

**Department of Transportation
Federal Transit Administration
Section 5309 Bus and Bus Facilities Livability Initiative Program Grant**

1. Applicant Information

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FTA Recipient ID: 1591

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(c) Description of Services: The City of Brownsville (City) currently measures approximately 80.4 square miles and has an average population density of 2,183 residents per square mile. Although the population stood at 175,638 in January 2009, it is estimated the City will surpass the 200,000 mark for the 2010 U.S. Census. Brownsville, Texas has consistently been categorized as being a city with one of the lowest median income levels nationwide.

Brownsville Urban System

The Brownsville Urban System (BUS) is a department of the City and has been providing fixed route public transportation services within the city since 1979. Additionally, complimentary paratransit service which offers "curb-to-curb" service began in 1991. BUS administers an annual operating budget of approximately \$4.4 million. It has been administering both federal and state grants for public transportation since it began providing public transportation services. Current active grants include Section 5307, Section 5309, Section 5310, Section 5311(f) and Section 5316 projects.

BUS operates a network of 14 fixed routes using 18 buses at peak times. Most routes begin and end at the Downtown BUS Terminal. The terminal is built around the historic Market Square building with capacity for eight buses in four bays on either side of the building. BUS also operates three routes that utilize the Northside Transfer Station (NTS). BUS service hours of operation for both the fixed route and paratransit service are from 6:00 a.m. to 8:30 p.m. from Monday to Saturday. All but one of the fixed routes operate within the city limits of Brownsville. BUS carries approximately 5,178 passengers on a typical weekday and Saturday. During Fiscal Year 2009, BUS carried 1.6 million passengers.

In 2006 BUS oversaw construction of the \$1.1 million NTS in order to improve bus frequency and passenger connection options in the city's growing North quadrant. Three routes currently utilize the NTS. Current projects include completion of the Brownsville

Multimodal Terminal which will facilitate regional public transportation efforts, fleet replacement through the purchase of at least six new heavy duty buses for FY 2011, and the New Freedom Capital Improvement Project which is serving to improve twenty-two BUS shelters in respect to current ADA standards.

Brownsville / South Padre Island International Airport

The City airport that is now known as the Brownsville – South Padre Island International Airport (Airport) opened for service in 1929. The Airport administers an annual operating budget of approximately \$3.8 million and includes an Airport and Business Industrial Park Fund. It handles eighty-nine flight operations per day from Monday to Sunday on its two air carrier runways. Of these flights, 40% consist of transient general aviation, 28% military and 16% local general aviation. Currently, both American and Continental Airlines offer flights at the Airport. Among others, the Airport provides service to travelers whose final destination includes South Padre Island and Matamoros, Mexico. Additionally, the Airport serves as part of the Brownsville Industrial Airpark which houses various businesses providing service to local, state, national and global clients.

Current and proposed Airport projects include extension of the major runway to 10,000 feet, a new terminal, and additional airlines providing service. All projects would ensure the economic success of the Airport.

(d) Fleet and Employee Information: There are 20 heavy duty buses and 2 medium duty buses in use for fixed route. Additionally, there are 11 vans being utilized for paratransit use. Further, BUS employs eighty-one employees, including thirty-eight fixed route operators and eleven paratransit operators.

(e) Agency Description: The City of Brownsville has the technical, legal and financial capacity to administer the proposed project. The City is a Texas Municipality established under Article 1165 et.seq of the Texas Revised Civil Statues. It provides a full range of municipal services contemplated by statue or charter. This includes public safety (primarily police and fire), streets, sanitation, health and social services, culture-recreation, public improvements, planning and zoning, community development, tourism and general administrative services. Other services include utilities, airport and industrial park operations and public transportation.

The City of Brownsville operated on a budget of approximately \$85.5 million last fiscal year. Brownsville's Finance Department, responsible for overseeing all fiscal aspects related to the City's twenty-nine departments and divisions and over 1,192 employees, has been recognized every year for the past thirty years by the Government Finance Officers Association of the United States and Canada for excellence in financial reporting. It keeps appropriate records and processes millions of dollars in payments, receipts, salaries, and grant expenditures annually.

2. Project Information

Our project proposal is divided into three components: completion of construction of the Brownsville Multimodal Terminal, construction of the Southmost Area Transfer Station and the Brownsville / South Padre Island International Airport Transfer Station, and the Intelligent Transportation System.

(a1.) Brownsville Multimodal Terminal

The City of Brownsville – Brownsville Urban System (BUS) is proposing to develop a multimodal terminal to provide a hub for ground transportation services including local, rural, intercity and international transit services, taxi and charter bus and to provide an improved environment for travelers. A multimodal terminal will offer existing and future transit operators the opportunity to provide coordinated services and enable passengers to transfer with ease between different routes and modes. Transportation carriers would benefit from efficiencies of shared costs and operational infrastructure, while passengers enjoy greater convenience in making daily commutes or embarking on local, intercity, or international travel.

A consolidated transportation hub would improve mobility and connectivity, reduce energy consumption, improve air quality, and promote economic development. By consolidating all transit services into one location, transit providers will save costs associated with operating multiple terminals to compete for customers. Amenities can be shared among tenants, thereby reducing operating costs for all.

Although the multimodal terminal facility development will be located in Brownsville its scope is regional and international. The completion of the project will enhance interconnectivity in modes of transportation that would expand to other transit systems in the region. The project would augment the infrastructure necessary to create a seamless network of public transportation in the region. Once completed it will serve as the complementary multimodal hub that will anchor ground transportation services between and within the urban areas of Brownsville and McAllen, Texas where a multimodal hub is currently in operation.

On a regional and national level the facility will serve as an anchor point and hub for connecting urban and rural transportation services throughout the region. Its development will provide an important piece of the infrastructure necessary to create a seamless regional transportation network that will feed into the statewide and national network of ground transportation. It will improve national safety and security by consolidating multiple destination points of bus services that operate internationally to one location. The Brownsville Multimodal also includes a security area that will be utilized by members of varying security forces. On an international level it will provide an attractive, safe and secure first stop within the United States for many travelers and will facilitate international travel and trade.

(a2.) Southmost Area Multi-Hub Transfer Station

Brownsville Urban System (BUS) is proposing the construction of a multi-hub transfer station in the Southmost area of Brownsville. This project would provide reliable

transportation to residents traveling to work, school, and to local services such as the grocery store, church, or the bank.

The Southmost area has a population of 33,791 with a density of 5,791 people per square mile. This area is one of the most impoverished neighborhoods in the City of Brownsville having a median income of 25,579. The average size of a household in Southmost is 4.2, with only an average of 1.8 vehicles available for travel. The construction of a multi-hub transfer station would increase ridership by providing alternative transportation to families with limited transportation or none at all.

The Southmost area provides service to nearly 19% of the total BUS ridership in Brownsville with 294,733 passengers in FY 2009. The proposed site for the Southmost Multi-Hub Transfer Station is located on the property of a high traffic grocery store in the center of the Southmost area. There are more than 10 basic services surrounding the site all within a half mile radius, including the Brownsville Police Department, the Brownsville Fire Department Station #3, Wells Fargo Bank, two elementary schools, church, etc. Ultimately, Brownsville residents will have increased access and frequency to any location within the City from the Southmost area.

(a3.) Airport Transfer Station

The City of Brownsville – Brownsville Urban System (BUS) is proposing to develop a transfer station, with park-and-ride facilities capable of handling hundreds of vehicles, adjacent to the Brownsville – South Padre Island International Airport to serve as a transfer hub in efforts to augment the multi-hub transfer system designed to link all of the major generators with each other and with the rest of Brownsville. Along with the recently constructed Northside Transfer Station, the soon to be completed Brownsville Multimodal Terminal, and the proposed Southmost Area Transfer Station, the Airport Transfer Station will serve to decentralize service, further assisting BUS passengers with additional flexibility in public transportation options related to getting to employment, school and job training centers. Currently, most of the bus routes begin and end at the downtown terminal. This adds significantly to trip times for routes that extend to various points across the city. Currently, the Airport serves as a bus stop for the Lower Rio Grande Valley Development Council's (LRGVDC) Rio Gulf Coast Express. This route provides service to the Downtown Bus Terminal, Airport, the Port of Brownsville, Port Isabel and South Padre Island. The LRGVDC reports they serviced a total of 29,104 passengers between January and December 2009. This amounts to approximately 26.5% of the LRGVDC's total ridership of 109,632 for their Rio Transit division which consists of eight routes. Initial discussions with the Brownsville Housing Authority (BHA) indicate proposed plans to construct a new housing complex within the Airport area. This housing complex will consist of an estimated 150 units, housing approximately 900 people that will benefit from the transfer station. The BHA is well aware of the mobility needs of their growing population; therefore, keeping proposed plans of the Airport Transfer Station in mind when finalizing upcoming construction projects. Further, discussions with Airport administration indicate proposed airport growth, including the addition of passenger airliners, and business growth in the form of additional Brownsville Industrial Airport tenants.

(a4) Intelligent Transportation Systems (ITS)

Background

In 2001, the Federal Highway Administration (FHWA) issued a final rule to implement Section 5206(e) of the Transportation Equity Act for the 21st Century (TEA-21) requiring that Intelligent Transportation System (ITS) Projects funded through the Highway Trust Fund conform to the National ITS Architecture and applicable standards.

To meet these requirements the Texas Department of Transportation (TxDOT) initiated the development of Regional ITS Architectures and Deployment Plans throughout the State of Texas. Although not required by the FHWA final rule, TxDOT took the opportunity to also develop an ITS Deployment Plan for each region. The Lower Rio Grande Valley Regional ITS Deployment Plan was prepared as part of this initiative.

The Regional ITS Deployment Plan for the Lower Rio Grande Valley Region outlines a vision for ITS deployment, and identifies and prioritizes projects that are needed to implement the ITS architecture on a short, medium, and long-term basis. In doing so, this plan helps the Region to prioritize funding decisions. As infrastructure is incrementally built-out over a 20-year horizon, integration among key foundation systems in the Region can occur as the system grows and expands.

In 2003, the Brownsville MPO joined with other agencies and TxDOT staff at the Pharr District in formulating a Regional Intelligent Transportation Plan (ITS). In July 2003, the State of Texas ITS Architecture and Deployment Plan for the Lower Rio Grande Valley Region was adopted. Stakeholders included representatives from TxDOT, Federal Highway Administration, cities, counties, the Texas Department of Public Safety (DPS), transit agencies, police and fire, metropolitan planning organization (MPOs), U.S Customs, U.S. Border Patrol, U.S. Immigration and Naturalization Service, and others. Through the architecture development process, stakeholders reached consensus in the transportation needs in the Region that could be addressed with ITS, worked with the architecture team to customize priority market packages that formed basis for the ITS Deployment Plan, and identified the required interfaces to provide the desired level of integration of systems and agencies within the Lower RGV Region.

Goals and Objectives

The primary goal for the Brownsville Urban System is to provide efficient and effective transportation. BUS intends on providing all passengers with safe and pleasant travel. The following are a list of objectives that will assist in meeting this goal.

- Improved schedule adherence and timed transfers
- More accessible passenger information using electronic media such as cell phones, the internet and electronic signs
- Increased availability of data for transit management and planning using Automated Passenger Counting and on-board electronic fare collection.

- Efficiency/productivity improvements in transit services using Automatic Vehicle Monitoring

Existing ITS in the City of Brownsville

ITS equipment was procured in 2004, however new technology and upgraded software would serve as much needed enhancements. Currently, Brownsville Urban System is using ITS technology to reduce mileage and costs, improve productivity, increase operational efficiencies, and improve customer satisfaction.

BUS is equipped with Automated Vehicle Location (AVL) and works with Computer Automated Dispatch, including Mobile Data Terminals, Transit Operations Center, and Public Announcement. All BUS Revenue Vehicles are also equipped with destination signs, on-board surveillance, and fare boxes.

Planned Projects

As part of the Lower Rio Grande Valley Region Regional ITS Deployment Plan developed in 2003, the Brownsville Urban System has identified Transit Vehicle Tracking as a high priority.

1. Smart Stop
2. Automated Passenger Counting
3. Smartcards Electronic Fare Technology
4. P25 Technology

Smart Stop

Communication with passengers is the key to efficiency and increase in ridership. BUS currently uses GPS technology on all buses but the technology is limited, with only arrival time communication available to staff. Brownsville Urban System (BUS) is dedicated in providing innovative technologies to improving access to information about transit, including information at the bus stops, such as the length of time until the next bus arrives, or destinations served by buses serving this stop, or fares. BUS also plans to utilize cell phone media and the web to make bus travel easy and accessible. Web information could include a trip-planning tool that maps out routes from start to finish and provides estimated travel times.

Smart Stop technology will:

- Inform passengers of interruptions, emergencies, and other important events.
- Calculate the arrival time of buses for specific stops and routes then communicate this information to passengers via handheld wireless devices (such as cell phones and PDAs), the internet, and electronic signs.
- Tells passengers exactly where their bus is and when it will arrive
- Sustainably increase ridership while reducing negative impact on the environment.

Automated Passenger Counting

- Delivers a robust solution to the problem of accurately and efficiently managing passenger boarding and alighting data.

- Allows BUS to plan according to the actual needs and demands of ridership, which is both an economically and environmentally sustainable practice.
- Uses infrared technology at bus doors, along with on-board and post-processing software, to provide a highly sophisticated level of accuracy while filtering out objects that are not passengers such as bags and other parcels.
- Ridership data is provided on a per-bus, per-door basis and correlated to scheduled runs, routes, stops, time, date, and destination.

Smart Card Contactless Fare Technology

Brownsville Urban System plans to upgrade to Smart Card technology on all buses and change all fares to electronic media. Fare boxes will read each passenger's Smartcard as they board the bus. This new technology will improve passenger tracking and accuracy of data used during negotiations and fare reconciliation.

Smart Card technology will establish interconnectivity in modes of transportation that would expand to the other systems outside of the Brownsville service area. This technology will benefit residents in the entire Lower Rio Grande Valley (LRGV) and surrounding communities, visitors from all over Texas, the United States, and owing to our proximity to Mexico, international visitors. According to the LRGV ITS Architecture Report in 2003, the Transit Passenger and Fare Management market package was identified as a highly priority in providing service regionally throughout the Rio Grande Valley. Stakeholders included Brownsville Urban System, Lower Valley Development Council Transit, McAllen Express Transit and The Wave. Brownsville Urban System will lead the region in implementing this new technology. Smart Cards will enable passengers to travel seamlessly through bus transit throughout the entire Rio Grande Valley

P25 Technology

P25 is an interoperability standard facilitating synchronization of communication equipment utilized by all agencies involved in first response. Key participants include members of the International Association of Chiefs of Police, International Association of Fire Chiefs, and Federal Law Enforcement Wireless Users Group. For further information please see Attachment K.

Operations:

- Smart Stop will improve schedule adherence, accuracy in schedule adherence monitoring and transfer coordination.
- Smart Stop, Automatic Passenger Counting, and Smart Card technology will increase transit ridership.

Labor savings:

- Automatic Passenger Counting will assist with reporting and avoid manual data entry.

Communications:

- Smart Stop enables passengers to accurately predict and communicate arrival time to riders allowing them to best plan their trip and utilize their time.

Passenger Information:

- Smart Stop will reduce schedule adherence customer complaints and the need to add customer information operators. It will also allow travelers to make better travel decisions

Scheduling and Planning:

- Automatic Passenger Counting, Smart Stop, and Smart Cards Technology will provide more complete and accurate data for scheduling and planning. These ITS features will also lead to potential reduction in schedule preparation time and staff, and aid in effective bus stop placement.
- Smart Card technology provide a good opportunity to facilitate multimodal trip making
- Smart Card technology can allow travelers to pay for multiple modes of transportation regardless of whether the service is administered by one agency or by multiple agencies within a region

Safety and Security:

- Smart Stop will enhance driver and traveler safety: accurate and quick location information allows for faster response to accidents.
- Smart Stop will assist in better operational response during detours caused by accidents, roadway closings or bad weather.

All ITS technologies will reduce travel time both by improving the operation of the vehicle and the overall operation of the transportation network.

2b. Project Evaluation Criteria

1. Demonstrated need for resources

1a Project represents a one-time capital investment that cannot be reasonably funded from formula allocations or state and local revenues. As a department of the City of Brownsville, BUS, a small urban transit system relies heavily on its annual federal formula allocation for operating assistance and expanded capital eligibility activities such as preventive maintenance and ADA complementary paratransit service. Although federal formula funding continues to increase each year, once it has been allocated locally for operating assistance and the expanded capital activities there is not sufficient funding

left to develop the proposed projects. Additionally, due to the increasing population, there is the strong probability that BUS will lose federal funding for operating costs by fiscal year 2013.

Since 2000, the level of state provided funds for public transportation has remained relatively unchanged, but at the same time, public transit operators have experienced increased demand for services, increased costs of operations, and an aging fleet of vehicles that are in need of replacement. In addition, since 2000 new transit operators have been added to the total number of providers in the state, resulting in smaller state funding allocations for all.

The decrease in state funding has placed a larger financial burden on local communities and transit systems in Texas. Within the last two years BUS has made a concerted effort to seek and secure new sources of local funding and to coordinate transportation services with other agencies. Although the development of the proposed project is a priority of the City of Brownsville and local funding has been allocated for it, it cannot be developed without federal capital funds.

1b The City of Brownsville did not receive sufficient funding in previous years.

BUS did not receive sufficient funding for the multimodal project in the SAFETEA-LU earmarks and formula funds are not available to complete the project. More than \$6 million was earmarked for this project in SAFETEA-LU. The estimated total development cost stands at \$32 million, of which approximately \$18.8 million is allotted for construction of the Brownsville Multimodal. Of the \$18.8 million, \$11 million has been secured with \$7.8 million pending. As stated in the previous section, once annual federal formula funds have been allocated locally for operating assistance and eligible expanded capital activities there is not sufficient federal funding left to develop either the multimodal or any other projects.

1c The project will have significant on service delivery.

A consolidated transportation hub would improve mobility and connectivity, reduce energy consumption, improve air quality, and promote economic development. By consolidating all transit services into one location, transit providers will save costs associated with operating multiple terminals to compete for customers. Amenities can be shared among tenants, thereby reducing operating costs for all.

Although the multimodal terminal facility development will be located in Brownsville its scope is regional and international. The completion of the project will enhance interconnectivity in modes of transportation that would expand to other transit systems in the region. The project would augment the infrastructure necessary to create a seamless network of public transportation in the region. Once completed it will serve as the complementary multimodal hub that will anchor ground transportation services between and within the urban areas of Brownsville and McAllen, Texas where a multimodal hub is currently in operation.

On a regional and national level the facility will serve as an anchor point and hub for connecting urban and rural transportation services throughout the region. Its development will provide an important piece of the infrastructure necessary to create a seamless regional transportation network that will feed into the statewide and national network of ground transportation. It will improve national safety and security by consolidating multiple destination points of bus services that operate internationally to one location. The Brownsville Multimodal also includes a security area that will be utilized by members of varying security forces. On an international level it will provide an attractive, safe and secure first stop within the United States for many travelers and will facilitate international travel and trade.

HUB Transfer Stations

The construction of a multi-hub transfer stations will link all generators with one another and significantly reduce travel time. Currently, most of the bus routes begin and end at the downtown terminal. This adds significantly to trip times for routes that extend to various points across the city. Some passengers will spend up to an hour on a bus route to reach their destination. Multi-hub transfer stations would decrease travel time by a half hour and decentralize service to the north and west side of Brownsville, avoiding travel to the downtown terminal all together.

In addition, the facilities will include a park and ride lot with enough space to accommodate ten vehicles. This will be both convenient to residents, and environmentally friendly, reducing greenhouse gas emissions. Cost efficient transportation is a top priority for the community and with the constant fluctuating fuel costs; bus transit will be the preferred choice of travel.

ITS

ITS technologies have been proven to help transit agencies increase safety and operational efficiencies. Remote monitoring of transit vehicle status and passenger activity helps to provide additional safety and security to passengers. ITS technologies also assist operations in maintaining vehicle fleets.

2. Planning and Priority at local/regional level

- a. The Brownsville Multimodal Terminal project is consistent with the transit priorities and is identified in the Metropolitan Transportation Plan. Further, it is included in the financially constrained Transportation Improvement Program and the State Transportation Improvement Program. The project has become one of the City's highest priority projects.

The additions of the multi-hub transfer station and ITS equipment is consistent with the transit priorities and is identified in the Brownsville Metropolitan

Planning Organization Plan 2010-2035. Both technical and planning committees were in sync with proposed projects and public comment was invited and received. The purpose of such improvement projects is to address area transportation needs. In 2009, initial meetings with BHA staff resulted in proposed plans to work collaboratively on providing community residents with joint transportation and housing projects. Additionally, meetings with aviation staff to discuss plans on how to provide additional transportation options for current and upcoming workers living in the area took place. Airport officials estimate there will be an increase of an additional 1,200 workers for the Airport Industrial Zone living in Brownsville. Through the addition of transfer stations in the Southmost area and the Airport area, the MPO hopes to meet such objectives as enhanced accessibility and mobility options, increased access to the Airport, increased access to major transportation generators, reduced travel time and offering options to decrease traffic congestion and improved energy conservation.

- b. The Brownsville MPO addresses the project. See supporting attachment.
- c. Letters of support for this project are included as attachments.
- d. The development of a multimodal terminal facility in Brownsville is consistent with service needs of the area based on local plans and projected population trends. South Texas' rapid and continuing growth has called attention to the need for efficient, dependent public transit systems. Like many areas in the state, South Texas has experienced significant population growth since the 1990s. Between 1990 and 2000, the population in the eight county Texas Department of Transportation Pharr District, the southernmost district, increased by more than 38 percent with the bulk of the growth occurring in Cameron and Hidalgo counties.

Along with the continued growth of the region, the demand for expanded public transportation services has grown. The City was identified in a report to the United States Congress in September 2000 as a small transit intensive city (a city that provides "a level of transit service far greater than their size and density characteristics would typically suggest" – Report Number FTA-TBP 10-00-04). Even with limited service, full buses are common in Brownsville during peak periods.

- e. This project enjoys widespread community support. City has partnered with multiple private and public agencies. Letters of support are included and can be found as attachments.

3. Livability

- a. Enhanced User Mobility: Completion of the Brownsville Multimodal Terminal, the transfer stations in the Southmost and Airport areas, along with implementation of ITS will help to improve the quality of life for countless individuals throughout the City. Many passengers utilize public transportation to

reach employment, educational institutions, job training, medical appointments and to manage day-to-day activities.

- b. **Broader Travel Mobility:** The multimodal terminals in Brownsville and McAllen will connect passengers from rural areas to urbanized areas and intercity bus travelers, feeding them all into the local public transit systems. The project will benefit residents from rural and urbanized communities surrounding and between Brownsville and McAllen, visitors from all over Texas, the United States, and, owing to its proximity to Mexico, international visitors.
- c. **Improve existing transportation choices:** It will have positive impacts on multiple levels. At the local level it will improve traffic circulation in a downtown central business district that is second only to San Antonio for historic resources in the State of Texas. By substantially removing transit buses and over-the-road coaches from narrow downtown streets the city will benefit from the reduced wear and tear on its right of way infrastructure. It will improve the safety and aesthetics of a 2½ block area that already serves as a site for the multimodal activity that is planned. It will serve as a catalyst for revitalization and redevelopment of an area currently in a state of declining retail use. The constant flow of pedestrian traffic will regenerate economic development in the surrounding area.
- d. **Improve accessibility:** Construction of the transfer hub stations in the Southmost and Airport area will serve economically disadvantaged populations, non-drivers, senior citizens and persons with disabilities. The Southmost area with its population density that is nearly triple that of the remainder of the City, historically represents high ridership in those current routes serving the area. The airport area transfer hub would serve those living in the Eastern segment of the City and utilizing local or regional public transportation agencies to get to work sites in the Port Isabel/South Padre Island areas. Additionally, individuals traveling in and out of the Brownsville – South Padre Island Airport would be able to utilize public transportation serving the transfer hub to reach the Brownsville Multimodal for additional connections. Rio Transit, the rural public transportation provider for this area connects with BUS as well. The intermodal/multimodal facility will therefore serve to connect local, national and international modes of travel.
- e. **Planning and Coordination:** The purpose of the Metropolitan Transportation Plan, (MTP), is to guide development of the Brownsville Transportation system through implementation of a prioritized list of potential transportation projects. Specifically, the MTP identifies projects needed to accommodate projected growth expected to occur in the Brownsville MPO area to the year 2035. The prioritized list was developed by the two MPO Committees, with input from the public.

4. Sustainability

(4a.) Improve Energy Efficiency

Brownsville Urban System has investigated energy-related design concepts that consider the environment, climate, building orientation, passive strategies, and other features that will impact performance and save the City of Brownsville money. BUS has developed a plan to construct a top performing energy efficient building. A power team of local government officials from the City of Brownsville Planning Department and the Transportation Department have partnered with architects, energy consultants, construction contractors, and the Metropolitan Planning Organization. The team created energy efficient strategies to reduce operating and energy costs and prevent CO₂ emissions.

Brownsville Multimodal Terminal

The Brownsville Multimodal Terminal has been designed to be environmentally friendly by utilizing energy efficient materials and alternative energy sources. The following is a list of energy efficient practices within the project design.

- 80% of materials used for construction will be recycled from demolition
- Natural Lighting will be used within the facility
- The construction of sidewalks and Wayfinding signs will be used to enhance pedestrian corridors. Hybrid Oak Trees will be planted to provide shading and decrease water usage
- RSD Roofing and a Geowater System will be used

(4b.) LEED Certified Facilities

Transfer Stations

The Brownsville Urban System's Multi-Hub Transfer Stations are intended to be high-quality projects that are environmentally sensitive, by using state-of-the-art energy efficiency and sustainable building methods. It is the City's intent to attain a "Certified" project status as defined in the Leadership in Energy and Environmental Design (LEED) Rating System by the U.S. Green Building Council. These projects will be the first LEED Certified Projects in the City of Brownsville and will be a demonstration of the City's commitment to greener development and responsible public policy.

BUS plans on the construction process accumulating the most LEED points, by using recycled materials and, in turn, recycling construction waste. Low-emitting materials such as adhesives, sealants and paints will be used to improve the indoor air quality by reducing contaminants.

The Southmost location is prime for LEED certification because of the high-density area in which it will be built, and the many surrounding services including the HEB Grocery Store, the Brownsville Police Station, IBC Bank, and the Brownsville Public Library all within walking distance.

In addition, Energy Star products will be purchased for the construction for both Multi-Hub Transfer Stations, including an Energy Star reflective metal roof and insulation. Other features will also be included in the construction such as water efficient landscaping, stormwater management, recycled glass, and a light colored roof.

Both transfer stations will be designed in such a way that BUS could add eco-friendly improvements over time with future funding.

Sustainable Sites

- Transfer Stations will be built on environmentally-preferable sites: The sites will not be considered prime farmland, habitat for threatened or endangered species, or near any bodies of water.
- The sites for this projects are within a half mile of 10 basic services, including HEB Foods, Brownsville Public Library, Wells Fargo Bank, Brownville Police Station and Brownsville Fire Station #3. The close proximity makes it easy for occupants to walk to services.

**Map included as Attachment E.*

- The projects themselves encourage public transportation, being Bus Transfer Stations.
- To encourage the use of non-motorized vehicles, both transfer stations will be equipped with bicycle racks.
- The transfer stations will have a minimum of 10 spaces available for Park and Ride.
- The stormwater management plan will be designed to reduce the distribution of natural hydrology by reducing impervious cover, increasing on-site infiltration and managing stormwater runoff. In total, the project will reduce stormwater runoff by 25%.
- The buildings' roofs will be reflective and of a light color which will reflect an estimated 35-50% greater amount of the sun's rays than a traditional roof, which decreases the amount of energy required to cool the building.

Water Efficiency

- Approximately 26% of the total landscape areas will be irrigated by a high-efficiency irrigation system. This irrigation plan consist of: drip irrigation, drought tolerant plant selection, and an automatic irrigation system utilizing dual or multiple program controllers, to maximize the water efficiency. The above

irrigation plan has an annual water savings of 50% for both the Transfer Stations and the Brownsville Multimodal Terminal.

Materials & Resources

- The transfer stations will include easily accessible recycle bins for the collection of recyclables: paper, corrugated cardboard, glass, plastics, and metals.
- The projects will use materials that contain recycled content, thus reducing the impacts on the environment that are a result of extracting and processing newly harvested materials. An estimated 20% of the building materials will come from post and pre-consumer recycled material.

Indoor Environmental Quality

- The transfer stations will provide optimum Indoor Air Quality by working to keep the project clean, dry and smoke free during construction, utilizing low-emitting materials such as adhesives, sealants and paints. To increase lighting efficiency LED Lighting will be used inside and outside of both transfer stations, including signage. This will decrease the energy cost of an estimated 20%.

Benefits

- 8 - 9% reduction in operating costs
- 26% less energy consumption
- 13% lower maintenance costs
- 33% less greenhouse emissions

5. Leverage of Public and Private Investments

(5.a) Jurisdiction and Stakeholder Collaboration

The tables below summarize the Total Project Cost, Total Funds Requested, and Total Matching Funds currently available for the project including the source and amount of the match.

Public-private partnerships are an essential part of this project. The City of Brownsville is the applicant and lead agency. It is responsible for mechanics of the project, such as project management, service planning, terminal location, and development. It is considering all issues related to transit and land use, including economic development, zoning, parking, and traffic. This project enjoys widespread community support and includes multiple private and public partners. Public partners include a variety of agencies spanning across multijurisdictional boundaries. Private partners include private ICB, van and local taxi operators.

Public Partners

The City of Brownsville has partnered with multiple public agencies to enhance the project. Many of these agencies oversee public transportation funding or are

public transportation operators which have assisted to secure or agreed to contribute resources. For example, through the efforts of the City of McAllen, the Harlingen/San Benito Metropolitan Planning Organization, the Texas Department of Transportation, and the Lower Rio Grande Valley Development Council (LRGVDC), the City of Brownsville has been able to secure several million dollars in FTA formula funds that were at risk of lapsing from other urbanized areas in the region. Furthermore, the Texas Department of Transportation has contributed Transportation Development Credits (TDCs) to the project. TDCs are a unique and innovative financing tool that TxDOT has used for many years whereby credits are “earned” when local and state funds alone were used to construct toll facilities. The TDC are then applied as local match for federal grant funds to further transit and rail projects. TxDOT has contributed close to \$500,000 in TDCs to the City of Brownsville which have been applied as the “local match” for this project.

Other collaborative public agencies whose primary function does not include providing public transportation services or funding have committed to contribute to the project as well. For example, a local economic development organization provided funding for a portion of the project. At least four local utility providers have agreed to remove and relocate their existing utilities at the project site at their expense. Also, the City has taken steps to include the United States Customs/Border Patrol as a public safety partner to help protect our Nation’s transportation networks. The creation of the multimodal terminal facility will serve to unify and facilitate the public service goals of public transit and the homeland security mission of the U.S. Border Patrol.

The table below lists project partners and describes their involvement in the project:

Partner Agency	Description of Partner Agency Involvement in the Project
<p>City of McAllen – Operates public transit service throughout the City of McAllen. It operates a transit terminal, Central Station, which has evolved as the top transportation hub in the region and in the Texas border area, and as one of the top transit facilities throughout the State of Texas.</p>	<ul style="list-style-type: none"> • Has participated in planning activities and provided input regarding planning, design, and operational issues since the inception of the project. • Has coordinated with TxDOT and LRGVDC to contribute more than \$3.8 million in federal funds for the project. • Will serve as a partner transit hub for seamless transportation between Brownsville and McAllen

<p>Harlingen/San Benito Metropolitan Planning Organization (HSBMPO) –</p>	<ul style="list-style-type: none"> • Has participated in planning activities and provided input regarding planning, design, and operational issues since the inception of the project. • Has coordinated with TxDOT and LRGVDC to contribute more than \$1 million in federal funds for the project.
<p>Lower Rio Grande Valley Development Council (LRGVDC) – Operates public transportation services throughout the non-urbanized and certain urbanized areas in Cameron, Hidalgo and Willacy counties and is the designated recipient for transit formula funding for two of the largest urbanized areas and all of the rural area.</p>	<ul style="list-style-type: none"> • Has participated in planning activities and provided input regarding planning, design and operational issues since the inception of the project. • Has coordinated with the City of McAllen, Harlingen/San Benito MPO and TxDOT to transfer more than \$4.8 million in federal funding for the project.
<p>Texas Department of Transportation (TxDOT) –</p>	<ul style="list-style-type: none"> • Has provided input and guidance to ensure compliance with applicable laws and regulations during each phase of the project. • Has allocated more than \$3.8 million in federal funds for the project. • Has provided \$511,945 in non-federal matching resources to leverage federal dollars.
<p>Brownsville Community Improvement Corporation (BCIC)</p>	<ul style="list-style-type: none"> • Has contributed \$100,000 to apply as local match for a portion of the project.
<p>Brownsville Public Utilities Board (BPUB) - is a municipally owned utility company providing electric, water, and wastewater services to residences and businesses in the Brownsville area.</p>	<ul style="list-style-type: none"> • Has committed substantial local resources to the project by agreeing to remove and relocate existing electrical, water and wastewater utilities at the project site at its own expense.
<p>Other Utilities Providers – Including Time Warner Cable, Texas Gas Service and AT&T.</p>	<ul style="list-style-type: none"> • Have committed to relocating their respective utilities/service lines at the project site.
<p>United States Border Patrol</p>	<ul style="list-style-type: none"> • Has provided input regarding project design. • Has requested to be included in the project to facilitate its homeland security mission and to serve as a public safety partner.

Private ICB Service Providers

As stated in a previous section, private ICB service providers are integral partners with the City in determining needs and eventually becoming end users by leasing space in the multimodal terminal. Several private intercity (including international) bus service providers have participated as project partners by contributing support and planning assistance throughout the development of this project. They have supplied considerable knowledge to the design and operational planning of the Brownsville Multimodal Terminal. They provided critical input related to site selection, existing and anticipated passenger volumes and facility design. Many have formally and informally committed to leasing space and operating service from the Brownsville Multimodal Terminal. A list of private ICB service providers that are considered project parties owing to their high levels of participation in the planning and design of the project and their written intent to become tenants in the facility can be found on page 19 of this application.

(5b.) Disciplinary Integration

In addition to the financial support of the both public and private sectors in the City of Brownsville, educational and training was also provided as support. The following entities were instrumental in the planning and design of the projects.

Brownsville Housing Authority

The City of Brownsville has initiated discussions with the Brownsville Housing Authority (BHA) regarding strategic planning collaboration within their 5-year plan. The BHA is proposing the construction of a new housing facility near the Brownsville International Airport. As part of the collaboration, the City of Brownsville plans on building a transfer station within the proximity of the proposed location to offer residents reliable and efficient transportation.

A map of proposed site for Housing Facility is included as Attachment E.

South Texas Energy Partnership

As part of the City of Brownsville's commitment to greener development and responsible public policy, state-of-the-art energy efficiency and sustainable building methods will be used in the construction of the Multi-Hub Transfer Station and the Brownsville Multimodal Terminal. The South Texas Energy Partnership hosted an Energy Efficiency Green Conference and Expo to provide education and training on LEED Certification and energy efficient practices. In addition, LEED Certified consultants provided assistance in the planning of the proposed LEED Certified facilities.

Brownsville International Airport

The City of Brownsville is providing an in-kind contribution of 4 acres of land property valued at \$480,866. The proposed site will enable the City of Brownsville to construct a Multi-Hub Transfer Station/Park and Ride. The 4 acres will allow the opportunity for future expansion.

A sketch of the Brownsville International Airport Transfer Station is included as Attachment D.

*A more detailed breakdown of public, private and federal investments are included as Attachments H

6. Project is ready to implement

- a. An environmental assessment was completed for the Brownsville Multimodal. The Federal Trade Administration provided a Finding of No Significant Impact (FONSI). The transfer stations will require documented categorical exclusions which are in the process of being completed. ITS is categorically excluded.
- b. Final design for the Brownsville Multimodal Terminal is more than 95 percent complete. Initial design of facilities projects for the Southmost and Airport transfer stations has been completed. Securing funding request will ensure completion of the ITS component.
- c. The Brownsville MPO endorses this project. See letter of support in attachment. :
- d. Local share is available for every component of this project. See tables below.

Total Project Costs

Project	Total Cost
Brownville Multimodal Terminal	\$7,809,328
Multi-Hub Transfer Stations	\$1,825,260
Intelligent Transportation System	\$894,500
Total Project Cost	\$10,529,088

Total Funds Requested

Project	Amount
Brownville Multimodal Terminal	\$6,247,462
Multi-Hub Transfer Stations	\$1,344,358
Intelligent Transportation System	\$715,600
Total Funds Requested	\$8,307,420

Total Matching Funds

Project	Source	Amount
Brownsville Multimodal Terminal	City of Brownsville Certificate of Obligation	\$1,561,866
Multi-Hub Transfer Stations	City of Brownsville Real-Estate In-Kind	\$480,902
Intelligent Transportation System	City of Brownsville – Community Development Block Grant	\$178,900
Total Matching Funds		\$2,221,668

- e. Beginning construction of the Brownsville Multimodal Terminal project is already in place. Completion of funding request will ensure 100 percent completion. Securing funding request will ensure completion of Southmost and Airport Transfer Station component. Securing funding request will ensure completion of the ITS component.
- f. The City has the technical, legal and financial capacity to administer the proposed projects. The City operated on a budget of approximately \$85.5 million last fiscal year. Further, the City’s Finance Department has been continuously recognized for excellence in financial reporting. All required local match has been secured and is available for prompt project implementation if selected. The City is in fundable status for grant making purpose. There are no outstanding legal, technical or financial issues with City of Brownsville as per the most recent triennial review during FY 2009.

6a. Line Item Budget

Activity Line Item Description	Federal Funds Requested
<p>Construction – Intermodal Bus Terminal The total cost of construction for the Brownsville Multimodal Terminal is \$18,881,753. The City of Brownsville has already secured \$11,072,425. The federal amount requested represents <i>80% of the balance</i> necessary to complete construction. It will be used for construction management, site preparation, and construction.</p> <p>Construction management includes supervision and administration procedures during construction. It includes but is not limited to: site and subcontractor supervision, safety overview, direction of reporting systems, administration of project closeout, post occupancy evaluation and warranty management. It also includes managing the resources of the design team for construction support activities such as shop drawing review, requests for information, and change control during construction.</p> <p>Construction includes all activities and expenses necessary to prepare the facility according to final design. It includes all of the components in the</p>	<p>\$6,247,462</p>

final design such as hardscape / landscape components, furniture and fixtures and other equipment, materials or supplies identified. <i>A more detailed budget is included as an Attachment H.</i>	
Construction – Multi-Hub Transfer Stations The federal funds requested are for the construction of a two LEED Certified Transfer Stations. Project costs include the purchase of 14,520 sq. ft of land property in the Southmost area, soft costs, general conditions, site work construction costs, off-site costs, and construction costs for the storage and retail space. Expenses for the purchase of Energy Star products are included in the project cost. <i>A more detailed budget is included as an Attachment I.</i>	\$1,344,358
Purchase and Installation – Intelligent Transportation System Federal funds requested are for the purchase and installation of enhanced ITS equipment for a fleet of 33 (22 fixed route and 11 paratransit). Estimated costs include annual service fees, service agreements, bus stop inventory, and fare collection management technology. <i>A more detailed budget is included as Attachment J.</i>	\$715,600
Total Federal Amount Requested	\$8,307,420

(d) The City of Brownsville is requesting \$8,307,420 in federal funds.

(e) For reference, please refer to charts on pages 21-22 of this proposal.

(f) Project Time-Line

BUS estimates that this project will be completed by the summer of 2010. BUS will soon begin final design for the terminal. That process is estimated to last 14 months. Once the design is complete, BUS estimates that the solicitation process and award of contract for construction will take approximately four months, and construction will take approximately 18 months. The table below lists milestones and their estimated completion dates.

Estimated Project Timeline – Brownsville Multimodal Terminal

Milestone	Estimated Milestone Completion Date
A/E Design Completed to 95%	As of Submission
A/E Design Complete	February 17, 2011
RFP out for bid for construction	February 21, 2011

Construction contract awarded	April 1, 2011
Contract complete	September 2, 2011

Estimated Project Timeline – Transfer Stations

Milestone	Estimated Milestone Completion Date
A/E Design Completed to 5%	As of Submission
A/E Design Complete	August 10, 2010
RFP out for bid for construction	February 18, 2010
Construction contract awarded	October 4, 2010
Contract complete	April 8, 2011

Estimated Project Timeline - ITS

Milestone	Estimated Milestone Completion Date
A/E Design Completed to 5%	As of Submission
A/E Design Complete	August 10, 2010
RFP out for bid for construction	February 18, 2010
Construction contract awarded	October 4, 2010
Contract complete	April 8, 2010

Additional Supplemental Information

The following supplemental material has been attached to this grant application.

- A. Map - City of Brownsville
- B. Map - Brownsville Multimodal Terminal
- C. Map - Southmost Multi-Hub Transfer Station
- D. Map – Airport Multi-Hub Transfer Station
- E. Map - Proposed Housing Facility
- F. Map - Southmost Area Services #1
- G. Map – Southmost Area Services #2
- H. Budget – Brownsville Multimodal Terminal
- I. Budget – Multi-Hub Transfer Stations
- J. Budget – Intelligent Transportation System
- K. P25 Item Breakdown
- L. Sketch – Southmost Multi-Hub Transfer Station
- M. Sketch – Airport Multi-Hub Transfer Station
- N. Letters of Support
 - Lower Rio Grande Valley Development Council (LRGVDC) – Kenneth Jones
 - Workforce Solutions – Cameron
 - South Texas Energy Partnership
 - Brownsville International/South Padre Island Airport
 - City of Brownsville – Finance Department

- TxDOT
- Texas Department of Transportation
- Congressman Solomon Ortiz
- Senator Kay Bailey Hutchison
- Senator John Cornyn
- State Senator Eddie Lucio Jr.
- State Representative Rene Oliveira
- TxDOT –Pharr District
- LRGVDC – Manuel Flores
- Brownsville MPO Policy Committee
- U.S. Customs and Border Protection – Ramon T. Orterga
- Greyhound Lines Inc. – Paul J. Tennant
- Valley Transit Co., Inc. – Robert R. Farris
- Autobuses Adame Ltd. – Jose Martin Fernandez
- Trans Pais
- Lic. Noe Berrones Gonzalez
- Yellow Cab Taxi Co. – Sixto Barbosa
- Texas Department of Human Services – Frotze Kormeier
- Brownsville Chamber of Commerce - Frank Feild