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THE POTENTIAL INTEGRATION OF SMART CARDS BY PUBLIC TRANSIT OPERATORS AND HUMAN SERVICE AGENCIES IN TEXAS

by

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16. Abstract

This report documents the activities conducted during the second year of a two-year research project examining the use of electronic transit fare payment methods, including the potential integration with other electronic benefit cards. The report presents information on institutional mechanisms required for implementation and a case study of a current transit smart card program, and summarizes technical and institutional issues that were encountered in implementing and operating the pilot project. The report describes the potential and alternative approaches for implementation.

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CHAPTER 1. INTRODUCTION

This report documents the activities conducted during the second year of a research project examining the potential integration of automated transit fare payment cards with other electronically distributed benefit programs, such as the Texas Department of Human Services (DHS) Lone Star Card (LSC). Researchers implemented and completed the evaluation of a pilot test and coordinated these activities with Texas Department of Transportation (TxDOT) personnel and representatives from DHS, the Texas Health and Human Services Commission, Texas Comptroller of Public Accounts, the Central Texas Workforce Development Board, Temple Workforce Center, and Temple Transit.

BACKGROUND

Passengers on public transportation systems in the United States have paid fares with cash since the introduction of the first horse-drawn trolley in the 1820s. There have been advancements in fare payment methods and technologies over the decades. Tokens, multi-ride tickets, and daily, weekly, and monthly passes are examples of fare payment techniques aimed at making transit use easier and more convenient for passengers. At the same time, these approaches simplify fare collection for transit operators and provide revenues in advance of actual use.

Transit agencies are applying recent advancements in telecommunications, electronics, and computer technologies to transit fare prepayment methods. These approaches are commonly referred to under the general heading of intelligent transportation systems (ITS). ITS refers to the application of a wide range of advanced technologies directed at improving the efficiency and operation of the transportation system. More specifically, ITS focuses on improving mobility and productivity, enhancing safety, maximizing existing transportation facilities, and enhancing the environment.

The application of ITS and other advanced technologies with fare payment methods, which are generally referred to as "smart cards," holds promise for making transit services easier to use, improving intermodal and multimodal connections, and enhancing fare collection management. Planning, implementing, and operating smart card systems is not an easy process. Public transit operators may need to address a variety of institutional and technological issues for these benefits to be realized.

Public transportation represents just one possible application of electronic payment methods. Credit cards, automatic teller machines (ATMs), and electronic toll collection systems are other examples of related technologies in use today. The LSC, implemented by DHS in 1994, represents another application of electronic benefits transfer technology. The Lone Star Card, which is a plastic debit card with a magnetic strip, is used in place of food stamps in Texas. The cards can also be used by recipients of the Temporary Assistance for Needy Families (TANF) program to receive cash advances.

One may anticipate widespread application of smart card technologies in the future as cashless transactions become more commonly accepted for a variety of goods and services. The use of an

electronic purse, or one card capable of handling all types of transactions, is even a possibility. This research project examines the use of smart cards with transit services in Texas, as well as the possible integration with other types of electronic benefits transactions such as the LSC.

RESEARCH OBJECTIVES

This research project accomplishes a number of objectives. During the first phase, researchers examined various types of smart card technologies, current projects, and potential issues associated with implementing and operating transit smart cards. The current use of the Lone Star Card, as well as the possible integration with a transit smart card application, was explored. Alternative approaches for pilot testing integrated smart card applications with transit and human service agencies in the state were examined.

The major research objective during the second year of the project was to implement and evaluate a pilot test. The demonstration was intended to focus on the integration of the LSC with a transit system in the state. Due to the lack of opportunity to interface with the current Lone Star Card vendor (Transactive Corporation), researchers developed a surrogate for this interface and used an existing identification card. The initial pilot test was conducted with Temple Transit in cooperation with the Temple Workforce Center. The pilot was operational during June through September 1999.

ORGANIZATION OF THIS REPORT

The remainder of this report is divided into four additional chapters. Chapter 2 summarizes the technologies and institutional mechanisms involved in smart card applications, describing anticipated technology, along with options, functions, and potential issues associated with implementing and operating an integrated smart card system. Chapter 3 discusses the pilot test. The report concludes with a brief report on the status of electronic benefits transfer (EBT) in Texas and possible considerations of immediate and short-term future transit applications. The final chapter summarizes the LSC and the efforts underway in the state to coordinate agency use of electronic benefits transactions.

CHAPTER 2. TECHNOLOGIES AND POTENTIAL ISSUES

Researchers previously conducted a state-of-the-art literature review of smart card and fare prepayment technologies, case studies, and potential issues associated with implementing and operating these systems. Researchers also attended numerous meetings with representatives from state agencies to obtain information on the LSC and EBT efforts underway and planned in Texas. The results of these activities provide the foundation for the discussion of the necessary institutional mechanisms required to implement an integrated transportation component to EBTs.

SMART CARD TECHNOLOGIES

A wide range of approaches and technologies can be used with electronic fare payment cards. Although varying in function and complexity, all systems utilize electronic communication and data processing, data storage, and record-keeping functions. This section highlights examples of available technologies and approaches *(1, 2, 3, 4)*.

Magnetic Stripe Cards

This technology involves imprinting magnetic stripes on paper or plastic cards. Many credit and ATM cards use magnetic stripes. The coercivity of a card, which relates to the strength of the external magnetic field needed to alter the stored information, may vary. Cards with high coercivity provide greater security, but are more expensive than cards with low coercivity. Paper cards are lower in cost, while heavier plastic cards last longer but are more expensive.

Contact Cards

As the name implies, use of this type of card requires physical contact between the card and the read-write unit. The card includes a microcomputer chip with electronically erasable programmable memory and read-only memory. Depending on the exact format, contact cards can store identification and cash information, use history, and other data. Contact cards can also be programmed to perform various functions and routines. Security of contact cards can be enhanced through data encryption.

Contactless Cards

These cards do not require physical contact with a read-write unit. Rather, the read-write unit can read a card that is passed close to, but not in direct contact, with the unit. Contactless cards have the same capabilities as contact cards and use similar microcomputer chip technologies. Contactless cards may use two different communication techniques. One approach uses a contactless interface, either remote coupling or close coupling, to power the card and transfer data using inductive and capacitive techniques. A second approach, called radio frequency identification (RFID), transfers data over radio waves. Power is supplied to RFID cards either by a battery in the card or by a magnetic energy source.

Combined Contact and Contactless Cards

This approach combines the technologies and functions of contact and contactless cards. One technology, which is usually referred to as a hybrid card, uses two separate computer chips for the various functions. Another approach, called a combination or dual-interface card, uses a single chip that may be accessed either remotely or by direct contact with the read-write unit.

A variation on the combination card is the use of chip technology and magnetic stripe. This variation has proved useful in the transition from deployed magnetic stripe technology to chip technology, prior to the complete changeover to chip. It is also appropriate when multiple applications are required and different technologies must be accommodated. An example would be one occurring when an entity desires to deploy chip technology for its specific requirements, but wishes to be compatible with previously deployed magnetic stripe technology.

In addition to these different technologies, smart cards may also vary in applications and functions. There is a major distinction between a single-application card and one that can be used for multiple purposes. A smart card that is good on only one transit system provides an example of a single application. A card that can be used to pay transit fares, buy groceries, and obtain cash from an ATM represents a more complex, multi-application smart card.

POTENTIAL ISSUES

Transit systems may encounter a variety of policy, institutional, and technical issues in the implementation and operation of smart card systems. The number and the complexity of issues are greater with multi-agency and multi-purpose approaches than with programs focusing only on fare payment at a single transit agency. This section highlights some of the issues to be considered in developing and operating smart card systems involving multiple agencies.

Technology Issues

Assessing available smart card technologies can help identify the approach that best meets the goals and objectives of a project. Factors usually considered in evaluating alternatives include the project or agency goals and objectives, the desired functional capabilities, the cost of various alternatives, the technical capabilities of agency staff or contractors, potential public/private partnerships, and compatibility with other advanced technology systems and projects. With the rapid advancements in technology, public transit operators should also consider maintaining future flexibility to respond to new systems.

Institutional Issues

Projects involving multiple agencies have more complex institutional issues than those implemented by a single organization. Agencies are likely to have differences in missions, goals, and policies. Other elements that may be addressed include determining the roles and responsibilities of each agency, developing cost-sharing and revenue-sharing agreements, security concerns, marketing activities, ongoing management and operation, and evaluating the

effectiveness of the system. The participation of private sector groups usually increases the complexity of these issues.

Revenue Issues

The allocation of fare revenues among participating transit operators is often an issue in the consideration of regional fare systems. For example, if an individual uses a smart card on a trip that involves two bus systems, it is critical to determine how the fare is allocated between the two operators. Although smart card technology greatly enhances the ability to track use, transit providers must still determine the basic formula for dividing fare revenues.

Finance Issues

Finance issues are related to the technology, institutional, and revenue concerns previously noted. The financial plan for a project should identify the capital and ongoing operations costs, the funding shares for each participating agency, the financial responsibilities of any private sector groups, the legal and liability responsibilities, and other related elements.

Customer Acceptance Issues

Smart card systems will be successful only if they are used by riders. As a result, transit systems must examine customer acceptance issues in the project development stage. Examining the potential acceptance and use of smart cards, the ability to generate new riders or more trips by current passengers, the interest in multi-use applications, and other factors that may influence use of the card are issues to consider.

CHAPTER 3. TEMPLE TRANSIT PILOT TEST

This chapter documents the transit application pilot test of a surrogate smart card for the Texas EBT – the LSC. In an ideal situation, researchers would have used the Texas LSC directly for the pilot test; however, because of circumstances outside the control of the researchers and the State of Texas, this was not possible. Chapter 4 presents a summary of the issues that prevented using the Lone Star Card directly for the pilot test.

In anticipation that the LSC would be available for use in the pilot test, researchers developed detailed alternatives for approaches and technologies to be used. The alternatives are still very viable and can be considered for a future application once second-generation LSC arrangements are in place. Chapter 4 includes a description of these alternatives.

SELECTION OF PILOT TEST

The following criteria were used to identify the pilot test:

- interest in participating,
- policy support,
- institutional coordination and cooperation,
- adequate resources,
- availability and compatibility with equipment and technology, and
- other factors or special features.

Members of the study panel assisted with this process, which resulted in the selection of Temple Transit for the pilot. Shown below is a summary of the criteria, as applied to Temple Transit.

Interest in Participation

Both the Temple Transit staff and the Temple Workforce Center staff were extremely supportive of developing a pilot test using Temple Transit. Researchers met with both groups individually and together several times to prepare for the pilot test. Personnel of the Workforce Centers have a history of participating in regional transit planning efforts and have long advocated opening the transit system to the general public, or at a minimum, to clients of the Workforce Centers.

The pilot test offered two major benefits to Temple and the state of Texas. First, it offered an opportunity to test the institutional and technical application of smart card technology for transit use in coordination with human service benefits. Second, it offered the opportunity for what de facto became a welfare-to-work project.

In addition, the project provided Temple with an opportunity to test the general public's interest in public transit at a time when the City and the area were looking at the possibility of expanding public transit services. Exposure to a computerized dispatching software provided by the researchers to facilitate the project was a secondary benefit to Temple Transit.

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Policy Support

The pilot test was supported by both the Temple public officials and the local Workforce Development Board. Researchers worked with both parties to develop the necessary memorandum of understanding (MOU) between the two entities, outlining the details of the project.

Institutional Coordination and Cooperation

The staff of the two entities expressed a ready willingness to work together to support the project. Workforce Center staff prepared information to allow an estimate of the possible usage of its clients. The Temple Transit staff worked with researchers to identify potential efficiencies in scheduling of services to accommodate additional ridership under the pilot test.

Adequate Resources

Researchers identified resources to cover the cost of additional riders on Temple Transit. The Temple Workforce Center staff ensured the $1 rider co-pay for each of their clients. Temple Transit identified available funding to accommodate increased riders, as well.

Other Factors

Temple Transit had concerns that the impact of additional riders coming from the Workforce Center client base could be an issue. Researchers worked with Temple Transit and Scott & White staff to evaluate the capacity of the existing transit system. They considered use of a computerized scheduling and dispatching system to increase efficiencies (load). Researchers provided a system to be used and tested by Temple Transit. Mr. Richard Szymanski, owner of Route Logic, Inc., allowed use of RouteLogic and ParaLogic software for the extent of the pilot test. The City of Temple subsequently prepared a request for proposal for a full-blown computerized scheduling and dispatching system to be used in the future.

In contemplating the possible impact of the introduction of Workforce Center clients as riders on the public transit system, researchers worked with Workforce Center staff to prepare estimates of eligible riders. Working directly with four Workforce Center counselors, using estimates of riders who were clients in TANF or Welfare to Work programs, researchers developed three scenarios. Under a maximum ridership scenario, the transit system could expect up to 1,694 new one-way trips per month. Under a medium ridership scenario (assuming 50 percent of those eligible might use the system for half of their transportation needs), Temple Transit could expect up to 880 additional one-way trips per month. Under a minimum ridership scenario (assuming 25 percent of those eligible might use the system for 25 percent of their transportation needs), Temple Transit could expect up to 440 additional one-way trips per month.

PILOT TEST SETTING

Temple Transit

The City of Temple began public transit services in June 1992. Temple Transit provides transportation for the elderly and disabled members of the community. The service area is the corporate boundaries of the city of Temple, covering approximately 66.9 square miles. The estimated population of the community is 53,733, according to the City's planning department. All certified disabled city residents and individuals 60 years of age or older qualify for the program.

The system began by providing each eligible participant with 12 one-way trips on a monthly basis, with no restrictions on trip type. Effective October 1, 1998, each participant is allowed 12 free one-way trips per month plus an unlimited number of trips at a $1 fare for each one-way trip for the remainder of the month.

Once eligible patrons have registered for the service, reservations must be made at least one day in advance of the requested trip. Due to the capacity constraints of the existing service, patrons usually try to book their trips as early as possible. Most popular times are confirmed six days in advance. Utilization of a more sophisticated scheduling system that enhances the efficiency of the system could reduce the compressed workload on the reservationists and spread the concentration of requests.

Funding for the system comes from federal, state, and local dollars. The City of Temple contracts with Scott & White Memorial Hospital of Temple for the actual provision of transit services. The contractor provides reservation and scheduling services as well as the actual operation of the transit service. Scott & White also provides a complimentary service for patrons of the hospital. This infrastructure of personnel, communications systems, and maintenance facilities was in place prior to initiation of Temple Transit services.

The City of Temple provides the vehicles for Temple Transit service and communications equipment, including software and mobile data terminals (MDTs). A listing of the vehicles is included in Table 1.

Table 1. Temple Transit Fleet.

Vehicle Type	Number of Vehicles	Year(s) Put into Operation
Lift-equipped vans	4	1993 (1); 1995 (1); 1997 (1); 1998 (1)*
Ford station wagons	3	1993 (2); 1995 (1)

*One to go into service in 1999

The City of Temple also provides an automated passenger identification system to track passenger activity. The system eliminates the need for purchasing, printing, counting, and managing monthly ticket sales. Each eligible person is issued a barcoded identification card used to record pertinent information about the individual (including name, address, eligibility criteria,

special accommodations, etc.). The system also allows for computerized tracking of all trip information, including origin and destination points, trip type, trip time, trip length, and number of trips provided. Temple Transit uses trip and demographic data to regularly generate reports on system utilization.

Services are provided Monday through Wednesday from 7:00 a.m. to 7:00 p.m., including holidays, and Thursday through Saturday from 7:00 a.m. to 10:00 p.m., including holidays. Five vehicles are operated in the system's peak hours, defined as 10:00 a.m. to 3:00 p.m. Temple Transit provides door-to-door demand-responsive service, with subscription services available. The system maintains a balance of no more than 50 percent of all trips offered through subscriptions. Patrons may each reserve only one trip type of subscription service. For example, a patron may place a reservation for a regularly scheduled doctor's appointment or work trip, but not both.

The transit system provided 23,155 trips in calendar year 1997, at an operating cost of $204,668. This is an increase of slightly less than 2 percent over the 22,721 total trips provided in 1996, at an operating cost of $197,561. Table 2 shows a history of the number of trips. Table 3 shows historical operating costs for the system.

Table 2. Trip Statistics.

Year	No. of Passenger Trips	Average Cost per Trip	Average Cost per Mile
1993	17,490	$8.17	$1.81
1994	21,402	$8.25	$1.96
1995	22,326	$7.91	$1.77
1996	22,721		
1997	23,155		

Table 3. Operating Cost Statistics.*

Year	Operating Costs
1993	$142,835
1994	$176,653
1995	$176,502
1996	$197,561
1997	$204,668

*Fare collection for trips exceeding the allocated number per person began October 1, 1998.

Personnel costs assigned to the transit system service include one administrative position (Mr. Ed Kabobel Jr., the City's transit manager) and eight operations positions (five drivers and three dispatchers, all Scott & White employees).

Evolution Underway at Temple Transit

As this pilot test was considered and implemented, the City of Temple was in the process of evaluating the possibilities for expanding services. The City's consultant completed a transit needs and feasibility study that was conducted between February and August 1999. The issues included:

- identification of transit need in the community,
- alternatives for providing expanded transit services,
- alternatives for funding expanded transit services,
- projections of short- and long-range financial requirements for each alternative,
- operational plans for implementing the recommended alternative scenario, and
- evaluation of possible regional services to be developed with the City of Belton.

Prior to initiation of the study, community stakeholders had recently expressed interest in expanding transit services. The possibility of fixed-route services and opening the service to any individual (eliminating the elderly and disabled eligibility requirements) were among the suggestions to be considered. In addition, prior to the study's initiation, the City of Temple appointed a Temple Transit Advisory Group, including two individuals with disabilities, two senior citizens, and three at-large members.

Central Texas Workforce System

The Central Texas Workforce System delivers programs and services to meet the needs of business, industry, and workers. Services are provided under the aegis of the area's Workforce Development Board, the local organization charged by the Texas Workforce Commission with planning and executing workforce-related programs in the area. There are two Workforce Centers within the city limits of the city of Temple. Job seeker services, training and education service, and employer services are among the services available at the centers.

Individuals who are served as clients of the Workforce Centers often require transportation to educational opportunities for general equivalency diploma (GED) classes, job training classes, and/or job interviews. The Workforce Centers can provide transportation assistance through a "petty cash" account. TANF/Food Stamp clients may also choose to use funds for transportation.

DEVELOPMENT OF PILOT TEST

Once the researchers had met with individuals to be involved with the pilot test, they developed a summary of actions that included the following major activities:

Temple Transit/City of Temple

- endorsement of the pilot test by the transit advisory committee, staff, and/or city council;
- implementation of improved scheduling/dispatching;
- provision of barcodes for application to LSCs (for which was substituted an identification card with barcodes when LSC use was ruled out); and

- execution of a written memorandum of understanding with the Workforce Development Board.

TxDOT -- Public Transportation Division

- endorsement of additional funds available from state Oil Overcharge funds to supplement the additional Temple Transit trips produced by Workforce Center clients.

Workforce Development Board/Workforce Center

- assistance in identifying likely candidates for using Temple Transit services,
- promotion of the use of Temple Transit by those candidates,
- facilitation of follow-up with clients who choose to use the transit service, and
- execution of necessary written agreements with the City of Temple.

Initially, researchers also desired involvement of the LSC management. However, because the card could not be used directly, they eliminated that interaction from further planning in implementing the pilot project.

PILOT TEST DETAILS

The parties involved agreed that the pilot test would consist of individuals eligible for TANF and Food Stamps as certified by DHS, and Welfare-to-Work recipients, using a referral form from the Workforce Center, would be eligible to ride Temple Transit. The City of Temple agreed to open its ridership to these individuals for the pilot test period of June--September 1999. The Workforce Center agreed to pay $1 per trip, from the first trip taken. Temple Transit provides elderly and disabled individuals with 12 "free" one-way trips before they begin to pay $1 per trip.

Researchers prepared the MOU, which each of the parties refined and executed. Figure 1 is a copy of the MOU.

Researchers also developed a sheet to be given to each of the Workforce Center clients referred to the transit system. They printed that document on both sides of a sheet of paper, with "How to Ride Temple Transit" on the front and "Temple Transit Riding Rules" on the back. Figure 2 provides that document.

Researchers prepared additional documentation to accompany the identification card for the Workforce Center client. A cover memo signed by both the Temple Transit director and the Workforce Center manager accompanied the Temple Transit Policy and a blank form that riders could use to file commendations or complaints about the transit service. Figure 3 presents those items. Figure 4 is a sample copy of a referral form.

MEMORANDUM OF UNDERSTANDING
Central Texas Workforce System
and the City of Temple (Temple Transit)

Part I: INTRODUCTION

Section 1: Parties to and Purpose of this Agreement:

This document serves as a Memorandum of Understanding between the Central Texas Workforce Development Board, herein after referred to as Board, Central Texas Council of Governments, herein after referred to as Contractor, and the City of Temple (Temple Transit), herein after referred to as the City. The Memorandum of Understanding outlines the responsibilities and commitments of each organization to serve City of Temple residents who are Texas Workforce Center Clients and who meet eligibility requirements as described herein during the term of this agreement. Agreement is made and entered into by and between the following:

Central Texas Workforce Development Board
Contact Person: Susan Kamas, Executive Director
Address: P. O. Box 450, Belton, Texas, 76513
Telephone Number: (254) 939-3771, ext. 214
Fax Number: (254) 939-3207

Central Texas Council of Governments
Contact Person: Jerry Haisler, Workforce Division Director
Address: 207 E. Avenue D, Killeen, Texas 76541
Telephone Number: (254) 526-4448
Fax Number: (254) 526-4985

Temple Transit, City of Temple
Contact Person: Edward A. Kabobel, Jr.
2 North Main Street, Temple, TX 76501
Telephone Number: (254) 298-5603
Fax Number: (254) 298-5728

The parties hereto, severally and collectively, agree by the execution of this Memorandum of Understanding to the obligations, performances and accomplishments of the tasks hereinafter described. Specifically, the parties hereto agree to coordinate resources to ensure the effective and efficient delivery of services as described in Part II of this Agreement.

Figure 1. Memorandum of Understanding (Page 1).

Program activity for both TANF, Food Stamp, and Welfare to Work customers may include job search activity, work skills training, vocational/educational training, job readiness activities, post-

secondary training, and life skills training. Post employment transportation services may be considered if transportation is available. Customers may also participate in more than one activity at a time to maintain participation requirements as required by State and Federal mandates.

Joint Responsibilities

The parties shall coordinate and perform the activities and services described herein within the scope of this Memorandum of Understanding as may be required and permitted by Federal and State laws and policies governing the parties's respective programs, services, and agencies.

Both parties will promote the use of Temple Transit by Choices, Food Stamp Employment and Training and Welfare to Work customers.

Both parties will comply with Texas Revised Civil Statute Article 4419b-4, Sections 5.03 and 5.04 (relating to workplace and confidentiality guidelines regarding AIDS and HIV).

Both parties will comply with Title VI of the Civil Rights Act of 1964 (Public Law 88-352), Section 504 of the Rehabilitation Act of 1973 (Public Law 93-112), the Americans with Disabilities Act of 1990 (Public Law 101-336), and all amendments to each, and all requirements imposed by the regulations issued pursuant to these acts. In addition, the contractor agrees to comply with Title 40, chapter 73, of the Texas Administrative Code. These provide in part that no persons in the United States shall, on grounds of race, color, national origin, sex, age, disability, political beliefs, or religion be excluded from participation in, or denied, any aid, care, service, or other benefits provided by federal and/or state funding, or otherwise be subjected to discrimination.

Both parties will periodically review the pilot test experience and suggest improvements or changes. Documentation of any changes in the pilot test arrangements will be forwarded to the TTI researchers.

Both parties will support and participate in periodic evaluation of the pilot test program, though conversations with the TTI researchers, including interviews with the Temple Transit dispatchers/schedulers, Workforce Center specialists, Temple Transit and Workforce Center administrators, and pilot test participants.

Individual Responsibilities

Central Texas Council of Governments
Temple Workforce Center shall:

Workforce Center specialists will determine a Choices, Food Stamp Employment and Training or Welfare to Work customer's need for transportation during the initial assessment of customer employment barriers. The specialist will complete a form, as attached in Attachment A, to be used

Figure 1. Memorandum of Understanding (Page 2).

by each participant in acquiring a photo identification card with uniquely assigned bar code.

The Workforce Center will monthly reimburse Temple Transit, through direct payment to "City of Temple - Transit Department", for the Choices, Food Stamp Employment and Training or Welfare to Work customer's use of Temple Transit. Payments will be sent to the attention of Mr. Ed Kabobel, Transit Manager, Temple Transit Department, Municipal Building, 2 North Main Street, Temple, Texas 76501.
Upon the request of Mr. Ed Kabobel, the Temple Workforce Center will investigate providing additional support to Mr. Kabobel for the certification/identification card processing.

Temple Transit, City of Temple

Provide copies of the Temple Transit participant application form to Ms. Vickie Matl, Temple Workforce Center Administrator.

Provide a photo identification card, with bar code, for each individual referred by the Temple Workforce Center.

Schedule transit trips, if available, for individuals referred by the Temple Workforce Center for only (1) educational training; (2) job readiness training; (3) work skills training; (4) vocational training; (5) job search activity; or (6) employment. [Temple Transit is not required to keep records on the purpose of the trips to be made, nor to "pre-qualify" the trips by trip purpose.]

Provide the Temple Workforce Center with a monthly accounting of the number of trips made by customers, to include the following: (1) name of participant; (2) origin and destination of trip; (3) number of individuals included in the trip. [The Choices, Food Stamp Employment, or Welfare to Work Customer and one child will be covered by the $1 per trip reimbursement to be made by the Central Texas Workforce Board. Each additional child will be an additional $1.] The monthly report will include a total amount to be billed to the Temple Workforce Center (equal to the number of one-way trips taken by eligible customers and any children over one per trip). The monthly statement and billing will be mailed to the attention of Ms. Vickie Matl, Temple Workforce Center Administrator, 102 E. Central Avenue, Suite 300, Temple, Texas 76501. Ms. Matl and the appropriate case managers will review and compare the destination report with the Workforce Referral Form (Attachment A) and forward the statement and billing to the Central Texas Workforce Board for payment. Payment of the amount billed will be mailed to Mr. Ed Kabobel, Transit Manager, Temple Transit Department, Municipal Building, 2 North Main Street, Temple, Texas 76501.

Part III: METHOD OF PAYMENT

Payment shall be made by the Central Texas Council of Governments as fiscal agent for Board to the City of Temple - Transit Department.

The method of payment shall be on a cost reimbursement basis, and only for agreed upon

Figure 1. Memorandum of Understanding (Page 3).

expenditures noted above. Expenditures are those that are properly incurred by the City in rendering performance in accordance with the terms of this Agreement.

Board will submit requests for reimbursement based on agreed upon expenditures for the period said payment is being requested. Payment requests shall be accompanied by either a detailed list of expenditures or monthly cost report, and documentation for which reimbursement is being requested.

AGREED AMONG AND BETWEEN:

Susan Kamas 6-9-99

Susan Kamas Date
Central Texas Workforce Board

6-9-99

Jerry Haisler Date
Central Texas Council of Governments, Workforce Development Division

Mark S Watson June 22 1999

Mark Watson, City Manager Date
Temple Transit, City of Temple

Figure 1. Memorandum of Understanding (Page 4).

ATTACHMENT A
WORKFORCE REFERRAL FORM

The Central Texas Workforce Center has authorized _____
for referral to Temple Transit of The City of Temple. Transportation services will be provided at a small fee for the customer who participates in employment and/or education related activities within the Choices Program. Please check which program and activity in which the customer is involved.

Program:

_ Choices (TANF) _ Choices (Foodstamps E&T)

Activity:

_ Educational Training _ Vocational Training
_ Job Readiness Training _ Job Search Activity
_ Work Skills Training

If applicable, please indicate the activity site and address for routine stops.

_____ _____
Activity Site Site Address

Will customer need additional transportation service for child care? (Circle) Yes No

If yes, please indicate the address of the Child Care facility:_____

Indicate activity time schedule for customer pickup and return if possible.

Pickup:_____ Return:_____

The Central Texas Workforce Center has verified that this customer is eligible for Choices Program services and that lack of transportation is a barrier to employment.

_____ _____ _____
Workforce Development Specialist (Please print name) Date Workforce Development Specialist (Signature)

Figure 1. Memorandum of Understanding (Page 5).

How to Ride Temple Transit

For Participants in the Temple Transit – Central Texas Workforce Center Pilot Transportation Program

(June 7, 1999 – September 30, 1999)

If a Temple Workforce Center Workforce Development Specialist has referred you to the City of Temple offices to take advantage of Temple Transit services, you will need the information below. **Please keep this sheet handy.**

1. You will need to get a photo identification card at the Temple Transit office in the Temple Municipal Building located at 2 North Main Street. Be sure to have your Workforce Referral Form with you. Your photo ID card will be sent to you in the mail. You will need to keep it with you and use it whenever you ride Temple Transit. It has a barcode on the back that will be swiped on a reader on the Temple Transit vehicles – much like the codes you see on groceries that are swiped at the check-out stand.

2. Temple Transit offers door-to-door, "demand responsive" transportation service to those individuals eligible for the service. Once you receive your ID card you can begin scheduling trips. There are two types of transit service – the kind you get on a trip-by-trip basis ("demand service") and the kind that you sign up for on a regular basis ("routine service"). Details on how to use each service is on the back of this sheet.

3. Temple Transit runs service from 7:00 a.m. to 7:00 p.m. on Monday, Tuesday, and Wednesday; and from 7:00 a.m. to 10:00 p.m. Thursday, Friday, and Saturday. Regular service is provided on holidays. No service is available on Sunday. You can call to arrange trips during the service hours.

4. To call Temple Transit to arrange a ride, dial **724-5959**. The telephone operator will work with you to schedule your trip as close to the time you need it as possible. Sometimes all the seats are taken, and they will recommend alternative times to you. When you call you must give the telephone operator the following information:

   -- Your Name
   -- Your ID Number
   -- A pick-up address and time
   -- The address of your trip destination
   -- The number of passengers
   -- A phone number (for calling you back)

5. Generally you will want to try to call as much as five days in advance to arrange your trips. Requests for "routine" service can be made up to two weeks in advance.

6. You do not pay a fare to ride Temple Transit, **but you must show them your ID card**. Through this pilot project the Workforce Center programs and the City of Temple are sharing the cost of your ride.

Figure 2. How to Ride Temple Transit/Temple Transit Riding Rules (Page 1).

Temple Transit Riding Rules

- **ID Card**
  Keep your card with you at all times. If you lose it, there is a $5.00 replacement fee. You cannot ride the service without an ID card.

- **Demand Service**
  Demand service is that service available for trips that do not occur on a regular basis. You can use it for job readiness training, work skills, training, educational training, vocational training, or job search activities. You can call to arrange service up to five (5) days in advance.

- **Routine Service**
  Routine service is for any trip that occurs on the same time and day of every week for a minimum of four consecutive weeks and has the same beginning and ending locations. Once you set up a "routine" trip it is considered "indefinite" and you must make a call to cancel that trip when you no longer need it. Requests for routine service must be made at least five (5) days in advance prior to the first trip. It may be requested as much as 14 days in advance.

  It is important to know that if you aren't available for a routine trip two times in a row that you will be taken off the schedule until you contact Temple Transit. If you don't call within two weeks, your routine service will be canceled.

- **Pick-up Times**
  Another **very important rule** is that you must **be prepared to be picked up by Temple Transit at least 15 minutes prior to the scheduled time, or up to 15 minutes past the time your trip is scheduled. When the driver arrives to pick you up, he or she will wait no more than 5 minutes for you to get in the vehicle.**

  If the driver is unable to reach your pick-up location within the allowable time frame, you will be contacted by phone and informed of the delay and anticipated arrival time.

- **Miscellaneous Rules**
- Drivers are not permitted to enter your home.
- You are required to wear seat belts and the driver won't start until you are buckled up.
- Children under two years old MUST be in a car seat, as required by State law. You must provide the car seat.
- Profanity or abusive conduct is not permitted and may result in suspension or termination of service. Eating, drinking, and smoking is not allowed.
- Drivers are not allowed to accept tips.
- ID cards are non-transferable and shall be revoked if misused. You shall not loan, sell, give, or allow the use of your ID card to another person.

Remember, to schedule a Temple Transit trip call 724-5959.

Figure 2. How to Ride Temple Transit/Temple Transit Riding Rules (Page 2).

Dear Temple Transit - Central Texas Workforce Center Pilot Program Participant:

We are pleased to announce that you are now eligible to participate in the Temple Transit - Central Texas Workforce Center pilot program for Choices Program customers involved in employment and/or education related activities. This eligibility is good from today through September 30, 1999.

Enclosed is your personal identification card. **Please carry your ID card with you at all times when using the transportation system.** Your ID card is all you need when participating in the program and is valid for as long as you are in the program. The transit vehicle driver uses your ID card to record your trip information.

You must carry your ID card with you when using the transportation system. There is a $5 replacement fee to replace a lost ID card. You cannot use the transit service if you do not have your valid ID card.

Enclosed is important information on how to use Temple Transit. Please keep this information handy for your use in scheduling trips and remembering the transit system rules. Also enclosed is a copy of the Temple Transit Suspension and Termination of Service Policy, and a Commendation/Complaint Form that you may use.

Sincerely,

Edward A. Kabobel, Jr.
Transit Manager
Temple Transit

Temple Transit Department
Municipal Building
2 North Main Street
Temple, Texas 76501
254-298-5603

Vickie Matl
Temple Manager
Central Texas Workforce Center

Central Texas Workforce Center
102 E. Central Avenue
Suite 300
Temple, Texas 76501
254-771-2555, Ext. 413

Figure 3. Letter to Pilot Program Participants, with Attachment (Page 1).

Temple Transit Policy

Suspension and Termination of Service – Responsibility

If a passenger cancels five (5) scheduled trips within a 30-day period for reasons other than those of a necessary or emergency nature, as determined by the Planner/Transit Manager, service will be suspended for a period of one (1) month. This rule pertains to late cancellations, that is, cancellations made after service hours when no other trip can be rescheduled in the canceled time.

Abuse of the policy on cancellations shall result in termination of the violator's Temple Transit service eligibility. Two suspensions in a six (6) – month period constitutes abuse.

When no cancellation notice is reported and the passenger is not at the scheduled location at the scheduled time, he/she shall be classified as a "no show." A record of all no shows will be kept.

The passenger shall be notified by mail of the first no show. If a passenger is classified as a no show twice within a six (6) – month period, eligibility shall be suspended for one (1) week. Three (3) no shows in six (6) months will result in suspension of one (1) month, and four (4) no shows will result in suspension for two (2) months. In the case of temporary suspension of a no show, suspension of service must not begin until the appeals process is complete.

When a suspension is warranted, the suspension period must run concurrently without interruption.

Abuse of the policy on no shows shall result in termination of the violator's Temple Transit service eligibility. Five (5) no shows in a six (6) – month period of time constitutes abuse.

Passengers who demonstrate mental, behavioral, emotional or psychological tendencies toward violent or destructive behavior shall have their Temple Transit service eligibility terminated.

Passengers may appeal their suspensions or terminations by written notification as outlined in Section VI. Appeal Procedure.

A passenger whose service has been terminated because of abuse may reapply for eligibility one (1) year from the date of termination.

The City Manager shall have the discretion to alter the penalty as directed by circumstance.

VI. Appeal Procedure

Introduction

Various federal agency regulations implementing Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act of 1991 (ADA), require grant recipients that employ fifteen or more persons to adopt and file procedures that incorporate appropriate due process standards and provide for the prompt and equitable resolution of complaints alleging any action prohibited by the implementing regulations. The City of

Figure 3. Letter to Pilot Program Participants, with Attachment (Page 2).

Temple, being a recipient of numerous Federal grant programs, has adopted the following appeal procedures as the mechanism for resolving complaints relative to any Federally assisted program activity undertaken by the City of Temple.

Procedure

The following administrative procedure has been established to insure prompt and equitable resolution of appeals of any persons with a disability based on any alleged acts of discrimination due solely to his/her disability that would cause him/her to be excluded from participation in, or denied the benefits of, any City of Temple transit service program or activity receiving Federal financial assistance.

The procedure will also be used to appeal suspensions and terminations of service. Should the appellant waive his/her right to appeal, the termination or suspension of service will be imposed beginning 10 days from the date of notification.

STEP ONE

Any person with a disability who feels that he/she has been discriminated against in any City of Temple transit service program or activity which is prohibited under Section 17.7, Department of Transportation Final Regulation Implementing Section 504 of the Rehabilitation Act of 1973 (Nondiscrimination on the basis of disability in Federally-Assisted programs and Activities Receiving or Benefitting from Federal Financial Assistance) and the Americans with Disabilities Act of 1991 (ADA) because of his/her disability, may communicate directly with the Transit Manager or his/her designee to seek clarification or interpretation of the event or occurrence, and passenger responsibilities. If the problem is not solved informally at this step, the appellant may proceed to the second step, at which point the matter becomes a formal appeal.

STEP TWO

Appeal to Transit Advisory Board

In this step, the appellant shall present the matter in writing to the Transit Advisory Board, within 180 days of the event or occurrence, including a brief description of the matter and the results of any action taken or decisions at Step One. If the appellant is not satisfied with the finding of the Board, the appellant may proceed to the third step.

STEP THREE

Appeal to the ADA Coordinator

In this step, the appellant shall present the matter in writing to the ADA Coordinator, within 180 days of the event or occurrence, including a brief description of the matter and the results of any action taken or decisions at Step One. The ADA Coordinator and appellant shall follow the procedures contained in the City of Temple Americans with Disabilities Grievance Procedure (copy attached).

The City Manager's findings shall serve as the final local authority as stated in the City of Temple Americans with Disabilities Grievance Procedure.

Figure 3. Letter to Pilot Program Participants, with Attachment (Page 3).

Confidential

COMMENDATION / COMPLAINT REPORT
Temple Transit Program
2 North Main Street
Temple, TX 76501

Date of Trip:_____

Destination:_____

Driver:_____

Please describe your commendation or complaint:

Please return this form to the address above,
to the attention of Edward A. Kabobel, Jr.

Figure 3. Letter to Pilot Program Participants, with Attachment (Page 4).

Central Texas Workforce Centers

102 E. Central Avenue, Ste. 300
Temple, Texas 76501
254.771.2555 800.493.8884
254.771.2822 fax

1305 S. Key Avenue, Ste. 102
Lampasas, Texas 76550
512.556.4511
512.556.4514 fax

Texas Workforce Center

207 E. Avenue D
Killeen, Texas 76541
254.526.4448 800.460.8801
254.526.4985 fax

313 N. Main Street
Rockdale, Texas 76567
512.446.6440
512.446.5305 fax

The **Central Texas Workforce Center** has authorized _____ for referral to **Temple Transit** of **The City of Temple.** Transportation services will be provided at a small fee for the customer who participates in employment and/or education related activities within the **Choices Program.** Please check which activity and program in which the customer is involved.

- ☑ Choices (TANF)
- ☐ Choices (Food Stamps E&T)
- ☐ Job Readiness Training
- ☐ Work Skills Training
- ☑ Educational Training
- ☐ Vocational Training
- ☐ Job Search Activity

If applicable, please indicate the activity site and address for routine stops.

Temple College
Activity Site

2600 So. 1st St. Temple, TX 76504
Site Address

Will customer need additional transportation service for child care? (Circle) (Yes) No

If yes, please indicate the address of the Child Care facility: Saulsbury Day Care Ctr. 206 So. 24th St. Temple, TX 76501

Indicate activity time schedule for customer pickup and return if possible.

Pickup: 8:00 Am **Return:** 1:00 pm.

The **Central Texas Workforce Center** has verified that this customer is eligible for **Choices Program** services and that lack of transportation is a barrier to employment.

Tynna Dixon
Workforce Development Specialist (Print)

6/28/99
Date

Tynna Dixon
Workforce Development Specialist (Signature)

Figure 4. Sample Referral Form.

PILOT TEST RESULTS

The results of the Temple Transit pilot test are decidedly mixed. The surrogate system of testing cooperation between a public transit system and a human services agency, using the barcode technology of Temple Transit, demonstrated that coordination is possible. However, a number of factors significantly limited the actual provision of transit service to the targeted rider group. This report provides a review of the results from the perspectives of (1) technical operations, (2) cost and financial implications, (3) institutional arrangements, (4) mobility impacts, (5) operation reaction, and (6) customer acceptance.

Technical Operations

Technically, the pilot test functioned well. The Temple Transit system, using the barcoded identification card, was able to deal with Workforce Center clients for trip scheduling and payment of fares. The system captured information related to individuals authorized to ride the transit system. At the end of the month, Temple Transit sent an invoice to the Temple Workforce Center billing for those services. Figure 5 is a copy of the invoice for the month of August and an example of trip-detail information.

Cost and Financial Implications

There were no real out-of-ordinary costs associated with the pilot test, other than staff time spent in discussing the arrangements. The City of Temple used the same barcode identification cards as used for its regular elderly and disabled ridership. Researchers initially considered the purchase of magnetic stripe readers when they thought it possible to use the LSC directly. Temple Transit vehicles could be equipped with those readers for approximately $200.00 per unit, and the magnetic stripe readers could be tied into the existing communication system used for barcode readers onboard the vehicles.

The Workforce Centers anticipated the reduction of individual payments to clients as one of the benefits of the pilot test arrangements. Individuals eligible for transportation support are normally provided with cash (or check). Under the pilot test, the Workforce Centers would benefit from paying once a month for the trips taken by the clients, thereby reducing the number of payments. The Workforce Center was unable to realize that reduction in the number of payments because of the limited use of the system by clients.

Institutional Arrangements

Institutionally, the pilot test successfully demonstrated the agencies' desires to coordinate and work together to provide services. The development of a memorandum of understanding between agencies was a somewhat simple task. Researchers used an existing Workforce Center MOU as the starting point for drafting the MOU, adapting the agreement to fit the pilot test arrangements. Each party (Central Texas Workforce Development Board, Temple Transit, City of Temple legal staff, and Temple Workforce Center) reviewed the draft and offered amendments.

Edward A. Kabobel, Jr.
Transit Manager

Ms. Vickie Matl
Temple Workforce Administrator
102 E. Central Avenue, Suite 300
Temple, Texas 76501

Dear Vickie:

I have enclosed the documentation for the trips provided by Temple Transit to Ms. Mary Bovee in August 1999. Ms. Bovee was provided twenty (20) one way trips. The documentation provides name of participant, origin and destination, and number of persons included in the trip.

Please remit a check payable to the:

City of Temple
2 North Main Street
Temple, Texas 76501

Please mail the check to the attention of:

Ed Kabobel
Transit Manager
2 North Main Street
Temple, Texas 76501

Thank you for your assistance. Hopefully we can continue to provide increased service in the future.

Sincerely,

Edward A. Kabobel, Jr., CCTM
Transit Manager

Figure 5. Invoice for Services, with Attachment (Page 1).

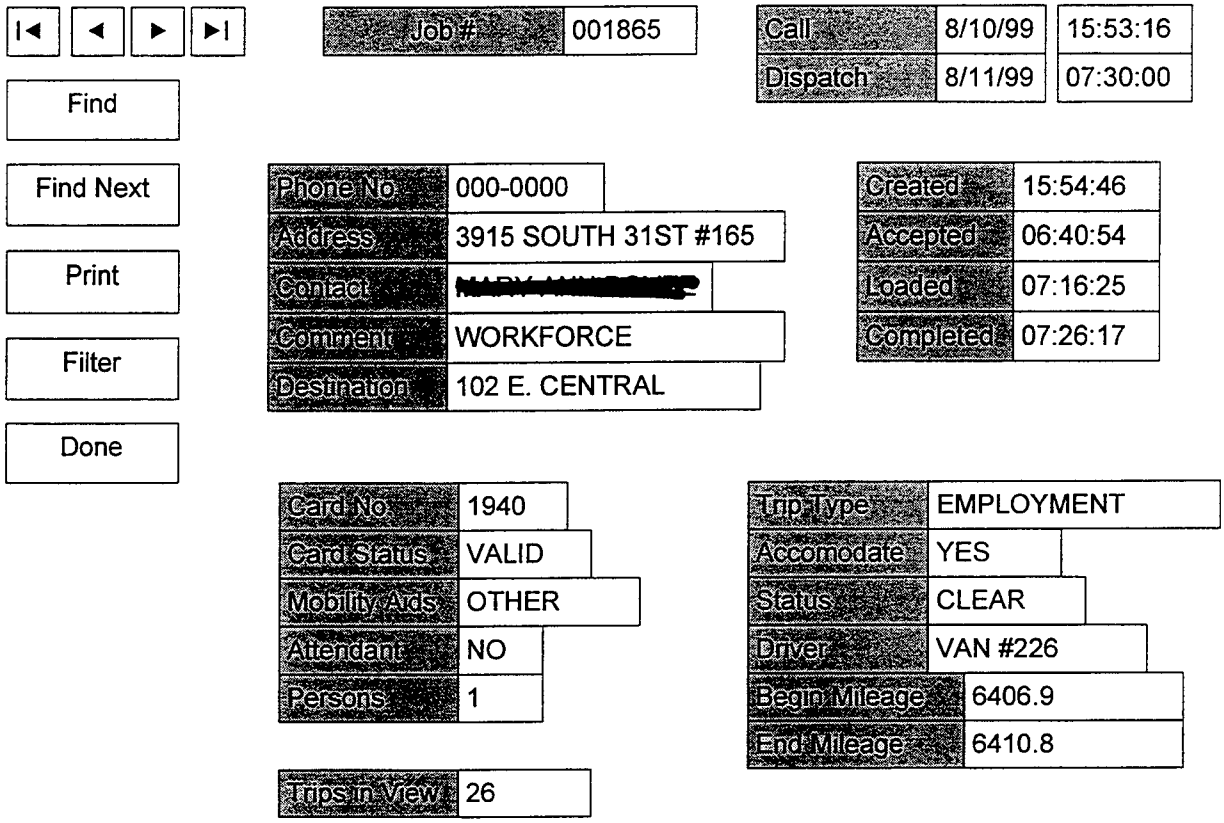

Figure 5. Invoice for Services, with Attachment (Page 2).

The only negative issues were related to the scheduling and dispatching of the public transit system and, more directly, to the ability of the system to schedule trips for the Workforce Center clients. Interviews with Workforce Center personnel indicated that clients had great difficulty in scheduling trips. In some instances the difficulty in scheduling trips is a reflection of the limits under which the system operates regarding regularly scheduled trips. Federal regulations implementing the Americans with Disabilities Act require that subscription service may not absorb more than 50 percent of the number of trips available at a given time of day, unless there is excess non-subscription capacity *(5)*. Because the Scott & White operation of the service had a minimum number of vehicles in operation during the normal work-trip peak period, options for scheduling routine trips during peak periods were few. Judging the available capacity was also a bit difficult, as the scheduling and dispatching process often led to a minimum use of the vehicle (one person per vehicle, without stops along the way).

Just as the pilot test was being implemented, Hill Country Transit was provided with $5,000 in Welfare to Work funds from the City of Temple. The Temple Workforce Center director was able to make arrangements with Hill Country to handle trips generated by the interest in the pilot test that Temple Transit could not accommodate. While no testing of any smart card technology was involved in the Hill Country service, the system did provide service that met the goals of the Workforce Center.

In debriefing the Workforce Center case managers (August 31, 1999), researchers found that the institutional arrangements did not appear to pose a problem for clients. There was at least one individual who had a problem making arrangements to get to the Temple Transit office to acquire the photo identification card. Hill Country Transit was available to take clients to the City's offices for that task, if necessary. Had the LSC been used directly, this would not have been an issue. However, when researchers were still anticipating using the LSC directly, planning discussions identified a potential problem. Families have only one LSC; however, a cardholder's dependent child could be eligible for Workforce Center assistance, as well as the cardholder. In that case, some surrogate would be necessary. The researchers' initial plans called for the cardholder to use the card and additional members of the family with eligibility to be given a barcoded photo identification card.

Mobility Impacts

The pilot program enhanced mobility for the individuals taking advantage of the Temple Transit services. The use of the barcoded card was more convenient for them, as it replaced the need for cash. There was not a great impact on general mobility of the targeted group because the system's capability to accommodate the group's trips was not great. According to the Temple Transit director (September 22, 1999), the system provided no target-group trips in the months of June and July, and provided 20 one-way trips in August. These issues and others were the subject of discussion during the recently completed study sponsored by the City of Temple.

Operation Reaction

The use of the barcode card did not present any difficulty for Temple Transit personnel, as it was already in use at the system. Scheduling/dispatching staff did not adapt well to the computerized system provided by researchers. Vehicle operators saw additional loads on vehicles, as scheduled by the system, as a challenge. Perhaps a longer training period and an emphasis on load efficiencies would generate higher system capacity. An anticipated change in the contract service provider should also make a difference in the ability of the system to accommodate trip requests.

Customer Acceptance

Researchers acquired customer feedback from Workforce Center caseworkers. There appeared to be no difficulty in using the system, only in being able to schedule trips. The one individual who used the system for 20 one-way trips during August could not be contacted directly. She used a pay phone to arrange the trips and had changed her residence by the end of the month. The customer would have benefited from using the LSC directly for the service, as it would have eliminated the need to go to the municipal building for processing of a photo identification card.

GENERAL SUMMARY COMMENTS

In mid-September, according to the Temple Transit director (September 22, 1999), only three individuals had acquired barcoded identification cards. However, the City of Temple and Workforce Center have agreed to continue the pilot test indefinitely. On September 16, 1999, the City of Temple extended for one year the Scott & White contract for providing transit operations. As this report is written, negotiations are underway for Hill Country Transit District to be assigned the contract and assume operations in early October 1999, following Temple City Council approval of the contract assignment (anticipated October 7, 1999). With the change in service providers, there may be an improvement in the ability of the system to accommodate trips. More experienced dispatching personnel, who will also soon be able to utilize a computerized scheduling/dispatching system provided by Temple Transit, could accomplish this.

Temple Transit anticipates doing a pilot test of fixed route service in the spring of 2000, offering a north-south route and an east-west route. This service would be available to all individuals and would no longer be limited to elderly and disabled individuals. The use of some form of prepaid fare medium would seem to appropriately meet the needs of individuals who were targeted in the smart card pilot test. Under a similar arrangement, the Workforce Center could purchase a monthly or weekly pass to be used by clients.

CHAPTER 4. ELECTRONIC BENEFITS TRANSFER IN TEXAS AND FUTURE RESEARCH

A number of factors influence the implementation of EBT systems in Texas. These factors include federal and state legislation, agency policies, evolving private business arrangements, and advancements in technology. At the federal level, the Debt Collection Act of 1996 requires that federal payments be made to recipients by electronic funds transfer. Additional legislation requires that all states implement EBT systems for the Food Stamp Program by 2002. As of May 1999, 36 states and the District of Columbia have on-line electronic Food Stamp programs (29 of those with statewide programs); 2 states have operational off-line food stamp EBT systems; 6 states have approved contracts for the statewide implementation of EBT systems; and 4 states have selected EBT vendors prior to obtaining approved contracts *(6)*.

All but two states have systems that use magnetic stripe cards and "on-line" authorization of transactions *(6)*. When paying for groceries, the food stamp customer runs the card through an electronic reader or a point of sale (POS) terminal, and then enters the confidential personal identification number (PIN) to access the food stamp account. Then, the processor electronically verifies the PIN and the account balance and sends an authorization or denial back to the retailer. The recipient's account is then debited for the amount of the purchase, and the retailer's account is credited. The retailer is paid through a settlement process at the end of the business day. The retailer, in effect, pays a negotiated transaction fee if a third-party clearinghouse service is used for debit/credit transactions.

LONE STAR CARD AND ELECTRONIC BENEFITS TRANSACTIONS IN TEXAS

Texas has been one of the leading states in testing and implementing EBT systems. The LSC currently represents the largest EBT program in the country. After a successful 1994 pilot test in Houston, the LSC was implemented on a statewide basis for recipients of the Food Stamp program and the TANF program in 1995.

The LSC uses the magnetic stripe technology. Individuals present the LSC to merchants for payment of eligible goods. The recipient swipes the card through a reader, which is similar to or is the same device used for credit and debit cards, and enters his or her personal identification number. The client indicates the account type (Food Stamps or TANF) and verifies the charge. The account is verified through an 800 telephone number that links into the LSC database. The system records the transaction and debits the account. Merchants batch process LSC payments daily. Currently the state may provide the retailer with state-owned equipment, or retailers may use their existing debit/credit devices. In the latter case, merchants are compensated at the rate of 2.5 cents per transaction in recognition of the cost savings to the state for not having to provide equipment.

More than two million clients in the state use the LSC. Clients make approximately six million transactions a month, at some 14,000 retailers across Texas who accept the card *(7)*. DHS staff estimate that the LSC will result in $126.6 million in savings to the federal and state governments through 2001. The program has eliminated the costs associated with printing,

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mailing, and processing the previously used paper Food Stamp coupons. There have also been reductions in fraud and abuse.

DHS administers the LSC, Food Stamp program, and TANF program *(6)*. Based on a competitive procurement process, DHS awarded a contract to Transactive Corporation for the statewide development, implementation, and operation of the LSC. In February 1998, Transactive Corporation announced its decision to eliminate its EBT business and entered into an asset purchase agreement with Citicorp Services, Inc. The U.S. Department of Justice filed an antitrust action in federal district court in Delaware in July 1998 seeking to stop the deal. In January 1999, Citibank announced that it would not pursue the purchase of Transactive's EBT contracts and the Department of Justice antitrust action was consequently dropped. In the meantime, the State of Texas has been considering its options for providing the EBT service.

This transition period had a major effect on the ability of the pilot test project to include actual use of the LSC to test cooperation between state social service agencies and local public transit agencies. Because Transactive Corporation was unwilling to expand any of the services offered, researchers could not call for establishment of a transportation account within the general framework of the program. Other pilot tests contemplated were also affected. The impact was not nearly as great as in the state of Indiana, where Transactive Corporation was selected to provide EBT services and was scheduled to initiate EBT service in Indiana in April 1999 *(8)*. When the company decided to leave the EBT market, that delayed initiation of an EBT program in Indiana for at least a year while the State of Indiana rebids the contract.

During the time of this pilot test, Transactive Corporation and the State of Texas were also in the midst of dealing with the year 2000 (Y2K) issue. Assuring Y2K compliance was of the utmost priority to the private company administering the LSC and to all those interacting with the system (State of Texas human service agencies and grocery retailers).

The State is currently considering how it will provide EBT services. Under consideration is the provision of some services directly by state employees, using software developed by Transactive Corporation. The State may use some combination of private vendors to provide all of the components of the EBT program or may consider other smart card technologies, with the future LSC probably using a combination of magnetic stripe and computer chips. Over the long term, it appears that the evolution to a combination card holds promise for coordinating a variety of transit-related applications.

Legislation also addresses EBT use by agencies in Texas. Legislation passed in 1995 established an Interagency Task Force on EBT. The mission of the Task Force is to advise and assist state agencies in adding new programs to the statewide EBT system and to coordinate efforts among agencies. Based on the 1995 act and subsequent legislation passed in 1997, the Task Force is charged with:

- serving as a resource to individual state agencies in planning, implementing, and operating EBT programs;

- developing operating standards and guidelines for the long-term use of EBT in the state to avoid redundant activities and to maximize the use of the state's investment in EBT; and

- reviewing possible demonstration projects and tests of EBT and related technologies.

The Task Force is comprised of 13 members. The Texas Comptroller of Public Accounts serves as the presiding office for the Task Force. Other agencies represented on the Task Force include the Attorney General's Office, the Texas Health and Human Services Commission, DHS, the Department of Health, the Texas Workforce Commission, and the Texas Rehabilitation Commission. In addition, two representatives each from retailers maintaining EBT point-of-sale equipment, bankers or ATM owners, and consumer or client advocacy organizations sit on the Task Force.

In the 1999 session of the Texas Legislature, legislation was passed that will affect EBT in Texas. A bill passed that calls for a test of incorporating provision of Medicaid benefits transfer using the LSC. A Women with Infant Children (WIC) pilot test is already planned, as well. It appears that those pilot tests will be initiated following the departure of Transactive Corporation, perhaps in 2001, according to Department of Health personnel involved in the project (August 12, 1999).

There should be an opportunity for the issue of incorporating transportation benefits in the LSC program to be discussed once the post-Transactive Corporation program is developed and implemented. Programs such as WIC and Medicaid are already in line for implementation of a pilot program.

ALTERNATIVE APPROACHES AND TECHNOLOGIES

While this pilot test did not allow direct use of the LSC, researchers developed approaches that should still be relevant once a new system is in place in 2001 or 2002. These approaches and technologies are summarized below for that possible future use.

A number of approaches and technologies can be used with transit smart cards. On one end of the spectrum is a transit-focused approach, providing only fare payment capabilities. At the other end of the continuum is a multi-use, multi-agency smart card that can be used to pay for numerous public and private goods and services. There are many levels of integration and multiple-use cards between these two approaches. Potential technologies include magnetic stripe cards, contact cards, contactless cards, hybrid cards, combination cards, and other techniques. In addition, these technologies can be programmed to perform different functions and can be linked in a variety of ways.

Over the long term, a non-magnetic stripe technology appears to offer numerous benefits and should enhance future pilot tests. As noted previously, current thinking is that the technology used with the LSC may evolve to a hybrid approach using magnetic stripes and embedded computer chips. The Washington Metropolitan Area Transit Authority's bus and rail system introduced the first use of such a card in May 1999 *(9,10)*. The card, which looks like a regular

credit card, is a stored-value card that will take up to $198 worth of fare value. More than 10,000 cards were sold in the first two months of availability. Known as "SmarTrip," it provides contactless passage through fare gates and parking facilities, similar to the way the "speedpass" is used at Mobil gasoline stations and the way transponders are used on toll roads.

In addition to determining the basic smart card technology to use in the pilot tests, public transit operators should also consider the design and operation of the overall system. Systems may use a number of alternative scenarios or system designs with either the LSC or another smart card technology. Figures 6 through 10 illustrate the different approaches that may be appropriate for future consideration.

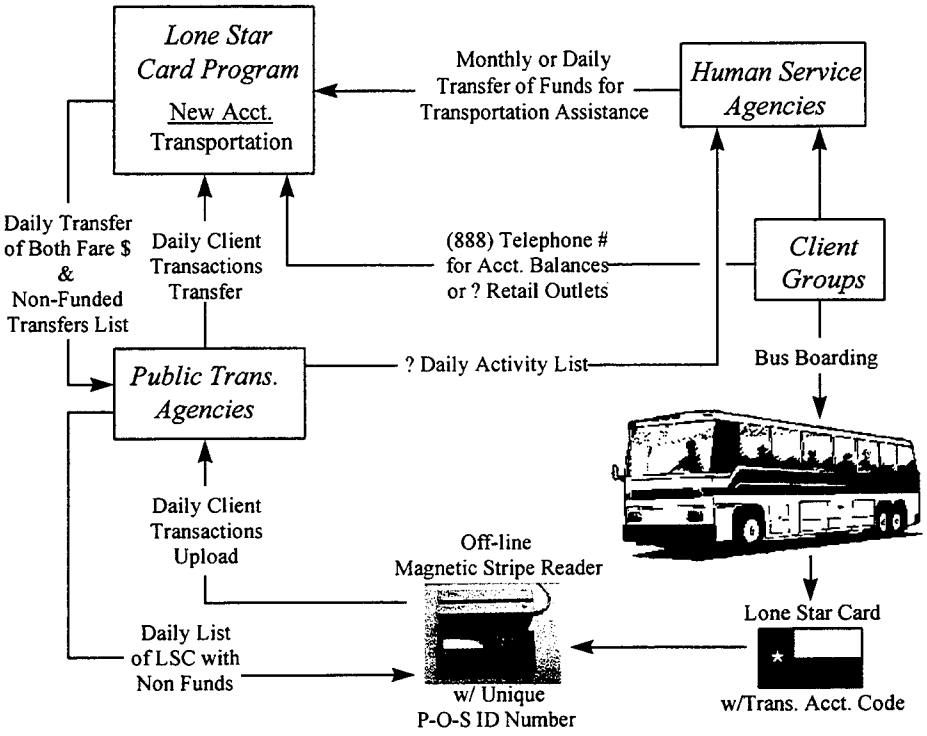

Figure 6. Off-Line On-Vehicle Lone Star Card Reader Option.

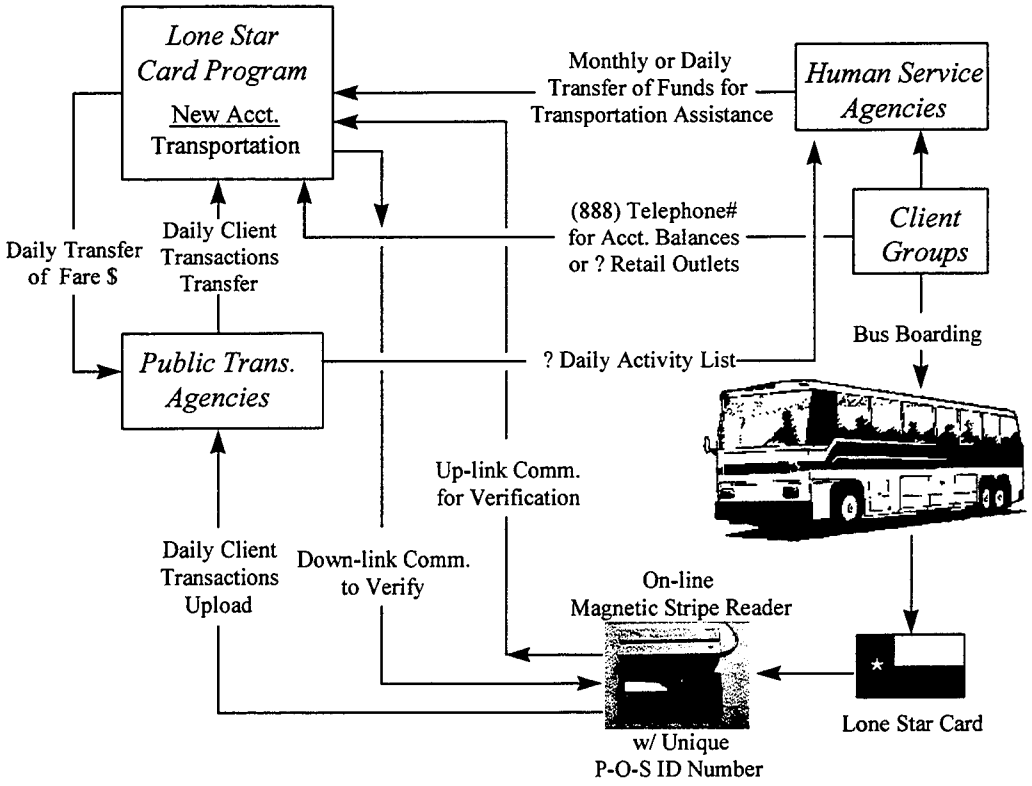

Figure 7. On-Line On-Vehicle Lone Star Card Reader Option.

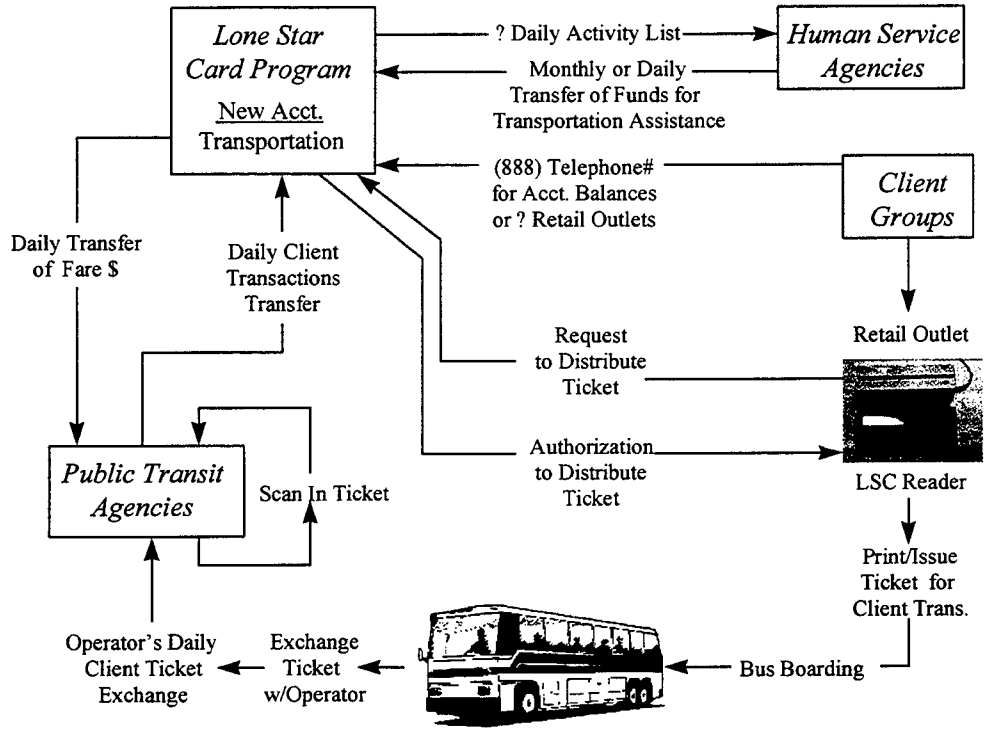

Figure 8. Retail Outlet Distribution Option.

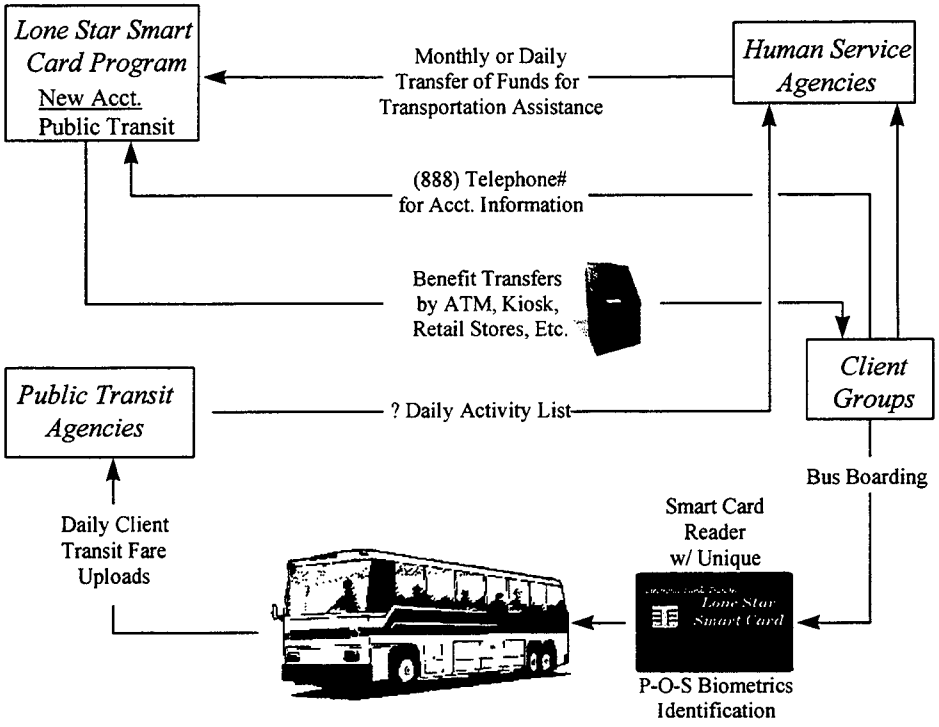

Figure 9. Combination Smart Card Option.

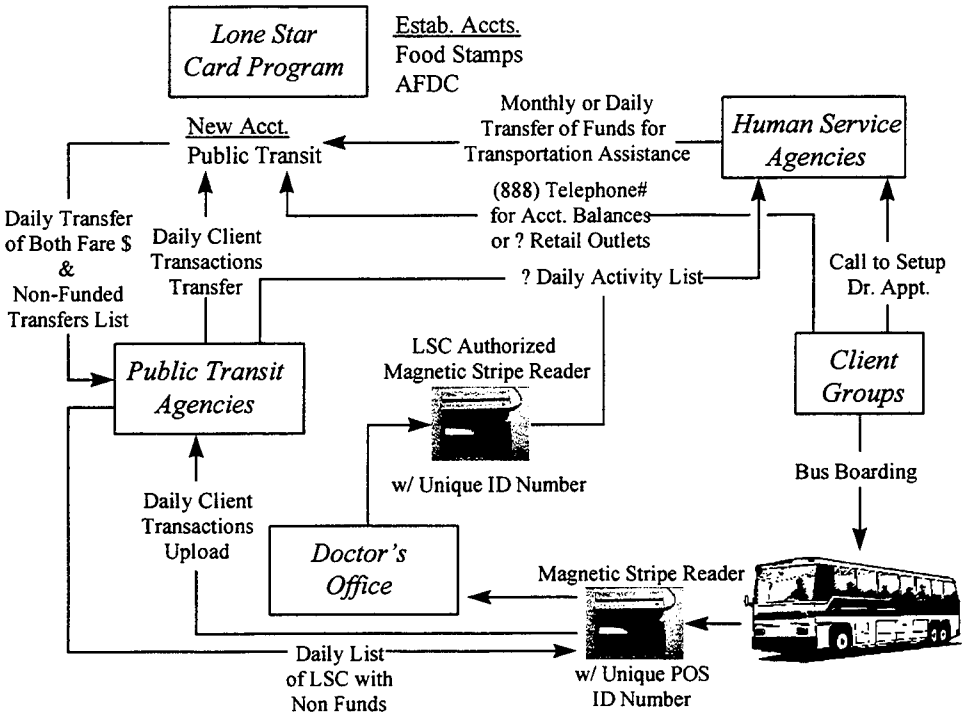

Figure 10. Off-Line Lone Star Card Medicaid Option.

As previously mentioned, future combinations of benefits distribution within the Department of Health are already being contemplated, with state agency programs apparently lining up for implementation. The WIC program is the most likely state-administered program to next benefit from EBT. Due to the WIC program's somewhat complicated prescriptive requirements, a simple magnetic stripe card cannot accommodate all the required elements of information. It is currently envisioned that a combination card, utilizing both a chip and the magnetic stripe, will be used to allow the recipients to use the LSC to receive both WIC and Food Stamp benefits. This card, when used in the WIC function, is planned to operate "off-line." That is, all the necessary information is stored on the chip and the supplying vendor will access the information relative to the recipient from the card itself. This card will continue to operate in the Food Stamp/TANF environment as the LSC does presently. Assuming a successful pilot, the current LSC technology (magnetic stripe) could be replaced with or enhanced by a chip technology to simplify the transaction processes at the vendor sites.

A transportation component could easily be added to the present LSC account as indiscriminate cash. Either through departmental negotiations or mandated by legislation, a separate transportation category could be included in the LSC program. Additional agency transportation funds could then be identified for availability to authorized individuals through use of the card.

Transaction fees are an issue that will require additional attention, depending upon the new LSC program delivery system devised. According to the president of the Gulf Coast Grocers Association (September 21, 1999), the vast majority of grocery retailers in Texas use a third-party clearinghouse service for debit/credit transactions. Some of the POS devices were furnished by the State of Texas and some were supplied by the grocery retailers who use them for other credit card and debit card transactions. If the State did not furnish the device, the retailer is reimbursed 2.5 cents per transaction to recognize the savings from not having to furnish the equipment. While the fees to grocery retailers for MasterCard and VISA are somewhat consistent (usually around 1.5 percent, with a lower percentage for very high-volume outlets), the fees charged by clearinghouse services for LSC transaction processing are fairly variable. It is normally assessed to the grocery retailer on a 4.5 cents to 8 cents per transaction basis, not on a percentage basis. Thus, the retailer absorbs the cost of the transaction fee. As participants in the EBT Task Force, the grocery retailers are in the process of evaluating their transaction costs and will be developing ideas to propose for consideration as the new LSC delivery system is developed.

Because the state will not allow passing the cost of the fee on to the individual receiving the benefits, a transit system utilizing the LSC for purchase of fares (whether at the point of the trip or for prepaid fare media) would have to accept the transaction fee as well. A survey of the acceptance of credit cards by public transit systems in the state and the availability of prepaid fare media shows that few agencies currently accept credit cards. That situation could change as the reliance on prepaid fare media increases. The "short-term options" section of this report presents detailed information about the survey.

As the State of Texas develops the next generation of the LSC, other research and demonstration activities continue around the country. While researchers found no other application of the smart

card technology where human services benefits were coordinated with transit fares, there are some other research and demonstration efforts that are worthy of continued observation.

The Federal Transit Administration (FTA) is developing guidelines and specification for multi-application electronic payment systems *(11, 12)*. This project is underway at the U.S. Department of Transportation's Volpe Center. The project seeks to define the relationship between transit operators and potential payment system partners through seven guidelines and specification documents, each defining a component relationship. The seven component relationships are: transit agency/transit agency; transit agency/financial institution; transit agency/university; transit agency/employer; transit agency/toll collection agency; transit agency/parking service; and transit agency/human service agency. FTA does not expect work on the transit agency/human service agency guidelines to begin until late 1999 or early 2000.

FTA is also sponsoring an operational test of multi-application payment systems *(11, 12)*. The intent of the operational test is to provide a working example of the resolution of institutional and technical issues associated with the implementation of a multi-application payment system. Proposals from entities wishing to execute the operational test are due to FTA by October 25, 1999. Proposals must include using electronic payment systems for transit fare collection, parking payment, and electronic toll collection. A 50 percent local match is also required. Only one grant will be made for execution of an operational test.

SHORT-TERM OPTIONS

DHS executed a survey in October 1998 requesting interest from a variety of public and private entities in participating in a LSC pilot test. Figure 11 shows a copy of the survey instrument used in the survey. Just as with the public transit service pilot test, the situation with the LSC provider contract prevented those pilot tests; however, the survey results pointed to the fact that there were few, if any, service providers equipped with POS devices that could accept the LSC. According to the DHS staff person responsible for the survey (September 22, 1999), while the majority of grocery retailers have this equipment in place, the others surveyed–among them, utility companies (electrical, natural gas, butane/propane, and telephone) and medical and medicine suppliers–did not.

Researchers surveyed the public transit providers in the state of Texas for acceptance of both credit cards and debit cards, and for the availability of prepaid fare media. Figure 12 is a copy of the survey instrument. Table 4 includes a full listing of the responses.

The vast majority of public transit agencies offer prepaid fares through daily, weekly, or monthly passes. Thirty-eight of the forty-one rural public transportation (FTA Section 5311) systems responded to the survey. Of those responding, 66 percent offer prepaid fares. All of the small urban transit (FTA Section 5307) systems responded to the survey. A total of 89 percent of the 5307 systems offer prepaid fares. All of the metropolitan transit authorities (MTAs) in the state responded and all offer prepaid fares. Three of the MTAs accept credit cards for prepaid fare media and other items. One of the 5307 systems, NETS of Tarrant County, accepts credit

TEXAS
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Dear Sir or Madam,

The Texas Department of Human Services, in conjunction with the Texas Comptroller of Public Accounts, the State Treasury, and the Department of Information Resources, implemented a statewide Electronic Benefits Transfer (EBT) system in 1995. The EBT program replaced paper food stamps and Temporary Assistance For Needy Families (TANF) grant warrants with plastic debit cards, called Lone Star Cards, which are similar to commercial debit or credit cards.

The State of Texas currently operates the largest EBT system in the country, with the Lone Star card providing food stamp and TANF benefits to more than 1.8 million Texans. At this time, benefit recipients are able to utilize their cards to access food and cash benefits in over 14,000 authorized retail stores that participate in the EBT program. It is estimated that the Lone Star card program will save Texas taxpayers $10.6 million and the federal government $79 million in administrative costs by the year 2001, and reduce the incidence of food stamp and TANF fraud.

The 1997 session of the Texas Legislature passed House Bill 1439 which requested the Department of Human Services to encourage housing authorities, utility companies, public transportation companies, and other nonfood retailers to accept payment for TANF goods and services through the state's EBT system. Potential benefits of the EBT system for participating companies include:

- elimination of the need for paper vouchers, checks, and cash
- automatic daily reconciliation of transactions
- increased consumer demand for goods and services by ensuring that benefits are used for the specified purpose
- the ability of Lone Star Cards to utilize existing Point of Sale machines with only minor modifications

To assess the feasibility of using the EBT system to accept payment for TANF goods and services within these sectors, DHS is conducting a survey to determine the level of interest in participating in the EBT program among nonfood retailers. We have enclosed a questionnaire requesting information regarding your interest in accepting the Lone Star card as a method of payment for services. Please assist us by completing the survey and returning it to DHS in the enclosed postage paid addressed envelope. Your answers are important to the State of Texas in determining the plausibility of expansion of the Lone Star EBT system into nonfood markets. Thank you for your cooperation.

If you have any questions, please contact me at my office number (512) 231-5803, fax (512) 231-5836, or e-mail address (anita.fulgham@dhs.state.tx.us)

Sincerely,

Anita Fulgham

Anita Fulgham
Project Manager

Enclosure

John H. Winters Human Services Complex ★ 701 West 51st Street ★ P.O. Box 149030 ★ Austin, TX 78714-9030 ★ (512) 438-3011
Call your local DHS office for assistance.

Figure 11. Electronic Benefit Transfer System Survey, with Attachment (Page 1).

TEXAS Department of Human Services

ELECTRONIC BENEFIT TRANSFER SYSTEM SURVEY

Please fill in the circle next to the response that best represents your opinion to the following questions.

1. Do you presently accept a credit/debit card? Ⓨ Ⓝ

2. Have DHS clients requested to pay for your services with the Lone Star card? Ⓨ Ⓝ

3. Have you been contacted by third party entities to accept the Lone Star card? Ⓨ Ⓝ

4. Are you interested in participating in the EBT system? Ⓨ Ⓝ

5. If potentially interested in participating in the EBT system, would you still be interested under the following conditions:

Company pays monthly fees of $100 for Point of Sale	Ⓨ	Ⓝ
Company pays fees to modify existing Point of Sale equipment	Ⓨ	Ⓝ
Company incurs cost of installing new equipment to use debit card system	Ⓨ	Ⓝ
Company pays a portion of fees stated above	Ⓨ	Ⓝ

6. If not interested in participating in the EBT system, indicate which of the following reasons represent the nature of your disinterest? (You may choose more than one response.)

- ○ Company not willing to incur costs of operating, modifying, or installing the EBT system
- ○ The EBT program appears to be incompatible with company's current payment system
- ○ DHS clients do not constitute a large enough proportion of customer base for company to benefit from participating in the system
- ○ Feel that the complications of implementing the system outweigh the benefits for company

7. What type of service do you provide?

- ○ Public Transportation
- ○ Electricity
- ○ Medicine/Medical Supplies
- ○ Public Housing
- ○ Natural Gas
- ○ Gasoline
- ○ Butane/Propane
- ○ Telephone
- ○ Other

Please indicate name of company below (optional):

Figure 11. Electronic Benefit Transfer System Survey, with Attachment (Page 2).

TEXAS TRANSPORTATION INSTITUTE

The Texas A&M University System

Cynthia A. (Cinde) Weatherby
Program Manager - Institutional Policy Program
Acting Program Manager - Systems Planning Program

Associate Director for Research
Southwest Region University Transportation Center

TO: DATE:

FROM: Cinde Weatherby

SUBJECT: Fare Media

I'm doing a quick survey of Texas transit systems to discover which offer pre-paid fare products and if credit cards or debit cards are being accepted. Would you please fill in the form below and fax it back to me today at 817/461-1239. If you would like to receive a copy of a summary of the results I will be happy to forward them to you. Thank you very much for your consideration of my request and your assistance!

_____

Name of Transit System

_____

Name and Title of Person Completing this form (please print)

_____

Voice Phone Number **Email address**

□ **Our Transit System Offers A Pre-Paid Fare Program**
(Please check all below that apply)
II. **Monthly Pass**
III. **Weekly Pass**
IV. **Daily Pass**
V. **Other:** _____

□ **We do not offer pre-paid fares**

□ **We Accept Credit and/or Debit Cards (Please check all below that apply)**
□ **Master Card** □ **VISA** □ **American Express** □ **Discover** □ **Debit Cards**

□ **We do not accept any credit or debit cards**

□ **Please send me a summary of the results of this survey.**

Figure 12. Survey of Public Transit Systems About Prepaid Fare Media.

Table 4. Responses to Prepaid Fare Media Survey.

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Nonurbanized Transit Systems (5311)							
Alamo Regional Transit	Jeannie Sagebiel	Jeannie Sagebiel	Monthly Pass Weekly Pass Special Purpose Passes			X	YES
Ark-Tex COG	Lynn Woods	Lynda Woods, Regional Dev. Specialist	Monthly Pass Weekly Pass Daily Pass			X	YES
Aspermont Small Business Dev.	Donn Mullis	Melissa Goldson, Transportation Director*		X		X	
Bee CAA	Cynthia Carriger	Baldemar P. Loya, Transportation Director		X		X	--
Brazos Transit	John McBeth	Kristine Box, Marketing Manager	Monthly Pass			X	
CARTS	David Marsh	Michelle Arandi, Customer Service*	Multi-ride Tickets			X	
Caprock CAA	Claudia Cowley	Rhonda Thornhill, Transp. Coord.	Monthly Pass			X	YES

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Central TX Rural Transit District	Will Evrard	Will Evrard	20-ride Ticket Book (4 free rides)			X	YES
Cletrans	Manager	No Response					
City of Del Rio	Mary Rodriguez	Elsa Reyes, Transp. Coord.		X		X	
Collin Co. Cmte. on Aging	Ed Casper	Ed Casper	Monthly Pass (students only)			X	
Colorado Valley Transit	Vastene Olier	Vastene Olier	Ticket Books			X	YES
CAC of S. Texas	Eli Ramirez	Eli Ramirez	Monthly Pass Weekly Pass			X	YES
Comm. Council of SW Texas	Jorge Botello	Sarah H. Cook, Transit & Safety Dir.		X		X	YES
Community Services	Rodney Coppock	Steve Terry, Fiscal Officer	Weekly Pass			X	YES
Concho Valley COG	Robert Stephens	Robert Stephens	Weekly Pass Daily Pass			X	YES
E. TX COG	Roxanne Pitts	Roxanne Pitts		X		X	YES
County of El Paso	David Marquez	No Response					
Golden Crescent RPC	Lisa Cortinas	Laurie Valenta, Dispatcher*	10-20 Trip Passes Monthly Passes			X	

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Gulf Coast Center	Paulette Shelton	Paulette Shelton*	Monthly Passes			X	
Heart of TX COG	Jim Hart	No Response					
Hill Country Transit	Carole Warlick	Carole Warlick	Parents advance pay for school transp. -- weekly, monthly, bi-monthly			X	
Hunt Co. Cmte. on Aging	Sally Ann Chavarria	Truly Lefferman, Dispatcher*	10-ride Pass-Card Single Ride Tickets			X	
Kaufman Co. Sr. Citizens	Omega A. Hawkins	Doris Jenkins, Transportation Director	Monthly Punch Card			X	YES
Kleberg Co. Human Services	Sandra Larson	Sandra J. Larson		X		X	
Laredo-Webb Co. CAA	Jose Gamez	Norma Arias*		X		X	
Lower Rio Grande Valley Dev. Council	Richard Hinojosa	Maria Lawson, Finance Department*	20-ride punch ticket			X	
Palo Pinto Co. Transp. Council	Reta Imboden	Reta Imboden		X		X	YES

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Panhandle Comm. Services	Robert Whorton	Robert Whorton	Monthly Pass Weekly Pass (10 one-way trip punch ticket)			X	YES
Parker Co. Transp. Services	Maggie Franklin	Reagan Calhoun, Operations Manager*		X		X	
People for Progress	Gladys Gerst	Lynn Godbee, Comptroller	Monthly Pass Weekly Pass			X	YES
Rolling Plains Mgt. Corp.	Jerry McMillian	Jerry McMillian	Monthly Pass Weekly Pass Daily Pass			X	YES
Rural Eco. Asst. League	Gloria Ramos	Gloria Ramos	Monthly Pass (school trips)			X	
San Patricio Co. CAA	Lupita Paiz	Lydia Velma Moreno		X		X	
SE TX Regional Planning Commission	Jeff King	Bridgett Hlavinka, Transp. Asst.		X		X	YES
S. Plains CAA	William Powell Jr.	Irma Guerra	Monthly Pass Weekly Pass Daily Pass Third Party Payment			X	YES

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
SPAN, Inc.	Erika Lissberger	Sharon A. Olufsen, Transp. Coordinator	Monthly Pass Weekly Pass			X	YES
Texoma Area Paratransit System	Ven Hammonds	Ven Hammonds	Monthly Pass Weekly Pass Daily Pass			X	YES
The Transit System	Barbara Perry	Linda MacArthur, Assistant Manager*	Pre-paid "in-house" tickets			X	
Town of S. Padre Island	Robert Fudge	Robert A. Fudge	There are no fares for service (free)	X		X	
W. TX Opportunities	Janet Everheart	Janet Everheart		X		X	YES
Urbanized Transit Systems (5307)							
Abilene Citylink	Brent Black	Brent Black	Monthly Pass Weekly Pass			X	YES
Amarillo Transit	Judy Phelps	Judy Phelps	Tickets			X	
Arlington Handitran	Sue Stevens	Sue Stevens	Monthly Pass 12-ticket books			X	YES
Beaumont Transit	Bill Munson	Bill Munson	Monthly Pass			X	YES
Brownsville Urban Transit	Norma H. Zamora	Norma H. Zamora	20-Ride Ticket Pass Semester Pass			X	YES

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Denton Transit	Veronica Rolen	Veronica Rolen, Public Transp. Coord.	Monthly Pass Weekly Pass Daily Pass Punch Card			X	YES
Island Transit	Wayne Cook	Kathy E. Cooper, Service Coordinator	Monthly Pass			X	YES
Grand Prairie's Grand Connection	Daon Stephens	Sharan G. Barrett, Sr. Account Clerk	$1 coupons for work, school, grocery			X	
Laredo Municipal Transit	General Manager	Viola N. Sanchez, PR & Marketing Coord.	Daily Pass (for agencies) Student Tickets ElLift Tickets			X	YES
Lewisville Transit	Stanley Nixon	Stanley Nixon, Program Specialist		X		X	YES
Brazos Transit	John McBeth	Kristine Box, Marketing Manager	Monthly Pass			X	
Lower Rio Grande Valley	Richard Hinojosa	Maria Lawson, Finance Department*	20-ride punch ticket			X	

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Lubbock Citibus	John Wilson	Patty Conner, Bookkeeper/Telephone Administrator	Monthly Pass Econo Card One-trip Pass Agency Discount Passes			X	
Mesquite Transit	Susan Skiles	Susan Skiles, Manager of Rec. Service	Ride tickets			X	YES
NETS	Brenda Cross	Walter Shearer, Dispatcher*	10-ride Ticket Book		VISA, MasterCard, American Express		
Longview Transit	Roxanne Pitts	Roxanne Pitts		X		X	YES
San Angelo Transit	Katharine Eagan	Katherine Wallace	Monthly Pass Weekly Pass			X	
Temple Transit	Ed Kabobel	Ed Kabobel		X		X	
Gulf Coast Center	Paulette Shelton	Paulette Shelton	Monthly Pass			X	
Texoma COG	Robert Wood	Robert Wood	Monthly Pass Weekly Pass Daily Pass			X	YES
Port Arthur Transit	Tom Kestranek	Tom Kestranek	Pre-Paid Books			X	YES
Tyler Transit System	Glory Fon	Patricia Davis, Dispatcher*	Single-ride Tickets			X	

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
Victoria Transit	Lisa Cortinas	Lisa Cortinas	Monthly Pass 10-ride and 20-ride Ticket Books			X	YES
Texarkana Transit	George Shackelford	George Shackelford	N/A -- Service to begin mid-to late-2000				YES
Waco Transit System	Kirk Scott	Kirk Scott	Monthly Pass Daily Pass (trolley only) 10-ride ticket book			X	
Killeen Transit	Carole Warlick	Carole Warlick	N/A				
Wichita Falls Transit	Steve Seese	Robert Parker, Director of Traffic & Transp.*	Ride Tickets			X	
Metropolitan Transportation Authorities							
Capital Metro	Karen Rae	J.T. Torres, Customer Service*	Monthly Pass 20-ride Booklet			X	
DART	Robin Stringfellow	Robin Stringfellow	Monthly Pass Daily Pass Annual Employer Pass		Master Card VISA		YES

Table 4. Responses to Prepaid Fare Media Survey (Continued).

Agency	Person Sent To	Respondent	Prepaid Fare Program(s)	No Prepaid Fares	Credit/Debit Cards	No Credit / Debit Cards	Want Results
El Paso Sun Metro	Terry Scott	Priscilla Ayalla, Customer Service*	Monthly Pass 20-ride Fare Card			X	
The T (Fort Worth)	Anthony Johnson	Anthony Johnson	Monthly Pass		Master Card VISA Discover American Express		
Houston METRO	Julie Gilbert	Mark Douglass, Customer Service & Sales	Monthly Pass Weekly Pass Daily Pass Stored Value Cards Annual Pass		VISA MasterCard		
Corpus Christi RTA	Linda Watson	Fred Haley, Dir. Service Dev.	Monthly Pass Weekly Pass			X	YES
VIA Metropolitan Transit	Priscilla Ingle	Priscilla Ingle	Monthly Pass Daily Pass Semester Pass Streetcar Pass Ozone Season Pass			X	YES

*Information obtained via telephone interview, rather than return of the survey form.

cards. That system is operated by the Young Men's Christian Association (YMCA), where credit cards are accepted for other purposes as well.

Further discussions with the agencies that accept credit cards indicate that most use a third-party clearinghouse for most of the transactions. According to Dallas Area Rapid Transit (DART) revenue department personnel (September 15, 1999), DART uses United Merchants Services to process VISA, MasterCard, and Discover. The T, according to accounting department personnel (September 17, 1999), uses First USA Merchant Services for processing MasterCard and VISA payments and deals directly with American Express. Researchers calling both DART and the T found that the agencies were evaluating their credit card processing arrangements. Houston METRO also accepts credit cards, using Wells Fargo and First Data Merchants Services to process the transactions. METRO is in the process of re-procurement of the services.

The purchase of prepaid fares not using any smart card technology would be a simple solution to meet the goals of programs such as those offered by the centers provided through the Texas Workforce Commission and Welfare-to-Work programs. However, another possibility for coordination among the agencies with local transit systems is possible once the new LSC delivery system is in place. If a transportation account can be established within the LSC system, individuals with LSC could purchase prepaid fare media from transit systems that accept credit cards. That system could be piloted in any of the transit systems that accept credit/debit cards and that are willing to accept the transaction fees involved. Given the amount of the fees currently being charged, it seems reasonable that a transit system would accept that fee as the systems already discount prepaid fares to some extent.

Researchers evaluated other credit card relationships but found them inappropriate for the public transit or EBT application. The City of Temple, for example, accepts credit cards for municipal court fines and fees, according to the municipal court clerk (August 31, 1999). Through a contract with U.S. Audiotex, the City accepts VISA, MasterCard, Discover, and American Express without any fees to the City. All transaction fees are paid by the individual choosing to pay the fines with a credit card as a convenience. Individuals taking advantage of the service call an 800 telephone number and interact with the system to provide citation numbers, fine amounts, etc. The system presents the transaction fee amount and gives the individual the option to accept the transaction or terminate the call. U.S. Audiotex credits the City's bank daily and provides information on which individuals (with citation numbers, etc.) have paid fines or fees. The company also provides processing for individuals who wish to use a credit card to pay Internal Revenue Service (IRS) income taxes and to enable consumers to use credit cards to pay, by telephone or through the Internet, for personal state income taxes, sales and use taxes, property taxes, and fines for traffic violations and parking citations. Clients, in addition to the IRS, include the states of California and New Jersey, the District of Columbia, and more than 400 municipal and county governments. It would be inappropriate for use by public transit systems because, to use U.S. Audiotex's services, the cost of the transaction is passed on to the individual, which is prohibited in the case of a LSC benefits recipient.

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