are exempted from these requirements.	Route/area maps	Reviews are proposed whenever major service changes take place.	- Service Planning Department
Toronto Transit Commission Toronto, ONT. (Canada)	FORMAL STANDARD One route per arterial street is the rule with exceptions made for situations where several routes must converge to feed into the same subway station.	Not Reported	On-going	Service Planning Department

PERFORMANCE CRITERION - ROUTE STRUCTURE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED STANDARD - Routes should be logical and simple with names that relate to features on the route. - No more than 20% of routes should have terminal loops larger than 4 square blocks.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Turnbacks, branching, and through-routing will be encouraged where significant cost saving will result. In order to avoid confusion branches should be given separate names and route numbers.	- Passenger boarding/ alighting counts - Rider surveys	Annual reviews	Scheduling Dept.
Metro Area Transit Omaha, NE	INFORMAL STANDARD There should be a maximum of 2 branches per trunk route.	Not Reported	Annual reviews	Planning Dept.
HiTran High Point, NC	INFORMAL STANDARD The structure of routes is constrained by pulse scheduling system with no demonstrated need for turnbacks or "wyes".	Route and schedule analysis using "riding check" data	Annual reviews	Management Company or a consultant with staff assistance.
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD - Cost saving routing techniques should be used whenever possible. - Through-routing should be used whenever possible. - No "wyes" should be used in bus routings.	Not Reported	Not Reported	Scheduler
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD - Turn-back operations should be limited to peak hours only unless justified by passenger concentrations. - Where branching results in cost savings consideration should be given to changing the branches' names and numbers.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE STRUCTURE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD - Turnback operations should be limited to peak hours only and should not operate in off-peak periods or when policy headways govern. - Where branching results in cost-savings consideration should be given to changing the branch's name and number to avoid confusion.	- Running time checks - Boarding/alighting counts. - Rider surveys - Land use analysis - Community meetings - Operator surveys	Not Reported	Scheduling
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD - A maximum of 3 branches and/or turnbacks will be used on a regular local radial line. - A maximum of 2 branches and no turnbacks will be used on a limited service line. - A maximum of one turnback and no branches will be used on crosstown lines. - Terminal loops must be limited to 10 minutes except where they generate ridership that exceeds 50% of the line's average productivity in terms of passengers per vehicle mile. - No terminal loop will exceed 20% of the total one-way route mileage for a route regardless of ridership productivity.	- Passenger counts - Boarding/alighting surveys	Reviews when major major service changes take place are proposed.	- Scheduling Dept. - Service Planning Department
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD - Turnbacks and branches will be operated where they result in cost-savings and improved service. - Where branching is utilized consideration should be given to changing the route designation to lessen confusion for riders. - Through routing shall be used whenever possible.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - ROUTE STRUCTURE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD - Loops may be warranted when a route has reached its natural terminus and the area near the terminus will be better served by operation of a loop. - Branches may be warranted at a logical split in the route where demand does not warrant the headway needed in the trunk line. Headways on branches will meet policy maximums.	Not Reported	Not Reported	Not Reported

SERVICE QUALITY

STANDARDS

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Montgomery Area Transit System Montgomery, AL	INFORMAL STANDARD Avoid vehicle loads in excess of 150% of seated capacity.	Not Reported	Not Reported	Not Reported
Arcata and Mad River Transit Authority Arcata, CA	INFORMAL STANDARD There should be a maximum of 15 standees per trip in the peak periods.	Passenger load checks	Not Reported	Not Reported
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD - Peak period load factors should not exceed 140%. - Base period load factors should not exceed 100%.	Riding checks	Annual reviews	Planning Dept.
Long Beach Transit Long Beach, CA	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - No load in any period should exceed 130% for more than 15 minutes on any trip. - Service should be added on radial lines when loads equal or exceed 90% during any time period. - Service should be added on grid and other lines when loads equal or exceed 90% during any time period. - Service should be added on express lines when loads equal or exceed 100%.	Riding checks	3 reviews per year	Not Reported
Riverside Transit Agency Riverside, CA	PROPOSED STANDARD Vehicle loads should not exceed 100% of seated capacity in base periods or 125% during peak periods.	Riding checks.	Monthly/quarterly reviews	- Planning - Operations

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD The maximum passenger load should not exceed 1.25 passengers per seat. However, loads up to 1.5 passengers per seat may be tolerated for very short distances or periods.	- Peak period cordon counts - Riding checks	Annual reviews	- Planning - Scheduling
San Diego Transit San Diego, CA	FORMAL STANDARD The standard maximum peak hour average load factor should be 100% of seated capacity.	Passenger counting program.	Annual reviews	Scheduling Dept.
Santa Clara County Transit District San Jaun, CA	FORMAL STANDARD - The minimum acceptable average load is 30%. - The maximum acceptable average load is 90%.	Riding checks	Quarterly reviews	Scheduling Dept.
Southern California Rapid Transit District Los Angeles, CA	FORMAL STANDARD - Loading factors for individual lines should not exceed 140% during the peak 20 minutes at the maximum load point. - Loading factors should not exceed 100% for base periods and evenings. - Loading factors should not exceed 100% during the peak 30 minutes for long-distance freeway and busway services.	Riding checks and peak load counts by traffic checkers.	Annual reviews	Scheduling Dept.
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD Operating Period / Express Lines / Arterial Lines Peak 30 minutes: 100% / 125% Peak 60 minutes: 100% / 100% Base: No Standees / No Standees Weekend: No Standees / No Standees	Not Reported	Not Reported	Not Reported
Torrance Transit System Torrance, CA	INFORMAL STANDARD Load factors on individual lines should not exceed or fall below the system average by more than 10%.	- Ride checks - Special studies when required	Not Reported	Administrative Specialist

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Regional Transportation District Denver, CO	FORMAL STANDARD Local Service: Peak (140% maximum average) Off-peak (100% maximum average) Express Service: Peak (125% maximum average) Off-peak (100% maximum average)	- Point checks - Ride checks	Not Reported	- Planning Dept. - Scheduling Dept.
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD 133% - Peak Local maximum 110% - Peak Express maximum 100% - Off-peak maximum	- Riding checks - Point checks	Semi-annual reviews	Scheduling Dept.
Delaware Administration for Regional Transit Wilmington, DE	INFORMAL STANDARD 125% - Arterial lines 100% - Express lines	Peak load counts	Irregular reviews	- Transportation Supervisors
Washington Metropolitan Area Transit Authority Washington, D.C.	INFORMAL STANDARD Average passenger load should not exceed 140% of seats over any given 30 minute period during rush hours.	Traffic checker data	Quarterly Reports	- Scheduling - Transit Route Development
Palm Beach County Transportation Authority W. Palm Beach, FL	PROPOSED STANDARD Average vehicle loads should never exceed 150% in any time period.	Not Reported	Not Reported	Not Reported
Jacksonville Transportation Authority Jacksonville, FL	PROPOSING STANDARD Specifics not reported.	Street Supervisor Checks	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD Express - 100% Local & Feeder - 130% (peak 30 minutes	Peak load counts	Reviews as needed	Not Reported
St. Petersburg Municipal Transit System St. Petersburg, FL	FORMAL STANDARD A maximum passenger load of 150% is acceptable	Field Supervisor observation.	Not Reported	Operations Dept.

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Atlanta Rapid Transit Authority Atlanta, GA	FORMAL STANDARD Passenger loads should not exceed 1.5 in the peak hour with overloads rescheduled to allow a 1.25 factor. During non-peak periods a load factor range of 0.75 - 1.25 will be maintained, with 1.0 as the goal.	Daily traffic checker	Not Reported	- Transportation - Scheduling
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED The maximum allowable average loads during the peak period should not exceed 1.25 at the maximum load point.	Not Reported	Not Reported	Not Reported
Decatur Transit System Decatur, IL	FORMAL STANDARD The maximum acceptable load factor in the peak is 1.4 with no standees permitted during off-peak periods.	Not Reported	Not Reported	Not Reported
South Bend Public Transportation Corp. South Bend, IN	FORMAL STANDARD As a norm, no trip should consistently carry more than 65 passengers. If this occurs, management should make immediate arrangements to deal with such overloads.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Peak 30 minutes: Express 100%, Arterial 125% Peak Hour: Express 100%, Arterial 100% Base: Express No Standees, Arterial No Standees Night: Express No Standees, Arterial No Standees Weekends: Express No Standees, Arterial No Standees	Peak load counts	Semi-annual reviews	- Scheduling - Transportation
Transit Authority of River City Louisville, KY	FORMAL STANDARD Local (Peak) - 110% Average with no trip over 135% Express (All-day) - 100% School - 135%	Peak load counts	Not Reported	Scheduling Dept.

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Mass Transit Administration Baltimore, MD	FORMAL STANDARD Peak - 130% Base - 100% School - 150%	Daily - Peak load counts (traffic checkers) - Street Supervisor observation	Not Reported	- Research - Planning and Scheduling - Transportation
Brockton Area Transit Brockton, MA	INFORMAL STANDARD The objective is no standees on any bus. The State Department of Public Utilities has a 120% loading maximum.	Not Reported	Not Reported	Not Reported
University of Massachusetts Transit Service Amherst, MA	FORMAL STANDARD No bus should carry more than 125% of its seated capacity.	Operator trip reports (daily)	Not Reported	- Line Supervisor - Operations Manager - Director of Transportation
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD Peak 30 minutes 140% Total Peak Period 120% Midday Period 100% Evening Period 100% Premium Services (all periods) 100%	Daily - Peak load counts - Ride counts	Not Reported	- Transportation - Scheduling
Battle Creek Transit Battle Creek, MI	INFORMAL STANDARD Peak 1.25 maximum Off-Peak 1.00 maximum	Daily Passenger counts by Operators.	Not Reported	Manager and Planner
Southeastern Michigan Transportation Authority Detroit, MI	INFORMAL STANDARD During the peak period all passengers should have a seat. Some vacant seats should be available to encourage new riders.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Duluth Transit Authority Duluth, MN	FORMAL STANDARD There is an absolute maximum load standard of 150% with a 120% load factor being the standard maximum during the peak hour. During off-peak periods the standard is 90%.	Maximum load counts	Quarterly reviews	Research and Development
Metropolitan Transit Commission St. Paul, MN	INFORMAL STANDARD For local trips the maximum acceptable loading factor is 140% of seated capacity. The standard is 100% for express trips and trips where passengers would be required to stand for 20+ minutes.	Point checks by traffic checkers (quarterly	Quarterly reviews	- Service Planning - Scheduling
Bi-State Department Agency St. Louis, MO	FORMAL STANDARD Express - 120% at maximum load point Local - 140% at maximum load point All - 100% at 10 minute point	- Peak load counts (traffic inspectors) - Operator counts (quarterly to annual)	Annual reviews	Scheduling Dept.
Metro Area Transit Omaha, NE	INFORMAL STANDARD Peak - 150% maximum Base - 100% maximum Express - 125% maximum Freeway Express - 100% maximum	Load checks at least monthly (more frequent in winter).	Continuous reviews	- Planning - Transportation
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD Peak / Base / Evening/Weekends Class: Urban — Peak 65% / 150%; Base 40% / 125%; Evening/Weekends 40% / 100% Crosstown — Peak 40% / 125%; Base 30% / 100%; Evening/Weekends - / - Suburban — Peak 50% / 125%; Base 35% / 100%; Evening/Weekends 30% / 100% Park & Ride — Peak 65% / 100%; Base - / -; Evening/Weekends - / -	Point checks and ride checks (daily)	Not Reported	- Planning and Development Dept.

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Charlotte Transit System Charlotte, NC	FORMAL STANDARD Base Period - No Standees Peak Period - 110% (Express) 125% (Local)	Riding checks	Semi-annual	Scheduling Dept.
Chapel Hill Community Transit Chapel Hill, NC	INFORMAL STANDARD Route Type / Base / Peak Shuttle 175% 175% Express 100% 125% Arterial 100% 150%	Boarding/alighting checks by spare drivers and supervisors. (3 times per year).	Annual reviews	Not Reported
Greater Cleveland Regional Transit Authority Cleveland, OH	FORMAL STANDARD Peak - 125% Off-peak - 100%	Traffic checker peak load counts (monthly - semi-annual)	Semi-annual reviews	Chief Scheduler
Richland Transit System, Inc. Richland, OH	FORMAL STANDARD Period / Maximum Load Peak 30 minutes 125% Peak 60 minutes 100% Base No Standees Saturday No Standees	Not Reported	Not Reported	Not Reported
Lane Transit District Eugene, OR	FORMAL STANDARD Regular Service: 1.5 maximum; no minimum Tripper Service: 1.5 maximum; 1.0 minimum Express Service: 1.0 maximum; .05 minimum	Not Reported	Annual reviews	Not Reported
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD Maximum Loads (Average) °Off-peak periods - 1.0 °Peak periods line haul service - 1.4 °Standing loads for no more than 15 minutes on any single trip.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Lehigh and Northampton Transportation Authority (Continued)	Minimum Loads (Average) °Off-peak - 10 passengers °Peak - 25 passengers			
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD Period / Blazer / Arterial Peak 30 minutes: 100% / 125% Peak Hour: 100% / 100% Base (non-peak): 75% / 75% Night: 75% / 75% Weekend: 75% / 75%	Not Reported	Not Reported	Not Reported
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD Peak Periods - 125% Base Periods - 100%	Maximum load checks	Semi-annual reviews	Scheduling Dept.
Brownsville Urban System Brownsville, TX	FORMAL STANDARD Passenger loads should never exceed 150% of seated capacity	Daily operator counts	Not Reported	Drivers and Dispatchers
Corpus Christi Transit System Corpus Christi, TX	INFORMAL STANDARD The maximum vehicle load should be 100%.	Not Reported	Monthly reports	General Manager review
Dallas Transit System Dallas, TX	FORMAL STANDARD Period / Express / Local / Crosstown Peak Hour: 110% / 130% / 130% Peak Period: 100% / 110% / 110% Midday: 100% / 100% / 100% Night: 100% / 100% / 100%	Maximum load point checks (traffic checkers) 2/month	Not Reported	Planning Analysts

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD Local Service Peak 20-30 min. (140%) Peak 60 min. (125%) Midday/Night (100%) Freeway Express (100%) Arterial Exprss (120%)	Riding checks	Quarterly reviews are proposed	- Service Planning - Scheduling Dept.
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD Service Type / AM Peak / Off-Peak / PM Peak Through Town 140% 100% 140% Express 110% 100% 110% Crosstown 140% 100% 140% Circulators 140% 100% 140%	Operator passenger counts (3 days per year).	Not Reported	Operations
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD Average capacity utilizations expressed as the average load factor is used as one of nine indicators to evaluate line performances. Any line whose indicators are more than .7 (lower 25%) standard deviations below the mean for comparable lines indicates a problem area which should be examined.	Not Reported	Monthly reports w/ Annual evaluations	- Planning - Scheduling - Market Research
Tidewater Transportation District Norfolk, VA	FORMAL STANDARD Peak hour load factors should not exceed 150% for regular bus lines nor 100% for express services. If these standards are exceeded, regardless of the duration, additional service should be investigated.	Riding checks by Transportation surveyers. (annual checks)	Annual reviews	Scheduling Dept.
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD Service Type / Average Load / Maximum Load Express 1.00 1.00 Semi-Express 1.33 1.45 Arterial (non-peak) 1.00 1.00 Arterial (peak) 1.33 1.45	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Municipality of Metropolitan Seattle Seattle, WA	FORMAL STANDARD Peak Period - 135% Midday - 115% Other Periods - 100% In addition to these maximum average loads per trip. Standing time should be limited to 20 minutes for any passenger.	Automatic passenger counting system (daily)	Monthly reports	Service Planning Department
Spokane Transit Authority for Regional Transportation Spokane, WA	FORMAL STANDARD Local Service: 133% maximum load (peak) 100% maximum load (off-peaks) Express Service: 100% maximum load (all periods)	Not Reported	Not Reported	Not Reported
Yakima Transit Yakima, WA	INFORMAL STANDARD Peak service with load factors exceeding 1.2 are considered for express service.	Not Reported	Not Reported	Not Reported
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD Service Type / Peak Periods / Off-peak Periods Regular 133% 100% Express 133% 100% Schoolday 133% 100% Feeder 133% 100% Freeway Flyer 100% 100% Shuttle bus 133% 133% Contract 133% 133%	- Maximum load point checks	Monthly reviews	Scheduling Dept.
Waukesha Metro Transit Waukesha, WI	INFORMAL STANDARD Peak Period 1.33 Off-peak period 1.00	Not Reported	Not Reported	Not Reported
Calgary Transit Calgary, AL (Canada)	FORMAL STANDARD 150% of seated capacity is maximum allowable average passenger load during the peak hour.	- Passenger counts - Inspector reports	Continuous reviews	- Schedules Unit - Transit Planning Committee

PERFORMANCE CRITERION - VEHICLE LOADS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Edmonton Transit Edmonton, AL (Canada	FORMAL STANDARD The maximum acceptable vehicle loading will be 1.5 times the seated capacity of the vehicle. Current objective is no more than 55 passengers per vehicle during peak hours.	Station counts	Continuous reviews	- Service Evaluation Unit
Ottawa-Carleton Regional Transit Commission Ottawa, ONT (Canada)	FORMAL STANDARD Bus loads on a route using standard 40 foot vehicles should not exceed 77 passengers 95% of the time with the average hourly bus load not exceeding 100% of seated capacity.	Data collection system with APC and RUCUS.	- Collected with every booking. - Monthly reports	- Operations/ Planning Dept. - Service review Committee
Metro Transit Operating Company Vancouver, BC (Canada)	INFORMAL STANDARD Peak periods - Maximum 130% BAse periods - Maximum 100%	Traffic checker reports	- Continuous monitoring	- Scheduling and Analysis Dept.
Toronto Transit Commission Toronto, ONT (Canada)	FORMAL STANDARD Peak 30 min. — Average Passengers Per Vehicle: 65-75 — Percent of Seated Capacity: 160-180 Peak 60 min. — 55-65 — 135-160 Transition Period (maximum 1-hour) — 41-55 — 100-135 Off-peak Period — Seated Load — 100	Point and Riding checks	- On-going reviews - At least 4 point checks and/riding check per year per route.	- Service Planning - Operational Planning Dept.

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Arcata and Mad River Transit Authority Arcata, CA	FORMAL STANDARD Maximum headways are 55 minutes.	Not Reported	Not Reported	Not Reported
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD Peak period - 30 minutes maximum except for lines serving low density areas. Base period - 60 minutes maximum.	Not Reported	Annual reviews	Planning Department
Intracity Transit Modesto, CA	FORMAL STANDARD Headways should be maintained at 30 minutes when possible.	- Length and potential ridership of proposed route - Traffic constraints	Reviewed with each new service addition	Transit Manager
Orange County Transit District Sacramento, CA	FORMAL STANDARD Local Service - Headways will not normally exceed 30 minutes (peak) and 60 minutes (base) except under conditions of extremely low demand. Shorter headways will rely upon productivity or passenger loading. Headways more frequent than 20 minutes will reflect passenger loading only. Express Service - Headways reflect passenger loads and work shifts.	Passenger loads and passenger counts from riding checks	Annual reviews	Service Development Department
Riverside Transit Agency Riverside, CA	PROPOSED STANDARD Maximum headways, excluding trippers, should be 60 minutes.	Schedules analysis	Annual reviews	- Planning - Operations - Contract Operations

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sacramento Regional Transportation District Sacramento, CA	FORMAL STANDARD - Maximum headways are 60 minutes unless a line's productivity is less than 50% of the standard for productivity and (SEE: PASSENGERS PER HOUR CRITERIA) the line becomes a candidate for remedial action. - Any line that exceeds the maximum ridership productivity standards by more than 50% is a candidate for increased service frequencies.	- Population data - Passenger counts from riding checks - Schedule analysis	Annual reviews	- Planning Dept. - Scheduling Dept.
San Diego Transit San Diego, CA	FORMAL STANDARD Peak (maximum) - 30 minutes Off-Peak (maximum) - 60 minutes	Passenger counts	3 reviews per year	Scheduling Dept.
South Coast Area Transit (SCAT) Oxnard, CA	INFORMAL STANDARD Headways shall not exceed 2 hours	- Bus operator schedules - Road supervisor schedule adherence data	Annual reviews	- Scheduling - Operations
Southern California Rapid Transit District	FORMAL STANDARD - In areas with population density exceeding 8,000 persons per square mile local service with 30 minutes maximum weekday base headways will be provided to within ¼ mile of 90% of the population. - In areas with density between 4,000 and 8,000 local service with 30 minute maximum weekday base headways will e provided to within ½ mile of 90% of the population. - In areas with less than 4,000 persons per square mile local service with 60 minutes maximum weekday base headways will be provided to within ½ mile of 90% of the population.	Population density data	Semi-annual reviews	- Schedules Dept. - Service Analysis Section

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD - Policy headways for regularly scheduled service should not exceed 90 minutes and should be designed to conform to clock intervals - Headways for express service, where local service exists, will not fall under policy headway guidelines.	Not Reported	Not Reported	Not Reported
Torrance Transit District Torrance, CA	FORMAL STANDARD STANDARD 30 minute headways on all new routes	Not Reported	Not Reported	Administrative Staff
Regional Transportation District Denver, CO	INFORMAL STANDARD Policy headways are generally a maximum of 60 minutes.	Traffic checks (daily)	On-going reviews	Planning and Schedules Division
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD STANDARD - Weekday peak: Maximum 30 minutes. - Weekday base/Saturdays: Maximum 60 minutes. - Sunday: Maximum 60 minutes.	Ridership counts	Bi-annual reviews	Schedules and Planning Department
Delaware Administration for Regional Transit Wilmington, DE	INFORMAL STANDARD Peak headways reflect passenger loading standards with policy headways during base periods.	Peak load checks	Irregular reviews	Transportation Supervisors
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD STANDARD No headways longer than 2 hours	Not Reported	Not Reported	Not Reported
Jacksonville Coach Company Jacksonville, FL	Proposing standard	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD 60 minutes maximum headways	Not Reported	Not Reported	Not Reported
St. Petersburg Municipal Transit System St. Petersburg, FL	FORMAL STANDARD 60 minute maximum headways	Not Reported	Not Reported	Scheduler
Metropolitan Atlanta Rapid Transit Authority Atlanta, GA	FORMAL STANDARD Peak - 30 minute maximum Base - 60 minute maximum	- Route lengths - Running times - Passenger volumes	Not Reported	Scheduling Dept.
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED STANDARD 30 minutes - weekday peak maximum 60 minutes - night/weekend maximum	Not Reported	Not Reported	Not Reported
Decatur Public Transit System Decatur, IL	FORMAL STANDARD 30 minutes - peak maximum 60 minutes - off peak maximum	Not Reported	Not Reported	Not Reported
South Bend Public Transportation Corporation South Bend, IN	FORMAL STANDARD Headways for all regular routes shall not exceed 30 minutes during the day and 60 minutes during the evening off-peak period.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Headways on regular service should not exceed 60 minutes	- Load checks - Surveys - Trailing checks	Annual Comprehensive Operational Analysis	Scheduling Dept.

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Transit Authority of River City Louisville, KY	FORMAL STANDARD - Maximum trunk headway during peak periods should be 30 minutes. - During off-peak and weekend operations the trunk headway should be no more than a coach's round trip running time.	Not Reported	Continuous reviews	Schedule Dept.
Massachussetts Bay Transportation Authority Boston, MA	FORMAL STANDARD Peak - 30 minute maximum Midday - 60 minute maximum Night - 60 minute maximum	- Peak load counts - Riding checks	Not Reported	- Service Planning Office - Schedules Dept.
Battle Creek Transit City of Battle Creek Battle Creek, MI	INFORMAL STANDARD - 30 minute peak period maximum - 60 minute base period maximum	Not Reported	Not Reported	Not Reported
Southeastern Michigan Transportation Authority Detroit, MI	INFORMAL STANDARD One hour maximum policy headways	Not Reported	Monthly reviews	Operations
Duluth Transit Authority Duluth, MN	FORMAL STANDARD Peak Hour: 10-30 minutes depending upon area density, income, and dependency. Off-Peak : 30-60 minutes depending upon area density, income and dependency.	- Population density - Area income data - Area auto ownership	Annual reviews	- Research & Development - Scheduling
Metropolitan Transit Commission St. Paul, MN	INFORMAL STANDARD - Clock headways in off-peak where headways exceed 10 minutes. - Maximum policy headways of 60 minutes.	Not Reported	Not Reported	Service Planning and Scheduling Department
METRO Area Transit Omaha, NE	INFORMAL STANDARD Peak Hour: 5-30 minutes (urban) Midday: 10-45 minutes (urban) Evening: 30-60 minutes Night: 40-60 minutes	- Ridership Productivity -Financial performance	Monthly	- Planning Division - Scheduling Division

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD - Urban: 20-40 minutes (peak); 45 minutes (base); 60 minutes (late night and weekend) - Suburban: 30-60 (peak); 60 minutes (base and late PM); 90 minutes (weekends) - Crosstown: 45 minutes (peak); 60 minutes (base and late PM); 90 minutes (weekends) - Park & Ride: Headways reflect demand.	Not Reported	As necessary	Planning and Development Dept.
Hi Tran High Point, NC	INFORMAL STANDARD Off-peak: 60 minutes Peak: 30 minutes	Not Reported	Not Reported	Not Reported
Charlotte Transit System Charlotte, NC	FORMAL STANDARD Peak: 30 minutes Off-Peak: 60 minutes	Schedules Analysis	Semi-Annual reviews	Scheduling Dept.
Chapel Hill Community Transit Chapel Hill, NC	INFORMAL STANDARD Maximum headways of 30 (peak) and 60 (base) minutes.	Riding Checks conducted by Supervisors/spare drivers	3 times/year	Not Reported
Allen County Regional Transit Authority Lima, OH	INFORMAL STANDARD Maximum headways vary between 30 minutes and 60 minutes.	Not Reported	Not Reported	Not Reported
Richland Transit System, Inc. Mansfield, OH	FORMAL STANDARD - Every bus route must operate at least five trips per day. - 30 minute headways are maintained on all but one line.	Not Reported	Not Reported	Not Reported
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD Maximum headways for regular base serve are 60 minutes with clock headways to be used whenever possible.	Not Reported	Not Reported	Scheduler

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Lane Transit System Eugene, OR	FORMAL STANDARD 30 minutes maximum - peak 60 minutes maximum - off-peak	- Ridership - Budget constraints - Running times	Annual reviews	Planning Dept.
Erie Metropolitan Transit Authority Erie, PA	INFORMAL STANDARD 30 minute maximum - peak 60 minute maximum - off-peak	Passenger loads (daily)	Reviewed continuously	Not Reported
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD Peak period - System service: 30 minutes Market area: 15 minutes Base period - System service: 60 minutes Market area: 30 minutes	Not Reported	Annual reviews	Not Reported
Chattanooga Area Regional Transit Authority Chattanooga, TN	INFORMAL STANDARD Headways should be not more than 60 minutes	Not Reported	Not Reported	Not Reported
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD Policy headways for regularly scheduled service should not exceed 60 minutes and should conform to block intervals.	Not Reported	Not Reported	Not Reported
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD Policy headways for regularly scheduled service will not exceed 60 minutes and should conform to regular clock intervals.	- On/off surveys - Transfer Matrix Analysis - Rider Surveys - Land Use Analysis - Community Meetings - Running time checks - Driver Surveys	Not Reported	Scheduling Dept.
Brownsville Urban System Brownsville, TX	FORMAL STANDARD Headways should not exceed 35 minutes	Operations daily log	Not Reported	Chief Dispatcher

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Citibus Lubbock, TX	INFORMAL STANDARD Headways should not exceed 30 minutes	Not Reported	Annual reviews	Planner and Manager
Corpus Christi Transit System Corpus Christi, TX	INFORMAL STANDARD Maximum peak - 30 minutes Maximum base - 60 minutes	Not Reported	Not Reported	Not Reported
Dallas Transit Dallas, TX	FORMAL STANDARD Maximum Headways Express / Local / Crosstown Peak Hour: 20 / 20 / 20 Peak Period: 30 / 30 / 30 Midday: 90 / 60 / 30 Night: - / 60 / 60	Not Reported	Quarterly reviews	Planning Dept.
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD - Local Radial Lines (maximum) Weekday - peak (30 minutes) base (60 minutes) Saturday/Sunday (60 minutes) - Crosstown Lines (maximum) Weekday - peak (20 minutes) base (45 minutes) Saturday/Sunday (45 minutes) - Headways for limited and express lines will be determined by demand, loading standards, and vehicle availability.	- Passenger loads - Vehicle availability	Review for each driver sign-up.	- Service Planning - Scheduling
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD Vehicle headways are based on passenger demand and loading criteria. Policy headways in effect.	Passenger loads	Reviewed 3 times per year	Scheduling Dept.
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD Standards specify headways between 10 and 120 minutes based upon the day and time period of operation and the density and income of an area.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Spokane Transit Authority for Regional Transportation START Spokane, WA	FORMAL STANDARD City Routes Weekdays 30 min (peak) 30-40 (base) 60 (eve) Saturdays - 30-60 (base) 60 (eve) Sunday/Holiday - 60 (base(-	Not Reported	Not Reported	Not Reported
Milwaukee County Transit System Milwaukee, WI	INFORMAL STANDARD - Headways are determined by system loading standards. - Policy headways will be used were loads are so light as to only warrant excessive headways. Policy Headways Peak Period 30 min. (reg.) 30 min. (shuttle) Base Period 30 min. (reg.) 30 min. (shuttle) Other Periods 60 min. (reg.) 30 min. (shuttle)	- Peak load checks - On/off counts	Reviewed with seasonal driver run selections	- Scheduling Dept. - Planning and Research Dept.
Waukesha Metro Transit Waukesha, WI	INFORMAL STANDARD 30 minute maximum/peak period 60 minute maximum/off-peak periods	Not Reported	Not Reported	Transit Coordination
Calgary Transit Calgary, AL (Canada)	FORMAL STANDARD A minimum headway of 30 minutes is assigned to each new route. The policy may be adjusted for service to special service areas and/or low transit generating areas in off-peak periods. Developed route's headways are determined by demand.	- Physical passenger counts - Inspector reports	Continuous reviews	- Schedules Unit - Transit Planning Committee
Edmonton Transit Edmonton, AL (Canada)	FORMAL STANDARD - Maximum headway from 6:30AM - 9:00PM on Mondday thru Saturday is 30 minutes. - Maximum headway from 9:00PM - 11:00PM Monday through Saturday and from 9:00PM - 11:00PM on Sundays and Holidays is 60 minutes.	Not Reported	Continuous reviews	Not Reported

PERFORMANCE CRITERION - VEHICLE HEADWAYS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Toronto Transit Commission Toronto, ONT. (Canada)	FORMAL STANDARD Peak period maximum - 20 minutes Off-peak period maximum - 30 minutes - Except where round trip time exceeds headway standard and low ridership does not warrant additional buses.	- Point and ride checks - Schedules analysis	On-going review	- Service Planning Department - Operational Planning Dept.
Metro Transit Operating Company Vancover, BC (Canada)	INFORMAL STANDARD - Base headways set for 100% loads at maximum load point, except where policy headways govern - Peak headways set for 130% loads at maximum load point - Policy headways (maximum) Trollies and City Buses: 15 minute (day) 20 minute (evening) 30 minute (owl) Suburban routes: 30 minutes (day) 60 minutes (nights)	- Passenger loads - Schedule analysis	Continuous monitoring	Scheduling and Analysis Dept.

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Montgomery Area Transit System Montgomery, AL	INFORMAL STANDARD About 96% of all trips will operate within 5 minutes of scheduled time.	Daily Street Supervisor reports.	Not Reported	Operations
Arcata and Mad River Transit Authority Arcata, CA	INFORMAL STANDARD No vehicle should be late with "on-time" defined as 0-3 minutes late.	Not Reported	Not Reported	Not Reported
Fresno Transit Fresno, CA	INFORMAL STANDARD On-time is defines as -3 to +3 minutes of schedule with an objective of 90% schedule adherence performance.	Riding and corner checks (daily)	Not Reported	- Schedules - Planning
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD All service should run on-time 90% or better during peak hours and at least 95% in the off-peak.	- Riding checks (daily) - Supervisor checks (daily) - Public comments (daily)	Not Reported	- Operations - Planning
Golden Gate Bridge, Highway, and Transportation District San Rafael, CA	INFORMAL STANDARD - No bus should arrive early at a timepoint. - No bus should arrive at a timepoint more than 2 minutes late.	Traffic checker observations.	Reviewed as needed	Scheduling
Long Beach Transit Long Beach, CA	PROPOSING STANDARD Specifics unreported.	Not Reported	Not Reported	Not Reported
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - On time defined as 0 to +5 minutes of schedule. - 20 minute headway/75% (peak) and 80% (base) - Over 20 minute headway/85% (peak and 90% (base) - Express services/95%.	Daily riding checks	Not Reported	Not Reported
Riverside Transit Agency Riverside, CA	PROPOSAL 95% of trips should be within 0 to +5 minutes of the schedule.	- Riding checks - Driver trip sheets	Reviewed as needed	Operations

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD - No more than 10% of all trips shall be more than 3 minutes late. - No more than 2% of all trips shall be more than 2 minutes late. - No trips shall run early.	Road Supervisor and dispatcher reports.	Monthly reviews	Transportation Department
Santa Clara County Transit District San Juan, CA	FORMAL STANDARD At least 95% of all trips should operate between 0 and +5 minutes of schedule.	Riding checks	Quarterly reviews	Scheduling Dept.
Stockton Metropolitan Transit District	FORMAL STANDARD In Minutes Period: 1-9 / 10-30 / 30-60 / 60-80 Peak: 75% / 85% / 95% / 95% Off-peak: 80% / 95% / 95% / 95% Weekends: 80% / 95% / 95% / 95% On time defined as zero minutes early to five minutes late.	Not Reported	Not Reported	Not Reported
Torrance Transit System Torrance, CA	INFORMAL STANDARD 90% of trips should be within 10 minutes of the schedule.	Schedule reports kept by Operations staff (weekly)	Not Reported	Assistant Transit Operations Supervisor
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD 93% - Peak hour minimum 96% - Off-peak minimum	- Riding checks/corner checks - Supervisor reports	Monthly reports	Schedules
Delaware Administration for Regional Transit Wilmington, DE	PROPOSING STANDARD "On-time" currently defined as 0 to 5 minutes behind schedule but no target established yet.	Corner checks (daily)	Not Reported	Transportation Supervisors

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD On-time performance exceeding 90% is required. "On-time" definition varies according to headways. 60 minutes or more: -1 to +15 minutes. 30-55 minutes: -1 to +10 minutes Less than 30 minutes: -1 to under 10 minutes.	Not Reported	Not Reported	Not Reported
Jacksonville Transportation Authority Jacksonville, FL	PROPOSING STANDARD Specifics not reported.	Street Supervisor checks	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD Between 80% and 100% of service must be on schedule depending upon the time of day and headway. "On-time" defined as 0 to 5 minutes behind schedule.	Checks at timepoints by supervisors.	Reviews as needed	Not Reported
Metropolitan Atlanta Rapid Transit Authority Atlanta, GA	FORMAL STANDARD Exact standard not specified.	Traffic checkers and Street Supervisors.	Not Reported	- Transportation - Scheduling
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED - Under most probable adverse conditions (no more than once per year), no more than 25% of service should be 50% (of headway) late. - No trips should leave terminals or time points early.	Bus Operator Radio Reports (daily)	Not Reported	Supervisors
Decatur Public Transit System Decatur, IL	FORMAL STANDARD At least 95% of service should be on-time.	Street Supervisor checks (daily)	Not Reported	- Transportation Superintendent - Office Manager

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
South Bend Public Transportation Corporation South Bend, IN	FORMAL STANDARD A goal of 95% on-time performance systemwide is reasonable and desirable. A bus is considered "on-time" if it arrives at the central transfer point by two minutes after its scheduled departure time. Running ahead of schedule anywhere along a route is unacceptable.	Not Reported	Not Reported	Not Reported
Des Moines Metropolitan Transit Authority Des Moines, IA	INFORMAL STANDARD Off-peak (Mon.-Sat.): 0 minutes early to 1 minute late. Peak (Mon.-Fri.): 0 minutes early to 5 minutes late is accepted.	- Route Supervisor checks - Trip checker reports (daily)	Not Reported	- Transportation - Planning
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Headways (In Minutes) Under 10 / 10-30 / 30-60 Peak 75% / 85% / 95% Off-Peak 80% / 95% / 95% Weekends 80% / 95% / 95% "On-time" is defined as 0 minutes early to 5 minutes late.	Route Supervisors (daily) (3,000-3,500 trips per month checked)	Monthly reports	- Transportation - Scheduling
Transit Authority of River City Louisville, KY	FORMAL STANDARD Peak 75% Base 95% Night 95% Weekends 95% "On-time" defined as 0 minutes early to 3 minutes late.	Corner checks (Traffic checkers)	Continuous monitoring	Scheduling Dept.
University of Massachusetts Transit Service Amherst, MA	FORMAL STANDARD - Buses should never run early. - No more than 10% of trips should be more than 3 minutes late.	Road Supervisor checks	Monthly reports	- Line Supervisors - Operations Manager - Director of Transportation

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD Headway / Peak / Off-peak Under 10 min. 80% 80% 10-30 min. 95% 95% Over 30 min. 95% 95% "On-time" defined as 0-5 minutes late.	Starter reports Ride Counts (Traffic Checkers) (daily)	Not Reported	- Transportation - Scheduling
Battle Creek Transit Battle Creek, MI	INFORMAL STANDARD - At least 95% of all trips should be on time. - "On-time" is defined as 0-4 minutes late.	Not Reported	Not Reported	Not Reported
Grand Rapids Area Transit Authority Grand Rapids, Mi	FORMAL STANDARD - A minimum of 93% of trips should be on schedule with no more than 2% early and 5% late. - "On-time" defined as 1 minute early to 5 minutes late.	Boarding/alighting surveys (traffic checkers) (on-going)	Not Reported	Not Reported
Southeastern Michigan Transportation Authority Detroit, MI	INFORMAL STANDARD A minimum of 80% of vehicles should operate on schedule.	Traffic checkers monitor service (weekly).	Not Reported	Operations
Duluth Transit Authority Duluth, MN	FORMAL STANDARD Weekday Peak Periods: 90% minimum "on-time" Other Operating Periods: 95% minimum "on-time" "On-time" defined as 0-3 minutes late.	Supervisor checks (daily)	Not Reported	- Scheduling - Operations
Bi-State Development Agency St. Louis, MO	FORMAL STANDARD 85% of peak period trips and 95% of base/night trips should be on-time which is defined as 1 minute early to 3 minutes late.	- Traffic Inspector reports - Supervisor checks (Quarterly-annual checks)	Annual reviews	Evaluation and Scheduling Division

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Billings Metropolitan Transit Billings, MT	FORMAL STANDARD - At least 95% of buses should be on-time at schedule check points. - "On-time" defined as 2 minutes early to 5 minutes late.	On street observations by Transit Operations Supervisor	Monthly reports	- Transit Operations Supervisor
Metro Area Transit Omaha, NE	INFORMAL STANDARD Peak 80% on-time Off-peak 95% on-time "On-time" defined as 0-3 minutes late.	Traffic Checkers (daily)	Not Reported	- Planning - Scheduling - Transportation
Regional Transit Service, Inc.	FORMAL STANDARD Peak 90% Base 95% "On-time" defined as 0-5 minutes late with no early trips.	Point and Ride checks (daily)	Not Reported	Planning and Development Dept.
Charlotte Transit System Charlotte, NC	FORMAL STANDARD 95% of off-peak buses and 90% of peak buses should operate on schedule.	Road Supervisor checks (monthly)	Not Reported	Operations
Richland Transit System, Inc. Mansfield, OH	FORMAL STANDARD Buses should be within 5 minutes of the schedule 90% of the time with no early buses.	Periodic field checks	Periodic reviews	Not Reported
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD The system should average at least 85% on-time performance with 95% required during non-peak periods. "On-time is defined as 0-3 minutes late with no early runs.	Road Supervisor checks	Not Reported	Road Supervisor
Lane Transit District Eugene, OR	FORMAL STANDARD The objective for 1980-81 was 94.5% of trips on schedule with 95.4% actually achieved. The objectives for 1981-82 and 1982-83 were 96.4% and 97.4%, respectively. "On-time" is defined as 0-4 minutes late with no early trips.	Random Supervisor checks (daily)	Annual reviews	Transportation

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD Headway (In Minutes) Less 10 / 10-30 / Special Peak: 80% / 90% / 95% Off-Peak: -- / 95% / 95% Weekend: -- / 95% / 95% - No definition of "on-time" performance provided. - There is an additional requirement that no complaints concerning schedule adherence should be received.	Not Reported	Not Reported	Not Reported
Red Rose Transit Authority Lancaster, PA	INFORMAL STANDARD Peak 90% on-time Off-peak 95% on-time "On-time defined as 0-5 minutes past schedule.	Road checker reports (periodic)	Not Reported	- Director of Transportation - Planning
Metropolitan Bus Authority Hato Rey, PR	FORMAL STANDARD At least 80% of trips should be within 5 minutes of the schedules.	- Starter checks (daily) - Field checks (monthly)	Not Reported	- Transit Dept. - Planning/Schedule Department
Chattanooga Area Regional Transit Authority Chattanooga, TN	FORMAL STANDARD Headway (In Minutes) Less 10 / 10-30 / 30-60 Peak: 75% / 85% / 95% Off-peak: 80% / 95% / 95% Weekends: 80% / 95% / 95% - "On-time" is defined as 0-5 minutes behind schedule. - Trippers and special services must achieve 95% "on-time" performance.	Riding checks by traffic checkers (On-going)	Not Reported	- Director of Operations

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD Headway (In Minutes) Peak: Less 10: 85%; 10-30: 90%; 30-60: 95%; Special: 95% Off-peak: Less 10: 95%; 10-30: 90%; 30-60: 95%; Special: 95% Weekend: Less 10: 95%; 10-30: 90%; 30-60: 95%; Special: 95% - "On-time" is defined as 0 minutes early to 5 minutes late.	Not Reported	Not Reported	Not Reported
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD A minimum "on-time" performance of 95% is required with "on-time" defined as 0 minutes early to 5 minutes late.	- Maximum load checks - On/off surveys - Running time checks - Driver surveys	Semi-annual reviews	Scheduling
Brownsville Urban System Brownsville, TX	FORMAL STANDARD - The system requires 100% schedule adherence. - No definition of "on-time" was provided.	Dispatcher checks (daily)	Not Reported	Operations Superintendent
City Transit Service of Fort Worth Fort Worth, TX	FORMAL STANDARD - At least 92% of trips should operate on-time. - No definition of "on-time was provided.	Not Reported	Not Reported	Not Reported
Dallas Transit System Dallas, TX	FORMAL STANDARD (In Minutes) Headway: less 5; On-time: 0-1 late; Percent Required: 75% Headway: 5-10; On-time: 0-2 late; Percent Required: 80% Headway: 10-15; On-time: 0-3 late; Percent Required: 85% Headway: more 15; On-time: 0-5 late; Percent Required: 95%	- Traffic checker reports - Line Supervisor checks (2 per month)	Not Reported	Planning and Scheduling Department
Metropolitan Transit Authority of Harris County Houston, TX	FORMAL STANDARD The objective for FY 1983 is 94% on-time performance. "On-time" is defined as -1 to +5 minutes of scheduled time.	- Supervisor checks - Special surveys - Operator reports (proposed)	Monthly reviews	- Transportation Department

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD 0-10 minute headway - 85% "on-time" 10-30 minute headway - 90% "on-time" over 30 minute headway - 95% "on-time" Special service - 95% "on-time" "On-time" defined as 30 seconds fast to 3 minutes late at the beginning of an inbound trip.	- Operator radio reports - Dispatcher receives calls	Daily and Monthly reports	Chief Dispatcher
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD Headway (In Minutes): 0-10 / 10-30 / 30+ / Special Peak: 75% / 85% / 95% / 95% Off-peak: 75% / 85% / 95% / 95% Weekend: 75% / 85% / 95% / 95% - Buses never run early. - "On-time" defined as within 5 minutes of scheduled arrival.	Not Reported	Not Reported	Not Reported
Tidewater Transportation District Norfolk, VA	FORMAL STANDARD Headway: 1-29 min. — Minimum Percent On-Time: 85% Headway: 30+ min. — Minimum Percent On-Time: 95% "On-time" defined as 0 early to 5 minutes late.	Point checks by surveyors (quarterly checks)	Reported quarterly	Scheduling Dept.
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD Headway (In Minutes): Less 10 / 10-30 / 30-60 Peak: 75% / 85% / 95% Off-peak: 80% / 95% / 95% Weekend: 80% / 95% / 95% - "On-time" defined as 0 minutes early to 3 minutes late at any timepoint. Under no circumstances should buses run ahead of schedule.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - SCHEDULE ADHERENCE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Municipality of Metropolitan Seattle Seattle, WA	FORMAL STANDARD - 80% of all trips comprising a line should be on-time during the peak period. - 85% on midday and Saturday trips. - 90% on Sunday/Holidays and nights. - "On-time" defined as 0 minutes early to 5 minutes late on nights and Sundays.	Automatic passenger counting system (daily collection)	Monthly reports	Service Planning Department
Spokane Transit Authority for Regional Transportation Spokane, WA	FORMAL STANDARD - No early operations - Filler bus should be added on route if scheduled bus is 10 minutes late. - "On-time" defined as 0 minutes early to 5 minutes late.	Not Reported	Not Reported	Not Reported
Yakima Transit Yakima, WA	INFORMAL STANDARD At least 95% of service should be on-time which is defined as 0-3 minutes late.	Not Reported	Not Reported	Not Reported
Waukesha Metro Transit Waukesha, WI	INFORMAL STANDARD At least 95% of service should operate on schedule, which is defined as 0 minutes early to 3 minutes late.	Dispatcher/Supervisor checks daily	Not Reported	- Dispatcher - Supervisor
Ottawa-Carleton Regional Transit Ottawa, ONT (Canada)	FORMAL STANDARD 95% schedule performance should be achieved with on time defined as 0 minutes early to 3 minutes later than the schedule.	Data collection system with/APC and RUCUS	Data collected every booking with monthly	- Operational Planning Dept. - Service review Committee

PERFORMANCE CRITERION - BUS STOP SHELTER LOCATIONS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Intracity Transit Modesto, CA	FORMAL STANDARD Shelters should be located wherever 75 people or more regularly board the bus.	Boarding/alighting surveys (riding checks)	Not Reported	Transit Manager
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - Shelters should be located where 100 or more persons board a bus on a typical weekday. - Benches should be installed along routes where waiting times are lengthy.	Boarding/alighting surveys (riding checks)	Not Reported	Not Reported
Riverside Transit Agency Riverside, CA	PROPOSED STANDARD Shelters should be installed at stops which have 100 or more daily boardings.	Boarding/alighting surveys (riding checks).	Not Reported	- Operations - Planning
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD A minimum of one adequately maintained bus shelter approximately every mile along a route on any major street in a new subdivision is desirable.	Not Reported	Not Reported	- Maintenance - General Administration
San Diego Transit San Diego, CA	FORMAL STANDARD - Shelters should be installed where at least 100 daily boardings occur. - Benches should be installed at all major traffic generators and at stops which have at least 50 daily boarding.	Boarding/alighting counts	Not Reported	Not Reported
South Coast Area Transit Oxnard, CA	INFORMAL STANDARD Bus benches and shelters shall be placed at major transit generators.	Passenger boarding statistics	Annual reviews	Planning Dept.

PERFORMANCE CRITERION - BUS STOP SHELTER LOCATIONS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD - Shelters should be provided at stops with the highest number of boarding riders on an average day. - Shelters should be provided at all major downtown stops wherever possible in accordance with existing physical conditions or planned downtown construction.	Not Reported	Not Reported	Not Reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD A minimum of 100 boardings per day are required for a bus stop shelter to be installed except at transfer points.	Bus operator passenger counts	As needed	Planning Dept.
Delaware Administration for Regional Transit Wilmington, DE	INFORMAL STANDARD A minimum of 100 daily boardings are required for shelter placement at a bus stop.	Not Reported	Not Reported	Not Reported
Palm Beach County Transportation Authority W. Palm Beach, FL	PROPOSED STANDARD In residential areas shelters should be located at every other bus stop.	Not Reported	Not Reported	Not Reported
Jacksonville Transportation Authority Jacksonville, FL	PROPOSING STANDARD Specifics not reported.	Not Reported	Not Reported	Not Reported
Rock Island County Metropolitan Mass Transit District	FORMAL STANDARD Place bus stop shelters at stops with more than 100 boardings/transfers per day.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Shelters should be provided at all stops which serve 100 or more boarding/transferring riders during a typical weekday. Shelter placements are prioritized based on a combination of the number	- Weekly boarding/alighting surveys. (Section 15) - Comprehensive	Reviewed every 2-3 years	Scheduling Dept.

PERFORMANCE CRITERION - BUS STOP SHELTER LOCATIONS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Transit Authority of Northern Kentucky (con't)	of daily boardings and vehicle headways. In addition, it is essential that shelters (preferably heated and lighted) be placed at all major park & ride locations.	Operational Analysis. (2-3 years)		
Battle Creek Transit Battle Creek, MI	INFORMAL STANDARD Bus stops with more than 15 daily boarding are eligible for shelter placement.	- Boarding surveys - On-off passenger	Annual reviews	- League of Women Voters
Southeastern Michigan Transportation Authority Detroit, MI	PROPOSING Placement is currently determined by a scoring system that reflects the frequency of service and the number of boardings at a location.	Not Reported	Annual reviews	- Operations - Planning
Duluth Transit Authority Duluth, MN	FORMAL STANDARD Shelters should be provided where 25 or more persons board on the average weekday, with elderly and handicapped persons counted as two (persons). Also every neighborhood will have at least one shelter as will every route.	"Brown Sheets" or passenger spread listings.	Annual reviews	Research and Development
Metropolitan Transit Commission St. Paul, MN	INFORMAL STANDARD Bus stops with at least 40 boardings per day are candidates for shelters.	Various techniques which include checks by localities applying for shelter placement.	Not Reported	Transit Development
Metro Area Transit Omaha, NE	INFORMAL STANDARD Shelters should be provided at all stops within the CBD where physical conditions permit and at hospitals (inbound) and elderly apartment complexes. At other locations 100-200 daily boardings are required to provide a shelter.	- Shelter requests - Riding checks (Section 15)	Monthly reviews	- Planning - Engineering

PERFORMANCE CRITERION - BUS STOP SHELTER LOCATIONS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD 75 daily boardings are required before a stop will be considered for a shelter.	Riding checks	Reviewed as necessary	Community and Public Information Department
Charlotte Transit System Charlotte, NC	FORMAL STANDARD A minimum of 50 daily boardings is required for shelter placement at a bus stop. Benches are installed where a minimum of 30 passengers board daily.	Semi-annual on-board checks (traffic checkers)	Semi-annual and reports.	Scheduling Dept.
Lane Transit District Eugene, OR	FORMAL STANDARD Bus shelters will only be provided at bus stops which act as collection points for 35 or more waiting patrons during an average weekday.	Not Reported	Data is collected and analyzed as needed.	Planning Dept.
Lehigh and Northampton Transportation Authority Allentown, PA	INFORMAL STANDARD Shelters should be provided if the stop: 1) Serves a major transit generator; 2) Is frequently used by the elderly or infirmed; 3) Is a major transfer point; 4) Has sufficient space for installation; 5) Serves a Park & Ride lot; 6) Has peak hour service of 30 minutes or less.	Not Reported	Not Reported	Not Reported
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD Shelters should be provided at all stops which serve 100 or more boarding/transferring riders during a typical weekday. Shelters (preferably lighted) should also be placed at all major Park & Ride locations regardless of existing demand and they should be provided at all major downtown stop locations wherever possible. The system prioritizes shelter placements based upon the number of boardings and the headways at the stop with longer headways and larger boardings having higher priorities for shelters.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - BUS STOP SHELTER LOCATIONS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Dallas Transit System Dallas, TX	FORMAL STANDARD Shelters should be located at hospitals, major trip generators, and where at least 50-100 daily boardings take place.	Public input	Shelters placed as funded.	Planning Dept.
Metropolitan Transit Authority of Harris County Houston, TX	INFORMAL STANDARD 50 average daily boardings qualify a stop for a shelter. Requirements currently under review.	- Riding checks - Rider surveys - Public Input	Continuous reviews	- Service Planning Department
Tidewater Transportation District Norfolk, VA	FORMAL STANDARD All bus stops with 50 or more boardings per day must have a shelter or other protection from inclement weather.	Riding checks by surveyors (annual)	Annual reviews	Scheduling Dept.
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD Bus stop shelters shall be provided at stops which serve 100 or more boardings on a typical weekday. Shelters shall also be provided at all Park & Ride lots. Pending fulfillment of the standard shelter locations will be prioritized to reflect the number of boardings and the vehicle headways at the stop. Stops with higher boardings and longer headways receive greater priorities. Bus stop benches shall be provided at stops which do not have shelters and serve at least 50 daily boardings.	Not Reported	Not Reported	Not Reported
Municipality of Metropolitan Seattle Seattle, WA	INFORMAL STANDARD At least 50 daily boardings are required to qualify a stop for a shelter.	APC boarding counts (daily)	Not Reported	Service Planning
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD The placement of shelters is based on five factors: 1) The number of daily boardings; 2) Passenger waiting time (½ midday headway);	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - BUS STOP SHELTER LOCATIONS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Milwaukee County Transit System (Continued)	3) Whether it is a transfer location; 4) The location's exposure to weather conditions; and 5) The type of activity being served by the stop. Each of these factors is weighted differently and scored with the location's total score being used to rank it on a priority listing for shelters.			
Calgary Transit Calgary, AL (Canada)	INFORMAL STANDARD Shelters will be placed at major transit generators and trasfer locations.	Not Reported	Not Reported	- Transit Planning Service Control (Inspectors)
Edmonton Transit Edmonton, AL (Canada)	FORMAL STANDARD Shelter locations are determined by a point system that evaluates potential placements.	Special surveys of riders.	As required (10 routes are surveyed each sign-up).	- Service Unit
Ottawa-Carleton Regional Regional Transit Ottawa, ONT (Canada)	FORMAL STANDARD By 1986 15% of all bus stops should have shelters and 25% should have a shelter or a park type bench.	Stop inventory	Annual review	- Operators - Planning Dept. - Service Review Committee

PERFORMANCE CRITERION - PASSENGER SAFETY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD There should be at least 150,000 miles between preventable accidents.	- Accident Reports - Training Records	Annual evaluations	- Maintenance - Operations
Golden Gate Bridge, Highway, and Transportation District San Rafael, CA	FORMAL STANDARD The number of passenger and driver accidents per million vehicle miles should not exceed the system's current performance level.	Accident reports	Not Reported	Operations
Intracity Transit Modesto, CA	FORMAL STANDARD Operators are graded for safety performance on a scale of 100 points. Operators falling below 70 points are suspended.	- Driver accidents - Driver traffic citations	Quarterly reviews	Operations Supervisor
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD - There shall be no more than 2.5 reportable vehicle accidents per 100,000 vehicle miles. - There shall be no more than 6 passenger accidents per million passengers.	Operations Division performance records	Annual reviews	- Transportation - Maintenance - Claims - Safety/Training
San Diego Transit San Diego, CA	FORMAL STANDARD The objective is to increase the number of vehicle miles between accidents from the previous year's performance.	- Accident reports - Safety records	Annual reviews	Safety Department
Santa Clara County Transit District San Juan, CA	FORMAL STANDARD The vehicle accident rate should not exceed 0.8 accidents per 1,000 vehicle hours.	Accident reports	Annual reviews	Safety Department
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD - The accident rate should not exceed 7.9 accidents per 100,000 service miles. - All locations having 3 or more accidents per year should be included in a high priority correction program with appropriate municipal and/or traffic officials.	Accident reports	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGER SAFETY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Regional Transportation District Denver, CO	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD The accident and injury rate should be located in the top 25% of the industry.	Accident reports	Monthly reviews	- Operations - Training
Washington Metropolitan Area Transit Authority Washington, D.C.	INFORMAL STANDARD Accidents per 100,000 bus miles projected at a 6.26 average.	Accident reports	Quarterly reports	Not Reported
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD Bus operators who have one chargeable accident are fired. Bus operators who have three or more unavoidable accidents are retrained.	Not Reported	Not Reported	Not Reported
St. Petersburg Municipal Transit System St. Petersburg, FL	INFORMAL STANDARD Reduce preventable accident rate from the previous year.	Accident/Incident reports	Not Reported	Operations
East Volusia Transportation Authority S. Daytona, FL	FORMAL STANDARD There should be at least 35,000 miles between preventable accidents.	Accident reports	Reviewed as required	Bus operators and Road Supervisors
Des Moines Metropolitan Transit Authority Des Moines, IA	INFORMAL STANDARD Then should be no more than one non-preventable accident per 20,000 vehicle miles and not more than one preventable accident per 35,000 miles.	Safety department	Monthly reports	Safety Department
Sioux City Transit System Sioux City, IA	INFORMAL STANDARD There should be at least 50,000 vehicle miles between accidents.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGER SAFETY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Transit Authority of of Northern Kentucky Newport, KY	FORMAL STANDARD The accident rates per passenger carried and vehicle mile operated should be at least in the top quartile of the national average for comparably sized systems.	Accident reports	Monthly reports	Transportation
Mass Transit Administration Baltimore, MD	FORMAL STANDARD Specifics not provided.	- Transportation Records	Annual reports	Safety and Training Dept.
Brockton Area Transit Brockton, MA	FORMAL STANDARD The objective is to reduce the rate of preventable accidents each year.	Not Reported	Not Reported	Not Reported
Grand Rapids Area Transit Authority Grand Rapids, MI	FORMAL STANDARD There should be at least 50,000 miles between preventable accidents.	Monthly accident reports	Monthly reviews	Not Reported
Metropolitan Transit Commission St. Paul, MN	INFORMAL STANDARD There should be at least 55,000 miles between preventable accidents.	Accident reports	Monthly reviews	Safety Department
Billings Metropolitan Transit Billings, MT	INFORMAL STANDARD There should be less than one chargeable accident per driver per year.	Accident reports	Not Reported	- Drivers' Supervisors - Police Dept.
Charlotte Transit System Charlotte, NC	FORMAL STANDARD The system's accident rate should be kept below the national average.	Accident records	Monthly reviews	Safety Department
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD Traffic and passenger accident rates should rank the top 25% of the national average for comparable systems.	Not Reported	Not Reported	Safety Director

PERFORMANCE CRITERION - PASSENGER SAFETY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Lane Transit District Eugene, OR	FORMAL STANDARD The objective for the number of miles between preventable accidents was 32,000 in 1980-81 with actual performance at 38,000. The objectives for 1981-82 and 1982-83 were 38,000 miles between preventable accidents.	Accident reports	Annual reviews	Transportation
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD The system should work to reduce accident rates as much as possible. The rate should not exceed 4.0 vehicle accidents per 100,000 vehicle miles.	Not Reported	Not Reported	Not Reported
Red Rose Transit Authority Lancaster, PA	INFORMAL STANDARD There should be no more than 6 vehicle accidents per 100,000 miles.	Accident records	Annual reviews	Director of Transportation and Planning.
Brownsville Urban System Brownsville, TX	FORMAL STANDARD The system will reduce the number of collisions and passenger accidents yearly.	- Accident/Injury reports - Insurance claims	Daily monitoring	Service Coordinator
City Transit Service of Ft. Worth Ft. Worth, TX	FORMAL STANDARD The number of preventable accidents per 100,000 miles should not exceed 1.5.	Not Reported	Monthly reports	Not Reported
Metropolitan Transit Authority of Harris County Houston, TX	FORMAL STANDARD 6.8 accidents per 100,000 vehicle miles (FY83).	Accident reports	Monthly reviews	- Safety and Training Dept. - Transportation Department

PERFORMANCE CRITERION - PASSENGER SAFETY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD Traffic accidents and passenger accidents should generally not be more than 10% greater than the average for similar sized systems in the country. Based upon experience traffic accidents should not exceed 60 per 1,000,000 vehicle miles. Passenger accidents should not exceed 10 per 1,000,000 passengers carried.	Not Reported	Not Reported	Safety Department
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD Traffic and passenger accident rates should not be more than 10% greater than the average for similar sized systems in the country.	Not Reported	Not Reported	Not Reported
Tidewater Transportation District Norfolk, VA	FORMAL STANDARD A maximum of 6 accidents per 100,000 vehicle miles is the objective. This is the national average for fixed route bus systems.	Driver and Supervisor accident reports	Calculated monthly by line and system	Director of Safety
Ottawa-Carleton Regional Transit Commission Ottawa, ONT (Canada)	FORMAL STANDARD The agency will maintain a safety record that equals or exceeds the upper decile safety record of the Canadian Urban Transit Industry.	- OC Transpo Safety Data - C.U.T.A. data	Annual review	- Operations Planning Dept. - Service Review Committee
Toronto Transit Commission	Standard under development.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGER TRANSFERS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Montgomery Area Transit System Montgomery, AL	INFORMAL STANDARD Passengers should not be required to transfer more than once to reach any point that is served by transit.	Not Reported	Not Reported	Not Reported
Golden Empire Transit District Bakersfield, CA	FORMAL STANDARD No more than 25% of riders should be required to transfer.	- Transfer counts - Annual on-board rider surveys.	Not Reported	- Administration - Planning
Intracity Transit Modesto, CA	FORMAL STANDARD The number of transfers should not exceed 20% of total ridership.	Transfer counts	Quarterly reviews	Operations Supervisor
Long Beach Transit Long Beach, CA	INFORMAL STANDARD No more than 24% of total patrons should have to transfer.	Not Reported	Not Reported	Not Reported
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - A direct trip should be provided to at least 70% of all local service riders. - A direct trip should be provided to at least 80% of all express service riders.	Not Reported	Not Reported	Planning Dept.
Regional Transportation District	INFORMAL STANDARD No passenger should be required to make more than two transfers to complete a single trip.	Customer complaints	On-going review	Not Reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	INFORMAL STANDARD As a general rule passengers should not be required to transfer more than once.	Not Reported	Bi-annual reviews	Planning Dept.
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD Passengers should not have to transfer more than twice to complete their trips.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGER TRANSFERS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Jacksonville Transportation Authority Jacksonville, FL	PROPOSING STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD There should be no more than 25% transfers in the system (The current rate is 40% and needs improvement).	Not Reported	Not Reported	Not Reported
St. Petersburg Municipal Transit System St. Petersburg, FL	FORMAL STANDARD Passengers should be required to make no more than one transfer.	Not Reported	Not Reported	Not Reported
East Volusia Transportation Authority S. Daytona, FL	FORMAL STANDARD There should be a maximum of one transfer required to complete any trip.	Not Reported	Semi-annual reviews	- General Manager - Director of Operations
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED STANDARD - Not more than 25% of passengers must transfer to reach their destinations, excepting transfers to other systems. - No more than 20% of the possible transfer waiting times should exceed ½ the less frequent route's headway. It is preferable to have 1-3 minutes with both coaches at transfer point at the same time.	Not Reported	Not Reported	Not Reported
Decatur Transit System Decatur, IL	FORMAL STANDARD Less than 20% of passengers should be required to transfer.	Not Reported	Not Reported	Not Reported
Des Moines Metropolitan Transit Authority Des Moines, IA	INFORMAL STANDARD No more than 10% of passengers should be required to transfer on a system-wide basis.	Not Reported	Monthly statistical reports	Planning

PERFORMANCE CRITERION - PASSENGER TRANSFERS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sioux City Transit Sioux City, IA	FORMAL STANDARD No more than 10% of passengers should be required to transfer.	Not Reported	Not Reported	Not Reported
Mass Transit Administration Baltimore, MD	FORMAL STANDARD No passenger should be required to make more than three transfers.	Not Reported	Annual reviews	Research/Planning
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD - No more than 25% of riders should be required to transfer more than once to complete their trip by surface transit. - Where 20% or more riders transfer between 2 lines those lines become candidates for linkage. - Where a route extension of one mile or less would eliminate a transfer for 20% of the riders, such an extension should be investigated.	- Comprehensive rider surveys - Checker observations - On-board surveys	Not Reported	Service Planning Office
Battle Creek Transit Battle Creek, MI	INFORMAL STANDARD No more than 25% of passengers on a given line should have to transfer to reach their destinations.	Passenger and transfer counts by bus operators (daily).	Summarized monthly	- Manager - Planning
Allen County Regional Transit Authority Lima, OH	INFORMAL STANDARD The transfer rate should not exceed 20%. The current actual transfer rate is 30%.	Operator counts transfers.	Not Reported	Not Reported
Lane Transit District Eugene, OR	FORMAL STANDARD No more than 50% of the originating patrons on any route should need to transfer in order to complete their trip.	Not Reported	Annual reviews	Not Reported
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD The number of transfers should not exceed 10% of the system's total ridership.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGER TRANSFERS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Citibus Lubbock, TX	FORMAL STANDARD No more than 25% of passengers should be required to transfer	Trip sheets (operators)	Semi-annual reviews	Planner
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD - 90% of the persons transferring should be able to do so within an average of 1/3 of the connecting line's headway. - If more than 30% of a line's riders require a specific transfer, new or through routes should be established or scheduled transfers created with a 5 minute maximum waiting time.	Not Reported	Not Reported	Not Reported
Tidewater Transportation District Norfolk, VA	FORMAL STANDARD If 150 or more of a line's riders require a specific transfer, a new or through route will be established or a scheduled transfer initiated with a maximum 5 minute waiting time.	Transfer counts (at least annual)	At least annual reviews	Scheduling Dept.
Spokane Transit Authority for Regional Transportation Spokane, WA	FORMAL STANDARD - Establish additional timed transfer connections. - Not more than one transfer shall be required to travel between any location in the service area and the CBD. - Not more than two transfers shall be required to travel between any two locations in the service area. - At least 90% of all transferring passengers will have a transfer wait time not exceeding 15 minutes.	Not Reported	Not Reported	Not Reported
Yakima Transit Yakima, WA	INFORMAL STANDARD Less than 20% of passengers should be required to transfer.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - MISSED TRIPS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Orange County Transit District Garden Grove, CA	FORMAL STANDARD In no event should missed trips exceed ½ of 1% of the total daily trips scheduled.	Not Reported	Not Reported	Not Reported
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD - Any trip that is more than 10 minutes late shall be recorded as a missed trip and there shall be no more than 10 and 5 missed trips per month (as one and five year targets) due to mechanical failures. - There shall be no missed trips due to a lack of operators or operator inattentiveness to duty.	Road supervisor and dispatcher reports.	Monthly reviews	Transportation
San Diego Transit San Diego, CA	FORMAL STANDARD The objective is to reduce the number of missed trips from year to year.	Not Reported	Annual reviews	Not Reported
Santa Clara County Transit District San Juan, CA	FORMAL STANDARD At least 99% of scheduled service should be operated each day.	Not Reported	Annual reviews	Not Reported
Torrance Transit System Torrance, CA	FORMAL STANDARD System goal is to have no missed trips. In actual performance less than 1% of all trips are actually missed.	Vehicle and run sign-in sheets.	Daily reviews	Assistant Transit Operations Supervisor
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD - No more than 140 trips should be missed as the result of accidents during the year. - Trip losses due to breakdowns should be less than 10%.	Dispatcher reports	Monthly reviews	Operations
Washington Metropolitan Area Transit Authority Washington, D.C.	PROPOSING STANDARD Specifics unreported	Not Reported	Quarterly reviews	Not Reported

PERFORMANCE CRITERION - MISSED TRIPS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD There should be no missed trips.	Not Reported	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD At least 99% of scheduled trips should operate.	Not Reported	Not Reported	Not Reported
Decatur Transit System Decatur, IL	FORMAL STANDARD No missed trips should be tolerated in the system.	Maintenance and dispatcher records.	Continuous reviews	- Maintenance Superintendent - Office Manager
Transit Authority of River City Louisville, KY	FORMAL STANDARD Less than 0.1% of scheduled trips should be missed on an annual basis.	Monitored continuously	Continuous monitored	- Scheduling
Mass Transit Administration Baltimore, MD	INFORMAL STANDARD There should be no missed trips.	Operating Division records (daily)	Daily reviews	Transportation
University of Massachusetts Transit Service Amherst, MA	FORMAL STANDARD No less than 95% of scheduled trips should be operated. the eventual target is 98%.	- Operator run sheets - Road Supervisors' logs.	Daily reviews	- Line Supervisor - Operations Manager - Director of Transportation
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD At least 99.9% of all scheduled trips must be completed each quarter.	- Daily service reports (starters) - Service Dependability reports.	Quarterly reviews	- Transportation - Operations - Planning
Southeastern Michigan Transportation Authority Detroit, MI	INFORMAL STANDARD There shall be no missed trips in the system.	Dispatcher terminal reports.	Daily reviews	Operations

PERFORMANCE CRITERION - MISSED TRIPS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Commission St. Paul, MN	INFORMAL STANDARD Less than 0.5% of scheduled trips should not operate.	Division operating reports.	Daily reviews	Operations
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD The objective is to avoid cutting runs either as a result of an insufficiency in equipment or manpower (RTS has not been forced to cut any service since February, 1979).	Not Reported	Not Reported	Not Reported
HiTran High Point, NC	INFORMAL STANDARD A trip should never be missed due to the unavailability of buses or drivers.	- Road calls - Accident reports - Dispatcher's log	Not Reported	Not Reported
Charlotte Transit System Charlotte, NC	FORMAL STANDARD At least 99.8% of scheduled trips should be operated.	Dispatcher reports	Daily Reports	Operations
Allen County Regional Transit Authority Lima, OH	INFORMAL STANDARD The system should lose no more than 1% of scheduled service due to weather, breakdowns, etc.	Dispatch records	Not Reported	Not Reported
Richland Transit System, Inc. Mansfield, OH	FORMAL STANDARD Scheduled trips shall not be missed more than 5% of the time. Only 0.02% of trips were missed in 1980-81.	A list of missed trips is maintained and checked at least twice per month.	Data reviewed 2 time/month.	Not Reported
Western Reserve Transit Authority Youngstown, OH	INFORMAL STANDARD No more than 5 trips per month will be lost due to either equipment or labor shortages.	Dispatcher reports	Monthly reviews	Manager of Transportation
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD There should be no missed trips in the system.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - MISSED TRIPS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Brownsville Urban System Brownsville, TX	FORMAL STANDARD NO more than 2 trips per shift can be missed.	Not Reported	Daily reviews	Dispatcher
Yakima Transit Yakima, WA	INFORMAL STANDARD Missed trips should be less than 1% of scheduled trips.	Not Reported	Not Reported	Not Reported
Waukesha Metro Transit Waukesha, WI	INFORMAL STANDARD There should be no missed trips in the system.	Operator reports (daily)	Monthly reports	Not Reported

PERFORMANCE CRITERION - SPAN OF SERVICE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Fresno Transit Fresno, CA	INFORMAL STANDARD - The downtown area should be accessible via transit by 7AM. - People should be able to leave downtown via transit until 6:15 PM.	Ridership by trip with early AM/late PM trips analyzed carefully.	Not Reported	- Service Planning - Service Refinement Team - Service Review Committee
Golden Empire Transit District Bakersfield, CA	INFORMAL STANDARD Service should operate at least between 6 AM and and 7 PM.	Passenger counts obtained from riding checks.	Not Reported	- Planning - Operations
Sacramento Regional Transportation District Sacramento, CA	FORMAL STANDARD (SEE: Passengers Per Vehicle Hour Criteria) Productivity standards exist for each operating period that must be attained to prevent service curtailment in that period.	Passenger data from riding checks (every trip at least once per year).	Annual reviews	- Planning Dept. - Scheduling Dept.
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD Service span is determined by passenger loads (specifics of standard not reported).	- Transit dependency data - Passenger (vehicle) loads.	Not Reported	Not Reported
Metropolitan Dade County Transit Agency Miami, FL	INFORMAL STANDARD Bus services normally operate between 5 AM and 3 AM.	Not Reported	Not Reported	Not Reported
St. Petersburg Municipal Transit System St. Petersburg, FL	FORMAL STANDARD Weekdays: 6 AM - 6 PM Nights: 6 PM - 10 PM Sundays: 8 AM - 6 PM	Not Reported	Not Reported	Scheduler
E. Volusia Transportation Authority S. Daytona, FL	FORMAL STANDARD Service should operate at least between 5:40 AM and 7:45 PM.	- Passenger requests - Rider surveys - Ridership data	Semi-annual Reviews	- General Manager - Director of Operation's

PERFORMANCE CRITERION - SPAN OF SERVICE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Decatur Public Transit System Decatur, IL	FORMAL STANDARD Service should operate at least between 6 AM and 6 PM.	Not Reported	Not Reported	Not Reported
South Bend Public Transportation Corporation South Bend, IN	FORMAL STANDARD Weekdays: 5 AM - 10 PM (standard) Saturdays: 5 AM - 7 PM (standard) In determining the exact start/finish times for each line the ridership on individual early and late trips will be evaluated.	Not Reported	Not Reported	Not Reported
University of Massachusetts Transit Service Amherst, MA	FORMAL STANDARD Access to campus must be provided by 8 AM. Egress from campus must be maintained until 5:30 PM.	Not Reported	Annual Reviews	Director of Transportation
Southeastern Michigan Transportation Authority Detroit, MI	INFORMAL STANDARD 6 AM - 7 PM minimum span weekdays with weekend variations.	Not Reported	Not Reported	- Operations Dept.
Metro Area Transit Omaha, NE	INFORMAL STANDARD Weekday - 4 AM - 1 AM Sat/Sun - 6 AM - 12 AM	Not Reported	Annual Reviews	- Planning Dept. - Scheduling Dept.
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD Urban (trunk) - 5 AM - 1 AM (weekdays) 6 AM - 1 AM (Saturday) 7 AM - 12 AM (Sunday) Urban (extensions) - 6 AM - 11 PM (weekday) 6 AM - 7 PM (Saturday) 7 AM - 7 PM (Sunday) Suburban - 6 AM - 7:30 PM (weekday) 7 AM - 7 PM (Saturday) Park & Ride - Peak hours.	Not Reported	Reviewed as necessary	Planning and Development Dept.

PERFORMANCE CRITERION - SPAN OF SERVICE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Canton Regional Transit District Canton, OH	FORMAL STANDARD 6 AM - 7 PM	Not Reported	Semi-annual Reviews	Not Reported
Richland Transit System, Inc. Richland, OH	FORMAL STANDARD Service is provided: 7 AM - 6:45 PM (Monday - Friday) 8:30 AM - 6:45 PM (Saturday)	Not Reported	Not Reported	Not Reported
Metropolitan Bus Authority Hato Rey, PR	FORMAL STANDARD Weekdays - 5 AM to 11 PM Weekends - 6 AM to 10 PM	- Demand analysis - Area characteristics	Reviewed as needed	Planning and Schedule Department
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD Weekdays: 5 AM to 12:30 AM Saturdays: 5 AM to 12 AM Sun/Hol.: 5:30 AM to 12 AM	Not Reported	Not Reported	Not Reported
Corpus Christi Transit System Corpus Christi, TX	INFORMAL STANDARD 6 AM - 8 PM (weekdays)	Not Reported	Not Reported	Not Reported
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD Minimum Service Span Local Service - Radials: Weekdays 6AM-7PM Weekends 6AM-6PM Local Service - Crosstowns: Weekdays 5:30AM-11PM Saturdays 6AM-11PM Sun./Hol. 6AM-7PM Commuter Service - Weekdays 5:30PM-7:30AM 4PM-6PM	- Passenger counts - Public input	Quarterly Reviews are proposed	- Service Planning Department - Scheduling Dept.
Spokane Transit Authority for Regional Transportation Spokane, WA	FORMAL STANDARD - Provide weekday service between 5 AM and 12 AM - Provide Saturday service between 6 AM and 12 AM - Provide Sun/Hol. service between 8 AM and 8 PM	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - SPAN OF SERVICE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Yakima Transit Yakima, WA	INFORMAL STANDARD Objective is to provide 16 hours of service per day.	Not Reported	Not Reported	Not Reported
Milwaukee County Transit System Milwaukee, WI	INFORMAL STANDARD Regular: 6 AM - 10 PM (M-F) Express: 7-9 AM - 4-6 PM (M-F) Feeder: 6 AM - 6 PM (M-F) Freeway Flyer: 7-9 AM - 4-6 PM (M-F) Shuttle: 9:30 AM - 4 PM (M-F)	Not Reported	Reviewed with seasonal driver run selections	- Schedule Dept. - Planning/Research Department
Edmonton, Transit Edmonton, AL (Canada)	FORMAL STANDARD Currently 6 AM to 11 PM, Monday through Friday.	Not Reported	Not Reported	Not Reported
Metro Transit Operating Company Vancouver, BC (Canada)	INFORMAL STANDARD Urban - First arrival in CBD (06:00) Last departure from CBD (01:10 to 03:10) Suburban - First arrival in CBD (0700 weekday) (0800 Saturdays) (0900 Sundays) Last departure from CBD (0010) Local feeders - Last trip (2200 to 2300)	Schedule review	Continuous monitoring	- Scheduling and Analysis Dept.
Ottawa-Carleton Regional Transit Commission Ottawa, ONT (Canada)	FORMAL STANDARD - Service hours should enable at least 95% of all person-trips (except those made on foot) made within the Urban Transit Area to be accessible to transit. - Anybody boarding a bus between 6:00AM and midnight, Monday thru Saturday, and between 7:00AM and midnight on Sunday, should be able to complete his trip within the Urban Transit Area.	- Survey data - Municipal automatic vehicle counting station data - Schedules analysis - Transfer/Schedules analysis	Reviewed every booking	- Operations/ Planning Dept. - Service Review Committee
Toronto Transit Commission Toronto, ONT (Canada)	PROPOSING STANDARD Specifics not reported.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PUBLIC COMPLAINTS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD The number of formal complaints per million passengers carried should be minimized through improved service with 95 and 80 complaints/ million riders established as the first and five year targets.	Service reports	Monthly reviews	- Information - Transportation
San Diego Transit San Diego California	FORMAL STANDARD The objective is to reduce the number of customer complaints per 1000 passengers from the previous year.	Customer service records	Annual reviews	Customer Service
Deleware Administration for Regional Transit Wilmington, D.C.	PROPOSAL STANDARDS Specifics unreported	Not reported	Not reported	Not reported
Bloomington - Normal Public Transit System Bloomington, IL	INFORMAL STANDARDS 6 separate complaints about a specific problem will cause an investigation of the problem to be made	- Operator input - Complaint calls	On-Going reviews	Transportation
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARDS All complaints are responded to by mail or phone within 3 working days	Phone calls and letters	Quartery reviews	Administration
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARDS Complaints should not exceed one quartile deviation from the system's average number of complaints per 100 revenue hours for the quarter being analyzed	Phone calls and letters	Compiled every 3 weeks with Quarterly reviews	- Customer Service - Involved departments
Billings Metropolitan Transit Billings, MT.	INFORMAL STANDARDS There should be less than 4 legitimate complaints per month	Not reported	Not reported	Supervisors

PERFORMANCE CRITERION - PUBLIC COMPLAINTS

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Allen County Regional Transit Authority Lima, OH	INFORMAL STANDARDS No more than 2 complaints per month should be received	Phone calls, letters and conversation with the public	Not reported	Not reported
Lehigh & Northampton Transportation Authority Allentown, PA	FORMAL STANDARDS Bus operators with more complaints than the average for all operators should be reviewed	Not reported	Not reported	Not reported
Brownsville Urban System Brownsville, TX	FORMAL STANDARDS There should be no more than one complaint per day	Complaint forms	Not reported	All departments
Tidewater Transportation District Norfolk, VA	FORMAL STANDARDS If two or more complaints against driver (or for prohibited actions on the bus) are received within a month, the operator will be investigated	Complaint reports	Monthly/Annual evaluations	Scheduling (Customer Service)

ECONOMIC & PRODUCTIVITY

STANDARDS

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Arcata and Mad River Transit Authority Arcata, CA	INFORMAL STANDARD Lines should achieve a minimum average of 25 passengers per vehicle hour.	Bus operator passenger counts (daily)	Quarterly reviews	Not Reported
Fresno Transit Fresno, CA	INFORMAL STANDARD Lines should achieve at least 60% of the system average for Revenue passengers per vehicle hour.	Farebox revenue (+ average fare)	Monthly reviews	- Service Development - Service Planning - Service Refinement Team - Service Review Committee
IntraCity Transit Modesto, CA	INFORMAL STANDARD Lines should average at least 19 passenger per vehicle hour.	Bus operator passenger counts (daily)	Monthly reviews	Transit Manager
Long Beach Transit Long Beach, CA	INFORMAL STANDARD Lines should achieve at least 80% of their line line group average or be subjected to a review.	Ridership counts	Monthly reviews	- Scheduling Dept. - Planning Dept.
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - If the performance of an individual line is less than half of the system average it will be considered a candidate for major resturcturing or discontinuation. - Indicator utilized is Total Passengers Per Service Hour.	Passenger counts from daily riding checks.	3 reviews per year	Planning Dept.
Riverside Transit Agency Riverside, CA	FORMAL STANDARD - Urban: 12-20 passengers per service hour. - Rural: 8-11 Passengers per service hour.	Not Reported	Monthly/Quarterly reviews	- Operations Dept.

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Sacramento Regional Transit District Sacramento, CA	FORMAL STANDARD - Daytime weekday service must maintain at least 30 passengers per service hour or 2/3 or system average, whichever is greater. - Evening weekday service must maintain at least 24 passengers per service hour or 60% of system average, whichever is greater. - Late night weekday service must maintain at least 20 passengers per service hour or 50% of system average, whichever is greater. - Daytime weekend service must maintain at least 25 passengers per service hour or 60% of the system average, whichever is greater. - Evening weekend service must maintain at least 22½ passengers per service hour or 50% of the system average, whichever is greater. - Lines which fail to meet the standards are candidates for remedial action. - Any major route segments or trips that are below 50% of the minimum standard for that route shall be candidates for target marketing, modifications, reductions, or eliminations.	Passenger data from riding checks (every trip at least once per year).	Annual reviews	Planning Dept.
Santa Clara County Transit District San Juan, CA	FORMAL STANDARD Individual regular lines must achieve 60% of the system average for total passengers per vehicle service hour in each of five time strata (6AM-6PM, 6PM-9AM, 9PM-6AM, Saturday, and Sunday). If a line is deficient in 2 of the strata it will be classified as substandard and assigned probationary status. Any line below standard during the 6AM-6PM period will be considered substandard.	Revenue reports	Monthly reports	- Senior Transportation Engineer
South Coast Area Transit Oxnard, CA	FORMAL STANDARD Unlimited passengers per service hour must be at least 21.25.	- Passenger counts - Service hour statistics	Monthly reports	Planning Department

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Southern California Rapid Transit District Los Angeles, CA	FORMAL STANDARD For local service the standard is 20 passengers per vehicle service hour.	Riding checks/Point checks	Semi-annual reports	- Scheduling Dept. - Planning Dept.
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD The minimum acceptable performance for a local line is 21 passengers per hour. Performance below this level will be carefully reviewed with recommendations for specific actions reported to the Board of Directors. The standard specifies the type of actions to be considered at various levels of productivity.	Not Reported	Not Reported (continuous reviews indicated)	Not Reported
Regional Transportation District Denver, CO	FORMAL STANDARD Lines are segregated by service type and ranked in order of productivity. Those lines in the lowest quartile for each service type are candidates for service review and possible remedial action.	Daily - Operator counts and traffic checker ride counts. - Vehicle hours	Quarterly reports	- Transportation Division - Planning and Scheduling Division
Connecticut Transit - Harford Division - New Haven Division - Stamford Division	INFORMAL STANDARD All lines are subject to this standard which requires a review if a line's productivity is 80% or less than the system average.	- Riding checks - Operator conducted passenger counts.	Monthly reports	Scheduling Dept.
Delaware Administration for Regional Transit Wilmington, DE	PROPOSED STANDARD Specifics not reported.	Not Reported	Not Reported	Not Reported
Brevard Transportation Authority Melbourne, FL	FORMAL STANDARD Standard reflects system's objective to continually improve productivity. If indicator declines in reporting period or remains stable (80% to 100%) a line is reviewed for possible action. If indicator declines to between 70% and 80% recommendations are made to Board for corrective action must be taken. (Revenue Passengers Per Revenue is used as the indicator).	- Revenue passengers - Vehicle hours	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Atlanta Rapid Transit Authority Atlanta, GA	FORMAL STANDARD New routes should achieve a level of 75% of the systemwide average by the end of a 90 day trial period. If usage is increasing but the 75% level has not been attained at the end of the 90 day period it may be extended.	Not Reported	Data reviewed whenever new service is implemented.	Not Reported
Rock Island County Metropolitan Mass Transit District Rock Island, IL	PROPOSED STANDARD Individual lines should attain a minimum productivity of 15 passengers per vehicle hour.	Data collected daily	Not Reported	Assistant General Manager
Decatur Transit System Decatur, IL	FORMAL STANDARD 80% or above system average - Acceptable 60% to 80% of system average - Investigate Below 60% of system average - Change	Daily operator trip sheets	Monthly reports	Office Manager
South Bend Public Transportation Corp. South Bend, IN	FORMAL STANDARD Exceeds 80% of system average - Acceptable/No Change 70% to 80% of system average - Reviewed for Corrective action Below 70% of system average - Report to Board with recommendations for corrective action. (This standard is also applied to new lines after 6 months.)	Not Reported	At least annual reviews	Not Reported
Des Moines Metropolitan Transit Authority Des Moines, IA	INFORMAL STANDARD Individual lines must attain a minimum productivity of 22 passengers/vehicle hour on weekdays and 12 passengers on Saturday.	Annual passenger counts	Annual data review	- Planning Dept. - Transportation Department

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Individual lines and segments are evaluated. Over 80% of system average - Acceptable performance 70%-80% of system average - Staff review 60%-70% of system average - Recommend action to Authority Under 60% of system average - Discontinued unless the service requires minimal resources and can be "carried" by the system.	Comprehensive Operational Analysis	Annual reviews	Scheduling Dept.
Transit Authority of River City Louisville, KY	FORMAL STANDARD Over 80% of like service average - Acceptable 60%-79% of like service average - Reviewed for possible action Below 59% of like service average - Action taken with 6 months reviews	- Riding checks on all trips at least once per year (temporary checkers) - Bi-annual Comprehensive Operational Analysis.	Annual reviews	- Scheduling Dept. - Research Dept.
University of Massachusetts Transit Service Amherst, MA	INFORMAL STANDARD Commuter lines should attain a productivity of at least 40 passengers per hour.	Daily operator trips reports	Not Reported	- Line Supervisor - Operations Manager - Director of Transportation
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD - Typical - 30 passengers/hour - Routes serving 80% transit dependent - 20 passengers/hour - Routes serving 15% Elderly and Handicapped - 20 passengers/hour	- Comprehensive rider surveys - Ride counts (traffic checkers) - Vehicle service hours	- 35-40 routes checked per year - Comprehensive surveys every 2-3 years.	- Scheduling Dept. - Service Planning

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Battle Creek Transit Battle Creek, MI	PROPOSED STANDARD Specifics not reported.	Daily - Operator passenger counts - Vehicle hours data	Monthly reports (proposed)	- Manager Planning
Bi-State Development Agency St. Louis, MO	FORMAL STANDARD Passengers per vehicle service hour is used with other indicators to develop a composites ranking of line performances. Lines with composite scores that are less than 75% of the group average are reviewed for improvements.	Operators collect passenger counts quarterly	Quarterly reports	- Planning Dept. - Research and Budget Dept. - Operations Dept.
Metro Area Transit Omaha, NE	INFORMAL STANDARD Lines are required to attain at least 20 passengers per hour on weekday; 15 on Saturdays, and 10 on Sundays/Holidays. Lower productivity is required if the line contributes to the continuity of service.	Not Reported	Monthly reports	- Accounting Dept. - Planning Dept.
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD The minimum standard of productivity for any urban line is 65% of the system average in FY80-81. This will increase to 75% in FY83-84. Revenue passengers per revenue hour is used as the indicator.	Passenger counts	At least annual reports	- Office of Planning and Development - Service Evaluation Committee
Charlotte Transit System Charlotte, NC	FORMAL STANDARD All lines are below 80% of the system average require recommendations for changes.	On-board checks by traffic checkers (semi-annual)	Semi-annual reports	Scheduling Dept.
Greater Cleveland Regional Transit Authority Cleveland, OH	PROPOSED STANDARD Specifics not reported.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Southwest Ohio Regional Transit Authority Cincinnati, OH	PROPOSED STANDARD Line performance will be compared to the performance of other lines of the same type.	Data to be collected monthly	Data will be reviewed quarterly	- Service Dept. - Plann:ng Dept. - Scheduling Dept.
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD Standard establishes 4 levels of monitoring based on passengers per hour for winter and summer season. - Based on system average: °100% or better: Winter normal monitoring °80%-100%: Staff review °70%-80%: Report to Board °Less than 70%: Board policy determination °90% or better: Summer normal monitoring °60%-80%: Staff review °50%-60%: Report to Board °Less than 50%: Board policy determination	Rider surveys	Not Reported	- Marketing Dept. - Planning Dept.
Lane Transit District Eugene, OR	FORMAL STANDARD Total passengers per vehicle hour is used with 4 other indicators to evaluate line productivity. The minimum acceptable performance level for weekly service between 6AM and 7PM is 50% of the system average for each class of lines (urban vs. non-urban). The 50% rule does not apply to evening, weekend, or holiday service. Evening services must achieve at least 5 passengers/hour while Saturday and Sunday services before 7PM must achieve at least 10 passengers/hour.	- Vehicle hours - Passenger data	Semi-annual reviews	Director of Marketing and Planning
Lehigh and Northampton Transportation Authority Allentown, PA	FORMAL STANDARD 80% of system average - Acceptable 60%-80% of system average - Review for special circumstances. Under 60% of system average - Make service changes.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Red Rose Transit Authority Lancaster, PA	INFORMAL STANDARD 80% of system average - Acceptable performance 60% of system average - Evaluate service Less than 60% of system average - reduce or eliminate service.	Not Reported	- Monthly reports proposed - Reports are currently "as needed"	- Director of Finance - Director of of Planning and Finance
Metropolitan Bus Authority Hato Rey, PR	PROPOSED STANDARD Specifics not reported.	Monthly on-board passenger counts	Not Reported	Planning and Scheduling Dept.
Chattanooga Area Regional Transit Authority Chattanooga, TN	INFORMAL STANDARD Targets for route productivity have been developed for both innercity and suburban routes. The number of passengers per hour must be within certain percentages of these targets or be subjected to Board evaluations.	Comprehensive operations Analysis. (bi-annual)	Bi-Annual reviews	Director of Operations
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD Greater than 80% of system average - Acceptable performance 70%-80% of system average - Reviewed for possible corrective action. 60%-70% of system average - Report to management with recommendations for action. Less than 60% of system average - Service is discontinued unless MATA determines that the system can "carry" the substandard service. Standards used to evaluate existing and planned local or arterial services. It is adjusted to incorporate the different operating characteristics of "Blazer" or Express services.	Not Reported	Not Reported	Not Reported

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD - This indicator is used with 3 other indicators of financial and ridership performance to evaluate individual lines and segments. - For specific evaluation standard please refer to "Cost Recovery" standard for this system.	Ridership calculated using farebox revenue and average fare formula.	Monthly report	Scheduling Dept.
Citibus Lubbock, TX	FORMAL STANDARD Individual lines must attain at least 60% of the system average.	Daily trip sheets (operators)	Semi-annual reviews	Planner
Corpus Christi Transit System Corpus Christi, TX	INFORMAL STANDARD Lines are ranked in order of productivity with the lowest quartile reviewed by General Manager for improvements.	Daily - Operator trip sheets - Revenue and Average Fare Formula	Monthly reports	General Manager review
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD One of four indicators used to evaluate line performance. Lines found in the bottom quartile for an indicator are to be carefully evaluated with consideration given to the public benefit a line provides to the areas it serves.	- Operator passenger counts (3 days/year) - Farebox counts with average fare (daily)	Weekly reports	- Finance Dept. - Planning Dept. - Operations
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD One of nine indicators used to evaluate line performances. Any line whose indicators are more than .7 (lower 25%) standard deviations below the mean for comparable lines indicates a problem area which should be examined. (Passengers per total vehicle hour is used as indicator).	Not Reported	- Monthly reports - Annual reviews	- Planning and Scheduling Dept. - Market Research Department

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Greater Richmond Transit Company Richmond, VA	FORMAL STANDARD Lines are evaluated against the system average for all lines. Standard is not used to evaluate express lines. Less than 100% of system average - Acceptable performance 80%-99% of system average - Review service to identify possible improvements. 60%-79% of system average - Further analysis with recommendations to Board for action. Less than 59% of system average - Service will be discontinued by Board unless it contributes to a policy objective and funds are made available. If continued it will be reviewed at 6 month intervals. Also, weekend and evening services must carry at least 10 passengers per hour. If a service does not meet this standard it will be reviewed in the same manner as lines that attain less than 60% of the system average.	Physical counts of passengers	Annual reviews	Not Reported
Municipality of Metropolitan Seattle Seattle, WA	FORMAL STANDARD Lines are ranked by type. Those lines in the lowest 20% of each service type will be reviewed in order to improve productivity. Indicator used is passengers per revenue hour.	Automatic passenger counting system	Monthly reports	Service Planning Department

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE HOUR

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Milwaukee County Transit System Milwaukee, WI	FORMAL STANDARD Lines should attain at least 22 passengers per hour on weekdays.	Riding checks (traffic checkers) (18-36 month cycle)	Not Reported	- Scheduling Dept. - Planning and Research Dept.

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Fresno Transit Fresno, CA	INFORMAL STANDARDS Cost recovery on individual lines should meet or exceed the State's 23% system-wide requirement	- Cost Allocation model - Farebox revenue (+ Average Fare)	Reviewed with each service change	Service Development, Service Planning, Service Refinement Team, Service Review Committee
Golden Gate Bridge Highway, and Transportation District San Rafael, CA	FORMAL STANDARD Individual lines should recover at least 50% of direct operating costs from passenger fares.	Financial accounts	Not reported	Finance/Auditing
Intracity Transit Modesto, CA	FORMAL STANDARD Lines must meet or exceed the 23% standard mandated by the state for local agencies	- Fare revenue - Cost analysis	Monthly reviews	- Senior Accountant - Transit Manager
Orange County Transit District Garden Grove, CA	FORMAL STANDARD If line performance is less than half of the system average the line will be considered a candidate for major restructuring or discontinuation	Not reported	3 Evaluations per year	Planning Dept.
Riverside Transit Agency Riverside, CA	FORMAL STANDARD All lines in urbanized areas should achieve 25% cost recovery in FY 83	Not reported	Monthly/Quarterly reviews	- Accounting - Planning - Operations
San Diego Transit San Diego, CA	FORMAL STANDARD Satisfactory line performance is 40% cost recovery	- Operating costs - Fare Revenue	Quarterly reviews	Planning Dept.
South Coast Area Transit Bernard, CA	FORMAL STANDARD Lines should achieve at least 26% cost recovery	- Budget documents	Monthly reviews	Planning Dept.

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD 15% cost recovery is the minimum acceptable performance for any line with lower performances to be carefully reviewed with recommendations for specific actions made to Board. The standard specifies different type of action ranging from service redesign to curtailment or discontinuation for various levels of performance.	- Farebox revenue - Operating costs	On-Going reviews	Not reported
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	INFORMAL STANDARD If a "multi-fare" or "premium" service has a cost recovery rate that is 70% or less than the system average the line is reviewed	Bus operator passenger counts and riding checks (daily)	Monthly reviews	Schedules
Delaware Administration for Regional Transit Wilmington, DE	PROPOSING STANDARD Current system-wide goal is 50%	Not reported	Not reported	Not reported
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD Individual lines should achieve a 30% cost recovery rate	Not reported	Not reported	Not reported
Jacksonville Transportation Authority Jacksonville, FL	INFORMAL STANDARD Specifics not provided	Not reported	Not reported	Not reported
Bloomington - Normal Transit System Bloomington, IL	FORMAL STANDARD On a systemwide basis a minimum cost recovery rate of 30% is required. This standard is also applied to individual lines and line segments which can be modified or deleted if the minimum rate is not attained.	- Operator passenger - Rider surveys (conducted by MPO)	Data reviewed 3-4 times per year	MPO

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Decatur Transit System Decatur, IL	FORMAL STANDARD Individual lines must recover at least 20% of operating costs from passenger fares	Actual expenses and costs fare revenue (daily)	Monthly reviews	Office Manager
Des Moines Metropolitan Transit Authority Des Moines, IA	INFORMAL STANDARD Individual lines must attain minimum cost recovery rates of 50% on weekdays and 25% on Saturdays	Annual passenger counts	Annual reviews	Planning Dept. Transportation Dept
Sioux City Transit System Sioux City, IA	INFORMAL STANDARD The systemwide standard is 35%. Individual lines that are below 25% are closely supervised	Not reported	Not reported	Not reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD Over 50% - Acceptable Performance 40%-50% - Reviewed for corrective action 35%-40% - Recommend corrective action to the Authority Below 35%- Line may be discontinued unless it has significant economic social importance or an agency/municipality is willing to subsidize the operation.	Farebox Readings	Monthly Reviews	Accounting
New Orleans Public Service Inc. New Orleans, LA	INFORMAL STANDARD Individual lines should recover at least 50% of costs from passenger fares.	Not reported	Not reported	Not reported
Mass Transit Administration Baltimore, MD	FORMAL STANDARD Individual lines should recover at least 50% of costs from passenger fares.	Farebox checks	Semi-Annual reviews	Finance Dept.

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD Regular Lines - 20% Premium Service - 40% School Service - 10% Contract/Manifest - 100% Industrial - 40% Community Based - 15% Community based and regular lines serving 80% transit dependent or 15% elderly/handicapped should be 2/3 of the above minimum values	- Operator revenue reports - Comprehensive rider surveys - Ride counts - Cost allocation model	Quarterly Reviews	- Treasurer's Office - Operations Planning - Service Planning - Transportation
Battle Creek Transit Battle Creek, MI	PROPOSING STANDARD Specifics not reported	Not reported	Not reported	Manager/Planner
Duluth Transit Authority Duluth, MN	FORMAL STANDARD Cost recovery is included with 5 other indicators to develop composite performance rankings of lines. Lines performing in the lowest quartile are closely monitored	Financial data	Annual reviews	Planning Dept.
Bi-State Development Agency St. Louis, MO	FORMAL STANDARD This indicator is used with others to develop a composite ranking of lines. Those lines that have composite scores less than 75% of the average for all lines are reviewed for improvement	Operators collect passenger counts quarterly	Quarterly reviews	- Planning - Research & Budget - Operations
MetroArea Transit Omaha, NE	INFORMAL STANDARD Attempt to identify "soft-spots" i.e. lines segments that are below the system average of 30%. The systemwide goal is 50%	Not reported	Monthly reviews	- Accounting - Planning
Southwest Ohio Regional Transit Authority Cincinnati, OH	PROPOSING STANDARD Line performance will be compared to the performance of other lines of the same type	Data to be collected monthly	Reviewed quarterly	Service Planning and Scheduling Dept

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Lane Transit District Eugene, OR	FORMAL STANDARD Cost recovery is used with 4 other indicators to evaluate line productivity. The minimum acceptable performance level for weekly service between 6 AM and 7 PM is 50% of the system average for each class of lines. (Urban vs suburban)	- Farebox Revenue - Operating expenditures	Annual reviews	Administration
Lehigh & Northampton Transportation Authority Allentown, PA	FORMAL STANDARD 80% of system average - Acceptable 60-80% of system average - Evaluate and adjust route to improve performance Less than 60% of system average - Eliminate except to meet economic, minority, or equity considerations, or if subsidized locally.	Not reported	Not reported	Not reported
Red Rose Transit Authority Lancaster, PA	INFORMAL STANDARD 80% of system average - Acceptable 60% of system average - Evaluate Service Less than 60% of system average - Reduce or eliminate service	Not reported	Monthly reports	- Director of Finance - Director of Transportation and Planning
Chattanooga Area Regional Transit Authority Chattanooga,TN	INFORMAL STANDARD Targets for cost recovery have been developed for both inner city and suburban routes. Cost recovery must be within certain percentages of these targets or be subjected to Board evaluation	Not reported	Periodic reviews	Not reported

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD This indicator is used with 3 other indicators of financial and ridership performance to evaluate individual lines and segments. 1) If 3 of the 4 indicators exceed 80% of the system average the line and/or segment is classified as performing satisfactorily. 2) If 3 of the 4 indicators are between 60% and 80% of the system average for 3 consecutive months the line is reviewed to determine if corrective action could improve performance. 3) If 3 of the 4 indicators are between 40% and 60% of the system average for 3 consecutive months the service will be targeted for review through the comprehensive operations analysis process which will recommend discontinuance or actions to improve performance. 4) If 3 of the 4 indicators are 40% of the system average for 3 consecutive months a report will be presented to the Board which will outline relevant details of the service including costs, revenues, and service characteristics. The Board will decide whether to discontinue service, modify the service, or continue the service in six-month intervals.	- Farebox revenue - Operating expenses	Monthly reviews	Scheduling Dept.
Citibus Lubbock, TX	FORMAL STANDARD Individual lines must attain at least 60% of the system average for cost recovery.	Operator trip sheets	Semi-annual reviews	Planner

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority of Harris	PROPOSED STANDARD One of four indicators used to develop composite rankings/evaluations of commuter express lines. Highest quartile - Superior/High performers given highest priority for service expansions. Mid-quartiles - Satisfactory/Average performers given 2nd priority for service expansions. Lowest quartile - Marginal/Low performers subjected to service redesign and possible reductions. Lowest decile - Provisional/Poor performers subjected to service redesign, possible reductions, or curtailment in whole or part.	- Operator trip reports (3-4 months) - Farebox checks with average fare. - Periodic Rider Surveys (Bi-annual) - Riding checks (traffic checkers) - Point checks (traffic checkers)	- Operator counts (3-4 months) - Surveys (2-3 years) - Riding/Point checks (as needed) - Monthly performance reports	- Service Planning - Treasury Services
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD One of 13 criteria applied to new service evaluations. The anticipated cost recovery rate for a new service is scored from 1 (10%) to 10 (100%) which is then added to the scores for the other 12 criteria. In order to be implemented a proposal must have a total score of at least 40 points.	Demand and Cost projections	Reviews as needed	Planning Dept.
Utah Transit Authority Salt Lake City, TX	FORMAL STANDARD All lines in the system should cover at least 15% of their operating costs from revenue derived at the farebox.	Not Reported	- Monthly reports - Annual reviews	- Planning and Scheduling Dept. - Market Research Department

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Greater Richmond Transit Company	FORMAL STANDARD Lines are evaluated against the system standard of 64% cost recovery. Greater than 110% of standard - Acceptable performance 95%-109% of standard - Review service to identify possible improvements. 80%-94% of standard - Further analysis with recommendations to Board for action. Less than 79% of standard - Service will be discontinued by Board unless it contributes to a policy objective and funds are made available. If continued it will be reviewed at 6 month intervals.	- Farebox receipts - Revenue hours x cost per hour	Annual reviews	Not Reported
Milwaukee County Transit System	INFORMAL STANDARD A 50% cost recovery rate is sought for all transit services.	Accounting records	Annual reviews	Accounting Dept.
Calgary Transit Calgary, AL (Canada)	FORMAL STANDARD - Each transit route will maintain as minimum average ridership sufficient to return 25% of its operating cost. - New routes must return at least 15% in the first year. The 25% standard is applied in the 3rd year of a route's operation.	Not Reported	Not Reported	Transit Planning Committee
Edmonton Transit Edmonton, AL (Canada)	PROPOSED STANDARD Currently reviewing existing methods of determining cost effectiveness.	Not Reported	Not Reported	- Service Evaluation Unit
Ottawa-Carleton Regional Transit Commission Ottawa, ONT (Canada)	FORMAL STANDARD At least 30% of operating costs must be recovered by any new route or route extension.	Data collection system with APC and RUCUS.	Annual reviews	- Operations/ Planning Dept. - Service Review Committee

PERFORMANCE CRITERION - COST RECOVERY

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Toronto Transit Commission Toronto, ONT (Canada)	FORMAL STANDARD Revenue/cost is used to determine the ranking of all routes in terms of net revenue per mile. "Poor performers" are those routes in the bottom quartile of this ranking.	- Riding checks - Revenue data - Cost data	Annual reviews	- Treasury Dept. - Service Planning Department
Metro Transit Operating Company Vancouver, BC (Canada)	PROPOSED STANDARD Specifics not reported	Not Reported	Not Reported	Operational Planning Dept.

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE MILE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Fresno Transit Fresno, CA	INFORMAL STANDARD Lines should achieve at least 60% of the system average for revenue passengers per vehicle mile.	Farebox revenue (+ average fare)	Monthly reviews	- Service Development - Service Planning - Service Refinement Team - Service Review Committee
Long Beach Transit Long Beach, CA	INFORMAL STANDARD Lines should achieve at least 80% of their "group" average or face review.	Passenger counts	Monthly reviews	- Scheduling Dept. - Planning Dept.
Riverside Transit Riverside, CA	PROPOSED STANDARD Lines should achieve at least 80% of their "group" average or face evaluation and corrective action.	Not Reported	Monthly/Quarterly reviews	- Operations Dept. - Planning Dept.
South Coast Area Rapid Transit District Oxnard, CA	FORMAL STANDARD Lines should achieve at least 1.5 unlinked passengers per service mile.	- Passenger counts - Mileage statistics	Monthly reviews	Planning Dept.
Southern California Rapid Transit District Los Angeles, CA	FORMAL STANDARD For local service at least 2.5 passengers per vehicle service mile during the peak period and and 1.5 per vehicle service mile during the entire day must be achieved.	Passenger data from riding checks and point checks	Semi-annual reviews	- Scheduling Dept. - Planning Dept.
Regional Transportation District Denver, CO	FORMAL STANDARD Lines are ranked in order of productivity. Those in the lowest quartile for each service type are candidates for service review and possible remedial action.	- Bus operator passenger counts - Riding checks - Vehicle mileage	Quarterly review	- Transportation Department - Planning and Scheduling Dept.

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE MILE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	INFORMAL STANDARD Lines are reviewed if productivity is 80% or less than the system average.	- Bus operator passenger counts - Riding checks	Monthly reviews	Scheduling Dept.
Delaware Administration for Regional Transit Wilmington, DE	PROPOSED STANDARD Specifics unreported	Not Reported	Not Reported	Not Reported
Brevard Transportation Authority Melbourne, FL	FORMAL STANDARD - Standard reflects system's objective to continually improve productivity. If the indicator declines or remains stable (80%-100%) in reporting period the line is reviewed for possible action. If it declines to between 70%-79% recommendations for action are made to the Board. If it declines to less than 70% of its previous level definite action must be taken. - Indicator used is revenue passengers per revenue mile.	- Revenue passengers - Vehicle mileage	Not Reported	Not Reported
Palm Beach County Transportation Authority W. Palm Beach, FL	FORMAL STANDARD Individual lines should achieve at least 0.75 passengers per vehicle mile.	Not Reported	Not Reported	Not Reported
Jacksonville Transportation Authority Jacksonville, FL	INFORMAL STANDARD Specifics not provided	Weekly operator conducted passenger counts.	Not Reported	Not Reported
St. Petersburg Municipal Transit System St. Petersburg, FL	INFORMAL STANDARD Each line should achieve at least 1.5 unlinked passengers per vehicle mile.	Daily passenger reports	Monthly route analysis	Fiscal Department

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE MILE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Atlanta Rapid Transit Authority Atlanta, GA	FORMAL STANDARD New routes should achieve a level of 75% of the systemwide average by the end of a 90-day trial period. If usage is increasing, but the 75% level has not been attained at the end of the 90-day period it may be extended.	Not Reported	Data reviewed whenever new service is implemented	Not Reported
Decatur Transit System Decatur, IL	FORMAL STANDARD 80% or above system average - Acceptable 60% - 80% of system average - Investigate Below 60% of system average - Change	Daily operator trip sheets	Monthly reports	Office Manager
South Bend Public Transportation Corporation South Bend, IN	FORMAL STANDARD Exceed 80% of system average - Acceptable/no change 70% - 80% of system average - Reviewed for corrective action. Below 70% of system average - Report to Board with recommendations for corrective action. This standard also applies to new lines after 6 months.	Not Reported	At least annual reviews	Not Reported
Des Moines Metropolitan Transit Authority Des Moines, IA	INFORMAL STANDARD Minimum Productivity High-Frequency lines (weekday) - 2.50/mile (Saturday) - 1.75/mile Low-Frequency lines (weekday) - 1.20/mile (Saturday) - 1.00/mile	Annual passenger counts	Annual reviews	- Planning Dept. - Transportation Department
Transit Authority of Northern Kentucky Newport, KY	INFORMAL STANDARD If individual lines or segments achieve more than 80% of the system average it is acceptable. If productivity falls below this standard the service is reviewed with specific actions recommended to the Board if ridership falls below 70%.	Comprehensive Operational Analysis	Annual reviews	Scheduling Dept.

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE MILE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Brockton Area Transit Brockton, MA	FORMAL STANDARD Individual lines should attain a productivity of at least 3 passengers per mile.	Daily operator passenger counts.	Not Reported	Not Reported
University of Massachusetts Transit Service Amherst, MA	INFORMAL STANDARD 2.5 passengers per mile is the minimum requirement for most lines.	Daily operator trip reports	Not Reported	- Line Supervisors - Operations Manager - Director of Transportation
Massachusetts Bay Transportation Authority Boston, MA	FORMAL STANDARD Typical Peak 2.5 passengers/mile Off-peak 1.5 passengers/mile For lines serving 80% or more Transit Dependents or 15% Elderly/Handicapped. Peak 2.5 passengers/mile Off-peak 1.0 passengers/mile	- Comprehensive rider surveys - Ride counts (traffic checkers) - Vehicle service mileage	- 35-40 routes checked per year - Comprehensive survey every 2-3 years.	- Scheduling Dept. - Service Planning Department
Battle Creek Transit Battle Creek, MI	PROPOSED STANDARD Specifics not reported.	- Daily operator passenger counts - Vehicle mileage	Monthly reports (proposed)	- Manager - Planner
Southeastern Michigan Transportation Authority Detroit, MI	FORMAL STANDARD 80% of system average - Acceptable performance 70% of system average - Monitor performance 60% of system average - Thorough analysis	- Operator passenger counts (daily) - DOT Ride counts - Vehicle mileage data	Monthly reports	Service and Marketing Committee
Bi-State Development Agency St. Louis, MO	FORMAL STANDARD Passengers per vehicle service mile is used with other indicators to develop a composite ranking of line performances. Lines with composite scores that are less than 75% of the group average are reviewed for improvements.	Operators collect passenger counts quarterly	Quarterly reports	- Planning Dept. - Research and Development Dept. - Operations Dept.

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE MILE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Regional Transit Service, Inc. Rochester, NY	PROPOSED STANDARD Suburban lines' productivity is compared to average productivity for all suburban lines. No set percentage or standard has been established yet. Revenue passengers per revenue mile is the indicator that is utilized.	Ridership counts	Data reviewed at least annually	- Planning and Development Dept. - Service Evaluation Committee
Chapel Hill Community Transit Chapel Hill, NC	INFORMAL STANDARD Any line with a productivity that is less than 50% of the system average should be cut.	Boarding/alighting checks by spare drivers and supervisors (3 times a year)	Not Reported	Not Reported
Metropolitan Bus Authority Hato Rey, PR	PROPOSED STANDARD Specifics not reported.	Monthly on-board passenger counts	Not Reported	- Planning and Scheduling Dept.
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD - This indicator is used with 3 other indicators of financial and ridership performance to evaluate individual lines and segments. - For specific evaluation standard please refer to "cost recovery" standard for this system.	Ridership calculated using farebox revenue and average fare formula.	Monthly reports	Scheduling Dept.
Citibus Lubbock, TX	FORMAL STANDARD Individual lines must attain at least 40% of the system average.	Daily operator trip sheets.	Semi-annual analysis	Planner
Metropolitan Transit Authority of Harris County Houston, TX	PROPOSED STANDARD Two (of six) indicators used to develop composite rankings/evaluations by service type of local lines. Both revenue and total passenger per service mile are used as indicators in the composite rankings. SEE: COST RECOVERY for exact standards.	- Operator trip reports - Farebox checks with average fare - Periodic rider surveys - Riding checks (traffic checkers	- Operator counts (3-4/month) - Surveys (every 2-3 years) - Riding checks (as needed) - Monthly Performance Reports	- Service Planning Department - Treasury Services Department - Transportation Department

PERFORMANCE CRITERION - PASSENGERS PER VEHICLE MILE

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
VIA Metropolitan Transit Authority San Antonio, TX	FORMAL STANDARD One of four indicators used to evaluate line performance. Lines found in the bottom quartile for an indicator are to be carefully evaluated with consideration given to the public benefit a line provides the areas it serves.	- Operator passenger counts (3 days/year) - Farebox counts with average fare (daily)	Weekly reports	- Finance Dept. - Planning Dept. - Operations Dept.
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD One of nine indicators used to evaluate line performances. Any line whose indicators are more than .7 (lower 25%) standard deviations below the mean for comparable lines indicates a problem area which should be examined. (Passengers per revenue mile is used as an indicator)	Not Reported	- Monthly reports - Annual reviews	- Planning and Scheduling Dept. - Market Research Department
Toronto Transit Commission Toronto, ONT (Canada)	FORMAL STANDARD Performance is compared to that of the previous year.	- Revenue passenger data. - Mileage logs	Monthly reports and quarterly assessments	- Treasury Dept. - Service Planning Department
Metro Transit Operating Company Vancouver, BC (Canada)	PROPOSED STANDARD Specifics not reported	Not Reported	Not Reported	- Operational Planning Dept.

PERFORMANCE CRITERION - PASSENGERS PER TRIP

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Orange County Transit District Garden Grove, CA	FORMAL STANDARD - Express service in operation at least one year should carry at least 30 riders per trip can be provided during peak periods. - On lines where multiple peak period trips can be provided a minimum of 30 riders per bus should be generated.	Passenger counts from riding checks.	3 reviews/year	Planning Dept.
San Diego Transit San Diego, CA	FORMAL STANDARD The standard average number of passengers per trip on a line is a minimum of 30 passengers.	Passenger counting program.	Quarterly reviews	Planning Dept.
Santa Clara County Transit District San Juan, CA	FORMAL STANDARD This criterion is used to evaluate the productivity of express services. - Less than 10/trip = discontinue - 20-20/trip = target for special promotion - More than 20/trip = acceptable performance	Revenue reports	Monthly reviews	Sr. Transportation Engineer
Stockton Metropolitan Transit District Stockton, CA	FORMAL STANDARD Any trip carrying less than 5 passengers shall be considered for termination unless operational requirements indicate otherwise.	Not Reported	Monitored continuously	Not Reported
Regional Transportation District Denver, CO	FORMAL STANDARD Lines are segregated by service type and ranked in order of productivity with lines in the lowest quartile for each type of service becoming candidates for service review and possible remedial action.	- Bus operator passenger counts - Riding checks	Quarterly reviews	- Transportation Department - Planning and Scheduling Dept.
Connecticut Transit - Hartford Division - New Haven Division - Stamford Division	FORMAL STANDARD Lines are reviewed for corrective action if their productivity is 80% or less than the system average.	- Bus operator passenger counts - Riding checks	Monthly reviews	Scheduling Dept.

PERFORMANCE CRITERION - PASSENGERS PER TRIP

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
South Bend Public Transportation Corp. South Bend, IN	FORMAL STANDARD - No trip should consistently carry more than 65 passengers. - If ridership on a tripper route falls below 25 passengers per trip, it may be discontinued. This standard is also applied to new services after 3 months.	Not Reported	Annual reviews	Not Reported
Sioux City Transit System Sioux City, IA	INFORMAL STANDARD No trip should carry less than 10 passengers.	Not Reported	Not Reported	Not Reported
Transit Authority of Northern Kentucky Newport, KY	FORMAL STANDARD - Unspecified standard for evaluating express services based on peak hour trip ridership. - All system trips must carry at least 5 riders to be maintained.	- Round trip farebox readings - Peak load counts - Comprehensive Operational Analysis	- Semi-annual collection - Annual reviews - Bi-annual COA	- Scheduling Dept. - Transportation Department
Transit Authority of River City Louisville, KY	FORMAL STANDARD Unspecified standard for evaluating express services based on peak hour trip ridership.	- Riding checks (temporary checkers) - Comprehensive Operational Analysis	- Annual ride checks - Bi-annual COA	- Scheduling Dept. - Research Dept.
Greater Portland Transit District Portland, ME	FORMAL STANDARD Each trip must carry a minimum of 11 passengers.	Daily operator trip sheets	Not Reported	Transportation Department
Duluth Transit Authority Duluth, MN	FORMAL STANDARD This indicator is included with 5 other indicators to develop composite performance rankings of lines. Lines performing in the lowest quartile are closely monitored.	On-board surveys	Annual reviews	Planning Dept.

PERFORMANCE CRITERION - PASSENGERS PER TRIP

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Bi-State Development Agency St. Louis, MO	FORMAL STANDARD This indicator is used with other indicators to develop a composite ranking of Express lines. Lines with composite performance scores that are less than 75% of the group average are reviewed for improvement.	Operators collect passenger counts quarterly.	Quarterly reports	- Planning Dept. - Research and Development Dept. - Operations Dept.
Regional Transit Service, Inc. Rochester, NY	FORMAL STANDARD Park & Ride trips must generate between 65% to 100% of seated capacity (revenue passengers per trip).	Ridership counts	At least annual	- Planning and Development Dept. - Service Evaluation Committee
Western Reserve Transit Authority Youngstown, OH	FORMAL STANDARD Every trip must carry a minimum of 2 riders.	Rider surveys	Not Reported	Marketing and Planning Dept.
Memphis Area Transit Authority Memphis, TN	FORMAL STANDARD As part of the total review of each route individual trips are examined with any trips are examined with any trip carrying less than 5 passengers considered for termination unless operational requirements indicated otherwise.	Not Reported	Not Reported	Not Reported
Metropolitan Transit Authority Nashville, TN	FORMAL STANDARD As part of the total review of each line, individual trips shall be examined with any trip carrying less than 5 passengers considered for termination unless circumstances indicate otherwise.	Comprehensive operational analysis (every 2-3 years)	Not Reported	Scheduling Dept.

PERFORMANCE CRITERION - PASSENGERS PER TRIP

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Metropolitan Transit Authority of Harris County Houston, TX	INFORMAL STANDARD Two (of four) indicators used to develop composite ranking/evaluation of commuter express lines. Both fare passengers for peak hour trip and total trip used as indicators in the composite rankings. SEE: COST RECOVERY for exact standards.	- Operator trip reports - Farebox checks with average fare - Periodic rider surveys - Riding/point checks (traffic checkers)	- Operator counts (3-4 months) - Surveys (every 2-3 years) - Riding/point checks (as needed) - Monthly performance reports	- Service Planning Department - Treasury Service Department - Transportation Department
Utah Transit Authority Salt Lake City, UT	FORMAL STANDARD A finding that a line is averaging less than 15 passengers per round trip for 2 consecutive months will automatically initiate an in depth review of the line by Planning and Scheduling and Market Research Departments.	Not Reported	Monthly reports	- Planning and Scheduling Dept. - Market Research Department
Municipality of Metropolitan Seattle Seattle, WA	FORMAL STANDARD Lines are ranked by service type. Those lines in the lowest 20% of each service type ranking will be reviewed in order to improve productivity.	Automatic passenger counting system (daily)	Monthly reviews	Service Planning Department

PERFORMANCE CRITERION - COST PER PASSENGER

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Fresno Transit Fresno, CA	INFORMAL STANDARD Lines should maintain 140% or less of the system average for cost per revenue passenger.	- Farebox revenue (and average fare) - Cost allocation model	Monthly reviews	- Service Dept. - Service Planning Department - Service Refinement Team - Service Review Team
Riverside Transit Agency Riverside, CA	FORMAL STANDARD Urbanized fixed routes = $1.25 - $1.75 per passenger Rural fixed routes = $1.50 - $2.00 per passenger	Not Reported	Monthly and quarterly reviews	- Accounting Dept. - Planning Dept.
Regional Transportation District Denver, CO	FORMAL STANDARD Lines are segregated by service type and ranked in order of productivity with lines in the lowest quartile for each type of service subject to review and possible remedial action.	- Bus operator counts - Riding checks	Quarterly reviews	- Transportation Department - Planning and Scheduling Dept.
Brevard Transportation Authority Melbourne, FL	FORMAL STANDARD - Standard reflects system's objective to continually improve productivity. If the indicator declines or remains stable (80%-100%) in reporting period, the line is reviewed for possible action. If it declines to between 70%-79% recommendations for action are made to the Board. If it declines to less than 70% of its previous level definite action must be taken. - Indicator used is operating cost per revenue passenger.	- Operating costs - Revenue passengers	Not Reported	Not Reported
University of Massachusetts Transit Service Amherst, MA	PROPOSED STANDARD Specifics unreported	- Operating expenses - Bus operator passenger counts (daily)	Annual reviews	- Line Supervisor - Operations Manager - Director of Transportation

PERFORMANCE CRITERION - COST PER PASSENGER

TRANSIT AGENCY	DESCRIPTION OF SERVICE STANDARD'S STATUS AND REQUIREMENTS	DATA UTILIZED TO EVALUATE SERVICE PERFORMANCE	EVALUATION AND REPORTING CYCLES	RESPONSIBLE DEPARTMENT(S)
Duluth Transit Authority Duluth, MN	FORMAL STANDARD This indicator is included with 5 other indicators to create composite rankings of performance. Lines ranking in the lowest quartile are closely monitored.	- Financial data - On-board surveys	Annual reviews	Planning Dept.
Bi-State Development Agency St. Louis, MO	FORMAL STANDARD Cost per total passenger is used with other indicators to create composite ranking of line performance. Lines with composite performance scores that are less than 75% of the line group average are reviewed for possible improvement.	Bus operators passenger counts (quarterly)	Quarterly reviews	- Planning Dept. - Research and Development Dept. - Operations Dept.
Edmonton Transit Edmonton, AL (Canada)	FORMAL STANDARD - If rate of $2.50 per passenger is exceeded a route or route segment is reviewed for possible service revisions. - Current standard under review.	On-board surveys	Reviewed as needed	Service Evaluation Unit
Metro Transit Operating Company Vancouver, BC (Canada)	PROPOSED STANDARD Specifics not reported	Not Reported	Not Reported	Operational Planning Dept.

APPENDIX D

Whereas the objective in Appendix C is to provide detailed information for specific agencies, the nine tables in Appendix D focus upon the three system-size classifications (Large, Medium, and Small) that were developed in the industry review. For each group of systems, there are three separate tabels that provide a description of the range of different standards that are applied to evaluate various criteria. In addition, each table presents the range of data sources that are utilized and the type of review cycles employed by the group of agencies. Finally, each table indicates the percentage of the agencies in the size-group that either apply a standard to evaluate a criterion or are developing such a standard and the percentage of systems that only monitor the criterion. The information in Appendix D is basically a summarization of the narrative contained in Chapter 3 of the report.

TABLE A-1

SUMMARIZATION OF ROUTE DESIGN STANDARDS

Large Agencies: 400 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Bus Stop Spacing	Standards are generally based on area characteristics such as density and the type of service. The spacing requirements range from 400' to 1500'.	- Route Maps - Public Comments - Stop List/Mileage Logs - Census (Population) Data - Field Observations - Surveys	Generally "As Needed" Reviews	11 (58%)	2 (11%)
Route Coverage	Generally based upon residential and/or employment density, distance from the CBD, and type of service. Spacing standards range from 1/2 mile to 2 miles, and accessibility standards require 60% to 95% of area residents to live within 1/4 mile to 1/2 mile of a route.	- Route Maps - Area Maps - Census (Population) Data	Infrequent to Annual Reviews	14 (74%)	2 (10%)
Route Deviation	Standards vary considerably. Four different provisions are noted: minutes added to travel time (5 - 8 minutes); percentage increase relative to auto trip distance (20% - 40%); distance added to route distance (1 mile); percentage increase in travel time (10% - 25%). Some require that deviations maintain or improve route productivity or result in time savings for a sufficient number of riders.	- Distance/Time Measurements - Traffic Checks - Passenger Counts	Infrequent to On-Going Reviews	8 (42%)	4 (21%)
Route Length	Standards are generally expressed in terms of maximum round-trip time with a range of 3 hours to 4 1/4 hours for through-routed lines.	- Schedules Analysis	Quarterly to Infrequent Reviews	3 (16%)	3 (16%)

TABLE A-1 (CONT.)

SUMMARIZATION OF ROUTE DESIGN STANDARDS

Large Agencies: 400 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Route Duplication	Standards limit duplication to approaches to major activity centers, feeder routes, and where a limited line operates in conjunction with a local route.	- Route Maps	Infrequent to On-Going Reviews	2 (11%)	4 (21%)
Route Structure	Systems focus primarily on the need to provide timed-transfers, pulse scheduling, and direct routing to major activity centers. No specific limits are placed on branching and turnbacks other than general avoidance and minimization.	- Route Maps	Infrequent to On-Going Reviews	1 (5%)	4 (21%)

TABLE A-2

SUMMARIZATION OF ROUTE DESIGN STANDARDS

Medium Agencies: 100 - 399 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Bus Stop Spacing	Standards are generally based on area characteristics and/or the type of service. The general spacing range is approximately 400' to 1/2 mile with area density the primary consideration.	- Route Maps - Field Observations - Passenger Counts - Census (Population) Data - Stop List/Mileage Logs - Surveys	Semi-Annual to Annual Reviews	16 (57%)	2 (7%)
Route Coverage	Generally based upon area density, transit dependency, and the need to serve major trip generators. Spacing requirements range from 1/2 mile to 1 mile. Accessibility standards require that from 50% to 95% of area residents should be from 1/4 mile to 1/2 mile distance or 5 minutes in travel time to a bus route or stop.	- Route Maps - Area Maps - Census (Population) Data - Public Comments - Special Studies	Reviews Range from 3 Per Year to "As Needed" with Annual Reviews Noted Most Often	12 (43%)	6 (21%)
Route Deviation	Standards vary considerably. Some standards limit deviations by requiring that route distances should not make any trip more than 120% to 133% of the trip distance by auto. Other requirements limit deviations to 8 minutes per round trip or 2 deviations per route. Some agencies require that deviations must result in specific productivity or ridership gains.	- Riding Checks - Route & Area Maps - Rider Surveys - Field Observations	Annual to Bi-Annual Reviews	7 (25%)	4 (14%)
Route Length	Only two systems reported specific standards. One limits average trip time to 60 minutes and the other limits route lengths to 20 miles distance and/or 2 hours running time round-trip.	- Riding Checks - Field Observations - Schedules Analysis	Semi-Annual to Annual Reviews	3 (11%)	4 (14%)

TABLE A-2 (CONT.)

SUMMARIZATION OF ROUTE DESIGN STANDARDS

Medium Agencies: 100 - 399 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Route Duplication	Only two agencies utilize specific standards. One limits duplication to 50% of route length and the other limits duplication to approaches to the CBD or a major activity center. Other systems state that duplication will be avoided or minimized but do not set specific limits.	- Route Maps	Generally Infrequent or "As Needed"	2 (7%)	6 (21%)
Route Structure	Only one system utilizes a specific standard that restricts branching to 2 per trunk line. Other properties require that branching, turnbacks, and loops will be minimized and utilized only where demand and/or cost savings warrant, but do not quantify these requirements.	- Route Maps - Census (Population) Data	Monthy to Annual Reviews	4 (14%)	4 (14%)

TABLE A-3

SUMMARIZATION OF ROUTE DESIGN STANDARDS

Small Agencies: Less than Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Bus Stop Spacing	Standards are frequently based on area characteristics such as density and the location of activity centers. Maximum spacing requirements range from every block to 1500 feet.	- Field Observations - Rider Surveys - Route Maps - Traffic Checks - Stop List/Mileage Log - Public Comments	Semi-Annual to Annual Reviews	26 (42%)	11 (18%)
Route Coverage	Generally based upon area charactistics (such as density), type of service, and the location of activity centers. Most agencies focus on accessibility and require that 85% to 95% of urban residents should be no further than 1/4 mile from a route. Accessibility standards for rural areas are less stringent. The remainder of systems with a standard generally provide for 1/2 mile spacing between urban routes.	- Route Maps - Census (Population) Data	Reviewed Semi-Annually to Annually with Most on an Annual Basis	25 (40%)	6 (10%)
Route Deviation	Most standards utilize a coefficient of directness that compares auto distance to transit distance for the same trip. The mean coefficient is approximately 1.31 with 1.33 as modal value. Several properties base the comparison on auto travel time and limit transit time to twice that of an auto. Some standards specify exceptions that reflect the need to serve activity centers and correct coverage deficiencies.	- Route/Area Maps - Field Observations - Employment Data - Distance Comparisons	Reviewed Quarterly to Every 3 - 5 Years.	15 (24%)	9 (15%)
Route Length	Most standards place limitations on route length in terms of time (mean = 75 minutes round-trip) that reflect the system's headway requirements and/or timed-transfer policy.	- Route Maps - Running Time Checks - Route Mileage Logs - Field Observations	Reviewed Quarterly to Every 3 - 5 Years. Annual Reviews Are the General Case	13 (21%)	13 (21%)

TABLE A-3 (CONT.)

SUMMARIZATION OF ROUTE DESIGN STANDARDS

Small Agencies: Less than Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Route Duplication	No formal standards are indicated. However, several informal and proposed standards do address the issue by placing a limit on duplication by specifying where it can occur and/or the number miles or percent of route miles that can be duplicated. Many other agencies simply state that duplication will be avoided or minimized.	- Route/Schedule Analysis - Area Maps - Route Maps - Overload Reports	Reviewed Quarterly to Annually	8 (13%)	11 (18%)
Route Structure	Few specific and quantifiable standards exist. Agencies focus primarily on the need to minimize or facilitate transfers; employ cost-saving devices; minimize branches, loops, and turnbacks; provide two-way service; service major activity centers; and improve service area coverage.	- Rider Surveys - Route and Area Maps - Census (Population) Data - Public Comments	Reviewed Quarterly to Once Every 3 -5 Years. Annual Reviews Are Noted Most Often.	4 (6%)	17 (27%)

TABLE B-1

SUMMARIZATION OF SERVICE QUALITY STANDARDS

Large Agencies: 400 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Vehicle Loads	Standards are generally based on the time period and type of service. The average standard for maximum average peak hour loads is 140% with base period standards never exceeding 100%. Express standards are generally 100%.	- Traffic Checks - Supervisor Checks - Public Comments	Quarterly Reviews	19 (100%)	-0-
Vehicle Headways	Standards are generally based upon type of service, time period, day of the week, and/or passenger demand. For local lines, maximum peak hour headways are 15 - 30 minutes, and for base periods maximum headways of 15 - 60 minutes are noted. Some properties specifically require the use of clock headways whenever possible.	- Traffic Checks - Bus Seating Capacity	Quarterly to Semi-Annual Reviews	13 (68%)	1 (5%)
Schedule Adherence	Definitions of "on-time" arrivals range from (-) 1 minutes to (+) 5 minutes of schedule with most in the 0 to (+) 5 range. Standards are generally based on headways, time period, and/or the day of the week and require 80% to 95% attainment.	- Traffic Checks - Supervisor Checks - Public Comments	Daily to Quarterly Reviews	8 (42%)	11 (58%)
Bus Shelter Locations	Generally a minimum number of daily boardings (mean 100) is used to qualify a stop for a shelter. Several agencies utilize a point system that takes such factors as headways, the type of location, and degree of elderly and handicapped usage into consideration. One agency specifies that by 1986 25% of all stops will have shelters or benches.	- Traffic Checks - Public Comments - Site Inspections	Daily to Semi-Annual Reviews	9 (47%)	-0-

TABLE B-1 (CONT.)

SUMMARIZATION OF SERVICE QUALITY STANDARDS

Large Agencies: 400 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passenger Safety	Standards vary considerably. Standards are often expressed as a maximum number of accidents per 100,000 or million vehicle miles. Some standards require that performance must be maintained at a level that is within a certain percentage of the national average.	- Safety Department Records - Accident Reports - Vehicle Mileage	Monthly to Annual Reviews	7 (37%)	5 (26%)
Passenger Transfers	Standards specify a maximum of 2 to 3 transfers per trip or a maximum of 5% to 33% of total passengers who will be required to transfer. Some standards include objectives to minimize transfers or waiting times through timed transfers, through routing, and route extensions.	- Traffic Checks - Rider Surveys	Generally Annual Reviews	5 (26%)	8 (42%)
Missed Trips	Standards require that a minimum of 99% to 100% of all scheduled trips must be operated.	- Dispatcher's Logs	Monthly to Annual Reviews	5 (26%)	7 (37%)
Span of Service	Standards are generally based on type of service and day of the week. For local lines the average minimum service period is 6:00 am - 1:00 am (weekdays) and 6:30 am - 12:00 pm (Saturday), with Sunday standards either not specified or somewhat less than those for Saturday service. Standards are also sometimes specified for express, feeder, shuttle, and/or school services.	- Schedules Analysis	Quarterly Reviews	7 (37%)	3 (16%)
Public Complaints	Only one agency reported an official standard for complaints (based upon the number of complaints in relation to the system average per 100 revenue hours), another system was in the process of proposing a standard. Other agencies generally indicated that complaints were recorded, investigated and followed up.	- Phone Calls - Letters/Complaint Forms	Monthly to On-Going Reviews	1 (5%)	12 (63%)

TABLE B-2

SUMMARIZATION OF SERVICE QUALITY STANDARDS

Medium Agencies: 100 - 399 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Vehicle Loads	Standards are generally based on the time period and type of service. The mean standard for peak period local service is 125% with base period standards never exceeding 100%. Express standards also limit loads to 100%. Higher load factors (150% and up) are acceptable on short-haul services such as feeders and shuttles.	- Traffic Checks - Operator Counts - Special Surveys	Monthly to Annual Reviews	19 (68%)	3 (11%)
Vehicle Headways	Standards generally specify maximum headways of 30 minutes (peak period) and 60 minutes (base period). Some standards reflect such factors as type of service, ridership, loading standards, and area characteristics. Some also include provisions for clock headways whenever possible.	- Loading Checks - Passenger Counts - Census (Population) Data	Monthly to Annual Reviews	16 (57%)	3 (11%)
Schedule Adherence	Definitions of "on-time" arrivals range from (-) 2 minutes to (+) 5 minutes of schedule with most in the 0 to (+) 5 range. Performance standards are based on headway, time period, and/or the day of the week and require 75% to 99% attainment.	- Traffic Checks - Supervisor Checks - Operator Reports	Monthly to Semi-Annual Reviews	20 (71%)	4 (14%)
Bus Shelter Locations	Generally a minimum number of daily boardings (mean = 100) is used to qualify a location for a shelter. Some systems also require shelters in various locations such as the CBD, hospitals, transfer points, etc. Two agencies indicated that a minimum of 50 boardings qualify a location for a bench.	- Traffic Checks - Public Comments - Operator Reports	Semi-Annual to Annual Reviews	13 (46%)	4 (14%)

TABLE B-2 (CONT.)

SUMMARIZATION OF SERVICE QUALITY STANDARDS

Medium Agencies: 100 to 399 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passenger Safety	Standards vary considerably. Most are expressed in terms of the number of passenger accidents per million passengers or vehicle accidents per 100,000 vehicle miles. Other standards require that performance must be between 10% and 25% of the national average for safety.	- Accident Reports - Passenger Counts - Vehicle Mileage	Monthly to Annual Reviews	10 (36%)	7 (25%)
Passenger Transfers	Standards specify that a maximum of 20% to 30% of riders will be required to transfer. Some systems also place a maximum wait time to make a transfer that is expressed as a percentage of the connecting lines headway.	- Rider Surveys - Passenger Counts - Transfer Counts	Infrequent Reviews	7 (25%)	5 (18%)
Missed Trips	Standards generally require that at least 90% to 99.5% of scheduled trips must be operated. One agency placed a maximum on the number of trips (10) that could be missed per month.	- Dispatcher's Log - Maintenance Records	Monthly to Quarterly Reviews	9 (32%)	3 (11%)
Span of Service	Standards are generally based on type of service and day of the week. For local lines the average minimum spans are 5:40 am to 11:45 pm (weekdays); 6:20 am to 11:25 pm (Saturdays); and 6:30 am to 11:15 pm (Sundays). Several standards include adjustment guidelines to expand or reduce the span for specific lines based on productivity criteria or service coverage needs.	- Schedules Analysis - Passenger Counts - Special Studies	Monthly to Annual Reviews	7 (25%)	5 (18%)
Public Complaints	Only two systems indicate official standards for complaints. Other agencies indicate that complaints are generally recorded, investigated and monitored.	- Phone Calls - Letters/Complaint Forms	Semi-Annual to On-Going Reviews	3 (11%)	11 (58%)

TABLE B-3

SUMMARIZATION OF SERVICE QUALITY STANDARDS

Small Agencies: Less than 100 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Vehicle Loads	Standards are generally based on the time period and type of service. The mean standard for maximum average peak hour loads is 133% with base period standards of 100% or less. Express standards are generally 100%.	- Traffic Checks - Operators Reports	Quarterly to Annual Reviews	31 (50%)	5 (8%)
Vehicle Headways	Specific headway standards vary considerably, however most provide for a 30-minute maximum during peak hours and 60 minutes during the base period. Several agencies provide specific standards that reflect the day of operation and type of service in addition to the time period.	- Traffic Checks - Public Comments - Supervisor Checks - Operator Reports - Passenger Count	Reviewed Monthly to Annually with Annual Reviews Noted Most Often	32 (52%)	11 (16%)
Schedule Adherence	Definitions of "on-time" arrivals range from (-) 3 minutes to (+) 10 minutes of schedule with an average range of 0 to (+) 4 range. Standards require the percentage of on-time arrivals to be between 75% and 100%. Some systems have variable standards based on the time of day.	- Traffic Checks - Supervisor Checks - Public Comments - Operator Reports	Monthly to Semi-Annual Reviews	32 (52%)	17 (27%)
Bus Shelter Locations	Standards generally require a minimum number of boardings at a stop to qualify it for a shelter. The minimum ranges from 5 to 100 with a mean value of approximately 65. Other standards require placement of shelters in specific locations such as at CBD stops, hospitals, etc.	- Traffic Checks - Field Observations - Rider Surveys - Route Maps - Traffic Checks - Stop List/Mileage Logs - Public Comments	Semi-Annual to Annual Reviews with Annual Reviews Noted Most Often.	14 (23%)	17 (27%)

TABLE B-3 (CONT.)

SUMMARIZATION OF SERVICE QUALITY STANDARDS

Small Agencies: Less than 100 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passenger Safety	Standards vary considerably. Generally standards are expressed as the average number of miles between preventable accidents with a mean value of about 31,000 miles. Other measures used include the number of passenger accidents per million passengers. Some standards relate more specifically to individual operators and place limits on the number of accidents an operator can have in a period of time.	- Accident Reports - Citations Issues - Operator Safety Checks - Route Mileage - Passenger Counts	Weekly to Annual Reports. Most Indicate Monthly Reports	19 (31%)	16 (26%)
Passenger Transfers	Most standards specify that a maximum percentage of riders should have to transfer to complete their trips. The range is between 10% and 50% with a mean of approximately 20%. Other standards limit the maximum number of transfers required to complete any trip to (1) one transfer.	- Transfer Counts - Rider Surveys	Semi-Annual to Annual Reviews. Mostly Semi-Annual Reviews.	18 (29%)	16 (26%)
Missed Trips	Standards generally specify that a minimum of 95% to 100% of scheduled trips must be operated. Several systems place an absolute limit to the number of trips that will be missed in a month or year.	- Dispatcher's Log	Monthly Reviews	15 (24%)	12 (19%)
Span of Service	Standards are based on the day of operation. The average minimum service periods are: Weekdays and Saturdays, 6:00 am to midnight and Sundays, 8:00 am to 6:00 pm. The variance between specific agencies is considerable for this criterion.	- Public Comments - Rider Surveys - Demand Analysis	Reviewed Monthly to Annually with Annual Reviews Noted Most Often	12 (19%)	10 (16%)
Public Complaints	Most respondents indicated that complaints are generally investigated, evaluated and then followed up.	- Phone Calls - Letters/Complaint Forms	Infrequent to On-Going Reviews	7 (11%)	26 (42%)

TABLE C-1

SUMMARIZATION OF ECONOMIC AND PRODUCTIVITY STANDARDS (Route Specific)

Large Agencies: 400 or More Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passengers/Hour	Standards require that individual lines achieve a specific ratio (20-30); establish a quartile ranking system in which the lowest 25% are reviewed; or require that individual lines must achieve 75% of the system average or standard.	- Passenger Counts - Operating Hours/ Revenue Hours	Monthly to Annual Reviews	8 (42%)	5 (26%)
Passengers/Mile	Standards require that a minimum percentage (75%) of the system average or standard must be maintained by individual lines; establish a quartile ranking in which the lowest 25% are reviewed; or require that lines must achieve specified peak (2.5) and base (1.0-1.5) ratios.	- Passenger Cournts - Vehicle Mileage	Monthly to Semi-Annual Reviews	8 (42%)	5 (26%)
Revenue/Cost	Standards specify different minimum ratios for individual lines (10%-100%) of various types; a minimum ratio for all lines (15%-30%); or establish a quartile ranking system in which the lowest 25% of routes are reviewed.	- Revenue Counts - Cost Allocation Model - Financial Reports	Monthly to Annual Reviews	9 (47%)	3 (16%)
Cost/Passenger	Standards specify either a fixed minimum ratio ($2.50-Canadian) or establish a quartile ranking system in which the lowest 25% of routes are reviewed.	- Passenger Counts - Cost Allocation Model - Financial Reports	Monthly to Annual Reviews	4 (21%)	7 (37%)
Passengers per Trip	Standards rank lines based upon productivity with lines in the lowest 20%-25% of a ranking being reviewed for corrective action or require that lines must attain at least 75% of the system or group average for the criteria.	- Operator Passenger Counts - Riding Checks - On-Board Rider Surveys	Monthly to Quarterly Reviews	4 (21%)	2 (11%)

TABLE C-2

SUMMARIZATION OF ECONOMIC AND PRODUCTIVITY STANDARDS (Route Specific)

Medium Agencies: 100 to 399 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passengers/Hour	Several different types of standards are noted. First, some properties require that individual lines must achieve between 50% and 80% of the system average or face corrective action. Second, other properties have established specific criteria by time period and require the route to meet these standards which may be an absolute ratio or a percentage of the system average for that period. Third, composite indexes that combine P/H with other indicators are used. Fourth, quartile ranking systems that require the review of routes in the bottom 25% for the indicator are also utilized.	- Passenger Counts - Operating Hours/ Revenue Hours	Monthly to Annual Reviews	16 (57%)	8 (29%)
Passengers/Mile	Standards for individual lines either establish a quartile ranking system that scrutinizes routes in the lowest 25%; combine P/M with other indicators in a composite index and require routes to be at least 80% of the system composite average; or require that routes must achieve a certain percentage (65%) of the class average.	- Passenger Counts - Vehicle Mileage	Monthly to Annual Reviews	10 (36%)	11 (39%)
Revenue/Cost	Standards either set an absolute minimum ratio that all lines or specific types of lines will achieve (15%-60%); require that all lines must perform within a certain level of the system-wide average or standard (50%-94%); or combine R/C with other indicators in a composite index and require lines to be within at least 80% of the system composite average.	- Revenue Counts - Financial Reports	Monthly to Annual Reviews	13 (46%)	8 (29%)
Cost/Passenger	No line-specific standards were reported.	- Passenger Counts - Financial Reports	Monthly to Annual Reviews (Monitoring Only)	-0-	16 (57%)

TABLE C-2 (CONT.)

SUMMARIZATION OF ECONOMIC AND PRODUCTIVITY STANDARDS (Route Specific)

Medium Agencies: 100 to 399 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passengers per Trip	Most of the standards reported for this criterion focus upon express or commuter services and establish minimum acceptable performance levels at 20 to 30 passengers per trip or 65% of seated capacity. The remaining standards focus upon all lines in general and require all one-way trips to carry at least 5 to 7.5 riders or that services must equal or exceed 80% of the system average.	- Passenger Counts - Revenue Reports - Rider Surveys	Monthly to Annual Evaluations with Monthly Cycles Reported Most Often	10 (36%)	5 (18%)

TABLE C-3

SUMMARIZATION OF ECONOMIC AND PRODUCTIVITY STANDARDS (Route Specific)

Small Agencies: Less than 100 Peak Vehicles

PERFORMANCE INDICATOR	SERVICE STANDARD'S DESCRIPTION	TYPE AND/OR SOURCE OF DATA	EVALUATION/REPORTING CYCLE	NUMBER AND PERCENT OF GROUP USING OR DEVELOPING STANDARDS	NUMBER AND PERCENT OF GROUP MONITORING INDICATOR ONLY
Passengers/Hour	Standards require that individual lines must maintain ratios of 8 to 40 passengers per hour or require that lines must achieve 60% to 80% of the system average to avoid review, service modification, or elimination.	- Vehicle Hours - Passenger Counts	Weekly to Annual Reviews	25 (40%)	15 (24%)
Passengers/Mile	Standards require that individual lines must maintain ratios of 1.0 to 2.5 passengers per mile or require that lines must achieve 40% to 80% of the system average to avoid review, service modification or elimination.	- Vehicle Mileage - Passenger Counts	Weekly to Annual Reviews	17 (27%)	18 (29%)
Revenue/Cost	Standards require that individual lines maintain a revenue/cost ratio of 10% to 50% or require that lines must achieve between 60% and 90% of the system-wide standard or average.	- Revenue Counts - Financial Reports	Monthly to Annual Reviews	22 (35%)	12 (19%)
Cost/Passenger	Only one system applies standards to specific types of services that ranged from $1.25 to $2.00 per passenger.	- Passenger Counts - Financial Reports	Monthly to As Needed Reviews	6 (10%)	10 (16%)
Passengers per Trip	Most reported standards establish a minimum productivity level for individual (one-way) trips between 2 and 11 riders. Other standards require lines to achieve at least 80% of the system average or that they rank above the lowest quartile of a composite performance index. One agency requires that "trippers" must average at least 25 passengers to be maintained.	- Passenger Counts - Rider Surveys - Farebox Readings	Monthly to Annual Reviews	8 (13%)	12 (19%)

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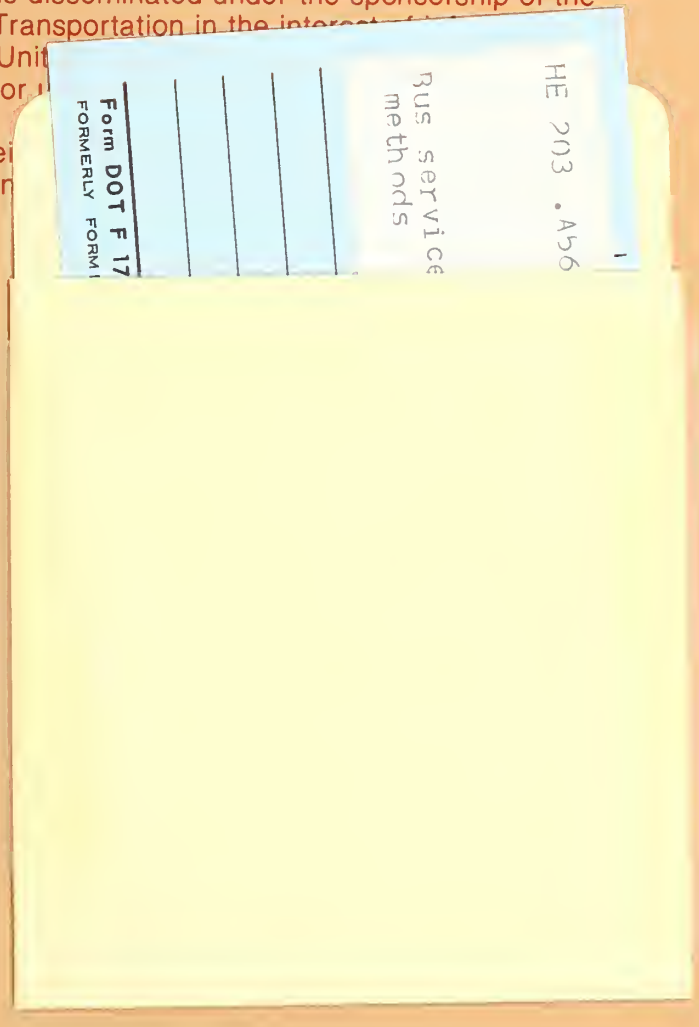

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