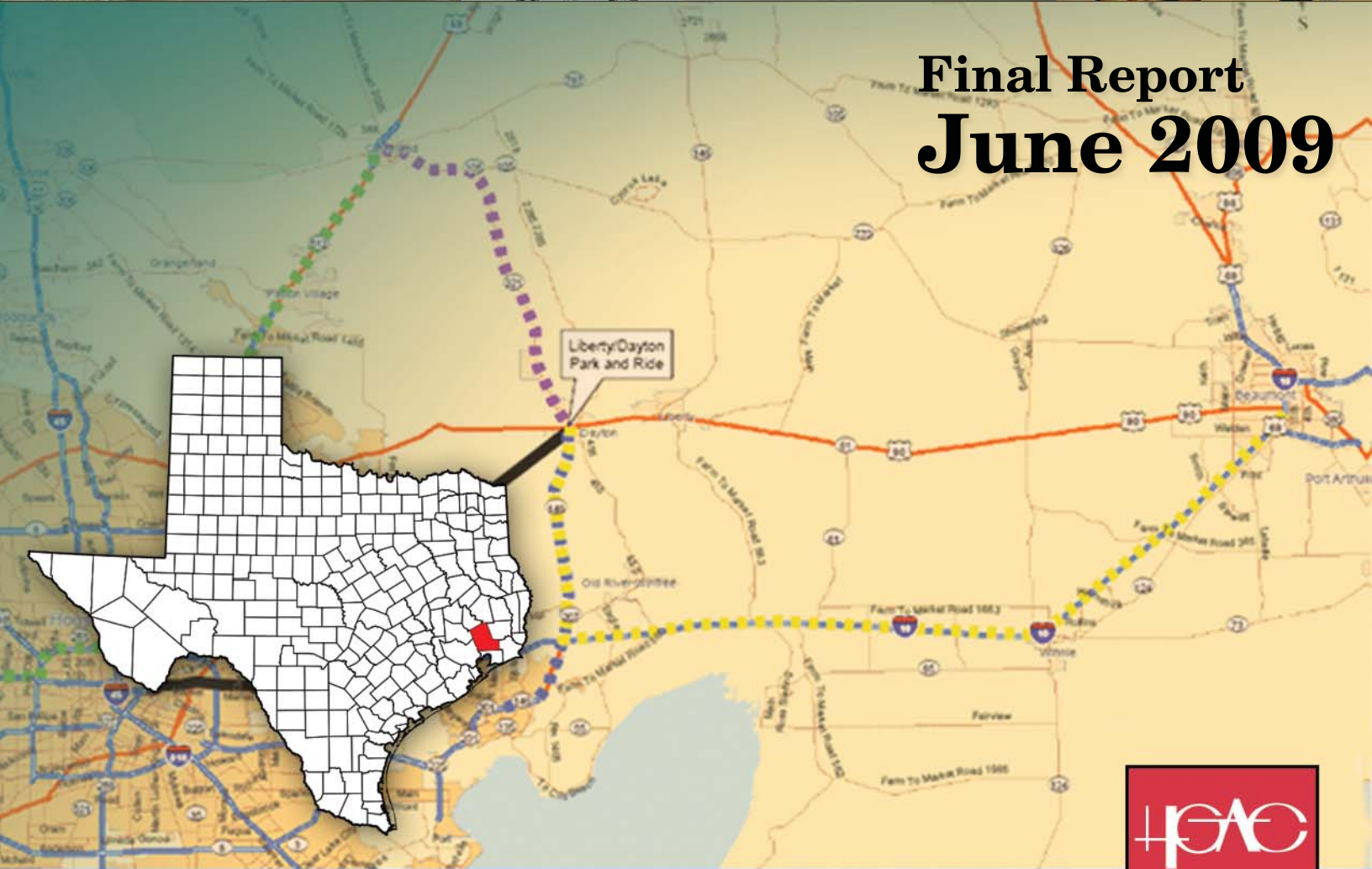


Liberty County

TRANSIT PLAN



**Final Report
June 2009**

Executive Summary





LIBERTY COUNTY TRANSIT PLAN

EXECUTIVE SUMMARY

**Approved by the Liberty County Commissioners Court and
by the H-GAC Transportation Policy Council-June 2009**

For the Residents of Liberty County



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ACKNOWLEDGEMENTS

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DISCLAIMER

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Liberty County Transit Plan-Executive Summary

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INTRODUCTION

When a group of concerned citizens attended a recent public meeting about transit in Cleveland, Texas and presented a signed petition to bring a park-and-ride service to their city, it was a reminder of a notable quote by Margaret Mead; “Never doubt that a small group of thoughtful committed citizens can change the world”. That event was significant because Cleveland is a city of about 7,000 people approximately 45 miles northeast of downtown Houston in Liberty County (the County).

During several public meetings that were held in Liberty County in the summer of 2008, more than 120 concerned citizens, business leaders and elected officials pointed out the transit related needs in their respective communities and within the County. The recommended services should also provide connections to other parts of the Houston-Galveston region for better access to jobs, educational opportunities, medical trips and social outings for those with limited mobility options today. The county judge, Honorable Phil Fitzgerald observed that at first he had doubts about the need for expanded public transportation services in Liberty County but as gasoline prices approached \$4.00 per gallon it became more apparent that many people would utilize such services. The advent of expanding employment opportunities in the Interstate-10 corridor near Baytown, Mont Belvieu and the Port Arthur and Beaumont industrial complexes *heighten the potential for successful transit operations in many directions.*

Justification for Liberty County Public Transportation Expansion

The following summary information provides the basis for the need for expanded transit service in Liberty County:

- Public Transportation is needed by special needs populations in the county;
 - According to the 2006 Census estimates, 18.8% of the population - 5 years of age and over report a sensory, physical, mental or self-care disability
 - 10.4% of Liberty County citizens are 65 and older
 - Transportation is needed by the special needs population for: daily essential errands such as medical appointments, grocery shopping, job training, college, employment
 - 7.6 % of the households in Liberty County (1,766 households) do not have automobiles.
- The increase in gas prices is beginning to force people to look for public transportation for work and essential errands;
 - Lower income families are affected most by the rise in gas prices as they have the least amount of disposable income with which to absorb the added expenses.
- The state has created a mandate to coordinate and consolidate health and human service transportation delivery for eligible members of the County which should create efficiencies and expand capacity through economies of scale;
 - This presents a unique opportunity for the County to create an integrated system addressing diverse agendas.

- Liberty County is currently expending approximately \$ 120,000 of local funds that could be used to leverage or match more federal public transportation dollars.

The recommended transit projects for Liberty County based on recent public input include the following short-term (1-2 years) and mid-term (3-5 years) projects. The long term recommended project is presented here for future consideration.

SHORT TERM

(1) Continue to refine the plans to implement a county-wide general public demand response (dial-a-ride) system. The development of a public transportation coordination Action Plan is recommended to guide that implementation process. One of the primary advantages of a coordinated county-wide system would be better efficiencies through centralized dispatching and resource sharing with the Brazos Transit District, the senior citizen centers and other transportation providers in the County. Projected ridership estimates are 95,000 annual trips for the countywide demand response and local circulator routes (combined) at maturity. Current ridership levels are about 62,000 annual trips. Approximately \$800,000.00 in additional funds would be needed for the county-wide demand response services which could be implemented incrementally at lower costs.

(2) Continue plans to implement the Park and Ride Service and transfer center in Dayton with commuter service to the Houston CBD (with a stop in eastern Harris County in the future). Projected ridership for that service was estimated between 400 and 600 daily riders in the year 2020 based on a demand analysis that was completed in 2003. ¹That demand analysis is being revisited due to higher growth projections for Liberty and adjacent counties. Funding for the construction of that park and ride facility has been committed and land acquisition is in process.

(3) Continuation of the Liberty County/University of Texas Medical Branch (UTMB) /BTD transit pilot project.

(4) Implementation of Commute Solutions Program strategies including but not limited to the development of an employee shuttle to the Wal Mart Distribution Center in Cedar Bayou and the formation of new vanpools, carpools (through the NuRide program) and the development of Telework programs by working with the major employers in Liberty County. The Telework programs would be most effective if higher speed internet services were available to the residents of Liberty County.

(5) Development of a car-ownership program similar to the Ways to Work Program. That program provides low interest loans to purchase used automobiles for low-income families to get to work and to share rides with other low income persons for work trips. That program could be a cost effective transportation option for a segment of the population in Liberty County.

¹ Liberty County Park & Ride Facility Advanced Planning Report, May 2003, The Goodman Corp.

MID-TERM

(6) A Transit Feasibility Assessment (Phase 2-Transit Plan) of a proposed park-and-ride route from Dayton/Liberty along SH 146 to IH 10 then eastward to Port Arthur and Beaumont.

(7) A Transit Feasibility Assessment (Phase 2-Transit Plan) of a Park-and-Ride service in Cleveland, Texas with connecting routes along US 59 North, southbound to the Townsend METRO Park-and-Ride lot and a cross-county connecting route to Dayton/Liberty along FM 321.

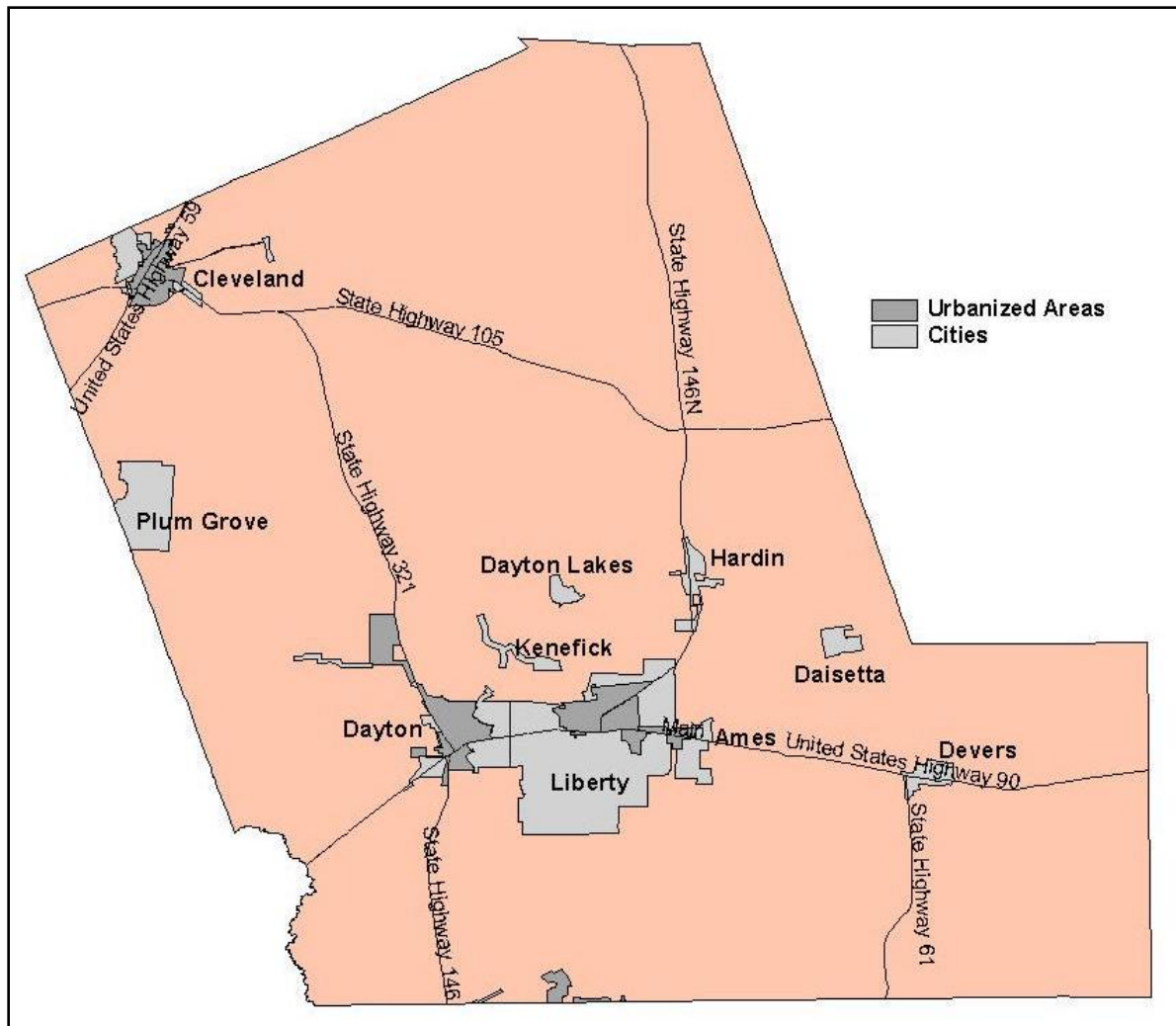
LONG-TERM (5 or more years)

(8) A Transit Feasibility Assessment of an Intermodal Transit /Transfer Center near the intersection of Interstate 10 and SH 146. Based on the apparent need to enhance transit services in the IH 10 Corridor between Houston and Beaumont/ Port Arthur it would be prudent to explore the development of transfer capabilities between the local circulator routes in Liberty and Chambers counties that could connect with the Intercity bus carriers operating along IH 10 today. An Intermodal Center could become a strategic location to facilitate those transfers as well as provide space for the **future development of higher speed passenger rail services** in the IH 10 corridor. There could also be important economic development opportunities that would emerge in the vicinity of such a center.

The following sections provide a brief summary of some of the information that was considered in the development of this transit plan for Liberty County. Those sections summarize the background geographic and demographic profiles, the existing and recommended transit services, the financial plan cost estimates and a feasible approach to implement the key recommendations in the transit plan.

Figure ES-1 on the following page shows the locations of the largest cities in Liberty County which also contain pockets of urbanizing areas (urban clusters) with large employers, schools and medical facilities. The clustering of those developments provides more opportunities for public transit connections within and between them as part of the expansion of a county-wide public transit system.

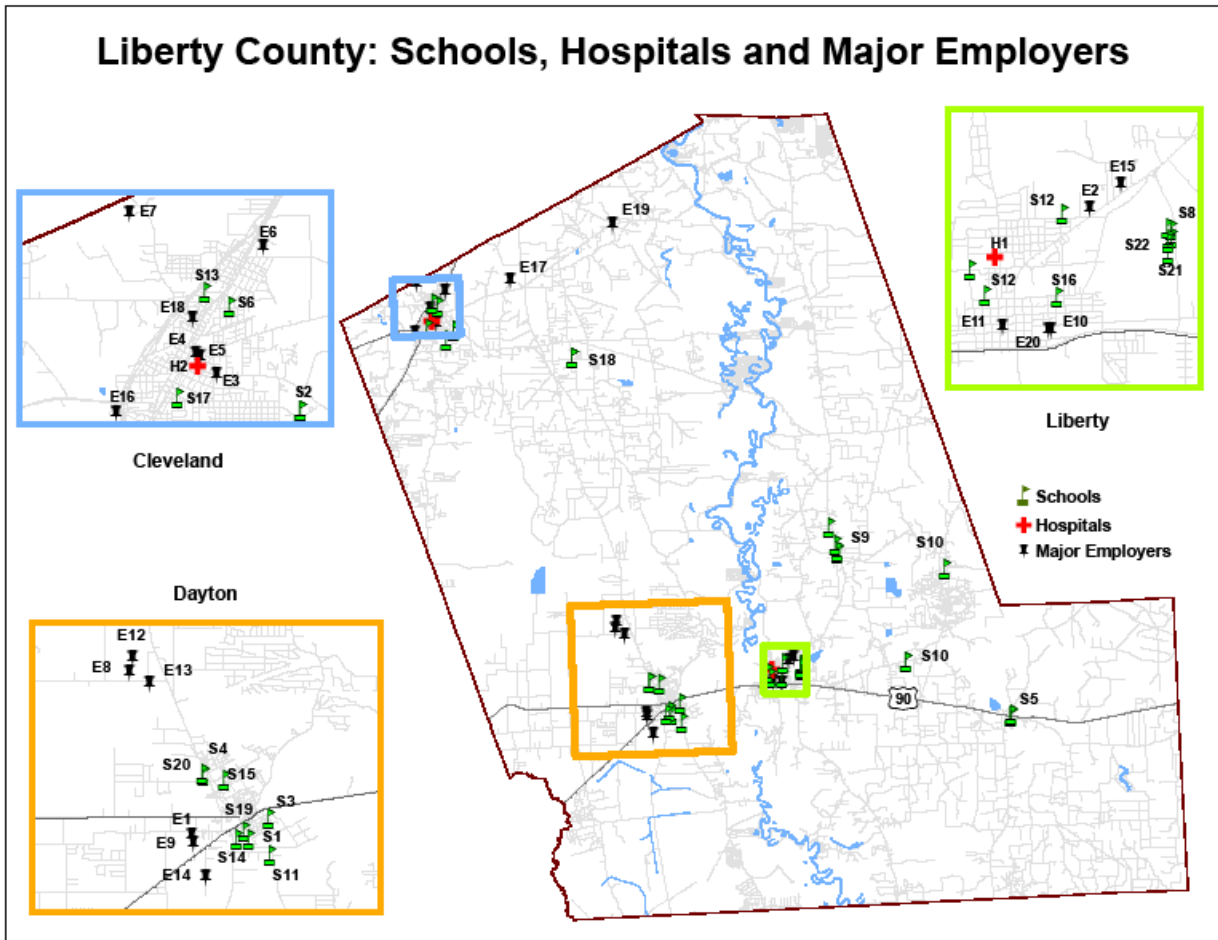
Figure ES-1: Urbanized Areas/Clusters and Cities in Liberty County



Source: H-GAC

That clustering of development further is apparent in **Figure ES-2** (following page) which shows the locations of schools, major employers and hospitals in the County. Appendix B- Attractors and Generators of the main document provides a summary table with more details about the characteristics of the major employers, schools and hospitals which are shown below.

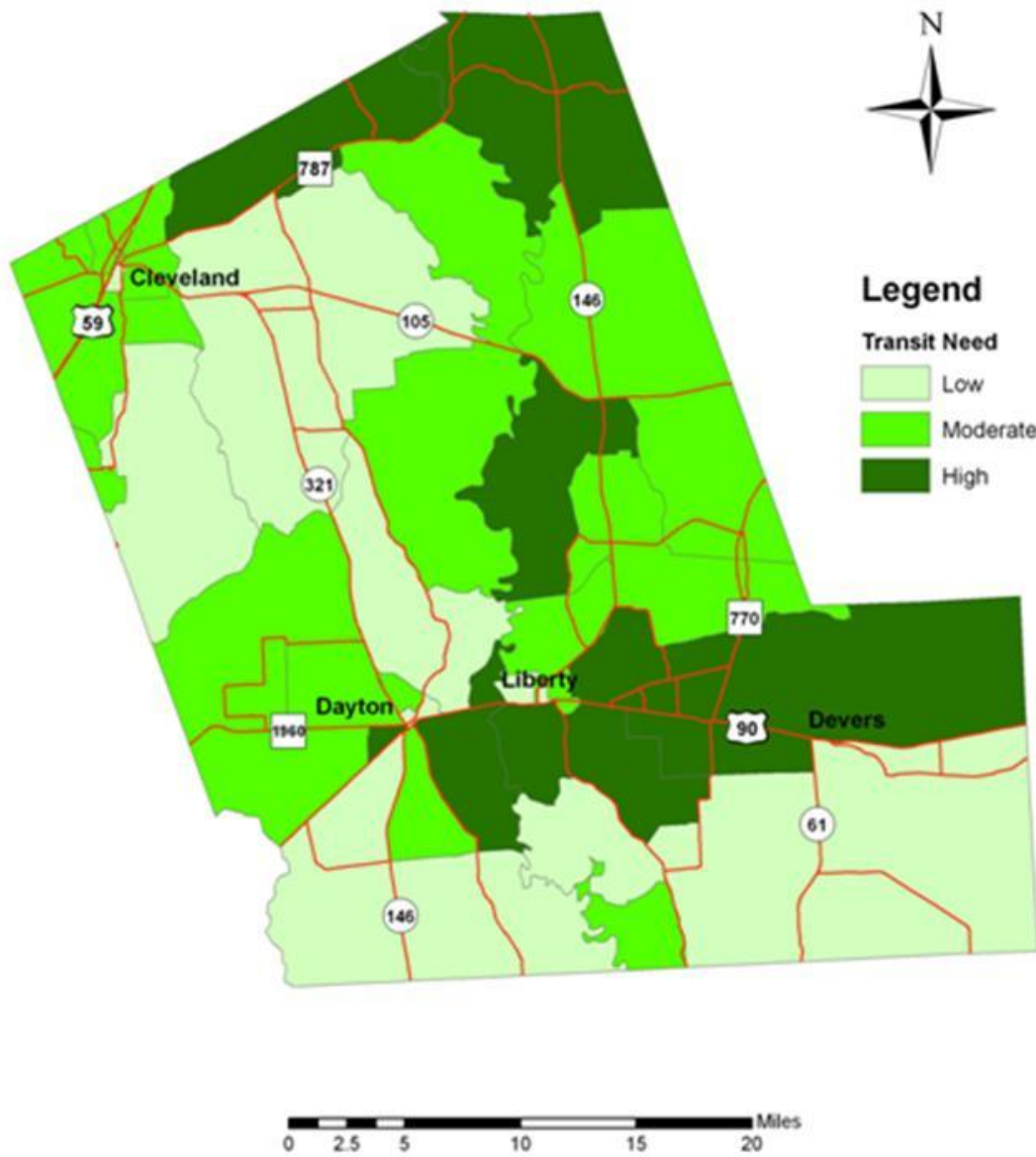
Figure ES-2: Liberty County Schools, Hospitals and Major Employers



Source: H-GAC

As shown in **Figure ES-3**, higher transit needs exist in the vicinity of the cities of Liberty, Dayton and Cleveland and throughout portions of the more rural parts of the County, particularly in the northern and central parts of the County. The broad nature of the rural transit needs in Liberty County, and the overall geographic size of the county underscore the need for such services.

Figure ES-3: Liberty County Transit Needs (TNI) Index



Source: H-GAC

EXISTING AND RECOMMENDED TRANSIT SERVICES



Existing Transit Services

The Brazos Transit District (or BTD also known as the District) is the designated public transportation provider for Liberty County. BTD operates its public transportation services in Liberty County under contract with TxDOT for the 5311 Rural Transit program. BTD operates the local circulator and demand response services in Liberty, Dayton, Ames and Cleveland which carry about 48,000 annual trips.

Additional transportation services are provided by the senior citizens programs in Liberty and Cleveland and the County's Indigent Care program. Together they carry more than 4,900 trips each year. Those transportation services help many of the elderly and disabled persons in Liberty County to maintain some levels of independence and allows them to be active members of the community which is vital to their well being and to the betterment of society in general.

The Medical Transportation Program (MTP) which provides non-emergency medical transportation to Medicaid eligible clients who don't have other means of transportation carried almost 8,700 trips in FY 2007. Other transportation providers include the Indigent Care Program and the Veterans posts.

Local elected officials have demonstrated their commitment to provide expanded transit services in the past by providing more than \$26,000 in local funds annually that could be counted as local match dollars to leverage more federal funds. Those funds have been used to fund a portion of the local match required for the local circulator routes and paratransit services.

In summary, approximately 61,900 passenger trips are carried each year in Liberty County by various organizations that are not coordinating their services today. It is likely that through service coordination more efficient services would be provided and the opportunities for transit expansion

would be realized sooner. **Table ES-1** provides a summary of the annual ridership for each agency.

Table ES-1: Current Transit Ridership Summary ²

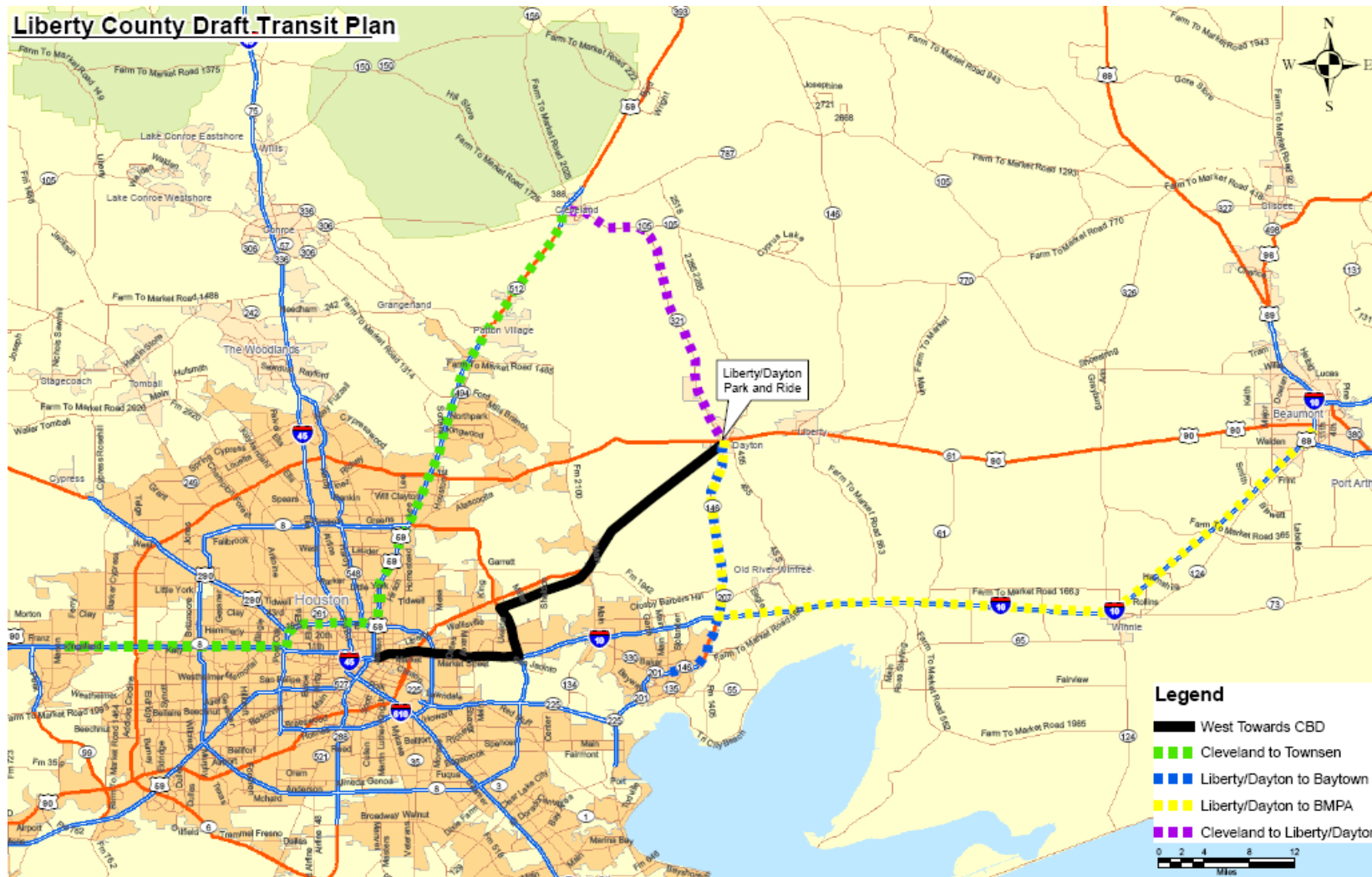
Agency	Urban Annual Trips	Rural Annual Trips	Annual Trips	Comments
Brazos Transit	48,000	-	48,000	Local circulators + Demand Response.
Medical Transportation Program	3,132	5,568	8,700	Non-emergency Medicaid
Cleveland Senior Citizens	972	1,728	2,700	Demand Response
Liberty Co. Project on Aging	720	1,280	2,000	Demand Response
Indigent Care Program	78	139	217	Confirmation Needed-DR
Liberty County Veterans Office	112	200	312	Demand Response
Hardin Senior Citizens	-	-		TBD
TOTAL RIDERSHIP	53,014	8,915	61,929	

RECOMMENDED TRANSIT SERVICES

Figure ES-4 on the following page shows the potential park-and-ride route options that are recommended for Liberty County. The proposed service connecting the cities of Dayton and Liberty with Harris County and the Houston Central Business District is the first priority. *Funding for the construction of that Park-and-Ride Lot and the operating funds have already been applied for and tentatively obligated.* Ridership on that proposed route is estimated at about 500 daily trips in the year 2020 (which is a conservative estimate) and the ridership would be higher if an interim stop at the proposed Crosby park-and-ride lot in Eastern Harris County is included in the operating plan. The feasibility of the other recommended park-and-ride services (that are based on the public comments received) would have to be studied further in subsequent transit feasibility assessments.

² The proportions of ridership for urban and rural segments of the population are estimated from the population distribution U.S. Census 2000.

Figure ES-4: Liberty County Park-and-Ride Options



Source: H-GAC

FINANCIAL PLAN AND COST ESTIMATES

In order to develop a financial plan for the proposed services in Liberty County, operating statistics were generated based upon the service plan as outlined above. The service plan and related financial plan reflects three time points – short-term (1-2 years); mid-term (3-5 years) and long-term (5 years or more). The timeframe could be shortened as a result of earlier implementation activities depending on the desires of residents and elected officials.

Financial requirements are driven by service levels, which in turn are driven by passenger demand. Therefore, the process includes the following steps:

1. Demand estimates are derived based upon assumed passenger generation rates per population.
2. Service levels are then derived based upon assumed service productivity (passengers per revenue hour of service).
3. Costs are calculated based upon the service levels and the unit cost of service.

Demand Estimate

Table ES-2: Circulator and Demand Response Ridership Projection

	Urbanized Area	Rural Area	Total
2006 Population	27,247	48,438	75,685
Per-Capita Ridership	0.76	0.76	0.76
Population not served	25%	75%	-
Net Increase Passengers	5,177	27,898	33,075
Current Annual Passengers	53,014	8,915	61,929
Projected Annual Passengers	58,191 ¹	36,813 ²	95,004

¹ Amount of annual passengers- Current annual Passengers plus 25% of existing population multiplied by the per-capita ridership

² Based on per-capita ridership

ESTIMATED COSTS

Table ES-3 below displays the estimated costs for the expansion of the general public demand response service in Liberty County.

Table ES-3: Demand Response Cost Estimates

	Urbanized Area	Rural Area	Total
Current Costs	\$375,012	\$51,577	\$426,589
Net Increase Cost	\$112,910	\$702,450	\$815,360
Total Costs	\$487,922	\$754,027	\$1,241,949

Programming Service

The calculations above reflect a mature service operating throughout the entire county. Transit services require time in order to reach mature ridership levels. The community must become aware of availability and understand how to access the service and become trial users. For purposes of programming, it is assumed that ridership reaches 50% of maturity in the short term, 75% of maturity in the mid-term and 100% of maturity in the long term. For Demand Response, it is assumed that the urbanized areas are currently 75% mature.

Further, introducing new service can be staged in order to control initial costs and test planning assumptions. **Table ES-4** reflects the costs associated with this service programming.

Table ES-4: Programming General Public Demand Response Service in 2008

Period	Annual Cost at Maturity (\$mil)		Percent of Maturity		Annual Cost for Period (\$mil)		Total (\$mil)
	Urban	Rural	Urban	Rural	Urban	Rural	
Near-term	.49	.75	75	50	.37	.38	.75
Mid-term	.49	.75	75	75	.37	.56	.93
Long-term	.49	.75	100	100	.49	.75	1.24

These data can also be used to estimate fleet requirements. An average vehicle will operate 10 to 12 hours per day for 260 days per year, or between 2600 and 3,120 hours per year. Based upon service levels at the programmed levels, the required fleet for the near term is 5 vehicles; for the midterm is 14 vehicles; and for the long term is 21 vehicles. This does not include back-up or spare vehicles.

Total Program Costs

The total service program would be as outlined in **Table ES-5**.

Table ES-5: Liberty County Transit Service Program Costs

Period	Elements	Annual Cost (\$ million)	Incremental Annual Cost (\$ million)
Short-term	County-wide Demand-Response	0.75	0.32
Mid-term	County-wide Demand-Response	0.93	0.50
	Park-and-Ride (pending)	0.44	0.44
	SUBTOTAL-Midterm	1.37	0.94
Long-term	County-wide Demand-Response	1.24	0.81
	Park-and-Ride	0.44	0.44
	SUBTOTAL-Long Term	1.68	1.25

During this period, the county-wide demand response service would be closely monitored and evaluated to identify corridors or markets that would support fixed route transit services. If fixed route service is implemented in the long term, then the demand in that corridor would likely increase and additional funds would be required to support the fixed route service.

Table ES-6 identifies the primary funding by agencies providing public transportation services in Liberty County. Additional sources for local revenues to match federal and/or state funds should be considered in the development of a viable funding strategy. Other potential funding sources are presented in **Appendix D** of the Liberty County Transit Plan (main document).

Table ES-6 – Available Transportation Resources by Agency in Liberty County (\$)

Agency	Liberty County³	Area Agency on Aging⁴	Elderly 5310	Rural 5311	Local/Other	Comments⁵
Brazos Transit District				300,000	46,000	Local match 26 k fares 20 k.
L.C. Project on Aging	3,024	15,311				
Cleveland Senior Citizens	4,542	3,194				
Hardin Senior Citizens	1,518					
L.C. Indigent Care	35,000					
Veterans	18,000					
SUBTOTALS	62,084	18,505		300,000	46,000	426,589

Table ES-6 does not include funds that have been tentatively obligated for the construction and operation of the Dayton Park and Ride Transfer Center. Approximately \$1.2 million for construction has been programmed in the Transportation Improvement Program (TIP). Two-hundred-and-fifty thousand (\$250,000) have been obligated by the Texas Transportation Commission (TxDOT) in Transportation Development Credits (TDC's) for local match for construction of the park and ride facility. Approximately \$550,000 (for

³ Liberty County General Funds are allocated to the senior centers for general operations in addition to transportation costs. It is assumed that 50% of those allocated funds are available for transportation purposes.

⁴ Area Agency on Aging Transportation funds.

⁵ Local match and fare revenue estimates provided by Lyle Nelson, Brazos Transit District.

operating expenses) have been applied for from federal Congestion Mitigation and Air Quality Improvement funds and is pending Federal Transit Administration (FTA) approval of the revised Advanced Planning and Environmental Report. Based on the County Transit Financial Plan and the information in Table 14, approximately \$427,000 of the needed \$ 1.24 million for the countywide demand response program (at maturity) is currently available through the combination of programmed and budgeted federal, state, and local funds. Therefore, approximately **\$800,000 additional dollars** is needed to fund the expanded countywide demand response program at full maturity. The services can be implemented incrementally over a longer time period time to reduce the short term fiscal impacts.

Summary of Projected Ridership and Costs for Liberty County

- 2006 population is 27,247 for urbanized area and 48,438 for the rural area for a total of 75,685 people.
- Projected increase in urban ridership is based on 25% of the 2006 urban population which amounts to 6,812 people. The projected increase in the rural areas was based on the 2006 rural population which is 48,438 people.
- The net increase in passengers is 5,177 in the urban area and 27,898 in the rural area for a total increase of 33,075 riders.
- The current annual passengers in the urban areas are 53,014 and for the rural it is 8,915.
- The total projected annual passengers at full maturity in the urban area are projected to be 58,191 and in the rural area the projected amount is 36,813 for a total of 95,004 passengers.
- The existing funds available for operations are estimated to be approximately \$430,000 thousand annually. Additional funding of \$550,000 has been applied for and is pending FTA approval, for a total of about \$980,000.00. ⁶
- The projected operating costs for the county wide demand response and park and ride services at full maturity is estimated to be about \$1.68 million annually. This results in an incremental annual cost of about \$700,000. (\$1.68 million-\$980 thousand).
- Approximately \$127,000 of the current expenses for public transportation by Liberty County, local fares and the participating cities can be considered as **local match** that can be used to **leverage** more federal (or state) funds.

⁶ The estimated cost of \$550,000 is the value of the grant application that may include some capital items (to be determined.)

FEASIBILITY ASSESSMENT

A financial strategy to address the identified funding shortfall of about \$ 800,000 could include the following elements over an extended period of time (2-3 years).

1. Apply for Job Access Reverse Commute (JARC) and New Freedom Programs grant funds in response to the TxDOT Coordinated Call for Projects, which will be **due in December 2009**. It is anticipated that annual calls for those projects will be forthcoming assuming that federal (FTA) funds will continue to be available. Since the recommended county-wide demand response services would provide access to jobs and related activities for the general public (including low income populations) it would qualify for JARC funding. The Park-and-Ride operation would also be eligible for JARC funding since it would provide transit connections between suburban employment and training locations.

Additional demand response services for disabled persons, to enhance their abilities to access or better utilize those paratransit services, beyond ADA requirements would be eligible for New Freedom funding.

2. Apply for funding for the Commuter and Transit Services Pilot Projects in response to the H-GAC Call for Projects (which is open now) for Congestion Mitigation and Air Quality Improvement (CMAQ) funds. The commuter shuttle would also be eligible for CMAQ funding since it would provide more ridesharing opportunities for workers, students and faculty.
3. Coordinate with local businesses and large employers that could benefit from transit patronage close to their business or office sites to provide cash donations or to donate land or a bus shelter that could be counted as a local match contribution.
4. Coordinate with H-GAC staff to garner local match from programs such as the Workforce and Local Development Council Worker Transit Funds.
5. Coordinate with TxDOT staff to secure Transportation Development Credits to provide a portion of the local match required for expansion of the transit program in Liberty County.

Several other potential funding sources are summarized in **Appendix D** in the main document. Essentially, a *proactive* grants management approach in combination with some innovative strategies to increase local funds for local match could provide ample funds to implement the short and mid-term recommendations in this transit plan. Coordination with the Intercity Bus carriers and state and federal transportation planning staff would be needed to pursue the development of an Intermodal Transit/Transfer terminal in the IH 10 corridor as a longer term transit related recommendation.