Houston-Galveston Regional Transit Services

SUMMARY

Transit providers in the Houston-Galveston area demonstrate several examples of regional transit services that cross jurisdictional boundaries:

- Harris County and METRO sponsor the Baytown Park & Ride to downtown Houston.
- Connect Transit in Brazoria County is working with METRO to build and operate a park & ride from Pearland to the TMC (to open 2014).
- Fort Bend County operates the Fort Bend Express to Uptown/Galleria, Greenway Plaza, and TMC.
- Brazos Transit District operates The Woodland Express from Montgomery County to downtown Houston, Greenway Plaza, and the Texas Medical Center (TMC).

FINDINGS

Regional Overview

The Area

The Houston-Galveston metropolitan planning area includes eight counties and contains four urbanized areas as of Census 2010. The Houston urbanized area (UZA) is the largest, located mainly in Harris County. Table 1 provides the population and area of each County and UZA. Figure 1 provides a map of the urbanized areas as compared to the county boundaries.

Table 1. Area Population and Size

<table>
<thead>
<tr>
<th>County</th>
<th>2000 Population</th>
<th>2010 Population</th>
<th>2010 Area (Sq.Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazoria County</td>
<td>241,767</td>
<td>313,166</td>
<td>1,386</td>
</tr>
<tr>
<td>Chambers County</td>
<td>26,031</td>
<td>35,096</td>
<td>599</td>
</tr>
<tr>
<td>Fort Bend County</td>
<td>354,452</td>
<td>585,375</td>
<td>875</td>
</tr>
<tr>
<td>Galveston County</td>
<td>250,158</td>
<td>291,309</td>
<td>398</td>
</tr>
<tr>
<td>Harris County</td>
<td>3,400,578</td>
<td>4,092,459</td>
<td>1,729</td>
</tr>
<tr>
<td>Liberty County</td>
<td>70,154</td>
<td>75,643</td>
<td>1,160</td>
</tr>
<tr>
<td>Waller County</td>
<td>32,663</td>
<td>43,205</td>
<td>514</td>
</tr>
<tr>
<td>Montgomery County</td>
<td>293,768</td>
<td>455,746</td>
<td>1,044</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,566,754</strong></td>
<td><strong>5,891,999</strong></td>
<td><strong>7,705</strong></td>
</tr>
<tr>
<td>Houston UZA</td>
<td>3,822,509</td>
<td>4,944,332</td>
<td>1,295</td>
</tr>
<tr>
<td>Conroe - The Woodlands UZA</td>
<td>89,445</td>
<td>239,938</td>
<td>42</td>
</tr>
<tr>
<td>Texas City UZA</td>
<td>96,417</td>
<td>106,383</td>
<td>59</td>
</tr>
<tr>
<td>Lake Jackson-Angleton UZA</td>
<td>73,416</td>
<td>74,830</td>
<td>34</td>
</tr>
<tr>
<td>Galveston UZA</td>
<td>54,770</td>
<td>N/A</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: U.S. Census Decennial Census and Google Map
The population of Galveston dropped below 50,000 as of the 2010 Census. Accordingly, the city of Galveston is now part of non-urbanized (rural) Galveston County.

Figure 1. UZAs in the Houston-Galveston Metropolitan Region
The Houston-Galveston Metropolitan Planning Area (MPA) contains several sizable cities and census designated places. Table 2 provides a list of municipalities (population greater than 14,000) within the Houston-Galveston MPA.

### Table 2. Jurisdiction Populations

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>2000 Population</th>
<th>2010 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston</td>
<td>1,953,631</td>
<td>2,099,451</td>
</tr>
<tr>
<td>Pasadena</td>
<td>141,674</td>
<td>149,043</td>
</tr>
<tr>
<td>The Woodlands</td>
<td>55,649</td>
<td>93,847</td>
</tr>
<tr>
<td>Pearland</td>
<td>37,640</td>
<td>91,252</td>
</tr>
<tr>
<td>League City</td>
<td>45,444</td>
<td>83,560</td>
</tr>
<tr>
<td>Sugar Land</td>
<td>63,328</td>
<td>78,817</td>
</tr>
<tr>
<td>Baytown</td>
<td>66,430</td>
<td>71,802</td>
</tr>
<tr>
<td>Missouri City</td>
<td>52,913</td>
<td>67,358</td>
</tr>
<tr>
<td>Texas City</td>
<td>41,521</td>
<td>45,099</td>
</tr>
<tr>
<td>Friendswood</td>
<td>29,037</td>
<td>35,805</td>
</tr>
<tr>
<td>La Porte</td>
<td>31,880</td>
<td>33,800</td>
</tr>
<tr>
<td>Deer Park</td>
<td>28,520</td>
<td>32,010</td>
</tr>
<tr>
<td>Rosenberg</td>
<td>24,043</td>
<td>30,618</td>
</tr>
<tr>
<td>Lake Jackson</td>
<td>26,386</td>
<td>26,849</td>
</tr>
<tr>
<td>Alvin</td>
<td>21,413</td>
<td>24,236</td>
</tr>
<tr>
<td>Angleton</td>
<td>18,130</td>
<td>18,862</td>
</tr>
<tr>
<td>Stafford</td>
<td>16,081</td>
<td>17,693</td>
</tr>
<tr>
<td>South Houston</td>
<td>15,833</td>
<td>16,983</td>
</tr>
<tr>
<td>Bellaire</td>
<td>15,642</td>
<td>16,855</td>
</tr>
<tr>
<td>Humble</td>
<td>14,579</td>
<td>15,133</td>
</tr>
<tr>
<td>La Marque</td>
<td>13,682</td>
<td>14,509</td>
</tr>
<tr>
<td>Katy</td>
<td>11,775</td>
<td>14,102</td>
</tr>
</tbody>
</table>

Source: U.S. Census and Decennial Census

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### Metropolitan Planning Organization

The Houston-Galveston Area Council (H-GAC) serves as the metropolitan planning organization (MPO) for the eight-county Houston-Galveston metropolitan planning area. The policy body of the MPO is the Transportation Policy Council, and H-GAC provides the staff for the MPO. The Transportation Policy Council (TPC) consists of elected officials and transportation organization representation from member counties, cities, and agencies responsible for regional transit and transportation. H-GAC staff provides technical support to the TPC and is responsible for regional coordination of planning activities in the areas of transportation and air quality. As MPO, H-GAC is responsible for the creation of the long-range regional transportation plan and the Transportation Improvement Program (TIP). The TIP is a fiscally constrained financial plan of transportation projects approved to receive federal funding over the next four years. Working with the regional transportation and transit agencies, local governments, and the Texas Department of Transportation, the MPO facilitates coordinated decision-making to program federal, state, and local funds in the TIP and the Statewide TIP (STIP). The STIP is a compilation of TIPs and evolves into one comprehensive list of all highway and transit projects statewide.
Transit Providers and Transit Districts

Metropolitan Transit Authority of Harris County (METRO)

METRO is the regional transit authority providing bus, paratransit, and light rail transit services for a service area that includes the city of Houston and most of western Harris County. METRO provides local, express, and commuter (park-and-ride) bus service throughout the METRO service area. METROLift service is complementary curb-to-curb ADA paratransit service provided for those individuals not able to ride fixed-route bus service. Additionally, in 2004, METRO opened a light rail service that extends 7.5 miles from downtown Houston to just south of the Reliant Stadium complex (the Red Line). METRO is expanding the light rail system. Construction currently underway includes three new METRORail lines — North, Southeast, and East lines. The Southeast and North lines are funded through FTA Full Funding Grant Agreements (FFGA) and are scheduled for completion in 2014. The East End line is locally funded and is also scheduled for completion in 2014.

Harris County Transit

Harris County Transit is part of the Harris County Community Services Department. Harris County Transit provides transportation to portions of the county that are not a part of METRO’s service area. Harris County Transit also provides trips to some residents within METRO’s jurisdiction that may not be directly served by METRO. Harris County Transit began as a medical transportation program (demand responsive). In 2006, Harris County Community Services developed a comprehensive transit strategy. The agency provides three services in its service area. The services include the RIDES demand responsive program, local fixed route, and park & ride bus service. The local bus service operates in Baytown, Pasadena, La Porte, Highland, Crosby, and South Houston. Harris County contracts with METRO to provide park & ride from Baytown to downtown Houston. The park & ride route is an extension of METRO’s Maxey Road Park & Ride.

Fort Bend County Public Transportation Department

The Fort Bend County Public Transportation Department serves rural and urban areas of Fort Bend County. Public transportation services include demand responsive transit within Fort Bend County. Additionally, Fort Bend County provides three commuter bus routes from park & ride lots in Fort Bend County to three major employment centers (Uptown/Galleria, Greenway Plaza, and the Texas Medical Center) within the METRO service area in Harris County.

Gulf Coast Center (GCC) Connect Transit

GCC is the urban transit provider for the urbanized areas of Texas City and Lake Jackson-Angleton. GCC is also the rural transit provider serving Brazoria County and the non-urbanized areas of mainland Galveston County. GCC provides fixed route transit within the cities of Texas City and LaMarque and also within Lake Jackson, Angleton, Freeport, and Clute. GCC also provides demand response transportation within its service area. GCC contracts with Island Transit to provide commuter service from League City to Galveston Island.
City of Galveston (Island Transit)

The City of Galveston “Island Transit” system provides transit services on Galveston Island. Island Transit operates fixed route bus services within Galveston and provides curb-to-curb ADA complementary paratransit for eligible passengers. Island Transit operates a park & ride commuter service for Gulf Coast Center from League City to Galveston. A major destination for the commuter service is the largest employer on Galveston Island, the University of Texas Medical Branch.

The population of Galveston dropped below 50,000 as of the 2010 Census. Population below the 50,000 threshold triggers a change in funding for transit services in Galveston. Federal statutes move Galveston funding from the urban to the rural transit program for both federal and state funds. As of Census 2010, the city of Galveston is part of non-urbanized (rural) Galveston County.

Galveston County Transit District

The Galveston County Transit District is a rural and urban transit district established to assist in the planning, funding, and development of regional transit access for Galveston County. The Galveston County Transit District will serve as the recipient of federal and state funds distributed by the Federal Transit Administration and the State of Texas for rural transit services in Galveston County.

The Galveston County Transit District does not operate transit services. Gulf Coast Center and Island Transit operate transit services in Galveston County.

Brazos Transit District (BTD)

BTD operates transit services for urbanized area of The Woodlands. BTD is also a rural transit district serving a large 21-county region that covers 16,865 square miles. BTD operates transit services in the rural parts of Montgomery and Brazos counties and all of the counties of Angelina, Burleson, Grimes, Houston, Leon, Liberty, Madison, Nacogdoches, Polk, Robertson, Trinity, Walker, and Washington. The majority of BTD rural transit services are curb-to-curb demand responsive transportation.

BTD operates The Woodlands Express park & ride service from The Woodlands to downtown Houston, Greenway Plaza, and Texas Medical Center. BTD also provides ferryboat and circulator service within The Woodlands. As of Census 2010, The Woodlands urbanized area expanded to include the city of Conroe. The Woodlands Township is the designated recipient for federal and state funds for transit in that portion of the urbanized area. The Township will contract to BTD to provide transit services.

City of Conroe

City of Conroe is the designated recipient for federal and state funds for the portion of the Conroe-The Woodlands urbanized area that includes the Conroe municipal boundaries. The City does not currently operate transit services.

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1 Liberty, Montgomery, and Walker Counties fall within the Houston-Galveston area.
Colorado Valley Transit (CVT)

CVT is a rural transit district serving a four-county region that covers 3,220 square miles. The counties in the service area are Waller, Austin, Colorado, and Wharton. CVT operates curb-to-curb demand response transportation and fixed route bus service within the service area.

Table 3 provides the National Transit Database (NTD) statistics to show the transit service levels for each transit provider. If an agency does not report directly to the NTD, the statistics reported are from the Texas Department of Transportation, Public Transportation Division (TxDOT-PTN).

Table 3. Transit Service Levels 2010

<table>
<thead>
<tr>
<th>Agency</th>
<th>Operating Expense</th>
<th>Passenger Trips</th>
<th>Revenue Miles</th>
<th>Revenue Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>METRO</td>
<td>$383,689,462</td>
<td>81,151,205</td>
<td>66,516,715</td>
<td>4,035,183</td>
</tr>
<tr>
<td>BTD (Rural)*</td>
<td>$10,690,016</td>
<td>681,514</td>
<td>2,445,187</td>
<td>123,179</td>
</tr>
<tr>
<td>Galveston Island</td>
<td>$3,548,179</td>
<td>612,058</td>
<td>595,282</td>
<td>48,807</td>
</tr>
<tr>
<td>BTD (The Woodlands)*</td>
<td>$2,273,737</td>
<td>540,134</td>
<td>605,493</td>
<td>32,951</td>
</tr>
<tr>
<td>Fort Bend County*</td>
<td>$3,064,191</td>
<td>177,286</td>
<td>1,129,322</td>
<td>55,794</td>
</tr>
<tr>
<td>CVT*</td>
<td>$1,098,127</td>
<td>65,285</td>
<td>404,737</td>
<td>37,343</td>
</tr>
<tr>
<td>GCC (Texas City)*</td>
<td>$1,497,044</td>
<td>72,344</td>
<td>478,725</td>
<td>28,680</td>
</tr>
<tr>
<td>GCC (Rural)*</td>
<td>$834,043</td>
<td>22,006</td>
<td>236,292</td>
<td>13,215</td>
</tr>
<tr>
<td>Harris County</td>
<td>$1,981,746</td>
<td>90,557</td>
<td>659,366</td>
<td>45,936</td>
</tr>
<tr>
<td>GCC (Lake Jackson)*</td>
<td>$871,006</td>
<td>35,035</td>
<td>224,685</td>
<td>11,887</td>
</tr>
</tbody>
</table>

Sources: *2010 TxDOT reported data; National Transit Database

FTA Section 5307 Urbanized Area Formula Funds

FTA apportions Section 5307 based on legislative formulas. Different formulas apply to urbanized areas with a population of 200,000 or more (large UZA or large urban area) and to UZAs with a population of less than 200,000 (small UZA or small urban area).

Large Urbanized Areas

The Houston UZA and Conroe-The Woodlands each have a population exceeding 200,000 and therefore are classified by FTA as a large urbanized area. FTA apportions Section 5307 Urbanized Formula funds based on a combination of the following factors: population, population density, revenue vehicle miles, passenger miles, fixed guideway revenue miles, and fixed guideway route miles. Additional funds for Job Access and Reverse Commute (JARC) are allocated to each urbanized area based on the percent of low-income individuals in that urbanized area. Eligible uses of Section 5307 funds for urbanized areas with a population over 200,000 include capital expenditures, planning, job access and reverse commute projects that provide transportation to jobs and employment opportunities for welfare recipients and low-income workers, and up to 10 percent of the apportionment may be used for ADA paratransit costs.

Transit systems in urbanized areas over 200,000 can use their formula funding for operating expenses if they operate no more than 100 buses. Systems operating between 76 and 100 buses in fixed route service during peak service hours may use up to 50 percent of their “attributable share” of funding for operating expenses. Systems operating 75 or fewer buses in fixed route service during peak service hours may use up to 75 percent of their “attributable share” of funding for operating expenses. Attributable share refers to the share of the urbanized area’s apportionment that is attributable to a transit system based on the transit system’s share of vehicle revenue hours in the urbanized area.
Small Urbanized Areas

Texas City and Lake Jackson-Angleton have a population less than 200,000 and receive funding based on population and population density. Additional funds for Job Access and Reverse Commute are allocated to each urbanized area based on the percent of low-income individuals in that urbanized area. Eligible uses are capital expenses, planning, and operating assistance up to 50 percent of the operating deficit.

Recipients

The following list provides the Section 5307 recipients within each UZA in the Houston-Galveston area. For the small urbanized areas of Texas City and Lake Jackson-Angleton, the designated recipient is the State of Texas (TxDOT). Both urbanized areas and Conroe-The Woodlands also receive State funds from TxDOT. ²

Houston UZA

- METRO (designated recipient).
  - Harris County (direct recipient).
  - Fort Bend County (direct recipient).

Texas City UZA

- Gulf Coast Center (direct recipient).

Lake Jackson-Angleton UZA

- Gulf Coast Center (direct recipient).

Conroe-The Woodlands UZA

- The Woodlands Township (designated recipient).
- City of Conroe (designated recipient).

As an MPO for an area over 200,000 population, H-GAC metropolitan planning area is also designated as a Transportation Management Area (TMA). The Transportation Policy Council has additional authority granted by the FTA to reassign funds to different UZAs within the TMA. For example, in the past H-GAC has reassigned funds from the Houston UZA to the Galveston UZA for transit use.

The designated recipient for rural funds is the State of Texas (TxDOT). The rural transit districts serve as subrecipients to the State for federal and state funds.

² Conroe-The Woodlands UZA is eligible to receive Texas state funds from TxDOT. The Woodlands UZA was a small urbanized area when legislation authorized state funds for transit in small urban areas in 1997. The large UZA is grandfathered to continue receiving state funds.
Local Allocation of Section 5307 Funding within a UZA

In order to allocate the Section 5307 funds within the Houston UZA and the Conroe-The Woodlands UZA, the recipients participate in local negotiations. In the Houston UZA, the two direct recipients provide lists of capital projects and projected operating costs to H-GAC and METRO. HGAC, METRO, Harris County, Fort Bend County negotiate the funding amounts to be shared. The METRO Board of Directors and the policy committee of the MPO approve the agreed amounts. H-GAC then programs the projects within the TIP to allocate the federal dollars to the recipients.

In the Conroe-The Woodlands UZA, the City of Conroe and The Woodlands Township negotiate the sub-allocation of Section 5307 and State of Texas transit funds and enter into a memorandum of understanding approved by the governing body of each jurisdiction. The policy committee of the MPO approves the agreed amounts and then H-GAC programs the projects within the TIP to allocate the federal dollars to the recipients. The same memorandum of understanding is provided to TxDOT for allocation of State funds to each of the designated recipients in the Conroe-The Woodlands UZA.

Regional Transit Services

Fort Bend County Public Transportation Department, Harris County Transit, and Brazos Transit District provide services from outside the METRO service area to major destinations within METRO’s jurisdiction. The sections below provide the details of the services

Baytown Park & Ride Service

Harris County Transit contracts with METRO to provide commuter bus service from the city of Baytown to downtown Houston. The Baytown Express Park & Ride began operating October 2007 using the San Jacinto Mall parking lot in Baytown (16900 Garth Road Baytown, TX 77521). This lot is available through a use agreement between the county and the mall owner. The mall does not charge Harris County for the use of the lot; however, the county is responsible for maintenance and security of the parking lot. Harris County paid for the shelter and lot striping. METRO requires payment for the incremental hours (beyond the METRO service area) to extend those services.

Fares and Transfers

METRO charges $4.50 per one-way trip. Passenger can use cash or a METRO Q Card to pay the fare. The METRO Q Card is electronic fare card for passengers. Passengers load money onto the Q Card and use it as a debit card to board METRO services. Transfers to other METRO services are free for three hours if payment is made using the Q Card.
Fleet

METRO operates two 45-foot coach vehicles for the Baytown Park & Ride. These vehicles come from a pool of vehicles including a combination of hybrid-diesel MCI’s and diesel New Flyer vehicles. These vehicles have a seating capacity of between 55 and 57 passengers.

Ridership

105 average daily boardings on transit trips to/from Baytown.

Service Design

The Baytown Park &Ride is a commuter service that travels along I-10 East targeted at gaining ridership from citizens of Baytown and surrounding communities. The service travels to downtown Houston. Passengers utilizing the service can also transfer to one of the many METRO routes serving the downtown area.

The service operates on 20-30 minute headways, with five inbound trips in the morning and one inbound trip in the afternoon. The Baytown Park & Ride service includes six outbound trips on 20-30 minute headways during the evening peak period. After the service leaves Baytown, it travels (about 14.5 miles) to the Maxey Road Park & Ride. The Maxey Road Park & Ride is within the METRO service area and has multiple inbound and outbound trips operating on 15-minute headways during peak periods of the day, with additional reverse commute trips.

Operating Cost Details on Baytown Park & Ride

The Baytown Park & Ride started originally as a Congestion Mitigation and Air Quality Improvement Program (CMAQ) funded project. During the first three years of operation, CMAQ funded 75 percent of the operating costs and the City of Baytown and Harris County provided the addition 25 percent. Harris County now utilizes a combination of FTA 5307 and local revenues to fund the service. The annual operating expense since inception of the route has been about $150,000.

Table 4 calculates the expected cost of operation in FY2013 at $152,748. METRO uses a cost model to determine the marginal allocated cost of the incremental hours to operate the service. The marginal allocated cost is $78.13 per revenue hour.

<table>
<thead>
<tr>
<th>Table 4. METRO Cost Model for Baytown Park &amp; Ride</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additional Revenue Hours</strong> 5.03³ daily × 254 days = 1,278 @ $78.13/revenue hr.</td>
</tr>
<tr>
<td><strong>Vehicle Depreciation</strong> 2 buses @ $107,320⁴ × 20%</td>
</tr>
<tr>
<td><strong>Out of Service Area Recovery Fee</strong></td>
</tr>
<tr>
<td><strong>Subtotal Expenses</strong> $152,748</td>
</tr>
<tr>
<td><strong>Expected Revenue</strong> 105 avg daily boardings × 254 days × $4.50 × 0.9⁶</td>
</tr>
<tr>
<td><strong>Net Additional Cost</strong></td>
</tr>
</tbody>
</table>

Source: METRO Service Planning and Evaluation

³ Scheduled time it takes to travel from Maxey Rd. to the Baytown P&R.
⁴ Annualized depreciation for last hybrid bus purchase (assumes 12 year depreciation). Only charge for the 20% of required local match.
⁵ Out of service fee represents a level sales tax METRO would get if the entity joined METRO.
⁶ Represents Q Card discount of 5 free rides after paying for 50.
Harris County Transit contracted with METRO to provide commuter bus service from the city of Pasadena to downtown Houston. The Pasadena Express Park & Ride began operating in April 2009 using the Pasadena Town Square Mall parking lot (171 Pasadena Town Square Pasadena, TX 77506) and was terminated March 2012 due to low ridership and loss of local support. Harris County controlled the parking lot through a use agreement with the mall owner. The mall adjusted the lighting times, so the lights would be on when the first passengers arrived at the lot. The Pasadena Constable provided in-kind security. METRO provided a standard passenger shelter for the lot. When the service ended, METRO removed the shelter. Harris County built a boarding pad to make the sight ADA compliant (about $10-12K). Harris County did some initial marketing at the inception of the service. METRO did not contribute additional marketing beyond its standard route information guides.

### Fares and Transfers

METRO charged $4.50 per one-way trip. Passengers could use cash or a METRO Q Card to pay the fare. Transfers to other METRO services were free for three hours if payment was made using the Q Card.

### Fleet

METRO provided two 45-foot coach vehicles. These vehicles came from a pool of vehicles including a combination of hybrid-diesel MCI’s and diesel New Flyer vehicles. These vehicles have a seating capacity of between 55 and 57 passengers.

### Ridership

Averaged 30 boardings per day.

### Service Design

The Pasadena Express Park & Ride operated similar to the Baytown Park & Ride. This service was an extension of the existing METRO Monroe Park & Ride service outside of METRO’s service area. The service was designed to provide transportation to the citizens of Pasadena needing transit service to downtown Houston.

### Operating Cost Details on Pasadena Park & Ride

The Pasadena Park & Ride was originally a CMAQ funded project. During the first full year of operation the cost was $135,880; 75 percent of costs were covered by CMAQ and the remainder provided by Harris County (cash and in kind). The City of Pasadena provided in-kind parking lot security.

When the CMAQ funding expired, the service ended. Pasadena was not willing to provide financial support to continue the service.

### Brazoria County Park & Ride (Planned)

Gulf Coast Center is contracting with METRO to provide a park & ride commuter service from a location in Pearland, TX (2530 Smith Ranch Road Pearland, TX 77584. This is service is anticipated to begin in 2014. This is a new park & ride facility that will be located adjacent to State Highway (SH) 288 in Pearland, TX, outside the METRO service area. The facility will have three bus bays, 1,000 parking spaces, pedestrian amenities, and bicycle accommodations. METRO has purchased the land using JARC funding and will construct the lot using livability grant funding. Gulf Coast Center will contract with METRO to provide the service, and the City of Pearland will provide operating funds. The $14,638,000 total capital cost of constructing the facility is detailed in Table 5.
Table 5. METRO Capital Cost Financial Plan for Brazoria Park & Ride

<table>
<thead>
<tr>
<th></th>
<th>Project Cost</th>
<th>JARC (Awarded 2011)</th>
<th>Livability Grant (Pending)</th>
<th>Unfunded</th>
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<td>Land Acquisition Cost</td>
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<td>Construction Cost</td>
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<td></td>
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<tr>
<td>Design Cost</td>
<td>$1,182,000</td>
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<td></td>
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<tr>
<td>Construction Management</td>
<td>$390,000</td>
<td>$1,500,000</td>
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<tr>
<td>Program Management Cost</td>
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<td>Contingency</td>
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<td>$302,400</td>
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<tr>
<td>Total</td>
<td>$14,638,000</td>
<td>$6,877,780</td>
<td>$7,457,600</td>
<td>$302,620</td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>$5,502,224</td>
<td>$5,966,080</td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td></td>
<td>$1,375,556</td>
<td>$1,491,520</td>
<td></td>
</tr>
</tbody>
</table>

Source: Houston METRO Service Planning and Development

**Fares and Transfers**

METRO will charge a fare of $3.75 per one-way trip. Passengers can use cash or a METRO Q Card to pay the fare. Transfers to other METRO service will be free for three hours if payment is made using the Q Card.

**Fleet**

METRO will provide approximately 10 45-foot coach vehicles. These vehicles will come from a pool of vehicles including a combination of hybrid-diesel MCI’s and diesel New Flyer vehicles. These vehicles have a seating capacity of 55 to 57 passengers.

**Ridership**

The projected daily ridership is anticipated to be about 900.

**Service Design**

The service will travel from Pearland, which is outside METRO service area to the Texas Medical Center along SH288. About 7,000 TMC employees reside in the Pearland vicinity and this service will be the only fixed route service providing the connection. The service has a proposed schedule service operating at headways of 10 minutes from 5:00 to 8:20 AM and from 3:00 to 7.35 PM. The service will provide 18 inbound and 21 outbound peak duration daily trips between SH288/ Brazoria County P&R facility and TMC Transit Center.

**Operating Cost Details on Brazoria Park & Ride**

GCC and the City of Pearland will share the operating cost of the service. METRO is charging GCC and City of Pearland the full cost of operating this new service.
Table 6. METRO Cost Model for Brazoria Park & Ride (Planned)

<table>
<thead>
<tr>
<th>Additional Revenue Hours</th>
<th>49.68^7 daily × 254 days = 12,619 @ $78.13/revenue hr.</th>
<th>$985,901</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Depreciation</td>
<td>10 buses @ $112,686^8 × 20%</td>
<td>$225,372</td>
</tr>
<tr>
<td>Out of Service Area Recovery Fee</td>
<td></td>
<td>$10,000^9</td>
</tr>
<tr>
<td><strong>Subtotal Expenses</strong></td>
<td></td>
<td><strong>$1,221,273</strong></td>
</tr>
<tr>
<td>Expected Revenue:</td>
<td>900 avg daily boardings × 254 days × $3.75 × 0.9^10</td>
<td>-$771,525</td>
</tr>
<tr>
<td><strong>Net Additional Cost</strong></td>
<td></td>
<td><strong>$449,748</strong></td>
</tr>
</tbody>
</table>

Source: Houston METRO

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**Fort Bend County Express**

Fort Bend County offers commuter services known as the Fort Bend Express. Three routes link commuters from Fort Bend County to three major employment centers in the METRO service area: Uptown/Galleria, Greenway Plaza, and the Texas Medical Center. Fort Bend County contracts with First Transit to operate the services.

**Service Design**

Commuter services operate from three park & ride locations in Fort Bend County:

- University of Houston Sugar Land (UH-SL), 14000 University Boulevard, Sugar Land, TX 77479
- AMC First Colony 24 (AMC), 3301 Town Center Boulevard, Sugar Land, TX 77479
- Fort Bend County Fairgrounds, 4310 State Highway 36 South (SH36), Rosenberg, TX 77471

**Fort Bend Express to Uptown/Galleria**

Fort Bend Express bus trips to Uptown/Galleria operate from/to the UH-SL and the AMC park & ride lots every trip. There are two route alignments serving Uptown/Galleria. One alignment operates along Sage and Yorktown to San Felipe (often referred to as the west route), and the other alignment follows Post Oak Boulevard (often referred to as the east route). Each Monday through Friday, there are 6 AM trips using each alignment (12 trips total) leaving the park & ride lots between 5:20 and 8:15 AM and arriving in Uptown/Galleria between 5:52 and 8:59 AM. There are 5 PM trips using Yorktown and 7 PM trips using Post Oak Boulevard (a total of 12 trips) leaving Uptown/Galleria between 3:20 and 6:58 PM and arriving at the park & ride lots between 4:03 and 7:43 PM.

**Fort Bend Express to Greenway Plaza**

The Greenway Plaza route operates from/to both the UH-SL and the AMC park & ride lots on every trip and stops at the METRO West Bellfort Park & Ride, permitting passengers to transfer between FBC and METRO routes. METRO service at West Bellfort includes park & ride to downtown Houston or TMC and the Wilcrest Crosstown.

Fort Bend Express to Greenway Plaza operates Monday through Friday. There are 10 AM trips leaving the Fort Bend park & ride lots between 5:10 and 8:00 AM and arriving Greenway Plaza between 5:48 and 8:43 AM. There

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^7 Scheduled time it takes to travel from Brazoria Park & Ride to TMC.
^8 Annualized depreciation for expected bus purchase (assumes 12 year depreciation). Only charge for the 20% of required local match.
^9 Out of service fee represents a level sales tax METRO would get if the entity joined METRO.
^10 Represents Q Card discount of 5 free rides after paying for 50.
are 10 PM trips leaving Greenway between 3:15 PM and 6:40 PM and returning to the Fort Bend park & rides between 4:02 and 7:35 PM. All trips stop at the METRO West Bellfort Park & Ride.

**Fort Bend Express / Texas Medical Center**

The Fort Bend Express / Texas Medical Center commuter service consists of fixed route service to the main campus of the TMC and to the Michael E. DeBakey VA Medical Center. Bus trips to the TMC operate from the SH36 as well as the UH-SL and the AMC park & ride lots. The TMC route serves at least two of the three park & ride lots on each trip. Certain trips in the morning and afternoon require a transfer at one of the park & ride lots in Sugar Land for access to the SH 36 park & ride lot. No additional fare is charged for the shuttle transfer.

The commuter service leaves the park & ride locations between 4:40 and 8:17 AM arriving at the Texas Medical Center between 5:40 and 9:28 AM. Return trips leave the TMC between 3:20 and 7:23 PM arriving at park & ride locations between 4:09 and 8:24 PM. A midday route runs round trip between 11:05 AM and 1:37 PM. There is no weekend service currently.

The stops in the TMC include:

- Main Street at Cambridge  
  - Shared METRO Stop
- Main St. at University Blvd  
  - Shared METRO Stop
- HCC at Pressler  
  - Shared METRO Stop
- Pressler Garage  
  - Shared METRO Stop
- Bertner at Bates  
  - Shared METRO Stop
- MD Anderson at Bertner  
  - Circle Drive Entrance
- John Freeman Blvd. at Cullen  
  - Shared METRO Stop
- VA Hospital  
  - Shared METRO Stop

A reverse commute service is available with the Fort Bend County Express / Texas Medical Center route. However, the reverse commute service is only accessible at certain times of the schedule.

Buses use the Southwest Freeway (Highway 59) HOV lane. Buses exit on Main Street to access the TMC in the mornings. Afternoon buses also use Main Street to access the Southwest Freeway (Highway 59) HOV lane for return trips. The decision to use these routes was based on route efficiency and run time performance.

**Fares and Transfers**

Exact change and tickets are accepted as fare. Fare is collected in the fare box upon boarding. If fare is paid in cash, exact change is required. The one-way cash fare is $2.25 from Fort Bend to Uptown/Galleria and Greenway Plaza, $3.50 from Fort Bend to TMC, and $2.00 from West Bellfort P&R to Greenway Plaza. The drivers cannot make change. Ticket books are available for purchase at a 10 percent discounted rate. Tickets are non-refundable.

Passengers traveling to from University of Houston Sugar Land and transferring to METRO services at the West Bellfort Park & Ride pay $1 to Fort Bend County plus the required METRO fare. Ticket books are priced as follows:

- $40.00 (20 rides) UH-SL / AMC to Greenway Plaza or Uptown / Galleria
- $80.00 (40 rides) UH-SL / AMC to Greenway Plaza or Uptown / Galleria
- $40.00 (40 rides) UH-SL / AMC to West Bellfort Park & Ride
- $35.00 (20 rides) West Bellfort Park & Ride to Greenway Plaza
- $70.00 (40 rides) West Bellfort Park & Ride to Greenway Plaza
- $63.00 (20 rides) SH36/ UH-SL / AMC TMC
**Fleet**

Fort Bend County uses small transit buses with 32-seats (space for 2 wheelchairs if required) for commuter services. Vehicles are owned by Fort Bend County or by First Transit, depending on the specific service requirements. The buses are not equipped with reclining seats, reading lights, or other commuter amenities.

**Ridership**

Figure 2 illustrates the trend in ridership on the Fort Bend Express routes over the last 12 months. The average weekday passenger boardings is increasing on each commuter service; however, the growth in ridership for service to TMC is the most significant.

![Figure 2. Fort Bend Express Passengers per Average Weekday](image)

Source: Fort Bend County Public Transportation Department

**Operating Cost Details Fort Bend Express**

Fort Bend County Public Transportation contracts with First Transit to provide commuter services. The contract cost is based on a rate per service hour that does not include fuel (Fort Bend County supplies fuel for all revenue service). The contractor rates through April 30, 2013 are as follows:

If Fort Bend County provides the vehicle:

- $41.54 per service hour for commuter service to Uptown/Galleria or Greenway Plaza
- $38.24 per service hour for commuter service to TMC

If First Transit provides the vehicle:

- $52.24 per service hour for commuter service to Uptown/Galleria or Greenway Plaza
- $52.38 per service hour for commuter service to TMC
The Woodlands Express

Brazos Transit District (BTD) contracts with a private transportation provider to operate park & ride from services from three park & ride lots in The Woodlands. All three routes go to destinations in the METRO service area. The destinations include downtown Houston, the TMC, and Greenway Plaza. BTD contracts with Coach USA to provide the services.

Service Design

BTD operates commuter bus services between Montgomery County and destinations within the METRO service area. Morning trips are provided from three Montgomery County park & ride locations – reverse trips are provided in the afternoon and evening. One midday trip between Houston and Research Forest and two midday trips between Houston and Sawdust are also provided. There is not a formal agreement between BTD and METRO to allow free or discounted transfers to METRO transit services. BTD does utilize the FTA-funded North High Occupancy Vehicle (HOV) lane for the park-and-ride service.

BTD owns and maintains the following park & ride facilities:

- Sawdust Park & Ride – 701 Westridge, Spring 1,200 parking spaces (43 percent filled 2011)
- Research Forest Park & Ride 3900 Marsico Place, The Woodlands 1,000 parking spaces (82 percent filled 2011)

Park & Ride Capital Expense

BTD used Section 5307 formula funds and Section 5309 discretionary funds to purchase and construct the park & ride locations. The following list provides the capital expense for the park & ride locations:

- Sterling Ridge – (2012) $569,665
- Sawdust – took over in (1987) $1,140,836
- Research Forest – (1995) $1,940,211

Fares and Transfers

BTD charges $5 per one-way trip.

Fleet

The service uses a range of 2000-2010 45ft Vanhool 57 passenger over-the-road coach buses. The fleet consists of 32 vehicles. The vehicles are equipped with reading lights, individual AC vents, reclining seats, and restrooms.

Ridership Calendar Year 2011

Sterling Ridge – 108,659 or about 428 daily
Sawdust – 222,890 or about 878 daily
Research Forest – 387,921 or about 1,527 daily
Operating Cost and Fare Recovery

The Woodlands Express is funded from farebox revenues, federal rural and urban transit funds, and state funds when required.

Table 7. The Woodlands Express Cost and Fare Recovery

<table>
<thead>
<tr>
<th>Park &amp; Ride Service</th>
<th>CY11 Operating Cost*</th>
<th>CY11 Fare Recovery</th>
<th>Farebox Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterling Ridge</td>
<td>$851,199</td>
<td>$569,665</td>
<td>67%</td>
</tr>
<tr>
<td>Sawdust</td>
<td>$1,134,747</td>
<td>$1,140,836</td>
<td>100%</td>
</tr>
<tr>
<td>Research Forest</td>
<td>$2,042,989</td>
<td>$1,940,211</td>
<td>95%</td>
</tr>
</tbody>
</table>

* $138.79 per revenue hour including capital cost of contracting for vehicles and operations facility

Source: Brazos Transit District