

# BURLESON TOD MASTER PLAN

CITY OF BURLESON, TEXAS

SEPTEMBER, 2012





# BURLESON TOD **Study**

City of Burleson, Texas  
September 2012

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# EXECUTIVE SUMMARY

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### ***Introduction***

The Burleson TOD Master Plan study established a community based vision for a future commuter rail station and supporting transit oriented development. The study focused on two key areas within the community including the West TOD area along the BNSF Rail Line, and the Old Town area of the City. The scope of the project comprised three key elements including:

- Real estate development market analysis (future market /development conditions and a real estate product / land development market assessment for the West TOD and Old Town areas);
- Station design (alternative station concepts and alternative site concepts for the West TOD Area);
- Transportation studies (station parking analysis, bus to rail transition plan, and non-motorized mobility plan).

The study, which commenced in October 2010, was managed by NCTCOG with direct input from a Project Review Committee (PRC) consisting of staff from NCTCOG, the City of Burleson and the Fort Worth Transportation Authority (The T). The study was funded by a Sustainable Development Grant from the North Central Texas Council of Governments (NCTCOG).

### ***Stakeholder and Public Involvement***

The Burleson community was crucial to establishing the vision for the West TOD and station. The Final Master Plan concept was created through a series of discussions with the community which led to overall consensus. Those discussions took many forms including:

- Key stakeholder interviews (with Joshua ISD, Burleson ISD, Business Leaders, Developers and Transportation interests);
- A public open house (which established preliminary preferences of the community related to transportation modes, development types, and urban design);
- A public meeting (in which alternative station and development concepts were presented, along with implications of each, to gauge public preferences related to the best alternative concept).



Figure ES.1 Open House

The stakeholder and public involvement process concluded with a presentation of case studies, station concepts, and site plans for the Burleson West TOD station to the Burleson City Council for final discussion and comment.

### Existing Conditions

A number of existing conditions and previous studies related to site conditions, real estate market, and transit and bus system studies were reviewed for relevant opportunities and constraints related to the future station development, supporting TOD development, and support of a future transit system. The review of the existing site conditions in the West TOD study area concluded that the site is well situated to support a future rail station and supporting TOD development for the following reasons:

- The station site and surrounding areas are predominately in agricultural uses, and large lot residential uses, so necessary land for future development is readily available, and potential conflicts between incompatible land uses will be minimal;
- Existing planned development (PD) zoning within the study area supports higher density uses that can accommodate future TOD development on the site;
- Existing site topography is gently sloping and conducive to cost effective site development and construction;
- Existing floodplain areas, tree stands and water features provide opportunities for amenity areas in the future development.

The market study encompassed both the West TOD study area and the Old Town study area. The scope of the market study included analyzing the subject properties and determining the opportunities, limitations and uncertainties regarding development on the site, reviewing market indicators and trends within a surrounding trade area to determine the health of the trade area's market and economy, and reviewing product-specific supply and demand to draw conclusions about the ability of the area to support new development. Specific conclusions of the market study are as follows:

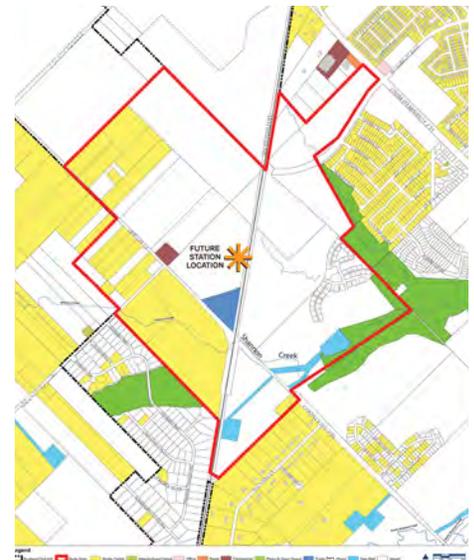


Figure ES.2 (Top) Existing Land Use for West TOD Study Area

Figure ES.3 (Bottom) Topography + Geographic Features for West TOD Study Area

- Burleson's regional trade area includes portions of Tarrant and Johnson Counties, as well as all or portions of the Cities of Burleson, Crowley and Fort Worth;
- Economic development activity in this trade area has been, and continues to be clustered along major transportation routes such as I.H. 35W, State Highway 174 and U.S. Highway 67;
- Burleson Trade Area demographics support demand for higher-density housing and support retail uses;
- Locational attributes (highways and transit) will support significant employment growth;
- Residential growth-related demand, coupled with unmet demand already in the Trade Area, should position Burleson for extensive retail/commercial development over the next decade;
- An expanding critical mass of housing across various price points, expanding regional access through transit and highway systems, and its growing connectedness, suggest Burleson could be ready to emerge as a more prominent employment address for the southwest Metroplex.

Finally, a review of existing transit and bus system services found the following:

- Public transportation services in Burleson are limited, but they provide a base which can be expanded in the future;
- There are two transit providers in and adjacent to Burleson. These are the Cleburne City/County Transportation which is based in the City of Cleburne, and the Fort Worth Transportation Authority (The T) which is based in Fort Worth;
- Cleburne City/County Transportation provides commuter service to downtown Fort Worth that originates in Cleburne;
- The Fort Worth Transportation Authority provides commuter service via a park-and-ride lot on the east side of I.H. 35W at the Alsbury/Stone road exit adjacent to the City of Burleson;
- Cleburne City/County Transportation also offers Burleson residents an intra-city and an intra-county demand response service, also known as paratransit service.

### **Final Concept**

The final concept of future development and transit within the study area supports significant TOD opportunities within a ¼ mile radius of the future station location. On the east side of the future station, a 63 acre site provides opportunities for new development immediately adjacent to the station entrance. On the west side of the station, a proposed connector street providing access between station entrance TOD development to the west would be lined with retail development. A fixed guideway streetcar (also called trolley) would provide an additional mode of connectivity between the station site and the development to the west, thus significantly extending the potential reach of future TOD to areas far beyond the ¼ mile radius on this side of the station. The trolley street would become a multi-modal urban street to the west of the station site; accommodating automobiles, the trolley, buses, bicyclists and pedestrians.

The Final Station Site is laid out in a manner that provides necessary vehicular and pedestrian access and parking while maintaining close proximity between the station and future TOD development. Site amenities would include pedestrian trails and seating, a water feature (fountain) that would be incorporated into an existing pond for aesthetics and aeration, and berming on the southwestern portion of the site for screening of the station from the surrounding developments. The rail station platform would be located on a spur line to the west of the existing BNSF rail line that would serve commuter rail traffic, allowing the existing BNSF line to provide thru traffic to the east of the station. The connection between station levels would be provided through an elevator, escalators and stairs. The station aesthetic would consist of brick and metal, with detailing to be reminiscent of the storefronts found in Burleson's 'Old Town' area. In keeping with the historic theme, a free-standing clock tower could be constructed as a part of the station development. The area beneath the station could support the development of revenue producing uses including restaurants, meeting facilities and shops. Depending on the final design of the station, up to 15,000 square feet of development could easily be accommodated beneath the rail lines.



Figure ES.4 (Top) Final Station Rendering - View from the East

Figure ES.5 (Middle) TOD Conceptual Vision

Figure ES.6 (Bottom) Final Station Rendering

### **Conclusion**

The Burleson TOD Master Plan study established a community based vision for a future commuter rail station and supporting transit oriented development. A review and analysis of existing study area conditions and previous studies indicate that the West TOD District site is very suitable for future station development, as well as supporting TOD development. In the West TOD District, Regional Trade Area demographics support demand for higher-density housing than is currently being developed in Burleson. The housing products for the West TOD District would be more urban in nature and could include a range of multi-family, townhome and limited higher density single family products. This residential base will provide the market for support retail uses (which is in line with the future TOD vision), and locational attributes (highways and transit) will support significant employment growth in the West TOD District. An important next step in implementing the vision for this area would be the refinement of the existing zoning (currently Zoned Planned Development) with a form-based code, and with specific design standards for architecture, roads, urban design elements, landscape and open space that support the vision for the district.

Within the Old Town District, the demographics reflect a slightly higher percentage of seniors relative to the Regional Trade Area and overall DFW Metroplex. The existence of this older demographic within the Old Town District, along with the lack of a major catalyst such as a future rail station, positions this area well for a different market focus and development pattern than will exist in the West TOD District. Stakeholders in the public meetings expressed a desire for the Old Town District to maintain its existing historic, eclectic character. Specialty restaurants (perhaps home grown), senior housing and additional businesses that would support the City Hall functions all would be supportive of the vision for this District.

With a solid vision in place for the future rail station and surrounding TOD, focus should now turn towards implementing rail. At the same time, Burleson can consider incremental (and possibly experimental) increases in transit service. There are two basic transit markets: the intra-community market and the market segment for work, shopping, education and other travel to central Fort Worth and to other parts of the region via transfers to regional bus and rail modes. As proposed previously in The Johnson County Rail Study, an Implementation Steering Committee should be established to focus on governance, funding, operations and other aspects of implementing regional rail in Johnson County.

	Concept A	Concept B	Concept C
Ultimate Station Development Cost - Multi Modal (Order of Magnitude)	\$\$\$	\$\$	\$
Early Station Development Cost - Bus Only (Order of Magnitude)	\$	\$\$\$	\$\$
Pedestrian Connectivity (Parking & Bus Bays to Rail)	-	+	-
Relationship of Station Platform to BNSF Rail Line (Safety)	-	+	+
Connectivity to TOD (East and West Sides of Station)	+	+	+
Station Site Economic Development Potential	+	-	-
Parking Expansion Potential	+	+	+

Figure ES.7 Comparison of Implications - Alternative Concepts





## PROJECT OVERVIEW

## PROJECT OVERVIEW



The City of Burleson is located in Johnson and Tarrant Counties and is centered near the intersection of Interstate Highway (I.H.) 35 West and State Highway (S.H.) 174. Although the City was officially incorporated in 1912, the original town site was established by the MKT Railroad in 1881 on their planned railroad from Fort Worth to Hillsboro. From its founding, the City has had close ties to the rail industry.



Today, the planned commuter rail known in the Federal Highway Administration (FHWA) approved long range transportation plan, *Mobility 2035: The Metropolitan Transportation Plan for North Central Texas*, as the Cleburne Corridor has a proposed station along the BNSF Rail Line within the City of Burleson. The proposed station, located near the intersection of Alsbury Boulevard and Hulen Street (formerly Shaffstall Road), is envisioned by the City of Burleson to become a multi-modal transit center which will anchor a 565-acre vertical and horizontal mixed-use development which will include employment centers, integrated buildings with residential and retail or office components, governmental buildings, and parks and open space.

In 2006, the City of Burleson received a Sustainable Development Grant from the North Central Texas Council of Governments (NCTCOG), which funded the preparation of a master plan for the Burleson West TOD. The master plan scope comprised three key elements including; a real estate development market analysis (future market / development conditions and a real estate product / land development market assessment), station design (alternative station concepts and alternative site concepts), and transportation (station parking analysis, bus to rail transition plan, and non-motorized mobility plan). The study, which commenced in October 2010, was managed by NCTCOG, with direct input from a Project Review Committee (PRC) consisting of staff from NCTCOG, the City of Burleson and the Fort Worth Transportation Authority (The T).

Figure PO.1 (Top) Old Town Burleson

Figure PO.2 (Bottom) Interurban Rail Car

The scope of the Burleson TOD Master Plan study encompassed two separate study areas as shown in Figure PO.3.

The first study area was the West TOD District which is an approximately 560-acre district straddling the BNSF railroad. Within this area 9.8 acres have been set aside for a future bus station which is envisioned to transition into a commuter rail station. Within this study area, all of the scope components mentioned previously were initiated. The second study area was Old Town Overlay District. This 230-acre district was located in the historic Burleson downtown area. The main focus of the study in this area was related to the real estate product and land development market assessment.

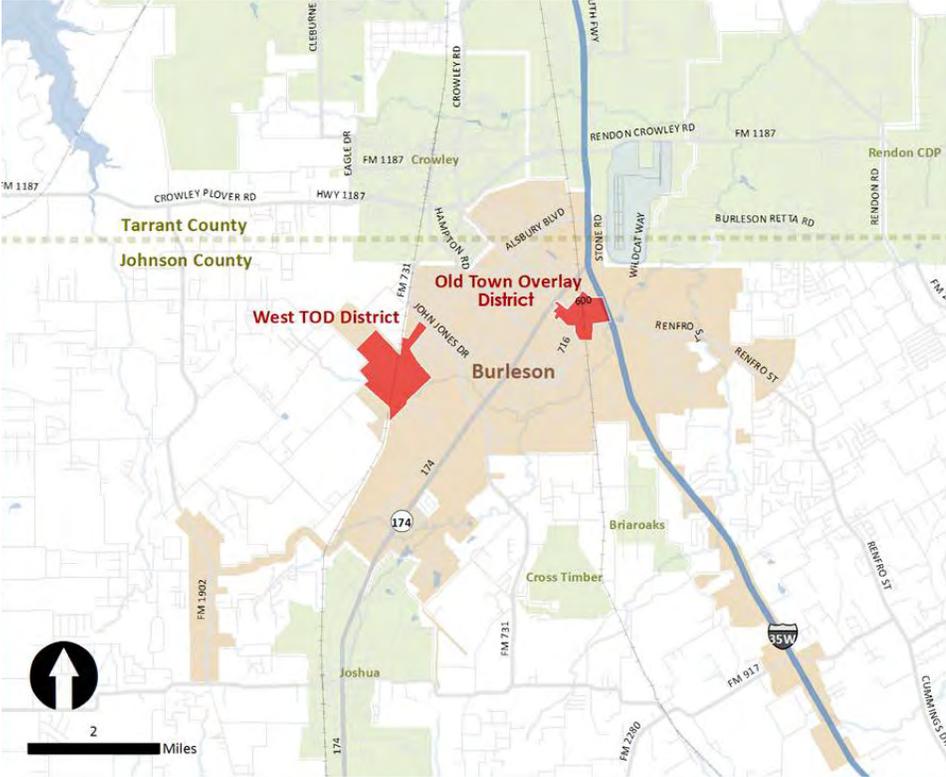


Figure PO.3 Project Study Areas



The community engagement strategy and public participation were critical elements from the onset of the planning effort. NCTCOG and the City were committed to steering a process where the wishes of the community and its stakeholders were identified, refined and implemented as part of the planning process. Early in the process, the Project Review Committee (PRC) and project team worked together to establish a public engagement plan that would provide the community with multiple opportunities to interact with the project team, to ask questions, to voice their opinions and concerns, and to respond to plan concepts.



The public engagement process included key stakeholder interviews, in which more than 20 people participated in the individual and group interviews, an open house which was attended by more than 50 individuals, and two public meetings which were held in 2011 at Burleson City Hall for the consultant team to present information and ideas. Through this process community consensus was achieved related to the following Station and TOD concept.



Figure PO.4 Stakeholder Interviews

Figure PO.5 Open House

Figure PO.6 Public Meeting



THE CONCEPT

## TOD VISION



Planning studies and proposals, and most recently the Johnson County Passenger Rail Study (2008), call for Burleson to eventually be served by a commuter rail service. This service would connect Burleson and other Johnson County regions with downtown Fort Worth. Transit commuters from Burleson could make connections to other areas via rail and bus service. There is existing rail service on the Trinity Railway Express (TRE) line from downtown Fort Worth to Dallas. The TEX Rail line from southwest Fort Worth to the DFW International Airport is under development, and other connections are being planned, such as the regional Cotton Belt line from North Dallas to Tarrant County. It is not difficult to envision a rail network across three or more counties.



Rail projects generally require a long lead time to develop the financing plan and to do the planning, environmental and design work to bring them into reality. As described in the case studies, in many cases bus service can serve as a seed for the eventual rail system. Additionally, there is almost always an important need for bus service to complement and supplement rail service after it is implemented.

The final station concept supports significant TOD opportunities within a ¼ mile radius of the future station location. On the east side of the future station, the 63 acre site provides opportunities for new development immediately adjacent to the station entrance. This location would be a prime location for the highest density and intensity of development due to its unique multi-modal access opportunities.



On the west side of the station, the final concept departed slightly from Concept A by lining the connector street that would provide access between the center of the station plaza, and the main street of the TOD to the west with retail development. This improvement allows this portion of the site that would otherwise be surrounded by parking to become a more pedestrian oriented space. Additionally, this block of the street would become a pedestrian street with a fixed guideway streetcar (also called trolley) stop located in the center of the pedestrian area. The streetcar envisioned is a steel wheel / steel track system, with either conventional overhead power,

*Figure C.1 Rail Station with Immediate Development Adjacency*

*Figure C.2 Retail Development through Station Site*

*Figure C.3 Trolley Concept*

battery power, or some combination. The trolley would provide an additional mode of connectivity between the station site and the development to the west, thus significantly extending the potential reach of future TOD to areas far beyond the ¼ mile radius on this side of the station. The trolley street would become a multi-modal urban street to the west of the station site; accommodating automobiles, the trolley, bicyclists and pedestrians.



Figure C.4 TOD Conceptual Vision

## SITE

The Final Station Site is laid out in a manner that provides necessary vehicular and pedestrian access and parking. The site maintains a close proximity between the station and future TOD development. Bus access to the site would be provided via an on-site loop road with four bus bays dropping passengers onto a pedestrian plaza located at grade, which will serve as the phase 1 bus station. As the rail station is developed in phase 2, the plaza will serve the additional purpose of providing outdoor seating for future shops and restaurants that will locate on the ground floor of the station.

Parking for the station (200 spaces as recommended in the Johnson County Passenger Rail Study) would be oriented in a linear fashion, parallel to the bus loop road in order to minimize the walking distance west (approximately 450 feet) from the station to future TOD development to the west. A kiss and ride drop off area would be located between the parking lot and the bus loop road. In phase 1, a connecting tunnel would be provided under the existing BNSF rail line to provide direct access for pedestrians and bicyclists to the future TOD development on the east side of the tracks. Site amenities would include pedestrian trails and seating adjacent to the existing pond on the northern portion of the station site, a water feature (fountain) that would be incorporated into the pond for aesthetics and aeration, and berming on the southwestern portion of the site for screening of the station from the surrounding developments. Depending on future parking needs, the surface parking could be expanded into the bermed area with the potential of doubling the sites parking capacity. If land values increase to a level that supports structured parking, the initial surface lot could be transformed into structured parking allowing additional TOD opportunities on the City-owned site within the bermed area along Hulen Street. A final detailed station site plan can be found in Figure C.5.



Figure C.5 Detailed Station Site Plan

## STATION



As mentioned previously, one of the main reasons that Concept A was the preferred station concept was due to its lower cost for phase 1 infrastructure, and ease of phasing from a bus station to a rail station. In phase 1, bus service would be provided to the site and accessed via an at grade pedestrian plaza.

The rail station platform would be located on a spur line to the west of the existing BNSF rail line that would serve commuter rail traffic, allowing the existing BNSF line to provide thru traffic to the east of the station. A barrier wall would be provided at the eastern edge of the station platform as a safety barrier between the station and the BNSF rail line. The platform canopy would consist of brick clad columns located at the edges of the structure supporting a standing seam metal roof. The roof would be constructed with a clerestory to allow air circulation through the structure. The connection between station levels would be provided through an elevator, escalators and stairs. The façade of the station would be clad in brick, with detailing to be reminiscent of the storefronts found in Burleson's 'Old Town' area. In keeping with the historic theme, a free-standing clock tower could be constructed as a part of the phase 1 or the phase 2 station development. This tower would announce the location of the station entry

Figure C.6 Station Clock Tower, ITC Fort Worth

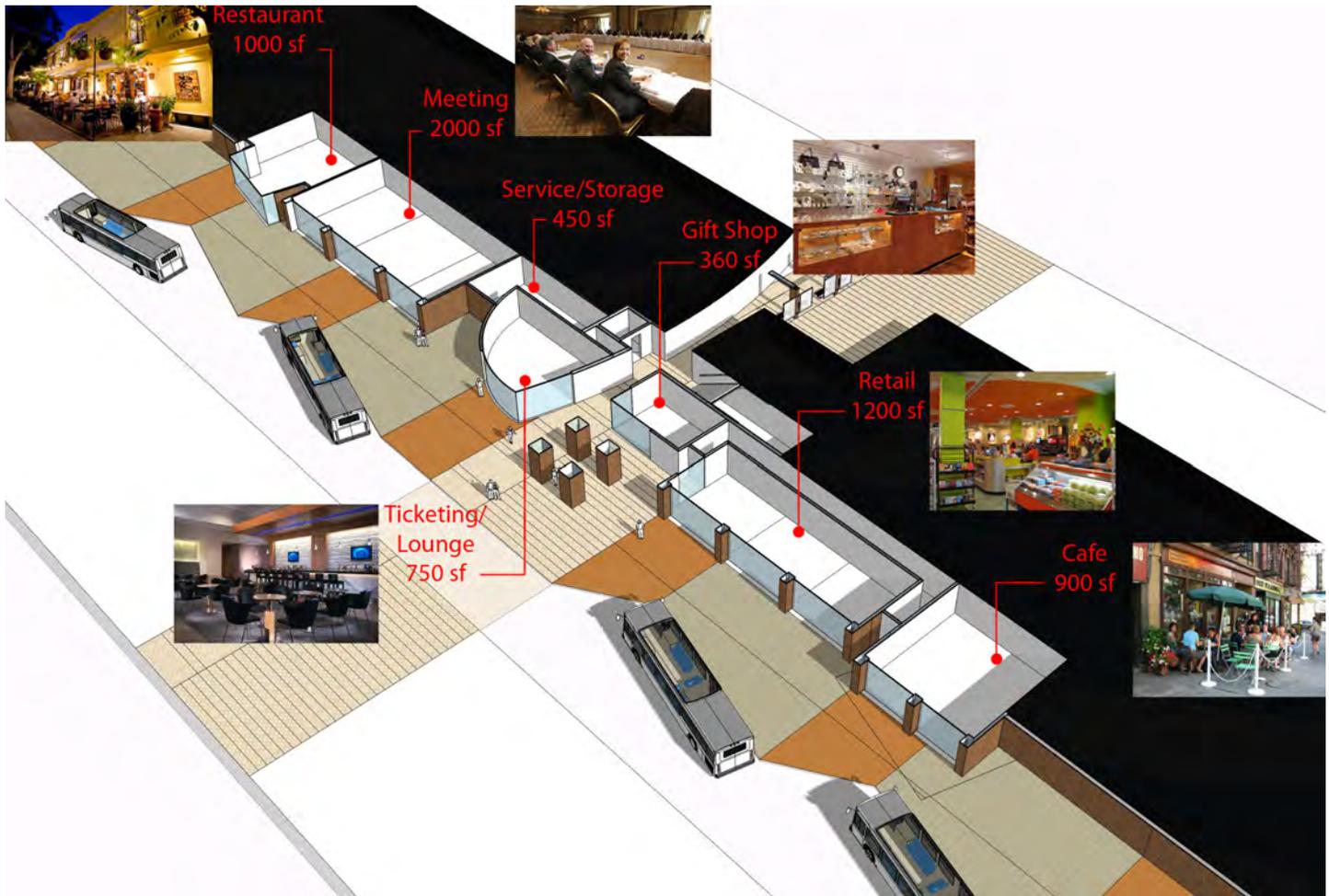


Figure C.7 Final Station Rendering - Interior Station Spaces

to the surrounding community. Light columns would extend into pedestrian plazas at both the east and west entries to the station in order to announce the location of the station entries within the site. The area beneath the station could support the development of revenue producing uses including restaurants, meeting facilities and shops as seen in Figure C.7. Depending on the final design of the station, up to 15,000 square feet of development could easily be accommodated beneath the rail lines. Figures C.8 – C.14 provide visualizations of the Final Station design.



Figure C.8 Station Clock Tower



Figure C.9 (Top Left) Final Station Rendering - Bus Plaza Looking North

Figure C.10 (Top Right) Final Station Rendering - Bus Plaza Looking South

Figure C.11 (Bottom) Final Station Rendering - View from the North



Figure C.12 (Top) Final Station Rendering - View from the East

Figure C.13 (Bottom Left) Final Station Rendering - West Station Entry

Figure C.14 (Bottom Right) Final Station Rendering - East Station Entry

## TRANSPORTATION

### ***Bus to Rail Transition Plan***

This section of the Burleson TOD Planning study provides some discussion and guidance on how to develop a more robust bus service in advance of the proposed commuter rail line. It also discusses how that bus service is likely to change once a rail line is put into revenue service.

Burleson commuters now have two public transportation options for travel into Fort Worth; the South Park-and-Ride route (Route 65) operated by The T (Fort Worth Transportation Authority) and the Cleburne City/County Interurban Commuter Route. The T provides four inbound and return trips a day from the park-and-ride lot just east of I.H 35W at the Alsbury exit. (It is important to note that the parking lot is located in Tarrant County, not Johnson County.) The lot contains approximately 290 parking spaces. A covered waiting area is provided for passengers.

The Cleburne City/County service stops at the Walmart on SW Wilshire in Burleson, and again at the South Park-and-Ride lot. It provides inbound service with one morning trip, one mid-day trip, and one afternoon peak period trip. Return service is provided on each trip.

Public transit generally requires an operating subsidy, and these two services are no exception. Currently, the City of Burleson does not pay anything for The T's service. As mentioned above, the T's Route 65 terminates within Tarrant County and the park-and-ride lot is inside the Fort Worth city limits.

Burleson's 2011 budget provides an appropriation for Cleburne City/County Transit. This amount underwrites a portion of both the demand-response service and the portion of the Interurban Route serving Burleson. Cleburne City/County Transit allocates approximately \$153,000 of funding from FTA to help pay for the cost of service to Burleson (this includes the local 50/50 match provided by Burleson). Finally, passengers also pay a fare which helps defray the operating costs.

Any expansion of transit service within the City of Burleson or an expansion of commuter service to Burleson will require an increase in public funding for the service. This will be true whether it is for purchasing



*Figure C.15 Fort Worth South Park-and-Ride*

transit services from a provider or for funding city-provided services. The policy decision to provide and pay for more bus transit service will be driven by the demand for more service. From January through April, the average daily ridership from the South Park-and-Ride lot for 2011 has been 130 riders per day, down from the 2010 annual average of 145 riders per day. Riders on the Cleburne City/County Interurban contribute another 7 to 10 riders per day. Ridership is sensitive to out of pocket auto expenses, especially the price of gasoline and parking.

More ridership might occur if bus service were more frequent, if there was more mid-day service, if additional destinations were served, or if the bus service received preferential traffic treatment and took less time. Quantification of potential ridership can require extensive travel demand surveys and computer modeling of travel desires. This may be a future step the City may wish to undertake as demand for service increases.

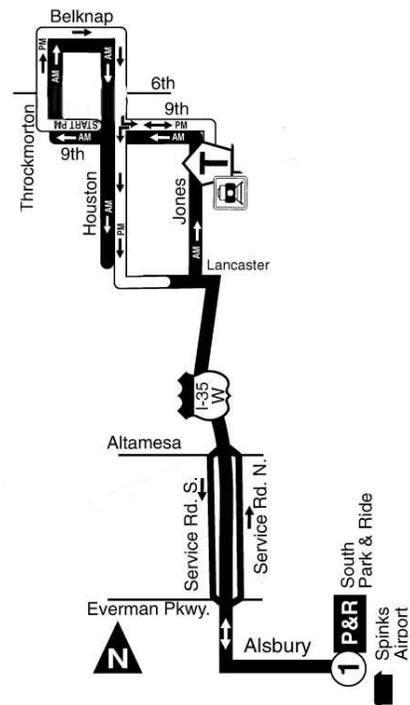


Figure C.16 Route 65, The T

None of the service enhancements described above can occur without additional public investment. As described in another section of the report (the Bus System Plan), the annual cost for one full time intercity route is estimated by URS to be \$250,000 annually. This does not include capital startup costs or depreciation of the rolling stock. Vehicles can cost anywhere from \$75,000 to \$350,000 depending on size, whether they are light duty, mid-range, or heavy duty, and whether they are gasoline/diesel or CNG fueled.

When there is sufficient development on the ground at the TOD site, Burleson will want to consider providing transit service from the initial park-and-ride lot prior to the establishment of the commuter rail service. Extending the current level of service from the South Park-and-Ride lot to the Burleson West TOD site would increase the operating time for each route by 40-45 minutes. While there is no agreement between The T and Burleson or Johnson County to extend the service across the county line, it is feasible the parties could reach such an understanding. The T has said it would need to recover its additional operating average hourly cost of fixed route service, which is around \$92 per revenue vehicle hour. Using the average hourly cost, the annual cost of extending the current commuter bus trips would be around \$140,000. This is not to say that Burleson and The T could not negotiate service modifications at a lesser cost or that Burleson might be able to leverage other revenue sources to lower the public subsidy requirements. There is also the possibility of an expansion of the FWTA membership and coverage area which could provide a broader funding base for service expansion and enhancements.

Expanded commuter service consisting of more park-and-ride locations and possibly more peak hour and mid-day service would help establish a transit ridership base. Experience shows that potential riders place a high value on frequency of service and convenient access to the stops. Traditional bus service, whether it is express (with limited stops) or local (more frequent stops) operates in the same traffic system as auto and truck traffic, with the same delays due to congestion, construction, weather and accidents or incidents. Throughout the DFW metropolitan area there are examples of preferential treatment through High Occupancy Vehicle (HOV) lanes, signal preemption, queue jumping sections, and all of the other state-of-the-art practices. There are no firm plans or funding sources for such facilities, particularly on the congestion sections of I.H. 35W, the major link from Burleson to the rest of the region.

### ***Rail Startup***

The Johnson County Passenger Rail Study conducted by Transystems (Dec. 2008) concluded with a list of the administrative and political steps needed to develop passenger rail service. These steps are worth repeating:

“At the conclusion of this study, it is important that an Implementation Steering Committee be put into place to start looking into the governance, funding, operations, and other aspects of the project. This Steering Committee can be charged with the following tasks:

- **Governance:** As discussed above, no one agency is currently in place to operate the service. The Steering Committee can be charged with lobbying the State legislature in approving the Rail North Texas Funding Bill or similar piece of legislation to set up a structure and funding basis for this service.
- **Funding:** The Committee can start evaluating what funding scenario is most appropriate for this new passenger rail service. Exploration of private public partnerships for some aspects of the project and/or participation by local municipalities for infrastructure improvements such as

station buildings, parking lots and access roads should be explored.

- **Coordination with the Railroads:** The proposed alignment traverses on the rights-of-ways of three railroads: the BNSF, the FW&W, and the UP. None of these railroads have been approached to discuss the potential of passenger rail on their property. As part of the discussion, the following points should be discussed:

- What parts of the railroad right-of-way would be made available for the Johnson County service, and what would be the conditions and associated price?
- Who will be responsible for maintenance?
- Would the respective railroad require operating the service?

- **Coordination with Municipalities:** Although there have been initial discussions with municipalities regarding station locations, and inclusion of known station plans into this report, more definitive discussions with the municipalities need to be discussed. A more permanent agreement could put them into the motion of zoning and land use planning needed for each station area. This is an important factor in the FTA criteria for New Starts; i.e. readiness with regard to transit supportive land uses and policies.

- **Public Involvement Process:** For this study, the public interest was represented by members of the Steering Committee. However, a more involved public involvement process should begin in the next phase of the project to allow for necessary input and representation.

- **Initiating the NEPA EIS Process:** With the acceptance of any federal funds, the NEPA process must be followed. Typically, an Environmental Impact Statement (EIS) is completed for larger scale projects which have the potential for environmental impacts. The initial step in the EIS process is the scoping process which consists of one or more meetings with concerned citizens and affected agencies to define the key param-

eters and techniques to be used in the EIS effort. A “Purpose and Need” needs to be defined, the evaluation criteria for each of the alternatives is developed and the existing and affected conditions are described in the EIS. An EIS is a lengthy process which takes into consideration the various alternatives and supports the alternative that has the least impact to the environment. For projects of a lesser scale with the potential for less impacts, an Environmental Assessment (EA) is completed instead.”

### ***Post Rail Startup***

Typically, the startup of a new rail service in a metropolitan area is done with a great deal of planning and coordination with the prior bus-only transit service. A good example of this occurred in the summer of 2011 as the DCTA A Train service began revenue service in Denton County north of Fort Worth and Dallas. The A train is owned and operated by the Denton County Transportation Authority which also manages the bus service in the corridor. Bus routes, which formerly traveled between cities and into Carrollton, were revised on opening day to take passengers to rail stations where they can transfer to the train for the long-haul portion of the trip.

This shifting of bus service from long-haul to “feeder” service is very typical and is what Burleson should plan for once it establishes a more robust bus service in advance of the rail project. Using the rail mode for the long portion of a trip is usually a benefit to the transit passenger compared to the same trip via bus in mixed traffic. However, many passengers also have resistance to transferring from one vehicle to another whether it is the same mode or a different mode. Keeping the public involved and informed about how bus service will evolve over the life of the rail project is important to keep in mind even at this early stage of development.

Although there is some Federal assistance for bus capital and operational expenses now, the operating expense for more bus service would have to come from non-Federal sources. Developing a financial plan for post-rail bus service should be a high priority for Burleson.



APPENDIX 1 - PROJECT OVERVIEW

## INTRODUCTION



The City of Burleson is located in Johnson and Tarrant Counties and is centered near the intersection of Interstate Highway (I.H.) 35 West and State Highway (S.H.) 174, approximately 12 miles south of Downtown Fort Worth. Although the City was officially incorporated in 1912, the original town site was established by the MKT Railroad in 1881 on their planned railroad from Fort Worth to Hillsboro. From its founding, the City has had close ties to the rail industry. In addition to the Missouri-Kansas-Texas (MKT) railroad which passes through Burleson's Old Town, the Burlington Northern Santa Fe (BNSF) Railroad passes approximately 5 miles to the west of Old Town, and within the current Burleson city limits. In 1912 the North Texas Traction Company began service on its Interurban line between Cleburne and Fort Worth, which made Burleson more accessible to the outside world. The interurban service ceased in April 1931.



Today, the planned commuter rail known in the Federal Highway Administration (FHWA) approved long range transportation plan, *Mobility 2035: The Metropolitan Transportation Plan for North Central Texas*, as the Cleburne Corridor has a proposed station along the BNSF Rail Line within the City of Burleson. The proposed station, located near the intersection of Alsbury Boulevard and Hulen Street (formerly Shaffstall Road), is envisioned by the City of Burleson to become a multi-modal transit center which will anchor a 565-acre vertical and horizontal mixed-use development which will include employment centers, integrated buildings with residential and retail or office components, governmental buildings, and parks and open space. The vision for this area was encompassed in a Transit Oriented Development (TOD) plan (see figure 1.4) which was incorporated into the *Imagine Burleson – Roadmap to 2030 Comprehensive Plan* (see figure 1.3) in 2010. While the funding for the commuter rail line is not currently appropriated, the City envisions providing a bus system with a station located at the BNSF site as an interim to commuter rail.

Figure 1.1 (Top) Old Town Burleson

Figure 1.2 (Bottom) Interurban Rail Car

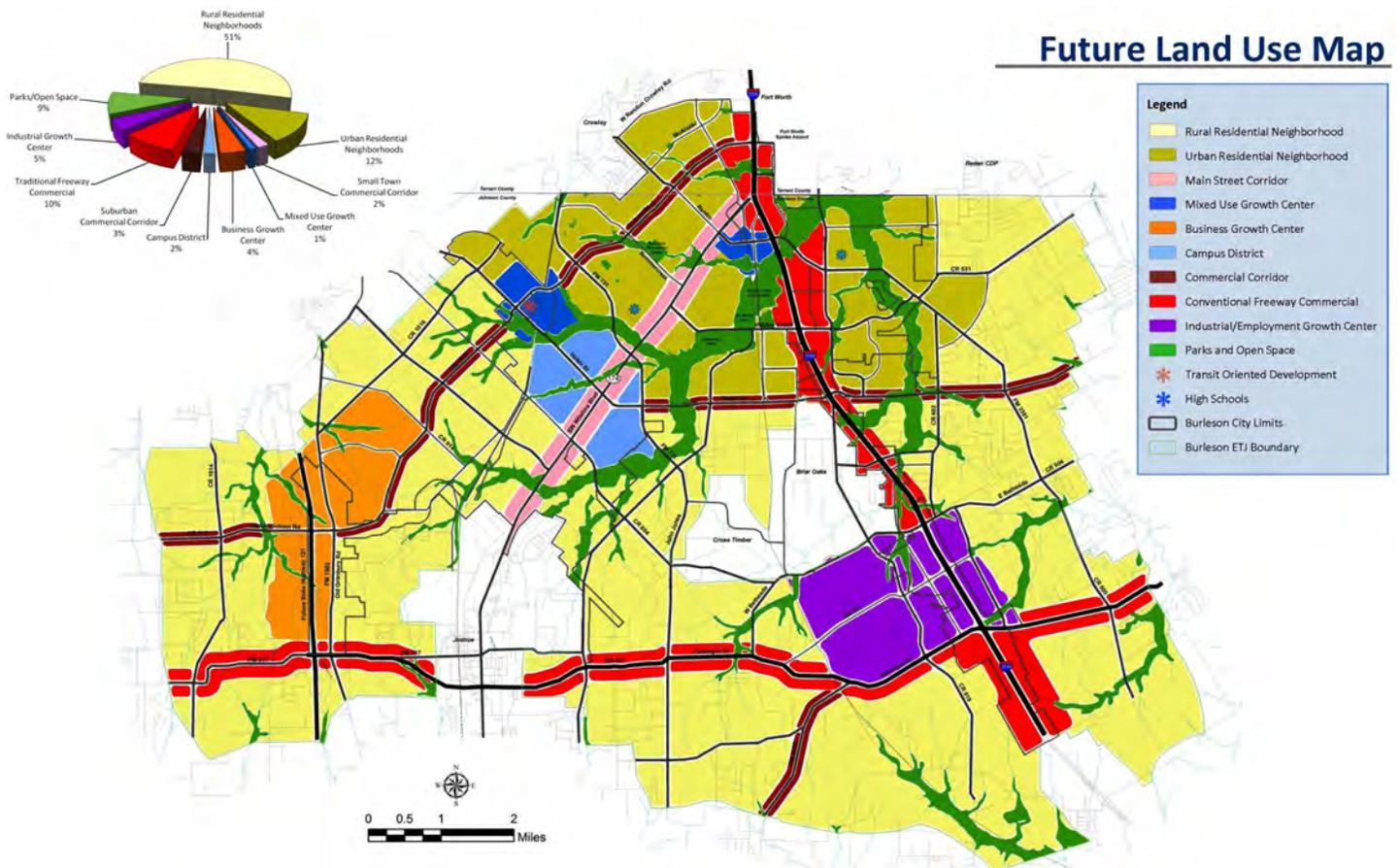


Figure 1.3 Imagine Burleson - Roadmap to 2030 Comprehensive Plan

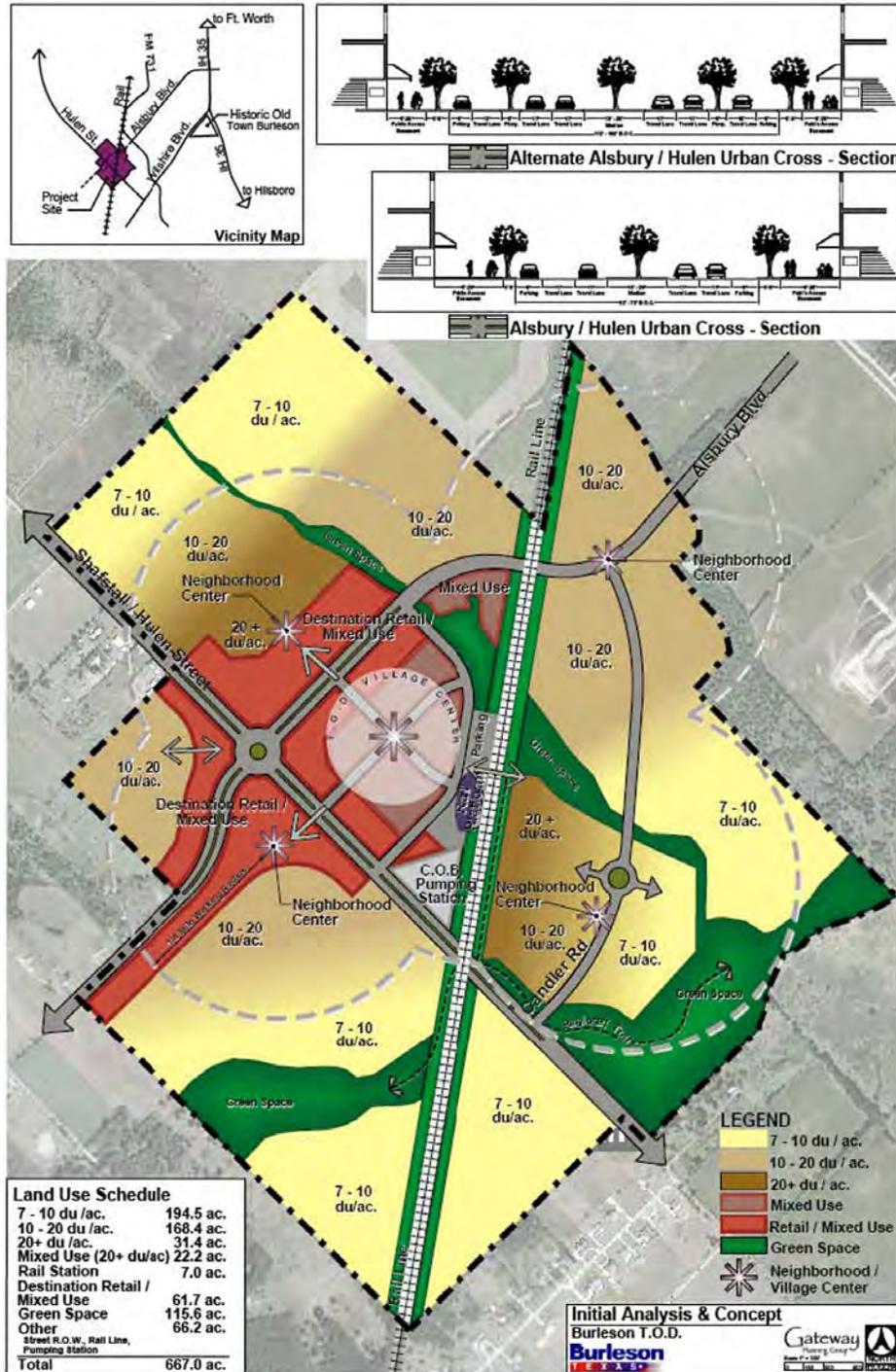


Figure 1.4 Burleson TOD Concept Plan

## PROJECT BACKGROUND + SCOPE

In 2006, the City of Burleson received a Sustainable Development Grant from the North Central Texas Council of Governments (NCTCOG). In October 2010, a team of consultants led by Hellmuth, Obata & Kassabaum (HOK) was engaged to prepare a master plan for the Burleson West TOD. The master plan scope comprised three key elements including; a real estate development market analysis (future market / development conditions and a real estate product / land development market assessment), station design (alternative station concepts and alternative site concepts), and transportation (station parking analysis, bus to rail transition plan, and non-motorized mobility plan). The study, which commenced in October 2010, was managed by NCTCOG, with direct input from a Project Review Committee (PRC) consisting of staff from NCTCOG, the City of Burleson and the Fort Worth Transportation Authority (The T).

## STUDY AREAS

The scope of the Burleson TOD Master Plan study encompassed two separate study areas as shown in Figure 1.5.

The first study area was the West TOD District which is an approximately 560-acre district straddling the BNSF railroad. Within this area 9.8 acres have been set aside for a future bus station which is envisioned to transition into a commuter rail station. This site was also identified in the *Imagine Burleson – Roadmap to 2030* comprehensive plan as a potential transit-oriented development opportunity. Within this study area, all of the scope components mentioned previously were initiated.

The second study area was Old Town Overlay District. This 230-acre district was located in the historic Burleson downtown area. The main focus of the study in this area was related to the real estate product and land development market assessment. This item was included in the scope of services to develop a clear understanding of the different markets that the West TOD District and Old Town Overlay District study area should target, to ensure the future viability of both districts by minimizing future competition between the two critical areas of the City. An additional part of the TOD Master Plan study is to explore options for connectivity between the two study areas through development of a new transit center.

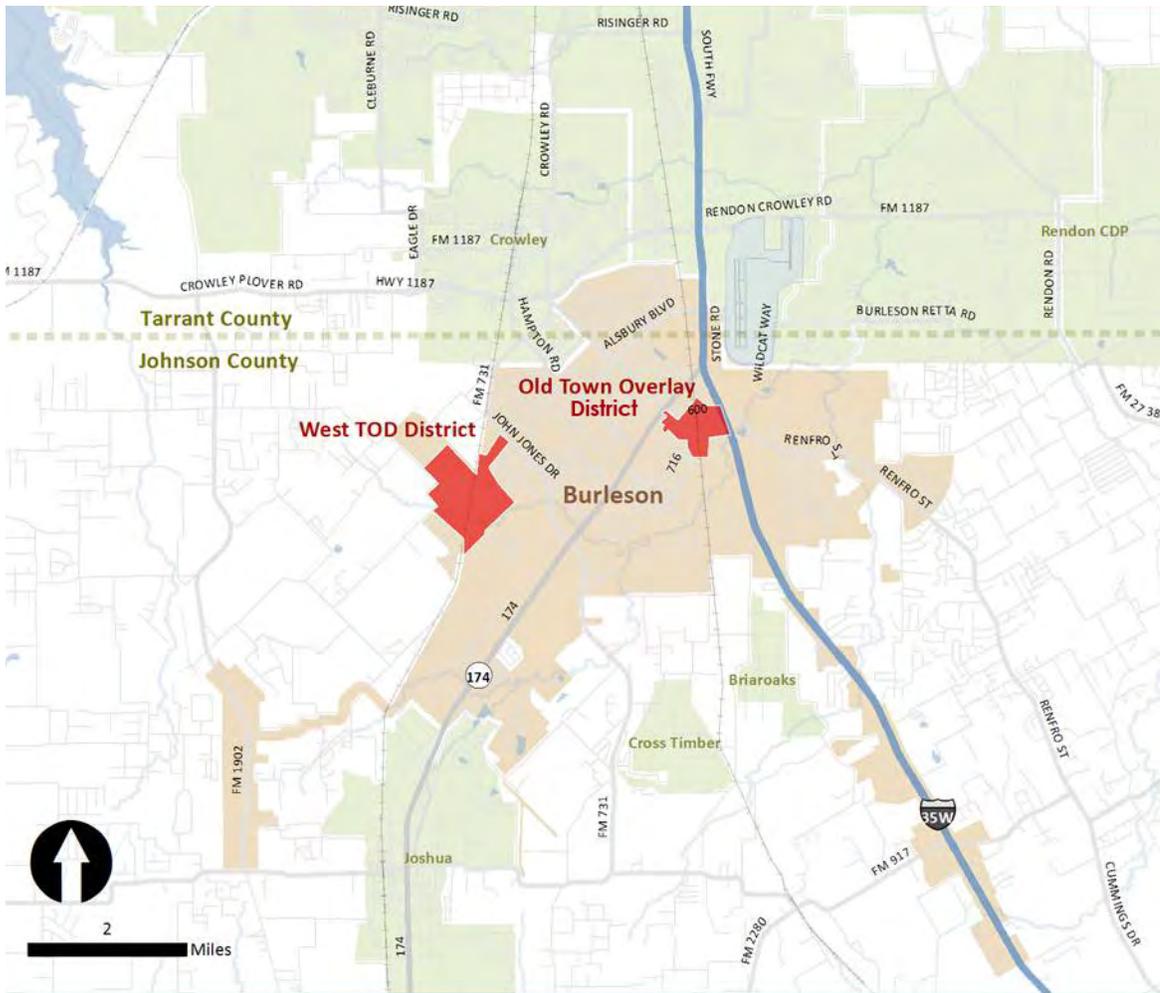


Figure 1.5 Project Study Areas

## STAKEHOLDER + PUBLIC INVOLVEMENT PROCESS

The community engagement strategy and public participation were critical elements from the onset of the planning effort. NCTCOG and the City were committed to steering a process where the wishes of the community and its stakeholders were identified, refined and implemented as part of the planning process. Early in the process, the Project Review Committee (PRC) and project team worked together to establish a public engagement plan that would provide the community with multiple opportunities to interact with the project team, to ask questions, to voice their opinions and concerns, and to respond to plan concepts.

### ***Key Stakeholder Interviews***

Key stakeholders from the business, development and transportation sectors of the Burleson community were surveyed in December 2010 and January 2011. More than 20 people participated in the individual and group interviews. Stakeholders were asked a series of questions related to the desirability of a commuter rail station and resulting development in the City, desired linkages and destinations of future bus and rail service, and stakeholder perceptions of Burleson as a walkable and bikeable community.

In general the stakeholders reported that they, and the specific constituencies that they represented, were very supportive, and in many cases extremely excited about future commuter rail service and supporting TOD development. The main destination expressed by the stakeholders as being desired for the future bus, and ultimately future rail service, was downtown Fort Worth. However, several individuals also expressed an interest in future service to DFW International Airport, Victory Park (Dallas) and downtown Dallas. The stakeholders interviewed were also supportive of creating a strong walkable and bikeable environment within Burleson, but cautioned that S.H.174 and Renfro Street both had multiple, heavily-traveled traffic lanes that made them somewhat unsafe for pedestrian and bicyclists activities. A complete summary of each stakeholder interview can be found in Appendix 2 of this report.



Figure 1.6 Stakeholder Interviews

### ***Open House***

An open house was held at Burleson City Hall on January 13, 2011. At this event which was attended by more than 50 individuals, the consultant team provided an overview of the project background and scope, and then held one-on-one discussions with the meeting attendees at a series of stations that focused on the real estate market and associated land uses within the TOD area, transportation, and urban design.

In the real estate market/ land use focus area, the majority of comments were from existing property owners in the area. Discussion centered on the potential product that would be appropriate for their properties, the types of development that would best support transit, the timing of new future development, and potential compatibility between existing and new development.

The majority of the comments received at the transportation focus area were related to creating safe, connected pedestrian and bicycle environments. There was specific discussion related to the appropriate design of the pedestrian and bicyclist environments within new mixed-use developments, as well as discussion related to making pedestrian and bicyclist connections along existing roadways and greenbelts.

The discussion at the design focus area was related to the appropriate look and character of the future rail station and TOD development. The public unanimously supported a more historic character and feel for these facilities, with an emphasis on utilizing the materials and design characteristics of the buildings that currently exist within Burleson's Old Town. The consensus was that any modern design or art would not fit well into the community.



*Figure 1.7 Open House*

### ***Public Meetings***

Two public meetings were held in 2011 at Burlison City Hall to present information and ideas. On April 7, 2011, the consultant team presented relevant case studies for the development of commuter rail stations, alternative station concepts, and alternative site plans. In return, 36 individuals asked questions of the consultant team and provided feedback related to their preferences for the future development of the Burlison West TOD station. The specific station and site concepts presented in this meeting and the preferences expressed by the public can be found in the alternative concepts section of this report.

On July 5, 2011, the consultant team presented final case studies, station concepts, and site plans for the Burlison West TOD station to the Burlison City Council for final comment. Summary meeting notes for both public meetings can be found in Appendix 3 of this report.



*Figure 1.8 Public Meeting*



APPENDIX 1 - EXISTING CONDITIONS

## WEST TOD STUDY AREA

The 560-acre Burleson West TOD study area is bisected by the BNSF railroad, and is primarily undeveloped. The areas large amount of open space, coupled with the centralized location of the station, creates unique opportunities for transit oriented development on both sides of the BNSF rail line. Site inspection indicates that the rail line is elevated throughout the study area, which provides opportunities to provide at-grade pedestrian and vehicular access without interfering with existing or future rail operations. The following summarizes existing conditions within the West TOD study area.

### ***Existing Land Use***

The majority of the project study area is best categorized as being vacant, which includes properties that are truly vacant with no development, as well as properties that are in agricultural uses. On the southeastern portion of the study area, two areas on the north and south sides of Hulen Street are being utilized for natural gas production and supporting activities. The western and southwestern portions of the study area contain primarily large lot, single-family residential uses. Finally, the site immediately west of the BNSF rail line and north of Hulen Street is in public use, and contains a water storage tank owned by the City of Burleson. A map of existing land uses in the study area can be found in Figure 2.1.



### ***Existing Zoning***

All of the West TOD study area is zoned as a Planned Development (PD). The Burleson W. TOD PD (B-747-06, D-065-06) supports a number of uses including residential, general retail, neighborhood service, and commercial, and encourages development within a mixed-use environment. The residential uses allowed range from 7,000 square foot residential lots to multi-family residential uses in excess of 24 dwelling units per acre. A current zoning map for the study area can be found in Figure 2.2.

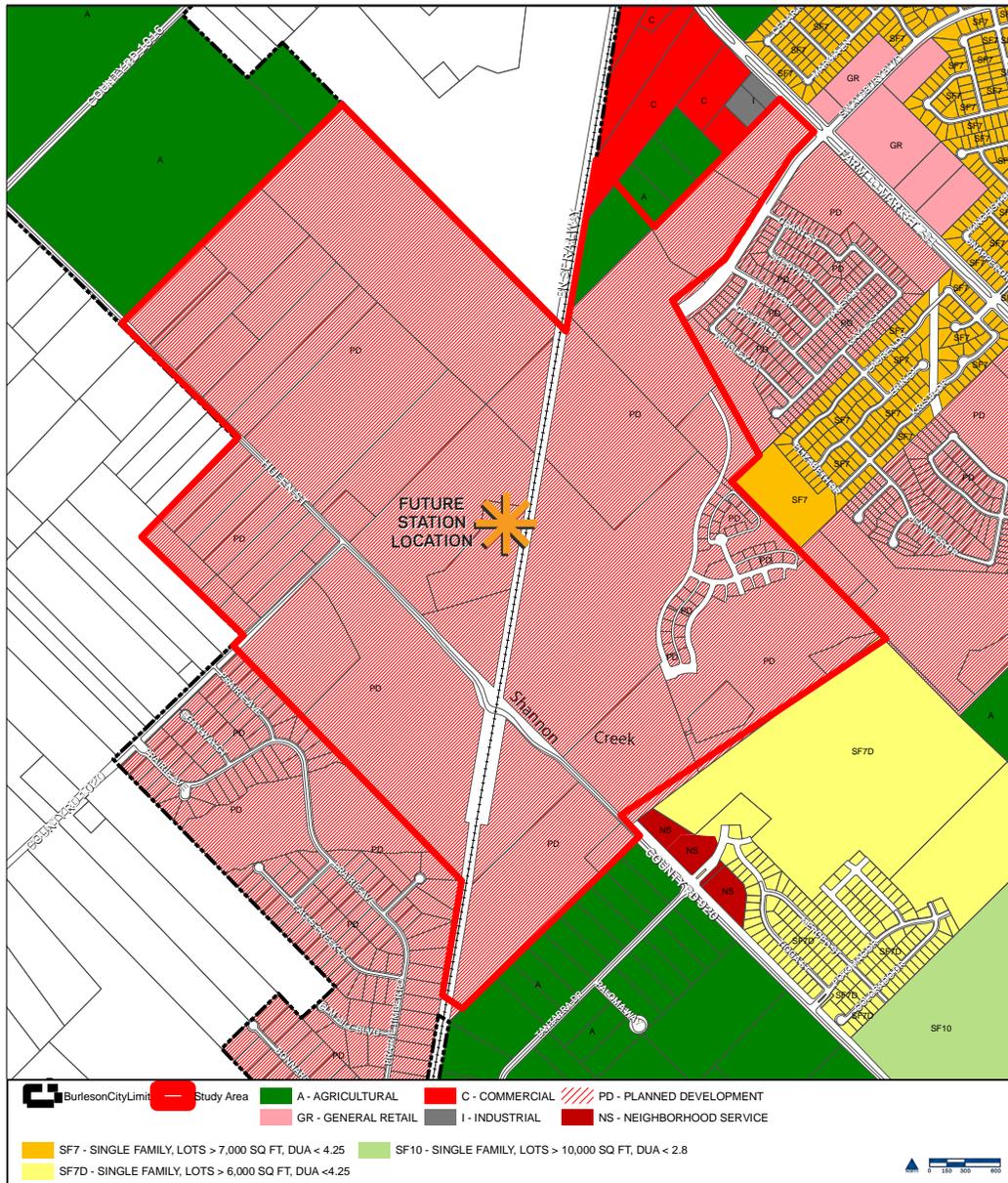


Figure 2.2 Existing Zoning for West TOD Study Area

### ***Topography + Geologic Features***

The topography of the study area gently slopes from a high point immediately to the west of the future station site, to a low point along Shannon Creek which flows along the southern portion of the study area. The highest point of the study area is approximately 806' and the lowest 766', which equates to a maximum 40' change in elevation. In general, the slightly sloping topography should not limit future development at the station or supporting TOD.

The floodplain of Shannon Creek is relatively broad, and consists of three floodplain areas on the west side of the BNSF railroad. These floodplains areas provide opportunities for future trail connectors and open space preservation within the study area. The three floodplain corridors converge into one floodplain at the Hulen Street underpass of the railroad. This area of Hulen Street has a tendency to flood, since the underpass must accommodate both the roadway and the creek channel. Additionally, the existing underpass has a low clearance, which currently prohibits most truck access to the future station site on Hulen. While the future Allsbury Road extension will alleviate access issues for trucks to the site, a long term solution will still be needed for Hulen Street. As Hulen is reconstructed in the future, the flooding and clearance issues will need to be addressed in this area. Immediately to the north of the future station location, an existing pond could be incorporated into the future development concepts as a public recreational and aesthetic benefit.

Major tree stands are primarily located within the Shannon Creek floodplain, and immediately to the east of the future station site. These areas of tree stands could become future open space preservation areas within future development sites. The remaining portions of the study area are primarily grasslands, some of which are being utilized as pastures for livestock. A map of existing topography and geologic features in the study area can be found in Figure 2.3. In general, due to the relative flatness of the station site and surrounding study area, the existing physical conditions within the study area have the potential to positively support and enhance the development of a future rail station and supporting TOD. The next section explores the market support for those facilities.

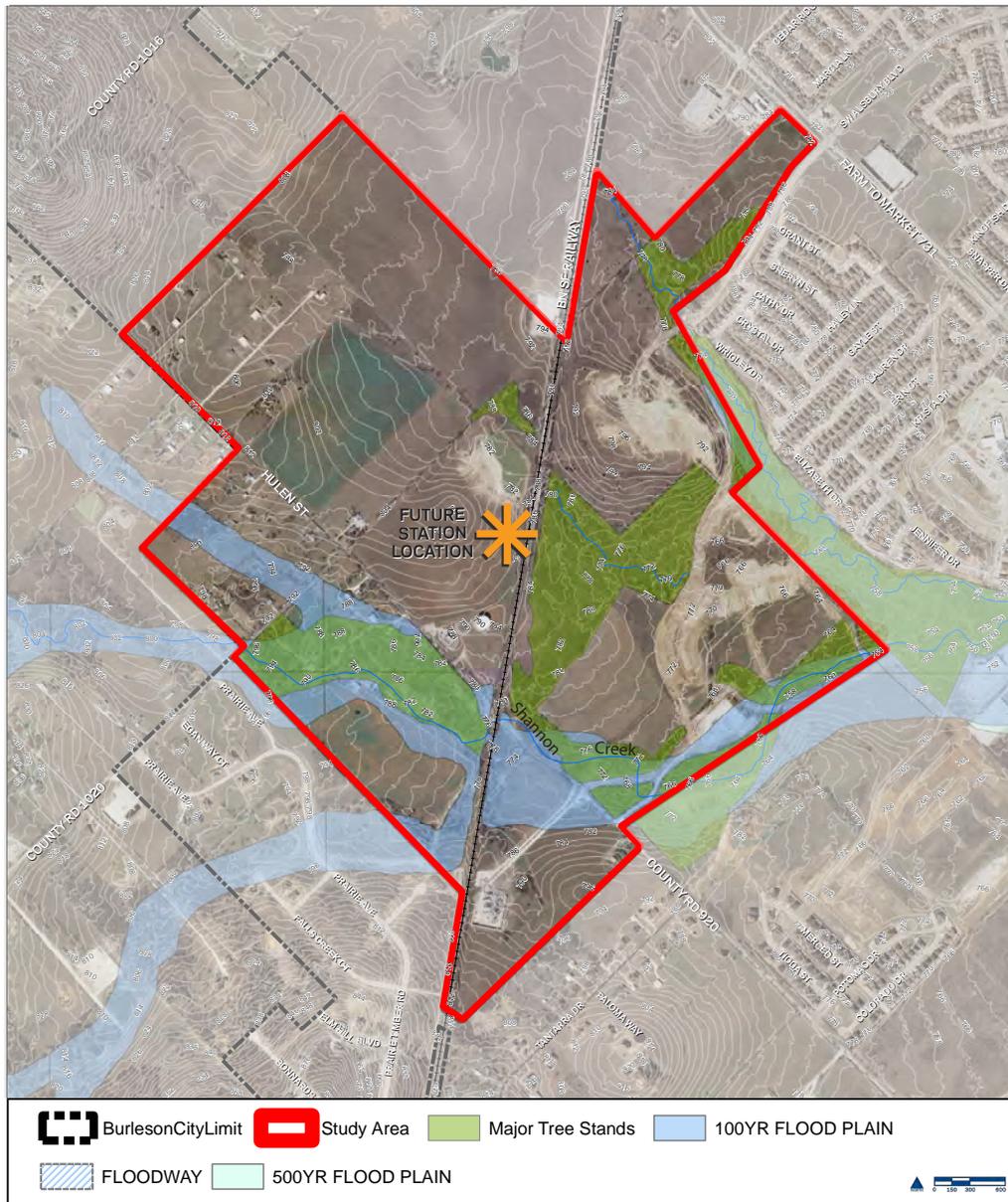


Figure 2.3 Topography + Geographic Features for West TOD Study Area

## MARKET

### ***Introduction***

A market analysis has several critical components. The first step involves analyzing the subject properties and determining the opportunities, limitations and uncertainties regarding development on the site. Secondly, a review of market indicators and trends within a surrounding trade area gives an indication of the health of the trade area's market and economy. Lastly, a review of product-specific supply and demand leads to conclusions about the ability of the area to support new development.

### ***Site Information***

Characteristics of the subject properties for the Burleson TOD Study are described below and illustrated in Figure 2.4.

#### *West TOD District*

- Approximately 560-acre district bisected by the Burlington Northern and Santa Fe (BNSF) railway
- Site of future bus, and later, passenger rail station
- Identified as potential transit-oriented development opportunity
- Regional access and visibility to the District is provided by S.H. 174 and more locally, FM 1731
- Surrounding land uses include primarily vacant land

#### *Old Town Overlay District*

- Approximately 230-acre district encompassing Burleson historic downtown area
- Regional access and visibility to the District is provided by both I.H. 35W and S.H.174
- Surrounding land uses include commercial, industrial and residential uses

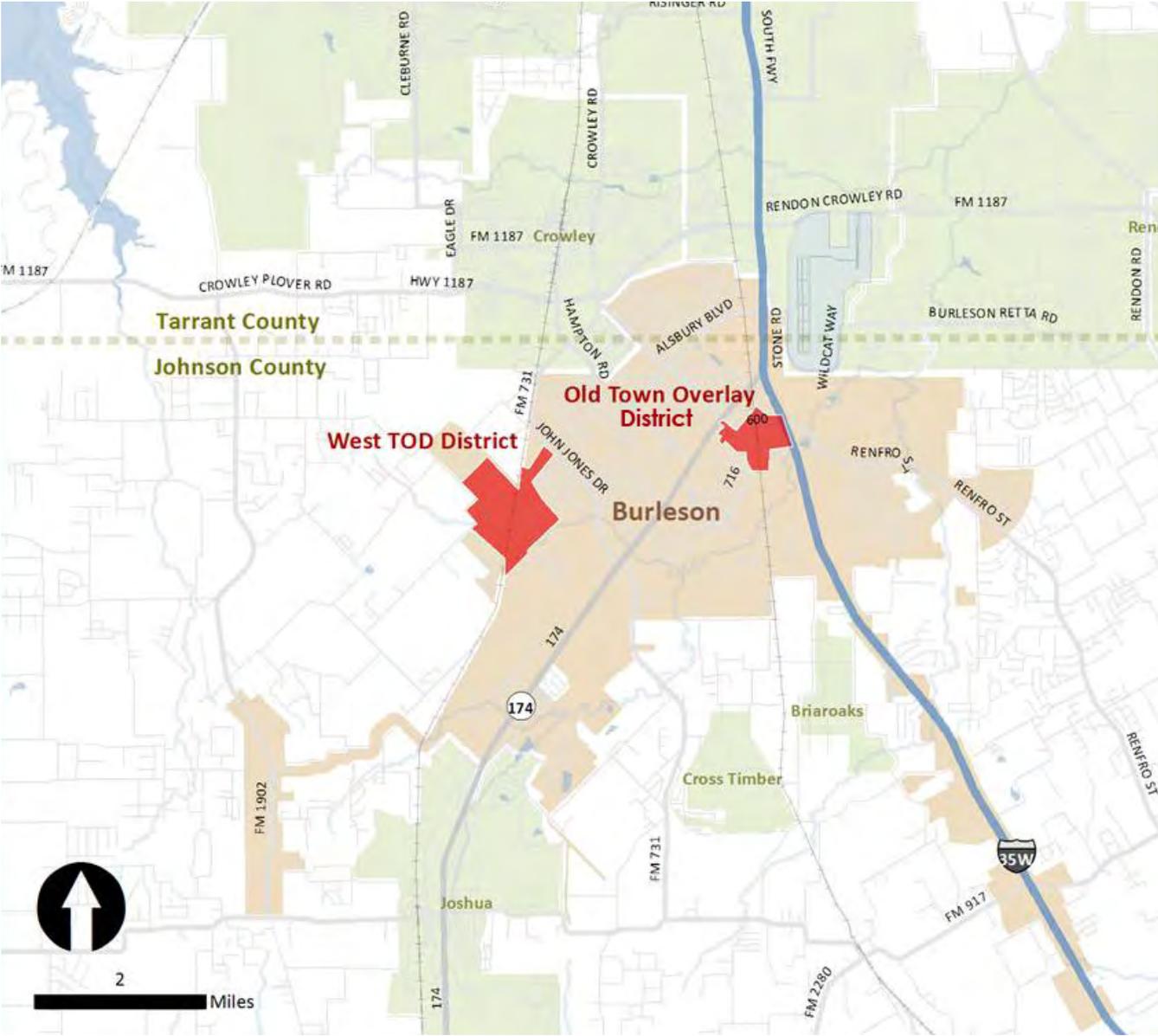


Figure 2.4 Subject Properties

### ***Trade Area Definition***

In order to determine the feasibility of proposed development projects, a trade area must be defined which identifies the influence area within which the project will compete with other similar developments and from which the project will draw the majority of its users. The following factors were considered in determining the trade areas for the West TOD and Old Town Districts:

- District size and the condition and character of surrounding development
- Physical and psychological barriers such as geographic features, major transportation thoroughfares, and jurisdictional boundaries
- Influence of potential competitive development concentrations

Based on these factors, the primary trade areas identified for the Districts were comprised of 5-mile rings. An additional regional trade area was identified from which both Districts could draw potential users. Figure 2.5 illustrates these trade areas.

As shown, the regional trade area includes portions of Tarrant and Johnson Counties, as well as all or portions of the Cities of Burleson, Crowley and Fort Worth. Economic development activity in this trade area has been, and continues to be, clustered along major transportation routes, such as I.H. 35W, S.H.174 and U.S. Highway 67.



Figure 2.5 Trade Area Map

### ***Trade Area Market Indicators***

Demographic and economic characteristics in the market are indicators of overall trends and economic health which may affect development in the subject Districts. Figure 2.6 summarizes key indicators considered when analyzing demand for select product types.

As reflected in Figure 2.6, key demographic characteristics of the Trade Areas are as follows:

- Approximately 22% of the Regional Trade Area residents reside within 5 miles of Old Town and 20% within 5 miles of the West TOD District
- Household growth in all of the Trade Areas (estimated at 3.3% to 3.4% annually) should substantially outpace that for the DFW Metroplex (12-county area defined by U.S. Census Bureau)
- The Regional Trade Area picks up significant renter populations along the south Interstate 820 loop, but still has a smaller share of renters than the DFW Metroplex
- The Old Town District has a slightly higher percentage of seniors relative to the other Trade Areas and the DFW Metroplex
- Median household incomes are lower for the Regional Trade Area as compared to the Districts' 5-mile rings, but this is primarily due to smaller household sizes
- Educational attainment is higher for the Regional Trade Area
- Overall ethnic diversity is significantly higher in the Regional Trade Area and the DFW Metroplex than the Districts' 5-mile rings (Hispanic and Black/African American)

Overall, the District and Regional Trade Areas profile as a well-educated, relatively affluent neighborhoods, with an established, less ethnically diverse population.

	Old Town 5-mi.	West TOD 5-mi.	Regional Trade Area	DFW Metro
2000 Population (1)	44,681	38,463	237,674	5,030,828
2000 Households (1)	16,009	13,661	86,882	1,881,056
2010 Population (1)	69,416	62,204	311,115	6,381,950
2010 Households (1)	24,799	21,913	111,729	2,334,568
2020 Households (estimate) (2)	34,300	30,600	156,100	2,902,100
Annual Household Growth Rate to 2020	3.3%	3.4%	3.4%	2.2%
Average Household Size (2010) (2)	2.78	2.83	2.76	2.88
Pct Non-Family Households (2010) (2)	27%	24%	35%	31%
Pct Renters (2010) (2)	21%	22%	29%	38%
Pct Age 65+ (2010) (2)	12%	11%	10%	9%
Pct Age 0-14 (2010) (2)	22%	22%	23%	24%
Pct With Bachelors Degree or higher (2010) (2)	20%	19%	24%	20%
Median Household Income (2010) (2)	\$60,378	\$60,032	\$56,364	\$53,913
Per Capita Income (2010) (2)	\$25,198	\$24,510	\$25,113	\$26,975
Pct With Income Over \$100,000 (2010) (2)	21%	20%	19%	23%
Pct Hispanic (2010) (2)	9%	10%	18%	27%
Pct Black/African-American (2010) (2)	2%	2%	14%	14%

Figure 2.6 Trade Market Indicators  
 (Sources: (1) U.S. Census Bureau and (2) Claritas, Inc.)

Psychographics describe characteristics of people and neighborhoods which, instead of being purely demographic, speak to attitudes, interests, opinions & lifestyles. PRIZM - NE (Claritas, Inc.) is a leading system for grouping neighborhoods into one of 65 distinct market segments. Commercial retail developers use psychographic profiling as an indication of residents' propensity to spend across select retail categories. Residential developers use the segments to suggest preferences for certain housing product types. Figure 2.7 summarizes current (2010) psychographic characteristics of the Regional Trade Area.

Rank	Segment Name	Households	Pct. of Households	Index to US (100 = avg.)
1	New Homesteaders	7,108	6.4%	359
2	White Picket Fences	5,766	5.2%	390
3	Kid Country, USA	5,407	4.8%	382
4	Upward Bound	5,299	4.7%	281
5	Fast-Track Families	4,358	3.9%	244
6	City Startups	4,314	3.9%	301
7	Middleburg Managers	4,293	3.8%	197
8	Sunset City Blues	3,691	3.3%	185
9	Family Thrifts	3,663	3.3%	180
10	Boomtown Singles	3,600	3.2%	232
11	Country Squires	2,970	2.7%	154
12	Blue-Chip Blues	2,890	2.6%	207
13	Second City Elite	2,858	2.6%	204
14	Kids and Cul-de-Sacs	2,799	2.5%	155
15	Up-and-Comers	2,791	2.5%	193
	<b>All Other Segments</b>	<b>49,922</b>	<b>44.5%</b>	
	<b>Total All Segments</b>	<b>111,729</b>	<b>100.0%</b>	

Figure 2.7 Trade Area Market Psychographic Indicators (Sources: Claritas, Inc. PRIZM-NE)

As shown, the Regional Trade Area is a blend of suburban, exurban (the region outside the suburbs of a city) and even some rural/small-town lifestyle segments. Higher population concentrations along I.H. 35W skew Trade Area psychographics toward relatively affluent, family-oriented suburban segments.

### ***Current Market Realities***

Burleson is located in the Fort Worth/Mansfield path of growth and is poised to compete for both residential and nonresidential expansion, due to its proximity to future transit and a high quality of life. Despite this competitive position, Burleson will still be affected by regional and national real estate trends. Following are some that impact future new development, both locally and regionally, based on the Urban Land Institute's "2011 Emerging Trends in Real Estate":

- National/regional prospects for both rental and ownership housing are especially strong with infill and transit-supported locations.
- Burleson Regional Trade Area commercial retailers are struggling to maintain market share, as residential growth slows and consumer spending plateaus - new retail locations require market-recognized amenities (e.g., public spaces, transit, urban infill).
- Job growth will drive demand for new office and industrial development and changing workforce environments will dictate space configurations and amenity levels – again, transit and urban infill locations continue to attract most investment.

The Regional Trade Area demographics/psychographics support demand for higher-density housing and support retail uses. Locational attributes (highways and transit) will support significant office and industrial employment growth.

Burleson's retail history has been primarily that of a "bedroom" community, providing residential support for retail space in surrounding communities. As residential expansion continues to occur in the Regional Trade Area, Burleson will offer locational advantages (highway, transit) for prospective retailers. This growth-related demand, coupled with any unmet demand already in the Trade Area, should position Burleson for extensive retail/commercial development over the next decade.

Burleson's office and industrial development remains comparatively modest in size and building class, particularly when compared to "closer-in" communities (See Appendix 4 - Economic Profile, page 154 for more detail). An expanding critical mass of housing across various price points, expanding regional access through transit and highway systems, and its growing connectedness, suggest Burleson could be ready to emerge as a more prominent employment address for the southwest Metroplex.

## TRANSIT + BUS SYSTEM

### **West Station Area Mobility Plan**

The West Transit Oriented Development lays out a vision for a mixed-use development with rail transit and complete streets, as envisioned in *Imagine Burleson 2030*, adopted by the City in April 2010. This comprehensive plan defines *complete streets* as:

*“a concept that refers to designing thoroughfares to allow for a safe and enjoyable experience for a variety of transportation modes, including automobile, pedestrian, bicycle and mass transit. Elements often incorporated into Complete Streets include wide sidewalks, bike or shared lanes, landscaping, raised crosswalks, controlled access and on-street parking. In addition to increased pedestrian safety, benefits of Complete Streets include more vibrant pedestrian activity, more enjoyable driving experiences and aesthetically-pleasing streetscapes which attract future investment.”*

Complete streets are designed to accommodate people who cannot or choose not to drive an automobile. To the extent possible in each situation, they address the mobility limitations of persons with disabilities and seniors. The envisioned development's overarching mobility theme is to provide transportation for both motorized modes such as rail, bus, trolley, as well as automobiles, plus the non-motorized or 'active transportation' modes such as walking and bicycling. *The Mobility Plan 2035: The Metropolitan Transportation Plan for North Central Texas* adopted by the North Central Texas Council of Governments also supports this vision.

### **Cleburne City/County Transportation**

Public transportation services in Burleson are limited, but they provide a base which can be expanded in the future. There are two main providers of transit service currently within the City Cleburne City/County Transportation which is based in the City of Cleburne, and the Fort Worth Transportation Authority (hereinafter referred to be its trade name "The T") which is based in Fort Worth.

Cleburne City/County Transportation provides commuter service to downtown Fort Worth that originates in Cleburne. The T also provides commuter service via a park-and-ride lot on the east side of I.H. 35W at the Alsbury/Stone road exit. This facility is inside the city limits of Fort Worth and is on the border of Tarrant and Johnson Counties.

Cleburne City/County Transportation also offers Burleson Residents an intra-city and an intra-county demand response service, also known as paratransit service.

Cleburne City/County Transportation, organized as a department of the City of Cleburne, offers demand-response service in Burleson from 8 am to 5 pm, Mondays-Fridays. It also operates one fixed route, the Interurban Commuter Route, which originates in Cleburne with stops in Joshua, Burleson, the Veterans' Clinic in Fort Worth, and the Intermodal Transit Center in downtown Fort Worth. The bulk of Cleburne City/County Transportation service is allocated to demand response service in Cleburne, which is available to any resident.

The 2010 operating budget of Cleburne City/County Transportation was \$1,761,629. The breakdown of the operating budget for each service area is as follows:

Cleburne: \$547,578

Burleson: \$153,286 (with 50/50 cost share from the City of Burleson)

Unincorporated Johnson County and other cities: \$ 272,508

City/County Transportation used \$788,257 for capital acquisitions and payments during the 2010 budget year. Most of its revenue is derived from two formula grants from the Federal Transit Administration (FTA). The Section 5311 program is for transit agencies providing service in non-urbanized areas (this grant is used to fund services in Cleburne and in parts of the County other than Burleson). Cleburne City/County Transportation also receives funding from the FTA Section 5307 program for transit service in urbanized areas, and this helps fund the Burleson

service. Cleburne City/County Transportation also has several annual contracts for specific services, including a contract with The T.

Burleson based ridership for the Interurban Commuter Route was 1,975 trips in 2010. The ridership is a little more than 7 one-way trips each weekday on average. Figure 2.8 summarizes origins and destinations for 2010 for City/County service.

	Origin	Destination
Cleburne	957	840
Joshua	72	63
Burleson	436	691
Park-and-Ride Lot	59	789
VA Clinic (Ft Worth)	19	66
ITC	2187	1281
Total	3730	3730

Figure 2.9 outlines the schedule and stops for the Interurban Commuter Route. Passengers pay a fare based on the number of stops after boarding. Currently the fare is \$3.00 per stop with a \$9 maximum fare. The demand-response service in Burleson provided 2,517 trips in 2010, or about 10 trips per day.

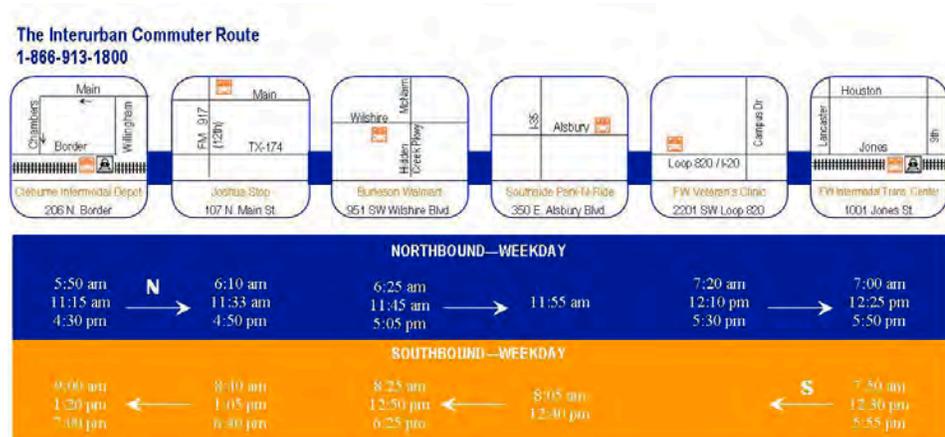


Figure 2.8 (Middle) 2010 Cleburne City/County - Origins and Destinations of Interurban Commuter Route

Figure 2.9 (Bottom) Interurban Commuter Route Schedule and Stops

Public transit in the US is a subsidized service in that the revenue from passengers does not cover the operating or capital cost. The most common measure of subsidy is called the Operating Ratio, which is the percentage of operating costs funded by the farebox revenues. In 2010, Cleburne City/County Transportation had an operating ratio of slightly over 7%. This is somewhat lower than fixed route transit systems, but Cleburne City/County Transportation is primarily a demand-response service. Due to the customized nature of demand-response service, it is more expensive to provide. In addition, Cleburne City/County Transportation operates in a low population density environment, meaning passengers and destinations are further apart and require more operating miles to serve.

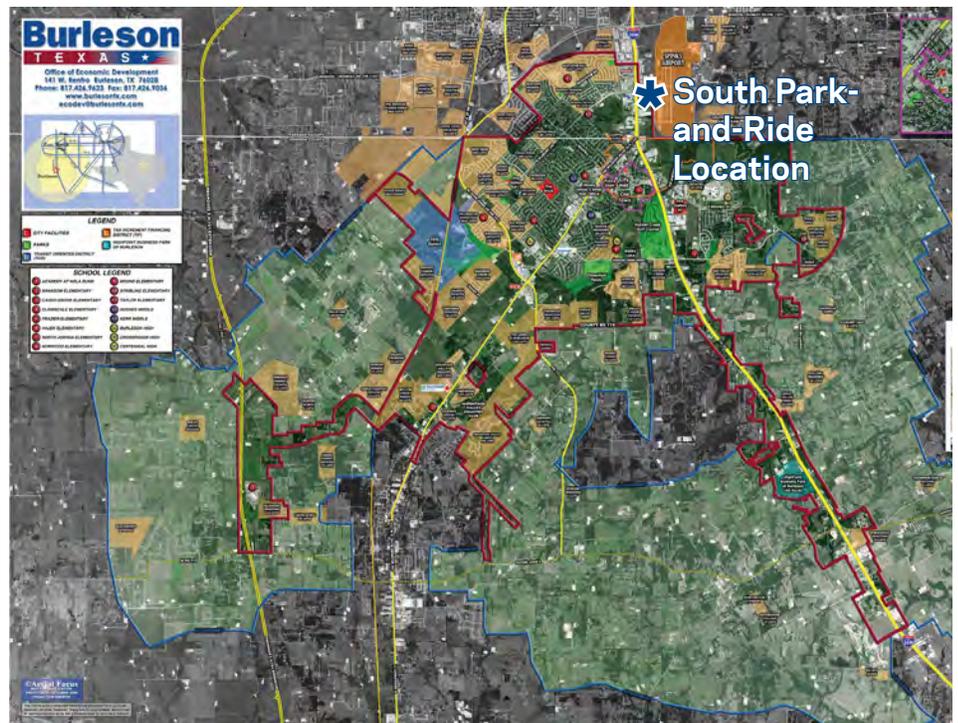


Figure 2.10 South Park-and-Ride Locator Map

**Fort Worth Transportation Authority (FWTA) – “The T”**

Weekday commuter service is provided by The T’s Route 65, also known as the South Park-and-Ride Express. It operates from a parking lot on Alsbury Rd and I.H. 35W (in Tarrant County) non-stop to The T’s Intermodal Transportation Center (ITC) at 9th and Jones. Two more stops in Downtown Fort Worth are served after the ITC stop.

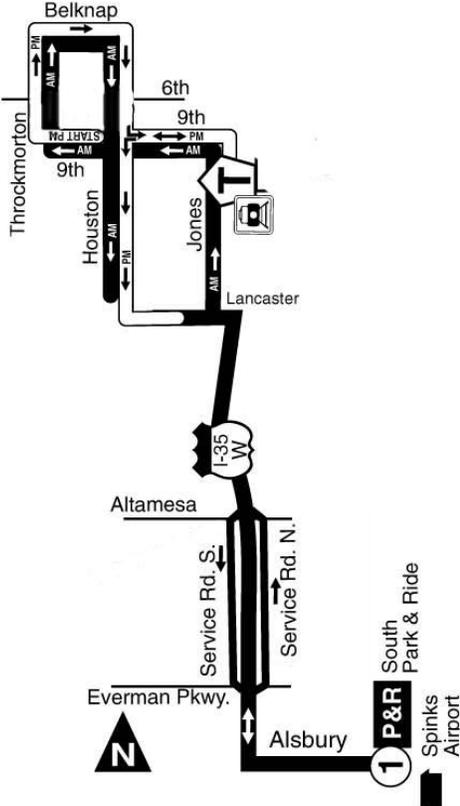


Figure 2.11 The T - Route 65 Map

South Park-and-Ride (adjacent to Burleson)	ITC	6th & Throckmorton	6th & Houston
5:40 AM	6:05	6:10	6:15
6:20	6:50	6:55	7:00
6:45	7:20	7:20	7:20
7:05	7:35	7:40	7:45

South Park-and-Ride (adjacent to Burleson)	ITC	6th & Throckmorton	6th & Houston
4:02 PM	4:10	4:15	4:40
4:42	4:50	4:55	5:20
5:07	5:15	5:20	5:45
6:02	6:10	6:15	6:40

Passengers arriving at the ITC can transfer to any of the other “T” bus routes or to the Trinity Railway Express (TRE) commuter rail service to Dallas’ Union Station and intermediate stations. The ITC will also be served in the future once funding is available by the new commuter rail line known as TEX Rail (formerly the South West to North East (SW2NE) line) which will connect to Terminals A & B at DFW International Airport. A route map of Route 65 operated by The T can be found in Figure 2.11, and the inbound (northbound) and outbound (southbound) weekday schedule are listed in Figures 2.12 and 2.13.

One mid-day trip provided by Cleburne City/County Transportation from the park-and-ride lot to the ITC is listed on the T’s schedule because passengers can use their T bus fare card or pass on City/County Interurban vehicles. Route 65 operates totally within Tarrant County. Burleson does not pay The T any fee for this service as it does not operate in Burleson or Johnson County. The fare from the South Park-and-Ride Lot is \$1.50 each direction. Discount multiple ride passes are available. There is no data available on passenger origins or destinations for route 65.

Figure 2.12 (Top) The T - Route 65 Inbound (Northbound) Weekday Schedule

Figure 2.13 (Bottom) The T - Route 65 Outbound (Southbound) Weekday Schedule

### ***Transit Dependent Populations in Burleson***

There are other special service providers and options in Burleson, but there are eligibility requirements for use. Medicaid, for example, provides individual transportation to medical services for qualifying recipients through the Non-Emergency Medicaid Transportation (NEMT) program. Applicants must demonstrate they have no other available transportation for their appointments. TxDOT's Public Transportation records show there are no active recipients or operators of vans purchased pursuant to the FTA Section 5310 program. School transportation for qualifying public school students is provided by a contractor of the school district. No other public transportation services are available.

### ***Previous Transit Studies***

There have been several recent studies and plans which have addressed the goal of having more public transit service in Burleson. While none of these have resulted in a firm plan for implementation, they demonstrate a growing awareness of the role public transit can play in meeting other community goals. One of the best examples of this is the comprehensive plan adopted by Burleson in April 2010, *Imagine Burleson*. While there were no specific recommendations for the type or level of service, public transit was seen as supportive of several goals and strategies including:

- Complete Streets Concept
- Environmental Sustainability
- Reduce Air Pollution

Several of the town meetings generated comments and support for public transit, including a trolley service focused on Old Town.

The current regional transportation plan, *Mobility 2035: The Metropolitan Transportation Plan for North Central Texas* includes a recommendation for the development of commuter rail service in the BNSF corridor serving Cleburne, Joshua and Burleson, connecting to the TEX Rail planned commuter rail line in Tarrant County.

The Johnson County Passenger Rail Study (Dec. 2008) was prepared by Transystems Corporation for The T and the NCTCOG. Its purpose was to assess the feasibility of passenger rail service from the downtown Intermodal Transfer Center (ITC) in Ft. Worth to Cleburne in Johnson County. It addressed the current Cleburne City/County Transportation demand response and commuter service, but did not recommend a plan for a broader bus transit system in Burleson. The Johnson County Passenger Rail Study incorporated previous efforts including the Regional Rail Corridor Study which was developed in 2004 by the NCTCOG.

The Johnson County Passenger Rail Study's Executive Summary noted that:

The concept of passenger rail service between Fort Worth and Johnson County was proposed as part of a Regional Rail Corridor Study conducted by the NCTCOG in 2004. This concept was designated as "Corridor W-4." Corridor W-4 is one of the eight rail corridors recommended in the Regional Rail Corridor Study, to meet future transportation needs and the subject of this report.

Corridor W-4, or referred to in this report as the Johnson County Passenger Rail Corridor, is an approximately 30 mile corridor utilizing primarily the Burlington Northern Santa Fe (BNSF) Railway - Fort Worth Subdivision, extending from the Intermodal Transportation Center in Downtown Fort Worth south to the communities of Crowley, Burleson, Joshua, and Cleburne. The corridor parallels the highway alignments of Interstate Highway 35 (I.H. 35), State Highway 174 (SH-174) and the planned Southwest Parkway. The corridor extends through two counties of Johnson and Tarrant.

The next section of this report describes three case studies of passenger rail and TOD results and plans.

## CASE STUDIES

The scope of the Burleson TOD Planning Study included a task to highlight three relevant case studies to provide the TOD and transit advocates in Burleson with some examples of similar communities seeking to leverage bus and rail service to influence desirable development in the vicinity of transit centers or stations. The purpose is to provide the stakeholders with different examples of how urban development and high quality transit service can be linked to improve livability measures and economic development. Candidate sites were screened by the PRC, and the following were selected for final case study development.

- Addison Circle -- DART Park-and-Ride bus transfer center
- Lewisville, TX -- Denton County Transportation Authority A Train
- Leander, TX -- Cap Metro Red Line Park-and-Ride

The selected case studies provide the stakeholders with a range of experiences at different points in development. The first case study involves intense existing development served only by bus transit and auto access but with the potential for future rail service. The second involves development along a rail project under construction, with limited bus service in the corridor. The third case study looks at a commuter rail station which has been in revenue service for a little over one year, and which had basic commuter bus service prior to the rail line opening. Figure 2.14 shows the basic characteristics of the three case studies in relation to the City of Burleson.

City	Transit Corridor	Population	TOD Plan?	Precursor Bus Service	Transit Authority Member?	Total # of Authority Member Cties	Service Area Population (NTB Data)
Addison, TX	Cotton Belt	16,000	Y	Y	Y	13	2.4M
Leander, TX	Metro Rail -Red Line	30,000	Y	Y	Y	8	.94M
Lewisville, TX	DCTA - A Train	101,000	Y	Y	Y	Countywide	.24M
Burleson, TX	BNSF Corridor	34,350	Y	Y	N	N/A	N/A

Figure 2.14 Case Study Characteristics



**Addison, Texas - Addison Circle**

Addison Circle, is a 15 acre area located in the Town of Addison immediately north of Dallas, is an intensely developed urban place. It is not yet served by rail transit, but is served by bus and demand-response para-transit service anchored by the DART Addison Park-and-Ride station. Addison has been a member city of the Dallas Area Rapid Transit (DART) agency since 1984. The residential population is only 16,000, but its unique employment center nature gives it a daytime population approaching 100,000. Employment in the Addison Circle development is estimated to be over 40,000, according to Addison city documents.

Developers, city planners and DART have worked cooperatively to provide convenient access to the bus transit system and to take advantage of a possible regional passenger rail corridor, the 25 mile long Cotton Belt line. The City has retained ownership of approximately 6 acres adjacent to the bus center and the existing rail right of way. Two studies are underway to advance the rail corridor. NCTCOG is conducting the Innovative Finance Initiative to develop funding options for the project, and DART is preparing an Environmental Impact Statement for the corridor.



Addison Circle is comprised of a comprehensive mix of urban land use, and was brought about by a series of public/private ventures (Figure 2.17). In general, Addison public funds provided infrastructure for intense commercial, retail and high density housing development. Development in 2009, according to city staff was comprised of:

- Multi-family units: 2,020 units
- Townhome/Condominium units: 407 units
- Office: 550,000 square feet
- Retail: 75,000 square feet

Figure 2.15 Addison Circle Existing Conditions

Figure 2.16 Addison Circle Development Plan

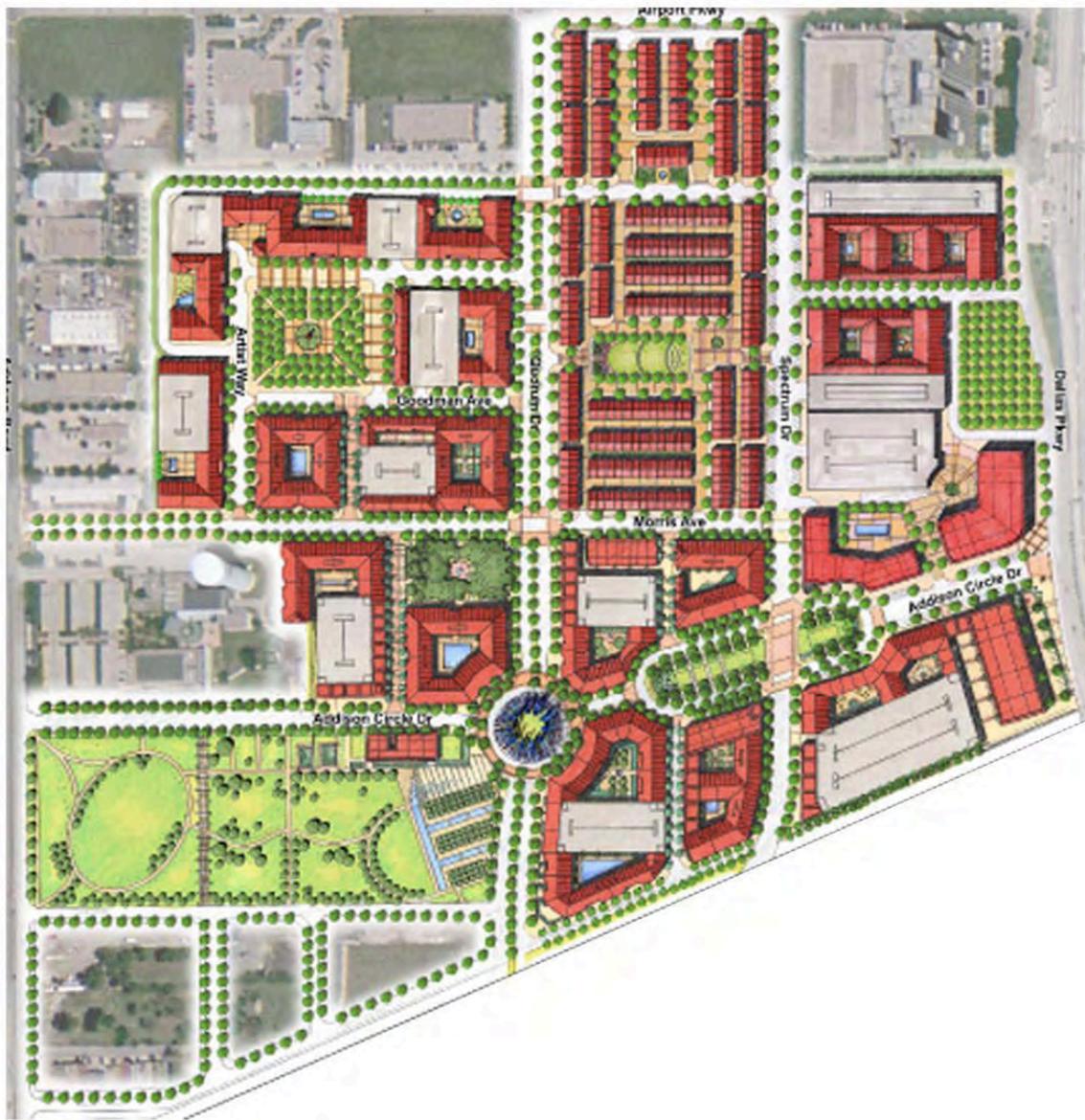


Figure 2.17 Addison Circle Development Plan

The Town of Addison provides the following history of its development :

*“Addison Circle began as a vision of the Addison 2020 committee established in 1992 to envision Addison’s future. The committee determined that Addison’s most logical future was to become the urban housing provider for those who wanted to live in an urban environment and also enjoy the great location, safe environment, shopping, events, and restaurants the Town had to offer.*

*Once the vision was adopted by the City Council, the staff hired RTKL to create image boards showing how the development could look. The staff then began pitching the idea to developers.*

*Robert Shaw of Columbus Realty Trust pursued the project and hired RTKL as the planners and architects. Columbus, RTKL, and the staff began crafting new zoning district standards and designing the Phase I product and infrastructure. (1993-1995).*

*The Addison City Council adopted the Urban Center zoning classification and rezoned the property to the UC district (1995). Once the zoning was approved, the Town entered into a development agreement for \$9,000,000 in infrastructure improvements with Columbus Realty Trust (1995). Tracts were later sold off to other developers. Development has occurred in nine phases”.*

The Town of Addison has a development staff which has been responsible for screening and analysis of proposals for the city-owned property, particularly the 6 acres adjacent to the Cotton Belt line. It is important to note that the Cotton Belt Line was not yet in the DART long range transportation plan in 1992, but Addison leaders felt it was a natural rail corridor that would be developed sooner or later.

The DART bus transfer station was located at Addison Circle in 1992. DART had been searching for an acceptable site to replace its transfer point at the old Prestonwood Mall in Dallas which underwent demolition. When DART did not have any willing “host” for the new transfer center, Addison volunteered to take the transfer center. There was little existing development that might have conflicts with a transit facility as it could be an asset to the employers looking for workers in the area.

DART buses at the Addison Circle facility averaged more than 800 riders per day in 2010. According to Addison staff, very few Addison residents use the bus system. Primary users are those who are commuting to jobs in the Addison Circle area and those who are using the Addison Transit Center for transfers.

#### **Lessons from Addison Circle TOD**

- A small population base can support intense development if it takes advantage of the overall transportation system, regional travel patterns, and follows a plan.
- A high value TOD requires patience and selectivity. Addison staff describes many situations where development proposals were offered to the city that might have provided short term benefits but were not the best use of the land in the long run.
- Private/public development process is essential.
- Bus transit can play a key role by providing low cost transportation to retail, hotel, and other hourly workers who otherwise might not be able to afford transportation. Without a plentiful supply of service employees, a diverse TOD will have difficulty being successful.

### ***Lewisville, Texas***

The Denton County Transportation Authority (DCTA) initiated revenue service in June 27, 2011 for a 21 mile rail corridor in Denton County, starting in the City of Denton and terminating at a cross-platform connection with DART's light rail service at the Trinity Mills station in Carrollton. Known as the A Train, it has been planned by DCTA. The A Train has five stations along the corridor; two in Denton and three in the City of Lewisville. DCTA was created only nine years ago. Approved by voters in 2002, it initiated fixed route and paratransit (demand response) services. Lewisville bus service began five years ago in 2006. DCTA is a coordinated county transportation authority created by House Bill 3323, under Chapter 460 of the Texas Transportation Code, approved by the 77th Texas Legislature and signed into law by the Governor in 2001. On November 5, 2002, the voters in Denton County approved the confirmation of DCTA by 73%. The DCTA Board of Directors represents every geographic area of the county. This is due to the Chapter 460 Agreement that guaranteed that the initial Executive Board membership had permanent board seats. This agreement preceded the decisions by the individual municipalities to join DCTA. The cities of Denton, Lewisville and Highland Village subsequently joined the DCTA on September 13, 2003.

DCTA began planning for the A Train in 2005. For the most part, the line follows existing right-of-way of the former MKT (Missouri-Kansas-Texas) line which was purchased by DART. The route runs adjacent to the I.H. 35W corridor for most of its length. DCTA had originally planned to secure funding for the A Train through the Federal Transit Administration New Starts Program. However DCTA did not apply for the funds due to the timeframe to deliver rail service by 2010 and meet with the Trinity Mills Station. The opportunity of local funds was instead pursued. Concession payment from the S.H. 121 toll road was used to fund the major transit improvement. The Denton County Regional Toll Road Task Force recommended the A Train for funding.

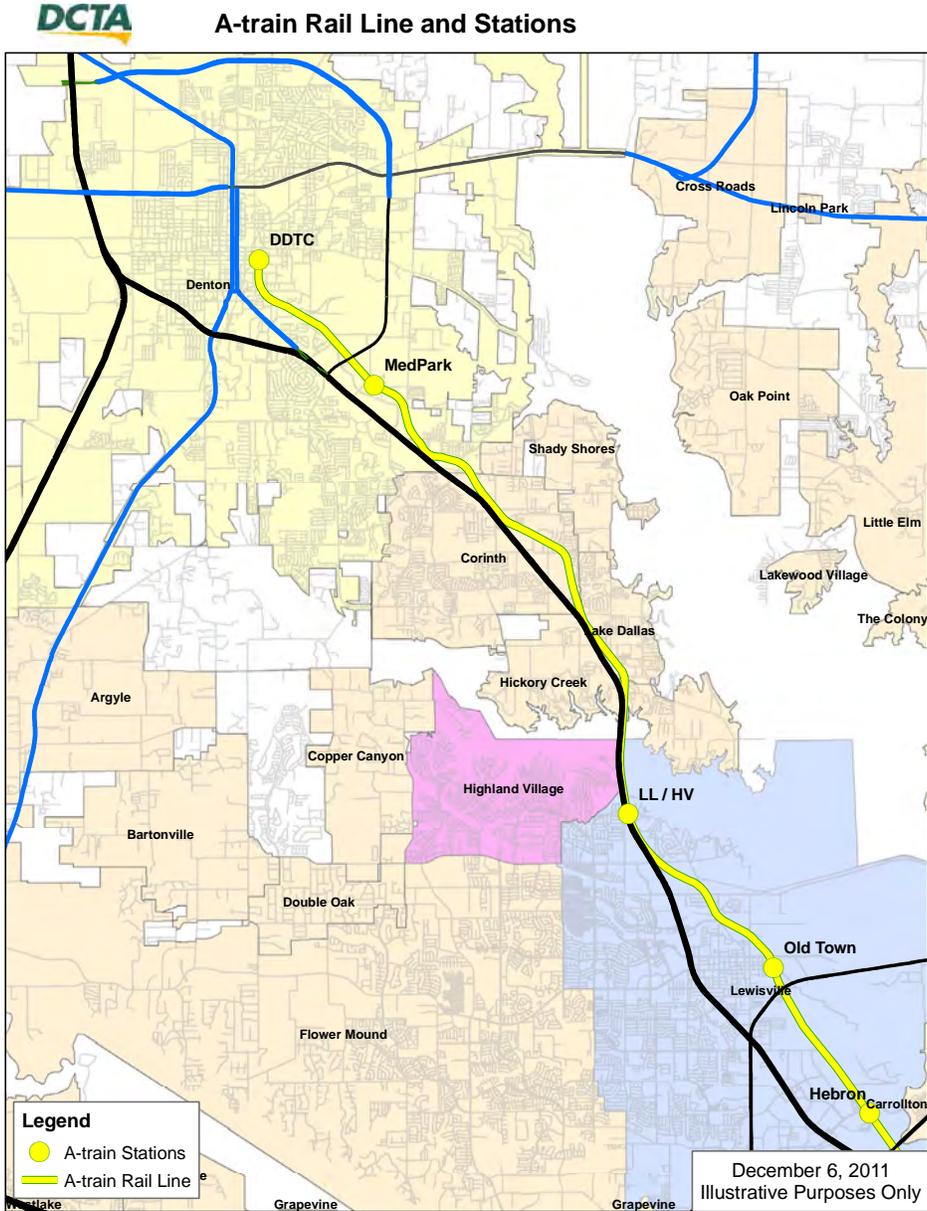


Figure 2.18 DCTA Route Map

### Bus Service in the Corridor

The A Train Corridor has four different networks of bus routes: DCTA Connect local bus service in Denton, UNT Shuttle (circulators around the University of North Texas) and the Commuter Express service linking Denton and Lewisville with Dallas and DART bus service in Carrollton. As rail service is implemented in this corridor, some of these routes might be restructured. Monthly ridership on the Denton-Lewisville-Carrollton commuter line has averaged over 5,000 trips per month in its first 3 months.



Figure 2.19 - Hebron Station TOD Rendering

### **TOD at Hebron Station**

Two station sites serving south Lewisville were studied during the planning of the A Train. The site now known as the Hebron site was selected by the DCTA staff and board after a public outreach process. This site had available developable land to take advantage of the rail station and nearby core services.

Construction of the TOD by Huffines Properties began in 2010 at the Hebron Station. A 90-acre mixed-use urban development with a blend of residential and retail space, it is the first TOD in Denton County. Build-out calls for 1,755 apartments. A rendering of the envisioned site buildout by the private developer is shown in Figure 2.19.

### **Lessons from Hebron TOD**

- A relatively new transit organization can implement a major rail project. There were many unique circumstances that enabled DCTA to develop the A Train.
- A well-planned rail transit project, combined with the problem of roadway congestion and delays, can combine to generate widespread public support for the rail project.
- An open station planning process that brings the public and private sectors together can result in private investment that supports the rail and bus transit facilities.
- Special circumstances and opportunities can arise at any time. Active participation in regional transportation organizations allowed DCTA to recognize a funding opportunity.

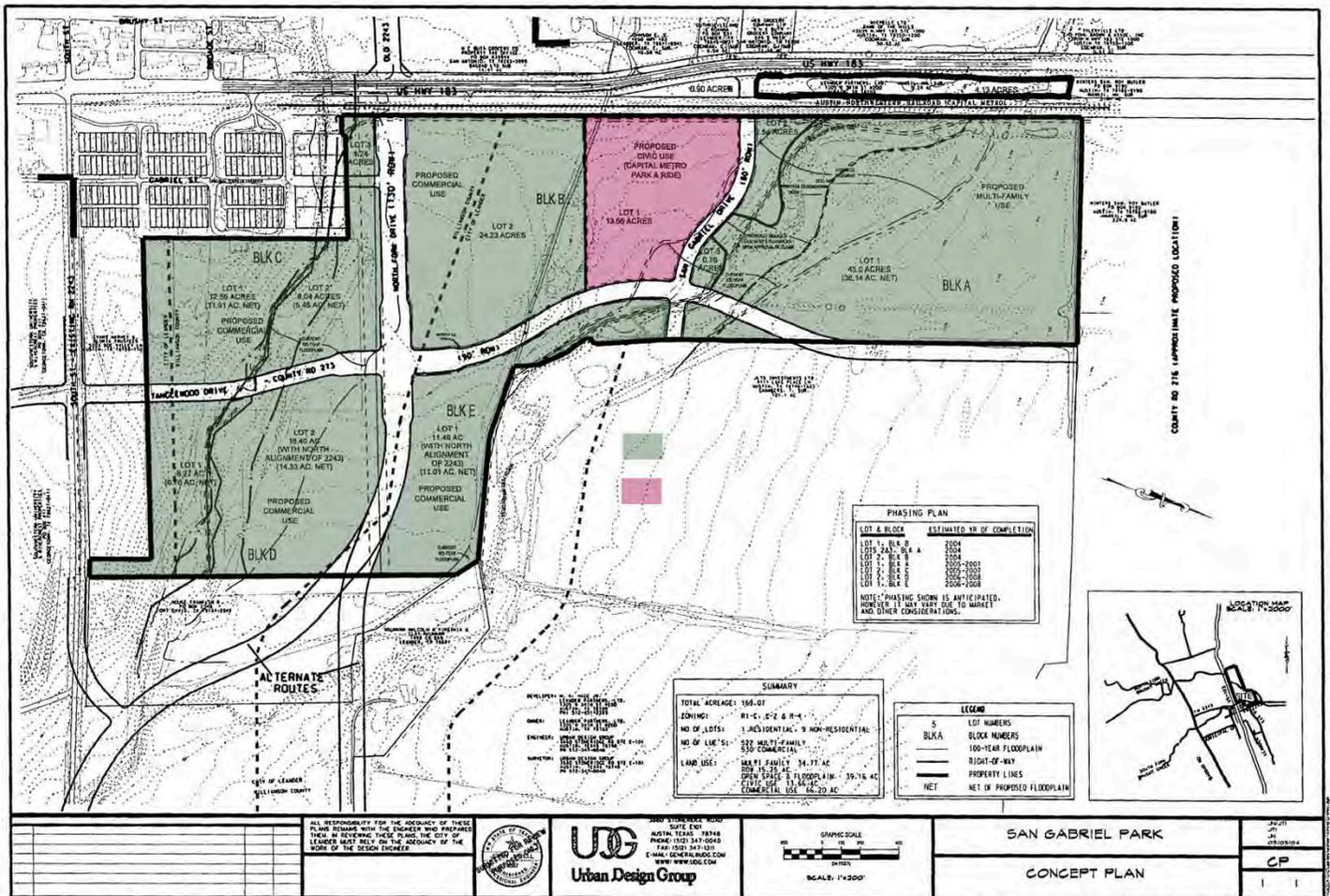
### **3. Leander, Texas**

Leander is a city of about 30,000 persons located north of Austin. It has one rail station on the Cap Metro Red Line, which opened in early 2010. The Red Line, including stations and vehicles, was paid for with local funds generated by Cap Metro and approved in a 2004 voter referendum. Leander participates with a 1% tax rate for transit. Cap Metro is made up of eight communities (Austin City, Jonestown City, Lago Vista City, Leander City, Manor City, Point Ventura Village, San Leanna Village, and Volente Village) with a total population of approximately 831,640. In anticipation of the rail station, in 2004 Leander adopted a TOD ordinance to guide the implementation around the station. The zoning ordinance adopted, known as the Smart Code, is a form based code rather than a conventional zoning code.

Leander based the Smart Code on New Urbanism principals designed to create traditional pedestrian-oriented communities with neighborhoods and town centers with a mix and integration of residential, commercial and retail uses. A route map of the Leander Station TOD can be found in Figure 2.20.

Cap Metro and Leander worked cooperatively to develop the outline of the Smart Code. An excellent history of the process is on the city's website ([www.leandertx.org](http://www.leandertx.org)) and is quoted in part below.

*"In 2004 the City of Leander and Capital Metro, jointly, undertook an economic analysis to determine what planning approach would best serve the N E quadrant of Leander and a possible rail stop. (see Gateway Planning Group) This "Phase 1" resulted in a market study and comparative analysis of an urban design vs. current development patterns. It was determined that the urban approach and use of the SmartCode would realize twice the ultimate tax base or \$2 billion rather than \$1 billion at build-out. The City then proposed a partnership with the major landowners to develop a Masterplan and adopt code to entitle their property for an urban plan.*



*Six landowners funded a half-million dollar study and plan, complete with design charrette, code development and Masterplan. In September of 2005 the City Council, unanimously, approved the Masterplan and code.*

*When the City of Leander created the code and plan for the Transit Oriented Development District (TOD) it took a bigger step than many realized. A 2300 acre plan that will contain over 30,000 people, ultimately, brings with it, many moving parts. Moving parts that are not typically part of the suburban development that characterizes most of Williamson County and Central Texas.*

*Technical issues that address the utilities, roadway design, drainage, water quality, street connections, access to existing and proposed State roadways, electrical connections, location of transformers, no-parking areas along the urban streets for fire and emergency vehicles, design of alleys in urban settings, design of alleys in residential settings, curb radius and disabled access, and many other highly detailed configurations and permutations that must all be considered and deliberated before the first urban plans are approved and built.*

*Policy issues such as: maintaining an affordable home as the urban values climb; how to encourage green building; how to maintain a diverse architectural style that maintains its class and character; how to encourage developers and landowners to cooperate on product types and projects; how to partner with the State of Texas on roadway, water and water quality issues; how to partner with Williamson County on roadway, court, indigent health care and drainage issues; how to assure the existing residents of Old Town Leander the vision and development of the TOD will benefit their needs and desires sooner rather than later;*

*how to incorporate important civic opportunities for churches, performance centers, activity centers, and other critical services for the poor and infirm; and many other considerations that realizes the potential of TOD.”*

As mentioned previously, the Red Line has been operating slightly more than a year. Ridership has doubled in one year, and has responded to new mid-day service and experimental Saturday service. The entire line is now averaging approximately 1,600 riders per day, with approximately 100 of those using the Leander station to access the line.

No development has reached the point of implementation to date. Delays in opening the service along with the general economic recession have combined to suppress financing and demand for new development in the area.

#### **Lessons from Leander**

- Available land and multi-modal transit service are not always sufficient for immediate TOD success. Market factors and economic



Figure 2.21 (Top) Leander Station

Figure 2.22 (Bottom) Leander Station TOD Site

## CONCLUSION

As Burleson considers the development of a community around the rail station, it will have the opportunity to consider increased transit options for the entire community. Express service between the Burleson community and downtown Fort Worth are provided by a combination of services from the Fort Worth Transportation Authority and the Cleburne City County Transportation. Increased services can be provided and managed by the existing providers or by the City through direct service or contracting options.

Burleson can learn from the successes and challenges experienced by numerous cities around Texas which have developed robust transit service in commuter rail or light rail corridors. The type and intensity of transit oriented development in the case studies are the product of many factors, including the variety of transit services available to residents, employees and patrons of the TOD.



APPENDIX 1 - ALTERNATIVE CONCEPTS

## INTRODUCTION

The scope of the Burleson West TOD study called for the consultant team to develop alternative concepts for design of the station site and for the architectural design of the station, and to provide implications related to each concept. The site design alternatives were to identify differing approaches to bus, automobile, bicycle and pedestrian access, internal circulation, parking layout, station platform locations, and opportunities for connectivity to the surrounding TOD. The alternative station concepts were to highlight the layout, configuration and visual appearance of platforms, canopies, and associated platform amenities. At least one station design was to explore the potential of an indoor station. All of the concepts investigated double tracking through the station area to minimize potential conflicts between commuter rail traffic stopping at the station, and thru-traffic. Additionally, each concept explored the site development implications associated with transitioning from Phase 1 which is envisioned to be a commuter bus facility, to Phase 2 which is envisioned to be an intermodal, commuter rail facility. The station and site concept implications were to highlight specific attributes of each concept in a manner that each can be compared to the other concepts. The following summarizes each of the site and station concepts presented to the Burleson stakeholders in the public meeting on April 7, 2011, and the preferences expressed by the public.

## CONCEPT A

Concept A satisfies the program requirement to evaluate an indoor rail station. It provides the best opportunity for phasing with the least up-front cost. A connection is provided under the rail line for pedestrians and bicyclists, providing the maximum opportunity for TOD development within a ¼ mile walk from the station.

### **Site**

Concept A is laid out in a manner that provides necessary vehicular and pedestrian access and parking, while maintaining a close proximity between the station and future TOD development. Bus access to the site would be provided via an on-site loop road with four bus bays dropping passengers onto a pedestrian plaza which will serve as the phase 1 bus station. As the rail station is developed in phase 2, the plaza will serve the additional purpose of providing outdoor seating for future shops and restaurants that will locate on the ground floor of the station. Parking for the station (200 spaces as recommended in the Johnson County Passenger Rail Study) would be oriented in a linear fashion, parallel to the bus loop road in order to minimize the walking distance west (approximately 450') from the station to future TOD development to the west. A kiss and ride drop off area would be located between the parking lot and the bus loop road, and a connector street will provide direct vehicular and pedestrian access between the center of the station plaza, and the main street of the TOD to the west. In phase 1, a connecting tunnel would be located under the existing BNSF rail line to provide direct access for pedestrians and bicyclists to the future TOD development on the east side of the tracks.

Site amenities would include pedestrian trails and seating adjacent to the existing pond on the northern portion of the station site, a water feature (fountain) that would be incorporated into the pond for aesthetics and aeration, and berming on the southwestern portion of the site for screening of the station from the surrounding developments. This area has the potential to support future expansion of the station parking, or additional future TOD. A conceptual site plan for Concept A can be found in Figure 3.1.



Figure 3.1 Concept A Site Plan

### **Station**

As mentioned previously, the Concept A station could be easily transitioned from a bus to a rail station. In phase 1, bus service would be provided to the site and accessed via an at grade pedestrian plaza. A free-standing clock tower could be constructed as a part of the phase 1 or the phase 2 station development. The phase 2 station would be constructed under the BNSF rail line, and a future spur line that would be constructed to the west of the existing BNSF line would serve commuter rail traffic, allowing the existing BNSF line to provide thru traffic to the east of the station. A barrier wall would be provided at the eastern edge of the station platform as a safety barrier between the station and the BNSF rail line. The platform canopy would consist of brick clad columns located at the edges of the structure supporting a standing seam metal roof. The roof would be constructed with a clerestory to allow air circulation through the structure. On the lower level, the spaces created beneath the station platform could be utilized for ticketing, shops, cafes or conferencing facilities, all of which would open onto the at grade pedestrian plaza. The connection between station levels would be provided through an elevator, escalators and stairs. The façade of the station would be clad in brick, with detailing to be reminiscent of the storefronts found in Burleson's 'Old Town' area, as preferred by the public. Figures 3.2 – 3.4 provide visualizations of the Concept A station design.



Figure 3.2 (Top) Concept A Station Rendering - View from the West

Figure 3.3 (Middle) Concept A Station Rendering - Longitudinal Section

Figure 3.4 (Bottom) Concept A Station Rendering - View From the North

### ***Implications***

The following summarizes the fundamental aspects of Concept A and resulting implications:

- Parking, Kiss & Ride, Bus Drop-off, Pedestrian/Bike Crossing are at grade- This will allow for minimal site improvement costs related to station development in phase 1 construction, and allow the pedestrian plaza constructed in phase 1 to form a transition to the phase 2 station. It also allows for direct access to surrounding TOD development, but more challenging access to the rail platform.
- The rail platform is located between a spur line serving commuter rail traffic and the existing BNSF rail line – This might create safety for commuter rail trains by separating the tracks within the station area, but provides some safety issues for pedestrians due to BNSF traffic being located immediately adjacent to the station platform.
- The station is located within an enclosed building under the rail lines –This building provides opportunities for restaurants, meeting / conference facilities, and other business functions that can provide an income stream to the City of Burleson, and potentially opportunities to share development costs of tenants such as Hill College could be attracted to the site. Depending on the final station configuration and design, up to 15,000 square feet of development could easily be accommodated beneath the rail lines.
- The ground floor of the station is accessible from the east and west sides of the rail line– This provides significant TOD development opportunities immediately adjacent to the station door on the east.

## CONCEPT B

Concept B provides for an outdoor station with the most direct bus to rail connection. It is also the most costly concept as related to phase 1 construction due to the need to build many of the station infrastructure improvements in phase 1. As in Concept A, a connection is provided under the rail line for pedestrians and bicyclists, providing significant opportunities for TOD development within a ¼ mile walk from the station.

### *Site*

Concept B is laid out in a manner that provides direct access between the future bus bays and the rail platform, but with indirect access to surrounding parking and future TOD development sites. Bus access to the site would be provided via a ramping loop road with four bus bays dropping passengers onto a pedestrian plaza located at the same elevation as the existing BNSF rail line. Bus passengers would be dropped onto a shared bus / rail station platform. Parking for the station (200 spaces as recommended in the Johnson County Passenger Rail Study) would be oriented in a linear fashion, parallel to the bus loop road in order to minimize the walking distance west (approximately 450') from the station to future TOD development to the west. A kiss and ride drop off area would be located between the parking lot and the bus loop road, and a connector street will provide direct vehicular and pedestrian access between the center of the station plaza, and the main street of the TOD to the west. Access between the parking lot level and bus / rail station levels of the site would be provided via elevators, ramps and stairs. In phase 1, a connecting tunnel would be located under the existing BNSF rail line to provide direct access for pedestrians and bicyclists to the future TOD development on the east side of the tracks.

Site amenities would include pedestrian trails and seating adjacent to the existing pond on the northern portion of the station site, a water feature (fountain) that would be incorporated into the pond for aesthetics and aeration, and berming on the southwestern portion of the site for screening of the station from the surrounding developments. This area has the potential to support future expansion at the station parking or additional future TOD. Additionally, a festival market / plaza area would be located as a key centerpiece between the station area and the surrounding TOD development to the west. A conceptual site plan for Concept B can be found in Figure 3.5.



Figure 3.5 Concept B Site Plan

### ***Station***

As mentioned previously, the Concept B station provides the most direct bus to rail connection of all of the concepts, but with the highest phase 1 infrastructure cost. In phase 1, bus service would be provided to the site at the same level as the existing BNSF rail line, and the station platform and canopy would be shared by the bus and rail modes. The station platform and canopy would be constructed to the west of a future spur line that would be constructed to the west of the existing BNSF line. This will minimize safety issues by eliminating pedestrian activities adjacent to the BNSF line. The platform canopy would consist of brick clad columns located at the center of the structure supporting two standing seam metal shed roofs. The roofs would be offset in a manner that provides protection from sun and rain, while also allowing air circulation through the roof structure. The façade of the retaining wall necessary to support the elevated bus and rail station would be clad in brick, with concrete infill panels on which murals could be painted depicting scenes from Burleson's historic past. Figures 3.6 – 3.8 provide visualizations of the Concept B station design.



Figure 3.6 (Top) Concept B Station Rendering - View from the West

Figure 3.7 (Middle) Concept B Station Rendering - View from the North

Figure 3.8 (Bottom) Concept B Station Rendering - View From the Northeast

### ***Implications***

The following summarizes the fundamental aspects of Concept B and resulting implications:

- Parking, Kiss & Ride, Pedestrian/Bike Crossing at grade - This will allow for direct access to surrounding TOD development, but more challenging access to the rail platform.
- Bus Drop-off at Platform Level - This will allow for direct access between the bus and rail modes, but will result in the highest phase 1 construction costs of the three concepts.
- Platform located west of a new spur rail line serving commuter rail traffic - This provides safety for commuter rail trains by separating the tracks within the station area, and maximum safety for pedestrians on the rail platform by separating the platform from the BNSF rail line.
- The station is accessible from the east and west sides of the rail line – This provides significant TOD development opportunities immediately adjacent to the station via a pedestrian tunnel to the east.

## CONCEPT C

Concept C provides for an outdoor station, stepped at three levels to provide a transition between the grade of the existing station site, and the level of the existing BNSF rail line. It allows for effective phasing of the bus station, as well as the later phase rail station, although the Phase 1 bus facility in this concept would be more complex and costly than the phase 1 facility in Concept A. As in Concepts A and B, a connection is provided under the rail line for pedestrians and bicyclists, providing significant opportunities for TOD development within a ¼ mile walk from the station.

### **Site**

Concept C separates the site into three grade separated zones; an automobile zone, a bus zone and a rail zone. Bus access to the site would be provided via a ramping loop road with four bus bays dropping passengers onto a pedestrian plaza located at a mid-level halfway between the rail platform above, and parking and kiss and ride facilities below. Pedestrian access to the upper and lower levels would be provided via stairs, ramps and elevators. Parking for the station (200 spaces as recommended in the Johnson County Passenger Rail Study) would be oriented in a linear fashion, parallel to the bus loop road in order to minimize the walking distance west (approximately 450') from the station to future TOD development to the west. A kiss and ride drop off area would be located between the parking lot and the bus loop road, and a connector street will provide direct vehicular and pedestrian access between the center of the station plaza, and the main street of the TOD to the west. In phase 1, a connecting tunnel would be located under the elevated bus station and the existing BNSF rail line to provide direct access for pedestrians and bicyclists to the future TOD development on the east side of the tracks.

Site amenities in this concept are identical to those in Concept B, and would include pedestrian trails and seating adjacent to the existing pond on the northern portion of the station site, a water feature (fountain) that would be incorporated into the pond for aesthetics and aeration, and berming on the southwestern portion of the site for screening of the station from the surrounding developments. Additionally, a festival market / plaza area would be located as a key centerpiece between the station area and the surrounding TOD development to the west. A conceptual site plan for Concept C can be found in Figure 3.9.



Figure 3.9 Concept C Site Plan

### ***Station***

Concept C would require the development of two separate platforms / plazas; one for the bus facility, and one for the rail facility. A single canopy would then link the two levels to provide protection from the weather, while also providing a transitional space between the bus and rail facilities that is unified. The rail station platform and canopy would be constructed to the west of a future spur line that would be constructed to the west of the existing BNSF line. This will minimize safety issues by eliminating pedestrian activities adjacent to the BNSF line. The platform canopy would consist of brick clad columns located at the edges of the structure supporting a flat roof above. The facade of the upper and lower level retaining walls necessary to support the elevated bus and rail stations would be constructed of precast concrete infill panels with climbing vines being planted at the base of each wall to facilitate the creation of “green” retaining walls. Figures 3.10 – 3.12 provide visualizations of the Concept C station design.



Figure 3.10 (Top) Concept C Station Rendering - View from the West

Figure 3.11 (Middle) Concept C Station Rendering - View from the North

Figure 3.12 (Bottom) Concept C Station Rendering - Platform Detail View from the South

### ***Implications***

The following summarizes the fundamental aspects of Concept C and resulting implications:

- Parking, Kiss & Ride, Pedestrian/Bike Crossing at grade - This will allow for direct access to surrounding TOD development, but more challenging access to the rail and bus station levels.
- Bus Drop-off at Mid Level - This causes grade separated access down to the parking and TOD level and up to the rail platform level, and will result in the higher phase 1 construction costs than Concept A.
- Platform located west of a new spur rail line serving commuter rail traffic - This provides safety for commuter rail trains by separating the tracks within the station area, and maximum safety for pedestrians on the rail platform by separating the platform from the BNSF rail line.
- The station is accessible from the east and west sides of the rail line - This provides significant TOD development opportunities immediately adjacent to the station via a pedestrian tunnel to the east.

## STATION PARKING STRATEGIES

As Burleson proceeds through the planning process for the TOD and for future bus and rail transit service at the site, they along with future transit partners will need to make decisions about a park-and-ride facility such as the size and land to designate, the phasing of construction of spaces, criteria for expansion, criteria for conversion to development, security, pricing, restrictions on length and purpose of parking, provision of bicycle parking, provision for “station car rentals” or similar programs , and the relationship between commuter parking and parking demand for adjacent development. Burleson will want to establish design criteria and policies to encourage desirable parking uses that support the overall goals of the TOD and the bus and rail transit services.

The park-and-ride lot is an essential element of success for the transit service and developments adjacent to the station. The park-and-ride lot also may have negative impacts such as consuming land that will become increasingly valuable and lengthening the walking distance from the station to nearby development. Park-and-ride lots require upkeep and maintenance, security in the form of patrols, electronic surveillance, or both, lighting, and enforcement of policies and regulations. If a fee is charged, it creates the expense of collection. Also, by adding cost to the transit trip, a parking fee may suppress use of the transit services.

Burleson either as the owner or permitter, will want the parking facility designed to encourage appropriate uses (and discourage inappropriate uses, such as long term or overnight parking) because monitoring and enforcement ‘after the fact’ are difficult and labor-intensive. The following are policies which may need to be considered as the entire TOD project moves toward realization.

<sup>1</sup> While not a true “station car” operation, there is a rental car operation with the Ft Worth ITC. Station cars programs are characterized by hourly rental rates, automated rental procedures not requiring reservations, with multiple pickup and dropoff destinations.

## Parking Policy Considerations

### Design Issues

**Number of Spaces / Phasing of Construction** - This is an obvious feature but it is important to have a good estimate of the expected transit ridership and to further estimate how many will arrive at the station by auto, bike, or as auto passenger. The Burleson site may have at least two different “opening day” scenarios. The first opening day will probably involve bus-only transit service. Later, there will be a conversion to commuter rail service with the bus mode possibly transitioning to service that brings people to the train rather than taking riders from the auto to the destinations in Tarrant County. Thus, “opening day” ridership for a commuter bus operation will be less than the ridership 25 years into the planning horizon when there is commuter rail service and possibly intra-city bus transit service, so the parking lot construction should be phased. Parking must also be provided for patrons of the adjacent and joint development uses that are being contemplated such as retail, educational, and commercial establishments. The current plans for the TOD site are for 200 parking spaces, as proposed in the Johnson County Passenger Rail Study, on slightly less than 2 acres. Signage and lot layout should be informed by the relative parking demand for transit versus on-site attractions.



Figure 3.13 Bike Lockers and Bike Racks

**Bicycle Parking/Storage** - Many bicycles represent a considerable investment by their owners and they will expect commensurate security for their property. A variety of bike lockers and racks are available on the market, and innovations appear continually. The placement of bicycle racks or storage should be a high-priority decision during the design stage of the park-and-ride lot.

**Security** - Security for the patrons and their vehicles must be foremost in the planning and design. As much “passive security” as possible should be provided because reliance in on-site personnel or police/private security patrols can be expensive. Lighting, electronic surveillance, emergency phones or other communication, are examples. Landscaping will be important to “soften” the hardscape of the parking lot but it should be designed to not obscure lines of sight or provide hiding places for criminal activity or vandalism. Fencing is another element that can be combined with the topography to minimize the “attractiveness” of the parking lot with respect to potential criminal activity.

## Usage

**Overnight Parking Rules** - Most park-and-ride lots, including DART, Cap Metro, and DCTA (the case study sites) prohibit overnight parking. However, one of the proposed uses of the planned Johnson County Rail Corridor is to connect with the DFW International Airport (DFWIA). Models show that most airport usage is by daily employees, but there will be some usage by persons accessing the airport to fly to other destinations. This situation is being studied and discussed by The T and some communities along the TEX Rail (formerly SW2NE) line in Tarrant County. At time of publication, no specific policies or methods for addressing overnight parking have been finalized. Burleson should monitor this aspect of TEX Rail's planning process over the next two years to learn from that experience. DART is working on a DFWIA rail line as well and will also be determining how to allow for airport travelers to use the park-and-ride lots for more than one day at a time.

**Short Term Parking** - If there is on-site development around the station, there may be a desire to protect some of the park-and-ride lot for short term parking. There are a variety of ways including parking meters, signage and "honor system", gates, permits, etc. The availability of resources to enforce such measures should govern which approach or approaches are selected.

**Enforcement and Monitoring Responsibility** -The responsibility for enforcing the usage rules will depend on how the property is developed and by what entity. If it is a city-owned operation, enforcement becomes a municipal duty. If it is a private development but the city requires a parking policy as part of any zoning or permitting process, enforcement becomes a private owner/manager duty. Regardless, the rules, regulations, security features, and related factors should be developed with the cost of the enforcement, operations and maintenance in mind. The entity which will be responsible for those functions should be involved in the planning and design process. It is always a good idea to involve local law enforcement agencies in the review process. Often, some agencies will have resources and training such as the "Crime Prevention Through Environmental Design" process that can greatly improve the final design and operation of parking and transit facilities.

Finally, although right now there is an abundance of land and it may seem unlikely that there could be pressures in the future to convert parking spaces into development that has happened to many mature rail systems nationally. DART has had many unsolicited proposals to relocate user parking in order to make room for development. Mockingbird Station is one example where this has been proposed. Burlison should establish policies and procedures for consideration of such requests in the future.

## CONCLUSIONS

By far, Concept A was preferred by the stakeholders in the public meeting on April 7, 2011. The stakeholders indicated that the fact that Concept A included potential revenue generating elements, and allowed for the phasing of development, made it preferred. Stakeholders liked the location of the bus transfer facility at grade (lower level), as it would decrease the phase 1 construction costs. They also indicated that pedestrian and bicycle access seemed simpler and more intuitive than in alternatives B and C. Additionally, security would be enhanced with an ability to limit platform access after operating hours. Stakeholders also were intrigued with the potential uses that could be accommodated within the spaces underneath the station platform, and the potential to share development costs with other entities, such as Hill College, that may take an interest in locating within those spaces. Based upon this feedback, the PRC directed that the consultant team develop Concept A as the Final Concept.

	Concept A	Concept B	Concept C
Ultimate Station Development Cost - Multi Modal (Order of Magnitude)	\$\$\$	\$\$	\$
Early Station Development Cost - Bus Only (Order of Magnitude)	\$	\$\$\$	\$\$
Pedestrian Connectivity (Parking & Bus Bays to Rail)	-	+	-
Relationship of Station Platform to BNSF Rail Line (Safety)	-	+	+
Connectivity to TOD (East and West Sides of Station)	+	+	+
Station Site Economic Development Potential	+	-	-
Parking Expansion Potential	+	+	+

Figure 3.14 Comparison of Implications - Alternative Concepts





# APPENDIX 1 - TRANSPORTATION OPTIONS

## INTRODUCTION

The development of the TOD West area provides Burleson with the opportunity to get the most from the infrastructure which will be built with private and public funding. This section provides an overview of opportunities to embrace the “complete streets” concept to accommodate and encourage walking, cycling, and other active forms of transportation. Different options for bus and paratransit (or demand-response transit) are presented. Cleburne City/County Transportation has provided fixed route proposals in the past, and this section also builds upon that proposal to show how the major destinations in Burleson could become transit-accessible.

## BENEFITS

The benefits of adding options to the future transportation system of Burleson include a lessened dependence on the single-occupant vehicle for all travel. This in turn has benefits for air quality and energy independence. In the long term, less land would be consumed by the need to provide multiple parking spaces for each auto throughout the day. Pedestrian and cycling amenities can reduce traffic congestion and provide more value from the investment in roadways, sidewalks, and traffic control systems. Increased physical activity has been shown to have health benefits resulting from weight loss and improved cardiovascular performance. Finally, a community with a variety of transportation options has positioned itself to attract a mobile workforce and commercial and jobs-related investment.

## ACTIVE TRANSPORTATION

Active transportation refers to walking and bicycling, as well as other human-powered modes of transportation, such as running or skating. These are important commute options for those who cannot or choose not to drive, due to age, disability, financial capability, or personal preference. For instance, a person who is visually impaired cannot operate an automobile and must rely on walking to a destination, or be transported through the use of transit service or by a sighted driver. Active transportation is especially suitable for mixed-use areas, with compact land use and a variety of destinations (work, shopping, school, recreation, and entertainment) in close proximity. A person may choose to live in a mixed-use area and walk or bicycle to nearby destinations, including to access buses, car or van pools, a train station, or a local circulator trolley from within the district – or from other connecting multi-use hike and bike paths, sidewalks, and on-road bikeways in the city. Active transportation is beneficial to the environment since pollution producing fossil fuels are not expended; to the participating individual's health due to exercise.

The Texas Department of Transportation (TxDOT) released a memorandum on March 23, 2011 committing TxDOT to place increased emphasis on bicycling and walking as part of their transportation projects. With increased coordination between the City of Burleson and TxDOT, especially on projects providing access to transit facilities, this memorandum will ensure more cohesive and better coordinated inclusion of non-motorized mobility and access as part of any new project, or reconstruction project involving the agency.

Active transportation within the Burleson West TOD district is comprised of two distinct mobility environments, the on-road bikeways and pedestrian facilities and the off-road sidewalks and multi-use hike and bike paths. These are highlighted in Figure 4.1, and described under On-Road Bikeways and Pedestrian Facilities and Off-Road Sidewalks and Multi-Use Paths.

### ***On-Road Bikeways and Pedestrian Facilities***

On-Road Bikeway facilities in urban settings that can be found in the currently adopted AASHTO Guide for the Development of Bicycle Facilities (1999 AASHTO Bike Guide) include bike lanes; shared low volume roads or wide curb lanes; and signed shared roadways (bike routes), which may or may not include designated bicycle facility treatments. The draft AASHTO Guide, dated December 2009, includes a greatly expanded chapter on new options for bike facility treatments such as use of the Shared Lane Marking and Bikes May Use Full Lane signage first included in the 2009 Manual on Uniform Traffic Control Devices (MUTCD).

For this area plan, all the local roadways, or roads that provide direct access to residential lots, are recommended as “bicycle accessible” with primary streets, or the main connector street, to include bike lanes. Bike lanes should be at least 5’ wide where there is no on-street parking; however, where there is parallel parking, bike lanes should be a minimum of 6’-wide to allow for the opening of driver-side car doors (See 1999 AASHTO Bike Guide). Buses, which are only envisioned to stop at the rail station, will not have to cross into the bike lanes for passenger pick-up and drop-off, eliminating a potential conflict. Local roads (light blue-shaded on Figure 4.1), are recommended to be bicycle accessible.

All roads (and multi-use hike and bike paths) can be signed to alert motorists of the presence of bicyclists; and can utilize wayfinding to aid in getting people to specific destinations. Chapter 9B of the MUTCD provides standards for the application, design and placement of these signs.

The Burleson West TOD is envisioned to have sidewalks with associated roadway crossings at intersections throughout the study area, including where a pedestrian facility is envisioned as a hike and bike path. On-road pedestrian facilities must include: Texas Accessibility Standards (TAS), American Disability Act Accessibility Guidelines (ADAAG), and Americans with Disabilities Act (ADA) compliant curb ramps, and where warranted, curb extensions, crosswalks, pedestrian signals, and median refuges. Additional information related to the design of these facilities can be found in the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, and the MUTCD. Sidewalks are discussed below under off-road sidewalks and multi-use hike and bike paths.

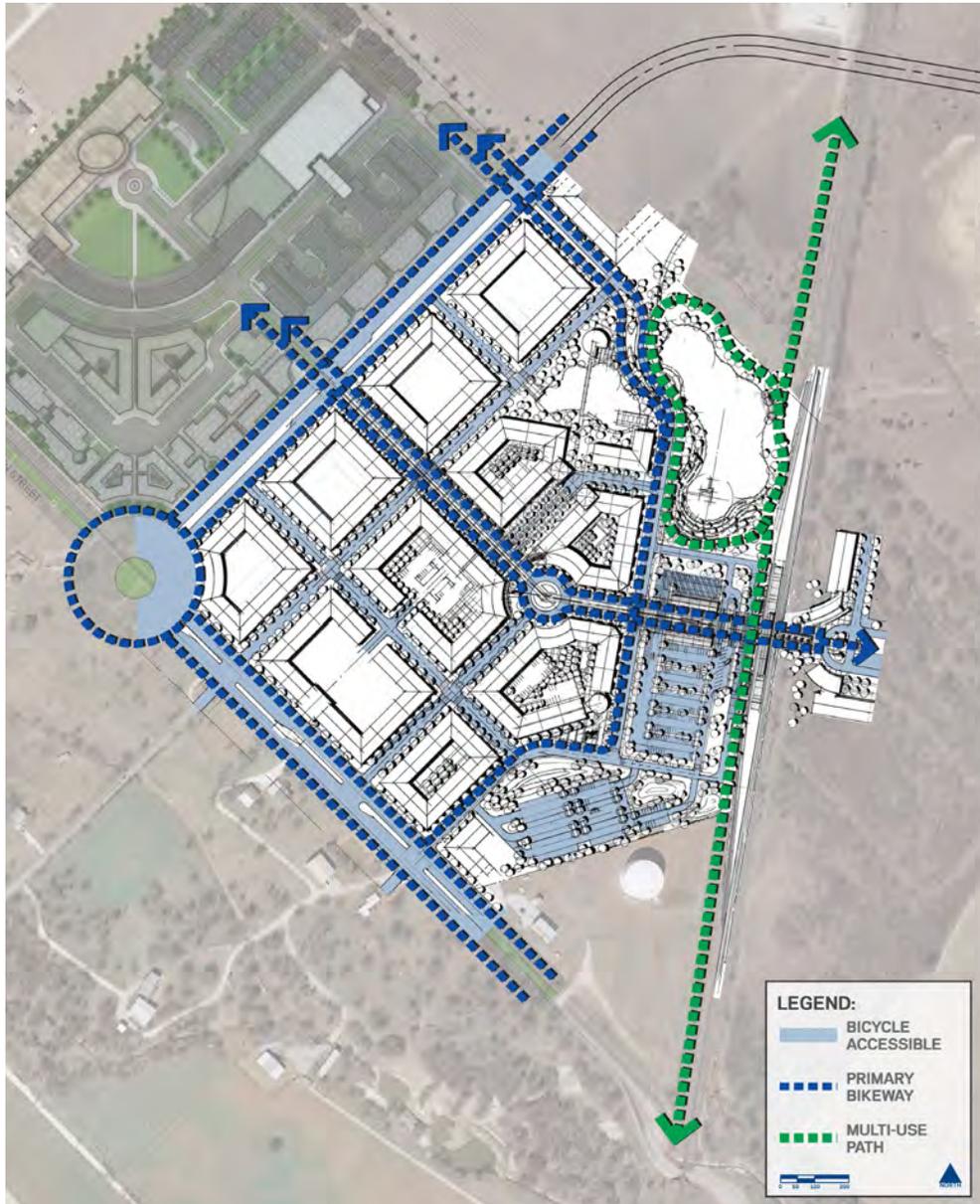


Figure 4.1 Active Transportation for West TOD Area

***Off-Road Sidewalks and Multi-use Hike and Bike Paths***

A second type of active transportation environment occurs behind the street curbs and includes sidewalks and off-road multi-use paths. Separation from moving traffic through the use of on-street parallel parking and/or planting buffers together with street trees, pedestrian lighting, benches, water fountains and trash cans, provide amenities that encourage walking and bicycling. Where possible, shade, especially from the afternoon sun in summer, is a highly desirable amenity. Each amenity contributes to the attractiveness of active transportation modes of travel and encourages use.

Sidewalks serve pedestrians – including “universal pedestrians,” or those with mobility, visual and other impairments – and occasionally where warranted – bicyclists. In this area plan, bicyclists should not need to ride on sidewalks due to lack of adequate facilities, since on or off-road bicycle accommodations suitable for various types of bicyclists (experienced, novice adult and child) are also incorporated into the plan. All block frontages are envisioned to include sidewalks of sufficient width to accommodate the adjacent densities, occupancy types and anticipated volumes and activities.

An important new resource for designing streets and sidewalks is the Institute of Transportation Engineer’s (ITE) *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* (2010). The document provides a table, “Design Parameters for Walkable Urban Thoroughfares,” differentiating both land use (Suburban, General Urban and Urban Center Core), and street types (Boulevard, Avenue, and Street). The range of sidewalk throughway width recommended is 6’-10’, plus pedestrian buffers of 5’-8’ in width based on urban classification and roadway type.

Another important resource for pedestrian facility design is the 2004 AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities (AASHTO Pedestrian Guide), which should also be used in the pedestrian facilities design process. This publication is currently being updated with the new edition anticipated to be complete within the next 2 - 3 years.

Multi-Use Paths (Hike and Bike Trails) must also be ADA accessible, and should be of sufficient width to safely accommodate user volumes and the mix of different users. The 12' multi-use path, shown in Figure 4.1, is already included in the City's Trail Plan, and traverses the district along the rail line and branches to the east of the railroad tracks along Shannon Creek, and can be similarly incorporated with future development. This envisioned tree shaded trail provides the needed connectivity eastward beneath the railroad at each end of the study area to the rest of the City's planned facilities. A connected recreational loop path around the existing pond provides a key, value-added amenity for the district. The trail should be located outside of the rail right-of-way wherever possible. Provision of requirements for surrounding developments to provide trail easements, and construction of the trail should be considered by the City. For multi-use path design guidance, refer to the 1999 AASHTO Bike Guide.

### ***Destination Amenities***

Every reasonable effort should be made to accommodate individuals traveling by bike, wheel chairs, or on foot. Bicyclists require secure bicycle parking at destinations, including both short term and long term parking. The Association of Pedestrian and Bicycle Professionals 2010 Bicycle Parking Guidelines provides guidance on both short and long term bicycle parking. Other amenities – including benches, trash receptacles, lighting, afternoon shade and water fountains – all contribute to more pleasant active transportation modes of travel and encourage use.

## MOTORIZED TRANSPORTATION

### ***Introduction***

The ultimate goal of the development plan is to have commuter rail service linking Johnson County with downtown Fort Worth and to the rest of the metroplex via transfers to the TRE, the proposed TEX Rail, and other transit services. There is no timetable for the implementation of the commuter rail service so the initial transit accessibility will be provided by a mix of traditional bus service. In the Burleson TOD Study public meetings, the meeting participants expressed considerable interest in the establishment of a tram, trolley or streetcar line linking the future development to the West of the proposed rail station, to the station and its associated park-and-ride lot, commercial and institutional/educational facilities.

The proposed mainstay of bus transit access will be a modification of the T's current bus Route 65 that is serviced from the South Fort Worth Park-and-Ride. The current terminus of the commuter bus service is the T's park-and-ride lot on the east side of I.H. 35W at the Alsbury Rd exit. The Burleson West TOD is approximately 4.2 miles west of the existing park-and-ride lot. Allowing for the additional travel time at 30 mph from I.H. 35W to Burleson West and appropriate dwell time for boarding, each bus trip would need an additional 20-25 minutes. The City and The T will need to agree on how to cover the additional operating cost to serve Burleson West.

In addition to the commuter service to downtown Fort Worth, Burleson may consider implementation of an intracity fixed route or expanded demand response service. Initially, the intracity service area would probably be concentrated on the central area of Burleson and be focused on Old Town and the commercial and service developments along SW Wilshire Blvd. The initial intracity service could connect with the existing Alsbury Rd bus park-and-ride lot. As the Burleson West area begins development, the intracity service can be expanded to connect with it either on an all-day, every trip basis or only at certain times of the day. As the Burleson West area achieves residential development, the intracity service would connect with it and the park-and-ride lot throughout the service period. This is discussed in more detail in the "Bus System Plan" section of this chapter.

Another possible component of transit access to and within the Burleson West development is a fixed-guideway streetcar or trolley service connecting the rail station area with the center of the developed community. As the Central Road is developed, allowances can be made for the addition of a track bed at relatively low cost. Because the operating distance would be relatively short (approximately one-quarter mile), vehicles with alternative power sources can be considered, as well as vehicles powered by traditional overhead wire. Examples of alternative power technologies include battery power, hybrid battery power, underground electric pickup, or even electric power via inductive loop. All of these options are deployed in US and Europe venues and the technologies are improving rapidly. The recommended motorized transportation network within the Burleson West TOD Development for internal trips is illustrated in Figure 4.2.

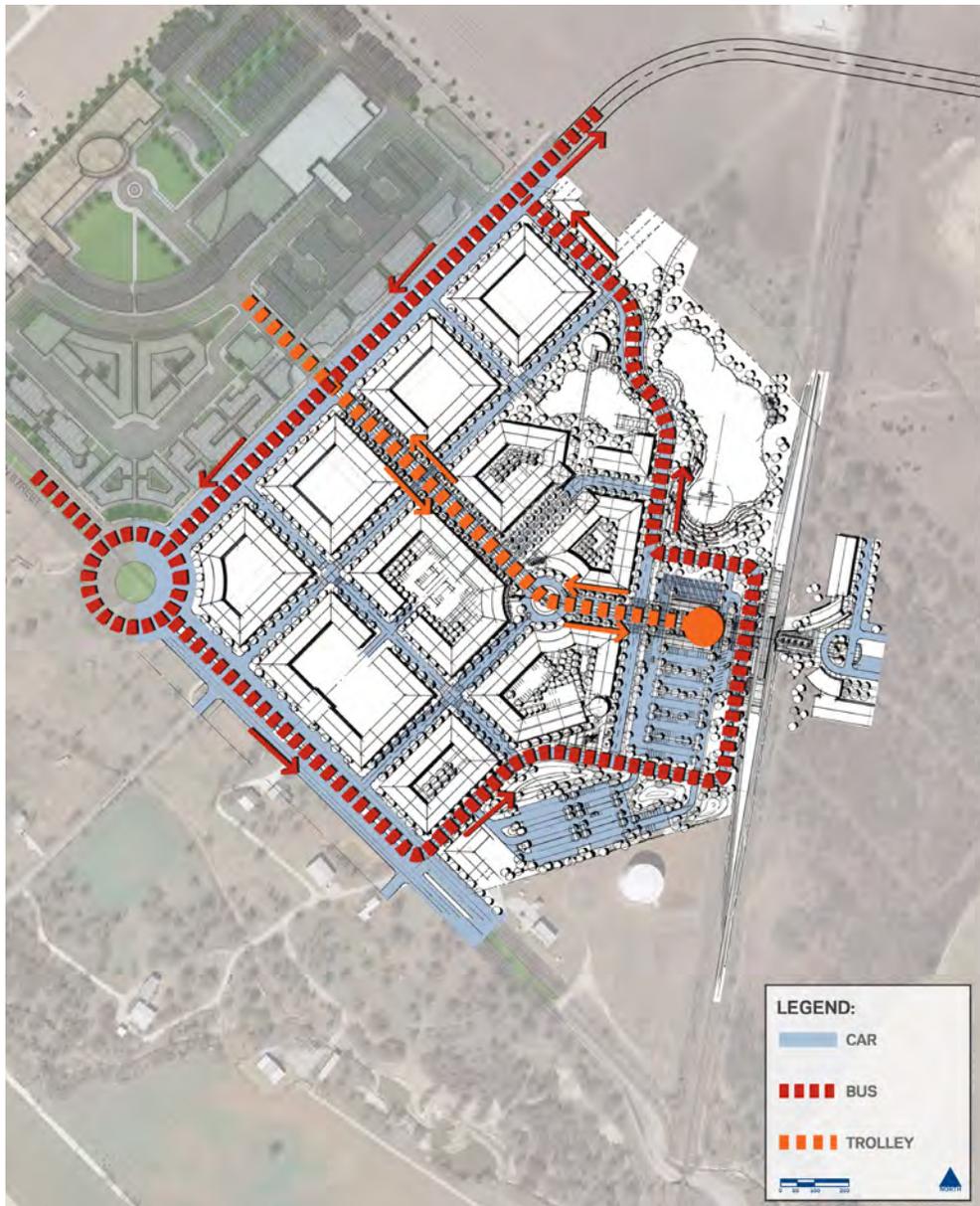


Figure 4.2 Motorized Transportation for West TOD Area

### **Bus System Plan**

This section discusses issues related to starting a new intracity bus transit service and expanding the existing commuter bus service. During the various public outreach sessions and stakeholder meetings, the study team heard many anecdotal references about a small but growing interest in intracity transit service. The reasons given included reasons such as:

- transportation for children for after-school programs and recreation opportunities
- mid-day service to Old Town so people did not have to get in their car for every trip, such as lunch meetings
- college students
- a complement to recreational and commuter bicycling
- for senior citizens and disabled
- to attract younger person and employers who are currently in cities with good public transit

### **Benefits**

According to the American Public Transportation Association, a community can experience tangible benefits from having an effective transit operation. These include:

#### **Enhanced Personal Opportunities**

- Public transportation provides personal mobility and freedom for people from every walk of life.
- Access to public transportation gives people transportation options to get to work, go to school, visit friends, or go to a doctor's office.
- Public transportation provides access to job opportunities for millions of Americans.

#### **Congestion Reduction**

- Access to bus and rail lines reduces driving by 4,400 miles per household annually.
- Americans living in areas served by public transportation save 785 million hours in travel time and 640 million gallons of fuel annually in congestion reduction alone.
- Without public transportation, congestion costs would have been an additional \$19 billion.

**Economic Opportunities**

- For every \$1 invested in public transportation, \$4 in economic returns is generated.
- Every \$1 billion invested in public transportation supports and creates 36,000 jobs.
- Every \$10 million in capital investment in public transportation yields \$30 million in increased business sales.
- Every \$10 million in operating investment yields \$32 million in increased business sales.

**Household Budget Savings**

- The average household spends 18 cents of every dollar on transportation, and 94% of this goes to buying, maintaining, and operating cars, the largest expenditure after housing.
- Public transportation provides an affordable, and for many, necessary, alternative to driving.
- Households that are likely to use public transportation on a given day save more than \$10,000 every year.

**Reduced Gasoline Consumption**

- Public transportation’s overall effects save the United States 4.2 billion gallons of gasoline annually: more than 3 times the amount of gasoline imported from Kuwait.
- Households near public transit drive an average of 4,400 fewer miles than households with no access to public transit. This equates to an individual household reduction of 223 gallons per year.

**Reduction of Carbon Footprint**

- Communities that invest in public transit reduce the nation’s carbon emissions by 37 million metric tons annually: equivalent to if New York City; Washington, DC; Atlanta; Denver; and Los Angeles combined stopping using electricity.
- One person switching to public transit can reduce daily carbon emissions by 20 pounds, or more than 4,800 pounds in a year.
- A single commuter switching his or her commute to public transportation can reduce a household’s carbon emissions by 10%, or up to 30% if he or she eliminates a second car.

### ***Thresholds for Public Transit***

While there is no firm or exact threshold of population or population density for public transit to be utilized and effective, it is commonly accepted<sup>2</sup> that increasing population density is positively correlated with transit use. The transit literature suggests that when population density is less than 7 dwelling units per acre<sup>2</sup>, transit usage is minimal. In 2000, Burleson had more than 10 dwelling units per acre. Although population increased by almost 40% in ten years, Burleson also increased its area from 19 square miles to 34 square miles, resulting in a much lower dwelling unit density. However, this is misleading because of the large amount of developable and urbanizing land, and commercially-zoned land, which was added to the city. Any initial or trial transit service should concentrate on the central area of Burleson, including Old Town, and extend to the West TOD site, which is adjacent to areas with varying levels of population density.

There are many cities in the US larger than Burleson that do not have public transit systems, and there are many smaller cities that do have public transportation. As mentioned, there are no fixed thresholds for population size or population density regarding the provision of public transit service.

<sup>2</sup>Public Transportation and Land Use Policy. Boris Pushkarev and Jeffrey Zupan.

## **Options**

Presently there is no public policy initiative or strong advocacy to establish an intra-city transit service beyond what is available from the Cleburn City County Demand - Response Service. If such an initiative develops in the next few years here are some basic concepts and modes for increased transit options.

### **Previous Fixed Route Proposal**

As part of the Burleson TOD Planning Study, the consulting team has developed a pro forma intra-city bus transit plan for Burleson to provide some benchmark cost estimates, ridership expectations, and a description of basic business models that are open to the city if it chooses to expand the transit options in the community. An extension of the current commuter service from the South Park-and-Ride at I.H. 35W at Alsbury Road lot to the TOD site is also explored.

Cleburne City/County Transportation (formerly known as Cletran) provided the city with a fixed route bus service proposal for discussion in 2009. An initial three month trial was discussed, but the annual operating expense would cost approximately \$250,000 per year, some of which would be offset by farebox revenues. No capital expense, depreciation, or vehicle leasing costs were included as City/County proposed using minibuses from its existing fleet for the service. Depending on the number of wheelchair positions in the floor plan, minibuses in their fleet have seating capacity of 15-24 ambulatory passengers. The proposal was not formally considered for adoption by the Council at the time.

### **Route Deviation or Flex Route Concept**

An alternative to a traditional fixed route service is a “route deviation” type of service. In this type of service, transit vehicles operate on a traditional fixed route with certain time points which are always met, but the bus can deviate from the route to provide door-to-door service when a passenger makes a request. Typically, the transit provider allows buses to deviate 4 blocks to  $\frac{3}{4}$  mile from the core fixed route. Route deviation service can generate ridership in areas where the population density is lower than optimal for public transit, where walking distances are great or where the sidewalk system is not adequate.

Route deviation service is used in many cities across the US, large and small. The lowered cost and improved technology of on-board GPS systems has helped make flexible routing more feasible. Other technology such as Automatic Vehicle Location (AVL) for dispatching has also increased the practicality of route deviation services. There have been many route deviation start-ups in Texas. In large cities such as Dallas, route deviation is used in specific neighborhoods, around rail and bus transfer centers and other areas where fixed route service might not be effective. In smaller communities, route deviation sometimes replaces the entire fixed route system. Several examples in Texas were the subject of a 2005 study performed by Texas Transportation Institute<sup>3</sup>. McAllen, Wichita Falls, Abilene and Hidalgo County were reviewed by this study, along with route deviation services operated in parts of Dallas, San Antonio and Austin.

Figure 4.3 maps the central area of Burleson where there are concentrations of destinations and attractions including Old Town, the college, senior centers, recreation facilities, large retail centers, apartments, and the future TOD site. Major attractions that have the best potential to support transit ridership are included within the potential Transit Service Area shown in green.

While a detailed feasibility study was beyond the scope of this study, this area could be considered for a slightly different type of trial transit service than the fixed route proposal discussed previously. The current capacity of City/County Transportation to offer this type of service has not been explored, but the agency has ample experience in providing demand response service in Johnson County, including Burleson. A trial route deviation service should have a sufficient advertising and promotion budget to create awareness and acceptance for the service. Route deviation service may have a higher operating cost per mile than fixed route service, but in some markets this is offset by higher productivity (passengers per hour). Route Deviation has had mixed results as a sustainable service, but it lends itself to trial service to test its viability.

<sup>3</sup>"Experience with Flex Route Transit Service in Texas." TTI, 2005.

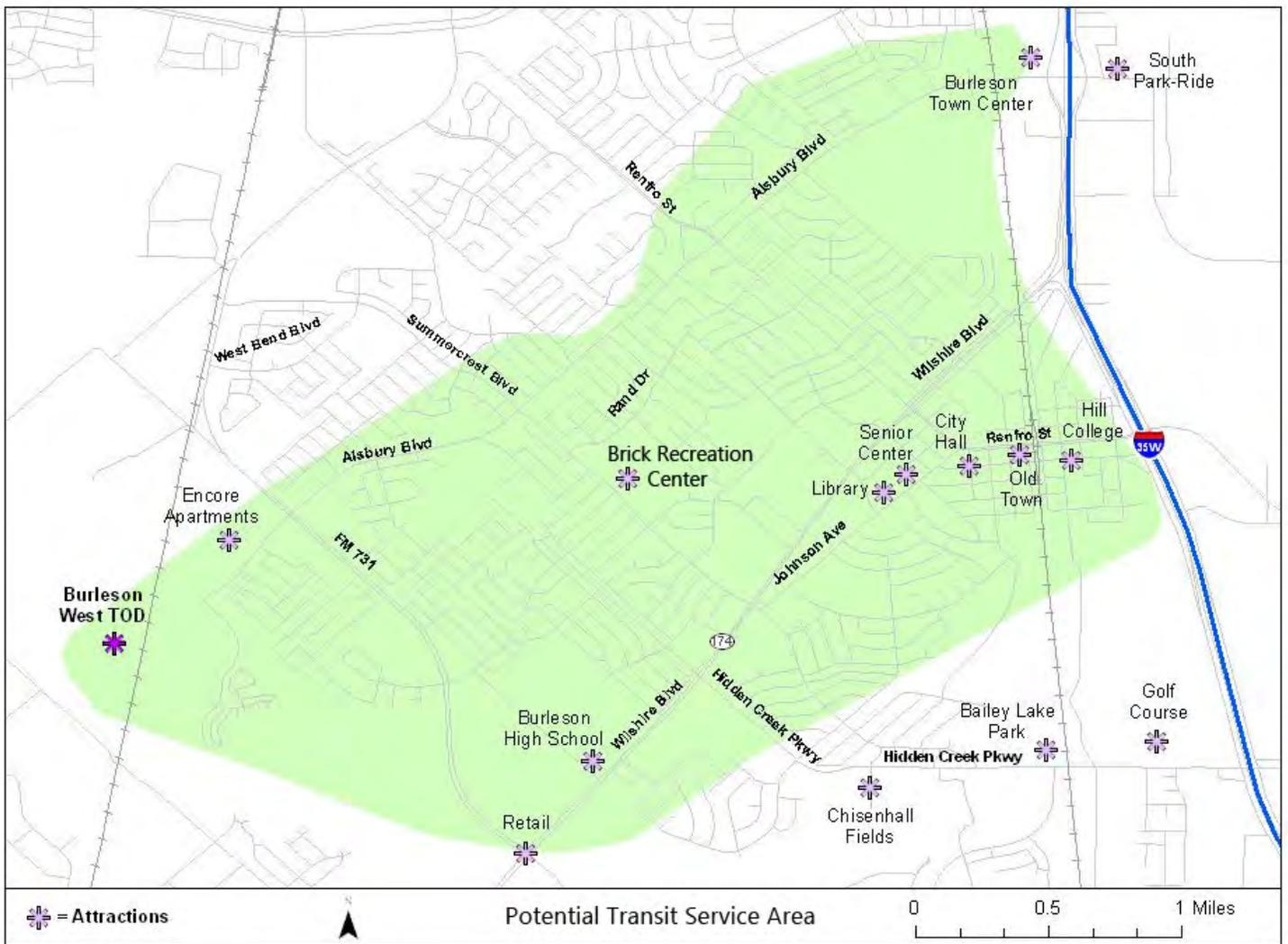


Figure 4.3 Potential Transit Service Area

### Paratransit

The Americans With Disabilities Act of 1991 (ADA) mandates the provision of complementary “paratransit service” if a city or other jurisdiction or agency provides fixed route service. Paratransit service is essentially demand-response service, wherein the passengers meeting the ADA criteria request door to door service in advance and the trip is scheduled by the transit operator. Paratransit service must be offered to an area a minimum of  $\frac{3}{4}$  mile either side of a fixed bus route.

FTA guidelines published shortly after the enactment of the 1991 ADA states that if the basic service provided by a jurisdiction or transit operator is a demand response service or a route deviation service that covers all areas within the  $\frac{3}{4}$  mile range mentioned above, then there is no requirement for a separate Complementary Paratransit service. This assumes the vehicles used in the demand response service are equipped with lifts or ramps and wheelchair tiedown positions. (Per the Americans with Disabilities Act of 1991, the provision of commuter express service in peak hours also does not trigger the requirement for complementary paratransit service as long as the commuter vehicles themselves are ADA-accessible).

Neither the Johnson County Passenger Rail Study, nor City/County Transportation developed a ridership forecast for its three month trial proposal. Developing an independent ridership model based on regional travel demand models is also beyond the scope of this plan, but there are some simple approaches for developing ridership expectations for a fixed route service. One way is to estimate ridership based on an assumed productivity for each vehicle hour or vehicle mile of service. This approach assumes the amount of service offered is commensurate with demand, meaning that the service frequency is reasonable and the service coverage of the community is “right-sized”. By this, we mean that the bus routes are substantially direct without an excessive amount of indirection, that important destinations are served and that an appropriate amount of service coverage exists in residential areas. It also assumes there is an adequate public awareness of the service and that it can be accessed efficiently. This ridership forecast methodology and other estimating techniques can be found in Synthesis 66 of the Transit Cooperative Research Program (TCRP) (2006, Transportation Research Board).

The overall ridership productivity for fixed route service inside The T's service area is 17.55 trips per revenue vehicle hour. For the bus service in Denton County it is 21.7 trips per vehicle hour. The DCTA productivity is relatively high due in part to the UNT shuttle service which is heavily used by students living in proximity to the UNT campus. Productivity rates for small urban systems are much lower. In the previously cited TTI report, Wichita Falls and Hidalgo County flexible service (route deviation) generated 10.0 and 3.2 riders per hour, a wide range. The overall rider productivity rate for City/County Transportation is around 2 passengers per revenue vehicle hour. This is typical of demand response services in small urban areas with significant rural areas. Ridership productivity rates are greatly affected by the population density being served. Areas with low density or with large rural sections have low passengers per hour rates due to the long distances between households and from households to destinations.

Burleson is a rapidly growing urban area, and its central area is gaining in intensity. By keeping the initial transit service area well within the fully developed areas, higher ridership productivities can be obtained. The recommended trial area shown in Figure 4.3 is relatively compact and a ridership per vehicle goal of around 5.0 passengers per vehicle revenue hour is a reasonable goal. For planning purposes, it is assumed the intracity service would have a span of service from 7 am to 7 pm M-F, and an 8 am to 5 pm Saturday service. There would be one all-day bus M-S, and an extra peak period bus M-F. This span of service would result in approximately 4400 vehicle revenue hours. With the assumed productivity rate of 5 passengers per hour, the annual ridership in the base year would be approximately 22,000 trips.

### **Expanded Commuter Bus Service**

Burleson may choose to explore contracting with The T for some or all of the service, especially an expansion of the commuter bus service currently terminating at the South Park-and-Ride facility on I.H. 35W. When there is sufficient development either committed or on the ground at the TOD site, Burleson may consider providing transit service from the initial park-and-ride lot prior to the establishment of the commuter rail service. Extending the current level of service from the South Park-and-Ride lot to the Burleson West TOD site would increase the operating time for each route by 40-45 minutes round trip, including dwell time at the additional park-and-ride location.

While there is no agreement between The T and Burleson or Johnson County to extend the service across the county line, it is feasible the parties could reach such an understanding. Any agreement from The T would be a Board and management decision in response to an official request from the City of Burleson. The T would need to recover its cost in a manner consistent with other contract services. A gauge of the possible cost can be determined by examining the average hourly cost of The T's fixed route service which is around \$92 per revenue vehicle hour as reported in the most recent National Transit Database (NTD). Using the average hourly cost, the annual cost of extending the current commuter bus trips may be around \$140,000. This does not address capital depreciation costs or other potential costs which The T may need to recover.

This is not to say that Burleson and The T could not negotiate service modifications at a lesser cost or that Burleson might be able to leverage other revenue sources to lower the public subsidy requirements. One example is the City of Arlington in Tarrant County. It is not a member of The T but has contracted for limited commuter service for several years. The City initiated service with a grant from the Sue Pope Foundation which has the reduction of air pollution in North Texas as one of its missions. There is also the possibility of an expansion of the membership and coverage area which could provide a broader funding base for service expansion and enhancements. Staff at The T have indicated the Board will be open to discussing membership requirements with Burleson. There are no set rules as the membership would be subject to a negotiated agreement to join or contract.

### **Cost of Service and Business Models**

As discussed previously, the Cleburne City/County Transportation proposal had an operating cost estimate of \$250,000 annually. Initially, no capital costs would be incurred in this arrangement. City/County Transportation has an hourly average operating cost of about \$53 per revenue vehicle hour. This compares favorably to \$92.31 per vehicle hour at The T and \$71.61 per vehicle hour at DCTA. The latter two rates are typical of large urban systems. The actual hourly cost of additional or incremental service could possibly be lower than the average cost experienced by the provider, as the marginal cost is comprised mainly of direct expenses such as operator wages and benefits, fuel, and maintenance. Incremental service normally would not cause an increase in administrative or other overhead-type costs.<sup>4</sup>

An operating budget for a route deviation service with one bus operating 12 hours per day and a second bus operating in the peak periods at 4 hours per weekday would be approximately \$250,000, virtually the same as for the fixed route proposal. It assumes the city would contract for the operation of the service to an agency or firm that had existing administration, supervisory and maintenance staff available to handle the operation. The estimate does not include capital costs of leasing a vehicle or any Operations and Maintenance (O&M) facility capital or lease costs.

There are several business models which could be considered by Burleson for provision of service. One option would be to contract with Cleburne's City/County Transportation agency for the service. It has the advantages of not requiring the city to hire any management or operating staff. No administrative or maintenance facilities would have to be acquired or otherwise provided. City/County Transportation has access to Federal transit capital and operating funds and already receives some Federal funds through TxDOT that are used to help defray the cost of the existing service in Burleson.

<sup>4</sup>U.S. Department of Transportation, Federal Transit Authority "Ch 4: Operating and Maintenance Costs." In *Procedures and Technical Methods for Transit Planning*.

Another model would be for Burleson to create its own transit department and operate it either with public staff or contract with a private management firm to provide staff to operate the service. The NCTCOG however does not promote the establishment of additional public transit operators in the DFW Region. It is even possible to contract with a private firm to provide the vehicles, management, drivers, fuel, maintenance etc. There are many examples of this in Texas. For example, The T service is contracted to a private management firm (in 2011, McDonald Transit has the contract). Waco's bus service and a portion of Cap Metro's service in Austin are operated by another private management firm (currently First Transit, Inc). DCTA's bus service is run by First Transit, and it's A Train commuter rail operated by Herzog Corporation. There are many of other examples in Texas. The City of Arlington, on behalf of specific entertainment businesses and theme parks, operates a hotel-type shuttle which is paid for by assessments on those businesses. Arlington contracts the entire operation to a management firm which provides the employees including drivers, supervisors, and maintenance. There is variation within these arrangements. Some private contracts call for almost turnkey service. Others are limited to only certain routes or areas, or only the ADA paratransit service. The exact arrangement is determined by the contracting agency.

#### **Route Deviation Service Phasing**

Except for options involving contracting with The T or with Cleburne City/County Transportation the business models will likely require startup costs for acquiring or leasing vehicles, provision of an operating and maintenance (O&M) facility, operating and supervisory staff, fare collection and cash handling procedures, and other front-end costs associated with a start up. In keeping with the concept that Burleson may want to approach intracity transit as a demonstration or trial, contracting with Cleburne City/County Transportation, or The T, has the best potential for avoiding high startup costs.

An initial phase, with two peak hour vehicles and one all-day vehicle as described above, would have the following approximate budget.

	CCTA Avg. Hourly Cost (\$53 / revenue vehicle hour)	FWTA (The T) Avg. Hourly Cost (\$92 / revenue vehicle hour)
Annual Operating Expense (labor, fuel, insurance, maintenance, dispatching, supervision)	\$250,000	\$435,000
Ridership	22,000 annual trips	22,000 annual trips
Farebox Income	\$ 25,000	\$25,000
Additional City Staffing	none	none
Facility Requirements	none	none

A future phase, if early trial service met the goals established by Burleson, would need to consider the capital investments needed to sustain public transit operations. Vehicle costs can range from \$60,000 to \$75,000 for “cutaway van” minibuses, also known as body on chassis vehicles. These have an expected life cycle of 5 years. True minibuses (vehicles built on mid-duty or heavy-duty bus or truck chassis) are in the price range of \$175,000 to \$250,000 for diesel powered units (more for CNG power). Life cycles for minibuses range from 7 to 12 years. Rubber-tired trolley buses (vehicles with body style, outer trim and seating built to resemble streetcars or trolleys) cost in the range of \$200,000 to \$350,000 and can have a life cycle of 7 to 12 years.

An O&M facility, exclusive of land costs, will be on the order of \$1 to \$2 million for a fleet of 5 to 10 vehicles based on typical recent construction costs. It is quite possible that Burleson’s city fleet department and facilities can handle an additional bus transit fleet, so this capital cost may be avoided or minimized. Similarly, if transit is operated as a city department, some existing staff can be utilized to handle accounting, cash handling, security and supervision. A dedicated dispatcher and service manager positions are recommended.

Figure 4.4 Potential Transit Service Area

## ACCESS TO KEY DESTINATION AND CIRCULATION

Figure 4.3 shows the key destinations in the central area of Burleson which could be served by an internal transit system, either fixed route, demand response, or a combination. Burleson has several major retail destinations along with the historic Old Town. The future development of the TOD West area can be linked to these areas through a well-planned transportation system that includes the concepts of Active Transportation (pedestrian and biking) and public transit services. In Burleson, as in most of the US, newer retail areas have developed over time with emphasis on auto access only. Future improvements and changes to the street and traffic systems should be designed using broad definition of circulation and access. This definition should include designing for transit vehicles and passenger stops and convenience, safe pedestrian access, and bike lanes, bike paths, and bike storage facilities.

## CONCLUSION

Burleson's examination of Transit Oriented Development at a planned commuter rail station has provided the opportunity to consider the future transportation options it wants to encourage and provide for its citizens. Burleson has already made progress in developing alternatives to the single-occupant automobile. The city has bike and walking trails, it contracts for demand-response service from the City/County Transportation agency, and it has a park-and-ride commuter bus station directly adjacent to the city served by The T and City/County Transportation.

Burleson's vision of a rail connection to Tarrant, Dallas and even Denton Counties requires a continuation of the progress toward more transportation options. The plan envisions that many rail passengers will arrive by auto, thus the provision of a traditional park-and-ride lot. A truly successful TOD and rail line will allow for and encourage other forms of access and circulation. These are the same as mentioned above: bikes, walking, and public transportation.

This study provided a simplified overview of different ways to increase the level of transit service within Burleson. It can explore contracting for more service with The T, with City/County Transportation, or it can contract for privately-managed service. As it develops transit plans in more detail, Burleson must collaborate with the transit operators and NCTCOG to be consistent with regional and federal policies toward funding multiple transit entities within the urbanized area.

The case studies chosen for this study should provide many lessons learned and should help define the possibilities. Obviously, there are other examples in Texas and throughout the US that may need to be examined further. One common thread among the case studies is that the development of a rail project takes many years to get from the planning stage to opening day. Burleson should continue refining its vision of having a community that provides transportation options. The options must work together to support the types and mixes of land use and private investments necessary to justify and sustain a rail connection to the rest of the North Central Texas region.





## APPENDIX 2 - STAKEHOLDER INTERVIEWS

## JOSHUA ISD INTERVIEW

December 1, 2010 – 2:00 P.M.

Attendees: Mark Bowers (HOK),  
Superintendent Ray Dane (Joshua  
ISD)

**QUESTION 1.** Are you aware of plans for bringing regional rail or other transit-transportation to Burleson, and if so, can you provide an idea about your level of awareness?

(A) Superintendent Dane is generally aware of the regional rail initiative in Johnson County, and more specifically the future station in Joshua, but is not aware of the specifics related to the Burleson station.

**QUESTION 2.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) He assumes that stakeholders in Burleson are aware of the rail / transit initiative. The overall program has had good coverage in the region.

**QUESTION 3.** What are your observations about acceptance of regional rail in the community and of a rail station in the community?

(A) He believes that people in the area would love the opportunity to utilize different modes of transportation in the area beyond the automobile. He stated that traffic congestion is very bad in Burleson, and that he avoids driving along S.H. 174 due to the congestion. He anticipates that

congestion will continue to worsen, and that the community understands that rail/transit is a needed solution.

**QUESTION 4.** Do you feel there are enough transportation options to get students in and around Burleson?

(A) No, the only existing options that he sees for students in his district are school buses and parents driving cars. Joshua ISD has about 5000 students, about 1500 are within Burleson City Limits. He has three schools within the Burleson City Limit, and major growth for Joshua ISD in the immediate future will be related to Burleson.

**QUESTION 5.** Do students walk or bike frequently in the community?

(A) No, the needed infrastructure for bicycling and walking does not exist within Burleson and the limits of Joshua ISD, and SH 174 is currently unsafe for students to cross. In the older parts of Burleson, the infrastructure for pedestrians and bicyclists is much better, but SH 174 still creates a barrier. In Joshua ISD, there is no 2 mile limit for district bus service. Due to safety concerns and lack of infrastructure, any student that wants to ride the bus will be accommodated.

**QUESTION 6.** What are your perceptions of Burleson as a walkable community?

(A) Again, walkability in the TOD area is non-existent, but in the older parts of Burleson, the infrastructure is much better.

**QUESTION 7.** What are your perceptions of Burleson as a “bikeable” community?

(A) The response would be the same as above for walkability.

**QUESTION 8.** What are your thoughts and your observations in the community about increasing housing density in Burleson? (MB Provided explanation other than single family homes but not just apartments)

(A) Density is not a problem for the school district, and in fact, an increase in density would be beneficial to the district. The general public, however, may not be supportive of higher density residential in the area. In Joshua, the public is generally accepting of the higher densities related to the proposed rail station there.

**QUESTION 9.** Does the school district have any future development planned? If so, what are those plans and/or who might we contact to discuss?

(A) The District has two future school sites that they have purchased – one near Cleburne, and one at Cross Timbers (not in Burleson, but adjacent). They have looked at an additional site in Burleson near 1902 and South Hulen Street, but have not moved forward with acquiring the site.

**QUESTION 10.** What avenues of communication do you feel have the best results in Burleson?

(A) For the school population, the District utilizes a system called “Alert Now” that places phone calls with specific messages to the parents of students. Beyond that system, websites, local newspaper notices and mailings have proven effective.

Note – Superintendent Dane was very supportive of this effort and asked that he be added to the mailing list so he can attend the upcoming public meetings.

## BUSINESS COMMUNITY INTERVIEW

December 8, 2010 – 9:00 A.M.

Attendees: Mark Bowers (HOK), Judy Meyer (PIA), Kent George (City of Burleson), Bud Melton (BMA), Judy Arnold (Texas Wesleyan University), Greg Gammon (Gammon Financial), Anne Ricker (Ricker Cunningham – Via Telephone), Keith Jones (URS Corporation)

**QUESTION 1.** Are you aware of plans for bringing regional rail or other transit-transportation to Burleson, and if so, can you provide an idea about your level of awareness?

(A) Judy and Greg are very aware of the future rail opportunities in Burleson and were involved in the previous studies for the area.

**QUESTION 2.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) For the most part community is very well informed about the rail initiative and is aware of the plans for future rail and the future TOD.

**QUESTION 3.** How do you think regional rail and a rail station will impact Burleson?

(A) It will have a positive impact on the community, but the level of connectivity to the community will determine the extent of the positive impact, and the level of ridership that is generated.

**QUESTION 4.** What are your observations about acceptance of regional rail in the community and of a rail station in the community?

(A) The public is for the most part excited about the future rail, but timing is critical. People want rail in the short term, but are also concerned about the overall cost to the community.

**QUESTION 5.** Is it more important to you that the City provide transportation options inside the City limits between destinations or between the City and outside areas, like downtown Fort Worth?

(A) It is more important to make regional connections such as to downtown Fort Worth, Hulen Mall, Joshua, Crowley, and DFW International Airport.

**QUESTION 6.** What destinations can you suggest that would make public transportation your preferred option?

(A) Making connections to Joshua, to Old town in Burleson, to Gateway Station, and to businesses on S.H. 174. The business park on I 35W south of Burleson is also important.

**QUESTION 7.** What are your perceptions of Burleson as a walkable community?

(A) Burleson is not currently walkable due to SH 174 and Renfro Street which both have multiple, heavily traveled lanes that are not safe for pedestrian crossings.

**QUESTION 8.** What are your perceptions of Burleson as a “bikeable” community?

(A) Our answer would be the same as for the walkability issues.

**QUESTION 9.** What avenues of communication do you feel have the best results in Burleson?

(A) In the business community, there are two Rotary Clubs (one breakfast and one lunch), a Lyons Club, and the Chamber of Commerce which has regular monthly luncheons in the community. All of these groups can provide avenues of communication with the business community.

## TRANSPORTATION INTERESTS INTERVIEW

December 8, 2010 – 11:00 A.M.

Attendees: Mark Bowers (HOK), Judy Meyer (PIA), Kent George (City of Burleson), Keith Jones (URS Corporation), Bud Melton (BMA)

**QUESTION 1.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) In the community, city leaders, county officials and the general public understand the opportunities that Rail will bring to the area. The question is what level of interest will there be once rail is established. Burleson has historically been a drive through community, and is now becoming a hub. There has been a lot of new economic development in the community, but there is still no major employer. SH 174 is a nightmare as related to traffic congestion, and it is expected that rail will relieve some of that congestion and provide an alternative mode.

**QUESTION 2.** Do you feel that Burleson needs transportation options such as bus rapid transit service?

(A) It may be an option, but it would have to have built-in reliability to be viable. It could not be subjected to existing traffic congestion, and would need to have the ability to change traffic signals, and would need dedicated lanes.

**QUESTION 3.** Do you feel there are enough transportation options to get residents in and around Burleson?

(A) No, CleTran currently operates Monday thru Friday from 8:00 a.m. to 5:00 p.m. In the future, the transit dependent population will need a bus option as well.

**QUESTION 4.** What are your perceptions of Burleson as a walkable community?

(A) From 731 to the east is pedestrian friendly and connected, but on the south side of town, people tend to stay in their cars because pedestrian movement is not safe. Additional planning and pedestrian easements are needed.

**QUESTION 5.** What are your perceptions of Burleson as a “bike-able” community?

(A) Facilities for bicyclists are very good. The city is much more bicycle friendly than pedestrian friendly. The only exceptions are the barriers created by SH174 and IH 35W. It is not safe for bicyclists to get to the park and ride. The city has a number of bicyclists clubs and bike rallies. Making bicycle connections to existing City parks and to downtown are both priorities.

**QUESTION 6.** What transportation improvements are planned for the facilities in Burleson managed by your agency?

(A) Participants referenced a number of items including the SH 174 Corridor Study(City of Burleson), Median Improvements on Renfro (TxDOT), Allsbury Extension (TxDOT?), Hike and Bike Plan (Burleson Parks Department).

## PETER THOMAS – LCM PROPERTIES

December 8, 2010 – 2:00 P.M.

Attendees: Mark Bowers (HOK), Peter Thomas (Timberchase Development Co. Inc.), Keith Jones (URS Corporation), Kent George (City of Burleson)

**QUESTION 1.** Are you aware of plans for bringing regional rail or other transit-transportation to Burleson, and if so, can you provide an idea about your level of awareness?

(A) Peter is very familiar with the plans for Rail, having been involved in the Johnson County Rail Plan study, and having attended the Burleson Comprehensive Plan meetings.

**QUESTION 2.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) He believes that the general public is not very aware of the plans for transit and rail. The development community is much more aware, and there has been a lot of land speculation that has taken place in the TOD District. Peter bought his property in 2004, and has 85 acres left. He is frustrated that rail is taking long to become a reality.

**QUESTION 3.** How do you think regional rail and a rail station will impact Burleson?

(A) Rail will have a positive impact on the community and the local economy. Peter originally acquired 280 acres, and has 85 remaining immediately adjacent to the railroad. He has zoning for single family at 4 du/ac. He would like to see a quiet zone, since the noise of train horns could be an issue for surrounding development.

**QUESTION 4.** What are your observations about acceptance of regional rail in the community and of a rail station in the community?

(A) The community is generally supportive and excited about access to rail. Builders in the area are already telling potential buyers about the future rail station and are seeing it as a positive marketing tool for their subdivisions.

**QUESTION 5.** Do you feel there are enough transportation options to get residents in and around Burleson?

(A) No. Single family home buyers in Burleson have jobs all over the Metroplex and there is a definite need for multiple transportation options. Burleson has experienced a lot of growth recently with families relocating from south Fort Worth, and from South Arlington.

**QUESTION 6.** Is it more important to you that the City provide transportation options inside the City limits between destinations or between the City and outside areas, like downtown Fort Worth?

(A) Both are important to future development of the area.

**QUESTION 7.** What are your thoughts and your observations in the community about increasing housing density in Burleson?

(A) Burleson currently has only single family homes, with only a few apartment complexes. There has been resistance to zero lot line development in the past, but higher density is generally supported and expected in the TOD district. Peter is currently exploring potential development of senior multifamily products.

**QUESTION 8.** What conditions exist in Burleson that demonstrate challenges to transit and Transit Oriented Development?

(A) The general public has not been exposed to Rail and TOD, so are unaware of the opportunities that it brings. Education of the public is a major challenge, as well as funding for the improvements, and timing.

**QUESTION 9.** What are your perceptions of Burleson as a walkable community?

(A) Pedestrian and bicycle infrastructure is in the works, but not currently existing. Pedestrian infrastructure is very good within new developments, and trails can add to the marketability of new communities.

**QUESTION 10.** What are your perceptions of Burleson as a “bikeable” community?

(A) The same infrastructure deficiencies exist as do with pedestrian infrastructure, although, Peter feels that pedestrian access is more important than bicycle access.

## BURLESON ISD INTERVIEW

December 8, 2010 – 3:00 P.M.

Attendees: Mark Bowers (HOK), Richard Crummel (Superintendent – Burleson ISD), Ronald Kuehler (Assistant Superintendent of Business and Support Services), Kent George (City of Burleson), Keith Jones (URS Corporation)

**QUESTION 1.** Are you aware of plans for bringing regional rail or other transit-transportation to Burleson, and if so, can you provide an idea about your level of awareness?

(A) Richard has a surface level knowledge. He has heard about the plans through his chamber activities.

**QUESTION 2.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) Community leaders are definitely aware, but the general public is not very aware of the plans. In Burleson ISD, only Richard and Ronald are aware of the plans.

**QUESTION 3.** Do you feel there are enough transportation options to get students in and around Burleson?

(A) Twenty years ago there were enough options, but the city and district have changed significantly, due to extensive population growth. The district is still reimbursed for transportation at 1983 rates. The district runs 52-53 bus routes daily with a mix of gasoline and diesel buses. The district maintenance facility is 35 to 40 years old. The district has 10,000 students, with 2400

– 2600 eligible for bus service (outside a 2 mile radius of their home school, or due to safe routes issues), but only about 1300 students per month ride the bus. Most students arrive at schools by automobile. All bus and vehicle operations in the District are contracted.

**QUESTION 4.** Do students walk or bike frequently in the community?

(A) There are some walkers, but those are typically at elementary schools where there are no major roadway crossings. It is usually dependent on the particular neighborhood and school location.

**QUESTION 5.** What are your perceptions of Burleson as a walkable community?

(A) Most new subdivision have good sidewalks and are accessible, however, older residential areas have no sidewalks. For the most part, SH 174, Renfro and I 35W are the boundaries between attendance zones for each school, so students do not have to cross those facilities, which can be quite difficult to cross. School hours are staggered for elementary, middle and high schools so that buses can run more than 1 route.

**QUESTION 6.** What are your thoughts and your observations in the community about increasing housing density in Burleson?

(A) Higher end apartments, vs subsidized apartments will have differing impacts on the school district. Burleson needs diversity in housing price range to support housing options for district employees. In the future TOD, staff are excited about opportunities to live in higher end apartments, but those housing types will have minimal impacts on the number of students since they are more geared towards singles and empty nesters.

**QUESTION 7.** Does the school district have any future development planned? If so, what are those plans and/or who might we contact to discuss?

(A) There are no immediate development plans. The district completed six new schools last year, and although they have additional land, their building program is complete for now.

**QUESTION 8.** What avenues of communication do you feel have the best results in Burleson?

(A) The BISD Website, flyers, electronic bulletin boards, and e-mail are the main methods utilized by the District, although none are 100% effective.

## ROCKY BRANSOM INTERVIEW

January 13, 2011 – 3:00 P.M.

Attendees: Mark Bowers (HOK), Kent George (City of Burleson), Shai Roos (City of Burleson), Keith Jones (URS Corporation)

**QUESTION 1.** Are you aware of plans for bringing regional rail or other transit-transportation to Burleson, and if so, can you provide an idea about your level of awareness?

(A) Rocky has been a proponent in the community pushing the rail initiative. Rail is a necessary alternative to overcome the gridlock on IH 35W. Connectivity to Fort Worth is critical, and the City will not attract younger, highly educated individuals to Burleson without transit, and different, denser lifestyles.

**QUESTION 2.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) The community has a strong knowledge of the rail initiative and have welcomed it with open arms. Most cities locate their rail sites in downtown area, which is a mistake. New development is needed to support rail travel, and established downtown areas can be quite complicated to re-develop.

**QUESTION 3.** How do you think regional rail and a rail station will impact Burleson?

(A) It will provide strong growth opportunities for the City and the overall region.

**QUESTION 4.** What are your observations about acceptance of regional rail in the community and of a rail station in the community?

(A) Rocky has never talked with anyone who was not supportive of the future rail station. The community is very eager to have the station.

**QUESTION 5.** Do you feel there are enough transportation options to get residents in and around Burleson?

(A) There are enough options within Burleson currently, but the real need is to link Burleson to Fort Worth and the larger region. Several trails have been planned linking the community to the TOD and many of those are being implemented.

**QUESTION 6.** Is it more important to you that the City provide transportation options inside the City limits between destinations or between the City and outside areas, like downtown Fort Worth?

(A) It is much more important to connect to destinations outside of Burleson like Fort Worth. People in Burleson need to be able to go to sporting events in Dallas, to the West End, to DFW International Airport, and other regional locations. Again, this connectivity will help position Burleson as a place that young professionals can call home.

**QUESTION 7.** What are your thoughts and your observations in the community about increasing housing density in Burleson?

(A) In general, the community resists adding density to already developed areas, however, it is supported in the TOD. The TOD and future rail station is creating a competitive edge for new developments. Rocky owns 72 acres in the TOD with 15 acres zoned MF. He is developing at 16.5 DU/AC. He has currently developed a 200 unit apartment complex. The biggest issue blocking development in the TOD is not having appropriate zoning in place to support the TOD vision. Zoning needs to be in place as soon as possible, because as more people move into the TOD, there may then be resistance to the higher densities envisioned for the area and necessary to support rail. Alsbury Blvd. needs to be built to really unlock the potential development in the TOD. 60% of Burleson's undeveloped land is west of the TOD. In the future, the TOD will become the geographic center of Burleson.

**QUESTION 8.** What conditions exist in Burleson that demonstrate support for transit and Transit Oriented Development?

(A) Traffic congestion during peak periods is creating support for transit. The need for connectivity is not only to Fort Worth, but also to Cleburne, since some residents in Burleson work in Cleburne.

**QUESTION 9.** What conditions exist in Burleson that demonstrate challenges to transit and Transit Oriented Development?

(A) A lack of appropriate zoning in the TOD and the needed Alsbury connection as mentioned previously. Additional street infrastructure is also needed in the area.

**QUESTION 10.** What are your perceptions of Burleson as a walkable community?

(A) Burleson is walkable, but only in pockets. Walkability is important to the future of Burleson and the planned future trails system will benefit the community.

**QUESTION 11.** What are your perceptions of Burleson as a "bikeable" community?

(A) In the future, the planned trails system will support bicyclists, but currently, bicycling is not safe.

**QUESTION 12.** Are you aware of any future development already planned in area(s) included in this TOD effort? If so, what are those plans and/or who might we contact to discuss?

(A) Rocky owns ½ of the TOD district. He believes two to three developments will move forward immediately when Alsbury Blvd is built. This constructing will be a bigger trigger for development than having a station in place. The market is primed for density, and there is a condo market emerging, as well as a market for older people looking for denser alternatives to SF homes.

**QUESTION 13.** What avenues of communication do you feel have the best results in Burleson?

(A) Developer roundtable work well within the business community. Public notices in newspapers work well for the general public. Mass mailings or advertisements are a waste of money.

## TRANSPORTATION INTERESTS INTERVIEW

January 13, 2011 – 5:00 P.M.

Attendees: Mark Bowers (HOK), Kent George (City of Burleson), Shai Roos (City of Burleson), Hon. Ken Shetter (Mayor – City of Burleson), Dan McClendon (City Council Place 5), Matt Powell (City Council Place 3), Keith Jones (URS Corporation)

**QUESTION 1.** Do you think others in Burleson are aware about the possibility of regional rail/transit-transportation in Burleson?

(A) For the most part, Burleson citizens are well informed about the future rail and TOD. The TOD is important, but Old Town is also important. Several new restaurants have located in Old Town. Ideally, the City would be able to support both Old Town and the TOD District. The community can't wait for a regional solution to mobility. The Cities along the Johnson County rail corridor will have to make the rail line a reality.

**QUESTION 2.** What are your observations about acceptance of regional rail in the community and of a rail station in the community?

(A) The local community is supportive. They see this as a big win for future riders, the environment, and for the region related to overall congestion. The public generally knows that rail is needed for the overall quality of life in Burleson. Many have traveled around the country to places like Washington

D.C. and New York, and they want the system, but want to make sure it is done right. When the station and TOD property were annexed, the property owners were generally supportive. A survey was prepared several years ago by the FWTA, and it showed about 70% of citizens supporting rail.

**QUESTION 3.** Do you feel that Burleson needs transportation options such as bus rapid transit service?

(A) (Note – the answers given were more related to overall bus service – not BRT) Yes, it is needed, but the success depends on how it is initiated. If ridership is not there, the service will not last. Burleson is still very rural and needs to ease in to bus service. There is a segment of the community that needs it immediately, like the elderly and disabled. NCTCOG predicts that in the future, only 1/3 of Burleson's population will be employed in Burleson. Bus service is needed to redirect automobile trips to other modes for sustainability. Today, most comment on need to have service to Fort Worth, but there is still a segment of the population that needs point to point service.

**QUESTION 4.** Do you feel there are enough transportation options to get residents in and around Burleson?

(A) No, there needs to be connectivity between the live, work and play areas of Burleson, and linkages across IH 35W are needed. The sidewalk inventory is inadequate, and many older areas have no sidewalk. This fact is also tied to childhood obesity. Planning for future trails is adequate, and a spine trail system connecting all parts of town is being constructed, but connections are needed between the spine trail and individual neighborhoods. The problem will be getting pedestrians and bicyclists across the SH 174 / 71 intersection. Also, sidewalks are a critical need to support the planned trail system, especially in the Old Town area.

**QUESTION 5.** General comments on density issues.

(A) Political bodies understand that differing densities are needed for a strong community. In Burleson, some plats have actually been denied because density was not high enough. Every step of the way in the creation of the TOD, it has been acknowledged that higher densities are needed in that area. There was never really a push back on the part of the citizens related to higher densities in the TOD. The main issues voiced by the community related to the TOD were related to lower income housing options, and the extension of Alsbury Blvd. through the district.





## APPENDIX 3 - PUBLIC MEETINGS

## FIRST PUBLIC MEETING

January 13, 2011 – 6:30 P.M.

A public meeting for the Burleson TOD Study took place at Burleson City Hall on Thursday, January 13, 2011 at 6:30 p.m. A total of 51 people attended the meeting.

There were three options public comments were accepted: general session, breakout open house focus areas and comment forms. The following are the comments received and the questions asked from each avenue, along with responses.

There were three options public comments were accepted: general session, breakout open house focus areas and comment forms. The following are the comments received and the questions asked from each avenue, along with responses.

### GENERAL SESSION

Comment: Johnson County has conducted an extensive planning process. It is hoped that the Burleson TOD Study will be folded into the Johnson County effort, and that the Burleson TOD Study will consider the elements of the Johnson County study.

## BREAKOUT, OPEN HOUSE FOCUS AREAS

### MARKET/LAND USE FOCUS AREA

**QUESTION 1.** Can people obtain a copy of the PowerPoint presentation online?

(R) Yes, the presentation can be accessed at [www.nctcog.org/SDplanningprojects](http://www.nctcog.org/SDplanningprojects) or at [www.burlesontx.com/index.aspx?nid=111](http://www.burlesontx.com/index.aspx?nid=111) by clicking on NCTCOG Transit Station Study.

**QUESTION 2.** Was market analysis specific to this area – how can people find out what would be appropriate for their properties?

(R) Yes, the market analysis was specific to this area, but more definition should be included in the TOD plan and more discussion should take place with city leaders about any policy changes that might be necessary before property development direction will become more apparent.

Comment: The City of Joshua desires similar transportation systems and is curious about the process and outcomes.

**QUESTION 3.** What is the most important or most beneficial development to bring in for transit?

(R) It depends on the market and what is the best fit for the community. For the Burleson effort, more information about this will emerge as the TOD plan develops.

**QUESTION 4.** How soon can we get things in place?

(R) The development of TOD is primarily dependent on when the transit service becomes available. Therefore, the time it takes for the rail service to become available in Burleson will dictate how soon TOD activities will fall into place. Making both rail service and accompanying TOD a reality are dependent on a variety of factors, including the completion of all required environmental analyses, the availability of funding, and the implementation of any policy changes that might be necessary.

**QUESTION 5.** Should we move/sell our home? Should we plant trees or plan some other buffer between our property and the train station?

(R) It is intended that the train station will be designed as a community asset that blends into the new development in the area to offer a safe, less expensive, more efficient way to travel throughout the Metroplex. As always, it is up to the homeowner where they prefer to live and how they wish to enhance their property with landscaping.

**QUESTION 6.** Where will the developments happen?

(R) This depends on the pace of population growth and when money is available or developers are willing to spend money on developments.

**QUESTION 7.** Can there be a better link to the study information, such as a website or could we incorporate some sort of interactive preference activity for our community?

(R) This will be investigated.

## TRANSPORTATION FOCUS AREA

### QUESTION 1. What is Burleson Mission Statement?

(R) The City of Burleson itself does not have a Mission Statement. The Mission Statement of the City of Burleson's Community Development Department is to implement the City's comprehensive plan through supporting special area plans, consistent construction and development codes, and providing building permits and inspection services to protect the health, safety, and public welfare.

Comment: Rail-Bike Depot (provide station amenities for bicyclists)

Comment: Add bike lane; add bike racks

Comment: We need more walkable environment.

Comment: Want bike lanes added to TOD

Comment: Critical need for a safe bike/pedestrian connection through the Campus District and across SW Wilshire

Comment: Suggestion made to consider utilizing the ETJ areas as potential new greenway connections including to the new Industrial District bordering IH 35W

Comment Note: Nearly everyone at this focus area expressed strong interest in the area becoming more walkable and bike-friendly – including to other neighborhoods to the Northeast and along the creek greenbelts.

### QUESTION 2. Will presentation be on web?

(R) Yes, the presentation can be accessed at [www.nctcog.org/SDplanningprojects](http://www.nctcog.org/SDplanningprojects) or at [www.burlesontx.com/index.aspx?nid=111](http://www.burlesontx.com/index.aspx?nid=111) by clicking on NCTCOG Transit Station Study.

### QUESTION 3. Will there be public meeting on concepts?

(R) Yes, a meeting is anticipated to take place in April to display and discuss rail station and transportation concepts. To make sure you get notification on upcoming meetings please send an email to [Judy.Meyer@publicinformationassociates.com](mailto:Judy.Meyer@publicinformationassociates.com), or contact Judy Meyer at 214-499-4661.

## DESIGN FOCUS AREA

Approximately seven people made comments at the design focus area. All comments were similar, which encouraged any design elements for the rail station or transit service facilities retain Burleson's community character and historic feel. The consensus was that any modern design or art would not fit well into the community.

## COMMENT FORMS

Eleven comment forms were submitted at the meeting. One comment form was received via fax and one was received via postal mail for a total of 13 comment forms.

From Zipcodes:

76028 – 8  
76036 – 1  
76058 – 1  
76031 – 2  
76097 – 1

**QUESTION 1.** What characteristics do you feel are most important to preserve as transit options and conceptual rail station designs are developed?

Vibrancy of Old Town – 5  
Economic development along major roads – 5  
Rural environment – 2

**QUESTION 2.** Which mode of transportation do you most frequently use for traveling inside the city limits of Burleson?

Personal Motor Vehicle – 12  
Walking – 1  
Bicycle – 1

**QUESTION 3.** Which mode of transportation do you most frequently use for traveling outside the city limits of Burleson?

Personal Motor Vehicle – 12  
Bicycle – 1

**QUESTION 4.** Please rank the following in importance as your most frequent destinations.

**#1 Rank**

- Employment outside of Burleson – 5
- Retail/commercial on Highway 174 – 2
- I-35W Business Park – 3
- Cleburne – 1
- Crowley – 2

**#2 Rank**

- Old Town – 4
- Retail/commercial on Highway 174 – 2
- I-35W Business Park – 1
- Gateway Station – 1
- Crowley – 1
- Employment outside of Burleson – 1
- Parks or golf courses – 1
- Other (FM 731) – 1
- Other (Fort Worth T&P Rail Station) – 1

**#3 Rank**

- Old Town – 5
- Retail/commercial on Highway 174 – 3
- Gateway Station – 2
- Employment outside of Burleson – 1
- Crowley – 1
- Joshua – 1

**#4 Rank**

- I-35W Business Park – 3
- Gateway Station – 3
- Old Town – 2
- Retail/commercial on Highway 174 – 2
- Cleburne – 1
- Other (Wilshire) – 1

**#5 Rank**

- Cleburne – 4
- Employment outside of Burleson – 2
- I-35W Business Park – 1
- Gateway Station – 1
- Retail/commercial on Highway 174 – 1
- Crowley – 1

There were rankings out to 10 items, however, many people only ranked the first five items, and most items ranked 6 or beyond were all retail or business park locations.

### ADDITIONAL COMMENTS

Commenter No. 1: We need connectivity between the transit project and our new Hidden Creek & Chisenhall facilities.

Commenter No. 2: Please take into consideration the need for safely navigating parking lots and don't put large landscaping right up to the corners – blocking traffic view as in Gateway Station. What about equestrian trails along with the walking and bike trails? A good multi-use center that could be used for small convention sports such as a hockey team and horse shows would bring out of towners to fill motels and restaurants even up on I-35. If you can't read any of this, email me at (undisclosed).

## SECOND PUBLIC MEETING

April 7, 2011 – 6:30 P.M.

A public meeting for the Burleson TOD Study took place at Burleson City Hall on Thursday, April 7, 2011 at 6:30 p.m. A total of 36 people attended the meeting.

Following a presentation, the following questions were asked or comments were made. Responses to questions also are provided.

Comment: There are no enclosed area for people to get out of the wind and rain on Concept Plans B and C. It would be more desirable to have sidescreens or something in addition the canopies.

**QUESTION 1.** What is the timeframe for building the station and opening service?

(R) It is difficult to pinpoint a specific date at this time. There are several things that must happen, including determining there would be sufficient ridership on the line, identifying a source of funding to bring transit service to Burleson, and developing relationships with transit partners. Bus service could be expected to begin sometime in the next five to 10 years, while rail service could begin in 5-7 years once a funding source has been found.

Comment (Mayor of Burleson): Bringing rail service to Burleson is part of a larger discussion about bringing rail service to the western half of the North Texas Region. The time has come to look at a subregional system when cities pool resources to bring services such as transit and rail to their

area. A regional solution has consistently been rejected by the Texas Legislature, which is forcing issues to the local level. He noted creating a TIF or TIRZ could provide money that could be invested in transit service. Concept A includes potential revenue generating elements, which is attractive. The mayor stated that he supports Concept A. He further noted the other concepts are more expensive, and Concept A allows the phasing in of development.

**QUESTION 2.** For what kinds of purposes could the space in Concept A be used?

(R) This plan envisions the space would be used for offices, or perhaps conferencing facilities. Space that could generate revenue.

**QUESTION 3.** How much space is there?

(R) Specifics would need to be determined when engineering and design work is done on the station and rail line.

**QUESTION 4.** Would Concept A allow for future expansion?

(R) All of the concepts allow for future expansion.

**QUESTION 5.** Is this the only rail station location being considered in Burleson?

(R) Yes, this is the only location where a rail station would be built in Burleson.

**QUESTION 6.** How far out will this affect residential areas – will the homes on Hulen be impacted?

(R) It is not anticipated that residences would be impacted any more than they would be impacted by changing development patterns if no rail service were planned. The market and changing demographics are driving development in Burleson. It is anticipated this area would develop

over time regardless. This study is to help plan for that and put some things in place that would allow more desirable development. The mayor also noted the city has no plans to invoke eminent domain or take any properties for any of its transit activities.

Comment: Appreciate the way you're looking to the future and planning for it.

Comment: Transportation will be extremely important in our future. Concept A seems to be the best of all of the station design options.

Self-addressed comment forms also were available for people to write down their comments. No written comment forms were received.



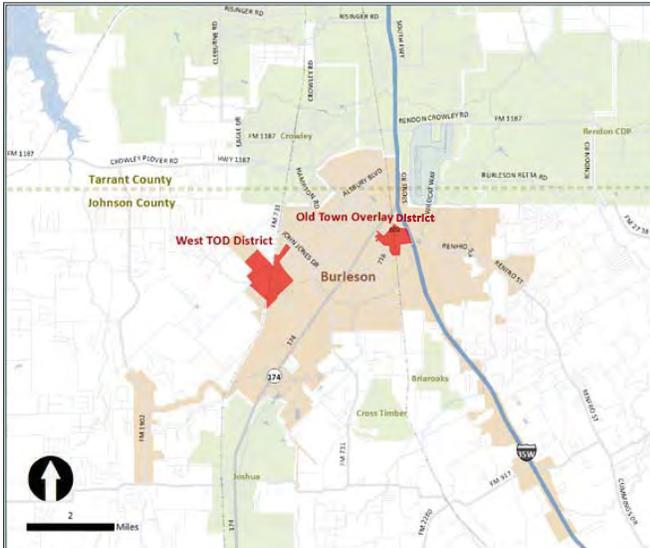


# APPENDIX 4 - ECONOMIC PROFILE

# Demographics

## City of Burleson Economic Profile

### Subject Properties



### Burleson Trade Area



#### West TOD District

- approximately 560-acre district straddling BNSF railway
- site of future bus, and later, passenger rail station
- identified as potential transit-oriented development opportunity

#### Old Town District

- approximately 230-acre district encompassing Burleson historic downtown area

#### Demographics

- Approx 22% of Regional Trade Area residents reside within 5 miles of Old Town (20% for West TOD)
- Regional Trade Area growth (~3.4% annually) should substantially outpace DFW Metroplex
- The Regional Trade Area picks up significant renter populations along the south IH-820 loop, but still has a smaller share of renters vs. DFW Metroplex
- The Old Town vicinity has a slightly higher percentage of seniors relative to the Regional Trade Area and overall Metroplex
- Median household incomes are lower for the overall Regional Trade Area versus the immediate 5-mile rings – but primarily due to smaller household sizes
- Educational attainment is higher for the overall Regional Trade Area
- Ethnicity (Hispanic and Black/African-American) is much lower in the study areas than in the Regional Trade Area and the Metroplex

	Old Town 5-mi.	West TOD 5-mi.	Regional Trade Area	DFW Metroplex
2000 Population (1)	44,681	38,463	237,674	5,030,828
2000 Households (1)	16,009	13,661	86,882	1,881,056
2010 Population (1)	69,416	62,204	311,115	6,381,950
2010 Households (1)	24,799	21,913	111,729	2,334,568
2020 Households (estimate) (2)	34,300	30,600	156,100	2,902,100
Annual Household Growth Rate to 2020	3.3%	3.4%	3.4%	2.2%
Average Household Size (2010) (2)	2.78	2.83	2.76	2.88
Pct. Non-Family Households (2010) (2)	27%	24%	35%	31%
Pct. Renters (2010) (2)	21%	22%	29%	38%
Pct. Age 65+ (2010) (2)	12%	11%	10%	9%
Pct. Age 0-14 (2010) (2)	22%	22%	23%	24%
Pct. With Bachelors Degree or higher (2010) (2)	20%	19%	24%	20%
Median Household Income (2010) (2)	\$60,378	\$60,032	\$56,364	\$53,913
Per Capita Income (2010) (2)	\$25,198	\$24,510	\$25,113	\$26,975
Pct. With Income Over \$100,000 (2010) (2)	21%	20%	19%	23%
Pct. Hispanic (2010) (2)	9%	10%	18%	27%
Pct. Black/African-American (2010) (2)	2%	2%	14%	14%



# Psychographics

## City of Burleson Economic Profile

**Psychographics** describe characteristics of people and neighborhoods which, instead of being purely demographic, speaks to attitudes, interests, opinions & lifestyles.

PRIZM - NE (Claritas, Inc.) is a leading system for grouping neighborhoods into one of 65 distinct market segments – used by retailers, home-builders and site-selection specialists to tailor product offerings and align development with target markets.



### Burleson Regional Trade Area PRIZM Segments (by Households)

Rank	Segment Name	Households	Pct. of Households	Index to US (100 = avg.)
1	New Homesteaders	7,108	6.4%	359
2	White Picket Fences	5,766	5.2%	390
3	Kid Country, USA	5,407	4.8%	382
4	Upward Bound	5,299	4.7%	281
5	Fast-Track Families	4,358	3.9%	244
6	City Startups	4,314	3.9%	301
7	Middleburg Managers	4,293	3.8%	197
8	Sunset City Blues	3,691	3.3%	185
9	Family Thrifts	3,663	3.3%	180
10	Boomtown Singles	3,600	3.2%	232
11	Country Squires	2,970	2.7%	154
12	Blue-Chip Blues	2,890	2.6%	207
13	Second City Elite	2,858	2.6%	204
14	Kids and Cul-de-Sacs	2,799	2.5%	155
15	Up-and-Comers	2,791	2.5%	193
<b>All Other Segments</b>		<b>49,922</b>	<b>44.5%</b>	
<b>Total All Segments</b>		<b>111,729</b>	<b>100.0%</b>	

The Trade Area is a blend of suburban, exurban and even some rural/small-town lifestyle segments.

Higher population concentrations along the tollway skew Trade Area psychographics toward relatively affluent family-oriented suburban segments.



# Residential Market

## City of Burleson Economic Profile



Burleson is located in the Fort Worth/Mansfield path of growth and is poised to compete for residential expansion, due to its proximity to future transit and a high quality of life.

Demand for new residential units over 10 years is based on growth forecasts for the Burleson Regional Trade Area – income -qualified into likely rent and price brackets. These forecasts show demand for an additional 33,261 ownership units and 13,638 rental units. The ownership units are further segmented into demand for 26,885 single family units, 4,744 townhome/condo units and 10,264 rental units.

Residential Demand Analysis				Households	2010	111,729		
Burleson Trade Area					2015	132,175	Annual Growth Rate	3.4%
10-yr Demand Estimates					2020	156,362		
				Household Growth (2010-20)	44,633	Adjust for 2nd homes, demolition, vacancy		5.0%
				Adjusted Unit Requirement	<b>46,865</b>	% Rental		29%
Trade Area Demand from New Households (10-yr)								
Household Income Range (2010 dollars)	Approximate Rent Range	Supportable Home Price Range	Current Households in Income Bracket	New Households by Income Bracket	Total Units	Estimated % Rental	Total Rental Units	Total Ownership Units
up to \$15K	up to \$375	up to \$75K	9%	9%	4,218	80%	3,374	844
\$15-25K	\$375 - \$625	\$75 to \$100K	8%	8%	3,942	80%	3,154	788
\$25-35K	\$625 - \$875	\$100 to \$150K	10%	10%	4,795	60%	2,877	1,918
\$35-50K	\$875 - \$1,000	\$150 to \$200K	17%	17%	7,998	30%	2,400	5,599
\$50-75K	\$1,000+	\$200 to \$250K	23%	23%	10,726	10%	1,073	9,653
\$75-100K	\$1,000+	\$250 to \$350K	14%	14%	6,458	5%	323	6,135
\$100-150K	\$1,000+	\$350 to \$500K	9%	9%	4,155	5%	208	3,947
\$150K and up	\$1,000+	\$500K and up	10%	10%	4,607	5%	230	4,376
<b>Totals</b>			<b>100%</b>	<b>100%</b>	<b>46,865</b>	<b>29%</b>	<b>13,638</b>	<b>33,261</b>

Sources: U.S. Census and Claritas, Inc.

### Ownership Demand

### Rental Demand

Annual Household Income Range	Approximate Home Price Range	Trade Area For-Sale Demand (Incomes \$15K+)	Estimated % Single Family Detached		Estimated % Townhome/Condo		Annual Household Income Range	Approximate Rent Range	Trade Area Rental Demand (Incomes \$15K+)
			Single Family Detached	Single Family Detached Demand	Townhome/Condo	Townhome/Condo Demand			
\$25-35K	\$100 to \$150K	1,918	85%	1,630	15%	288	\$15-25K	\$375 - \$625	3,154
\$35-50K	\$150 to \$200K	5,599	85%	4,759	15%	840	\$25-35K	\$625 - \$875	2,877
\$50-75K	\$200 to \$250K	9,653	85%	8,205	15%	1,448	\$35-50K	\$875 - \$1,000	2,400
\$75-100K	\$250 to \$350K	6,135	85%	5,215	15%	920	\$50-75K	\$1,000+	1,073
\$100-150K	\$350 to \$500K	3,947	85%	3,355	15%	592	\$75-100K	\$1,000+	323
\$150K and up	\$500K and up	4,376	85%	3,720	15%	656	\$100-150K	\$1,000+	208
							\$150K and up	\$1,000+	230
<b>Totals</b>			<b>85%</b>	<b>26,885</b>	<b>15%</b>	<b>4,744</b>	<b>Totals</b>		<b>10,264</b>



# Retail Market

## City of Burleson Economic Profile



Burleson’s retail history has been primarily that of a “bedroom “community -- providing residential support for retail space in surrounding communities. As shown below, there are significant gaps in the existing retail inventory, not uncommon for a community of Burleson’s size. As residential expansion continues to occur in the Trade Area, Burleson will offer locational advantages (highway, transit) for prospective retailers. This growth-related demand, coupled with unmet demand already in the Trade Area, should position Burleson for extensive retail/commercial development over the next decade.

Retail Category	Estimated 2010 Household Retail Demand	Estimated 2010 Retail Sales (Supply)	Estimated 2010 Retail Void (Leakage)	Estimated Retail Sales/s.f.	Annual Household Growth Rate (2010-2020)	New Retail Space Needed for Household Growth	New Retail Space Needed to Recapture Void/Leakage	Adjustment Factor for Continued Void/Leakage	Total 10-Year New Trade Area Retail Demand (s.f.)
Furniture & Home Furnishings	\$94,432,129	\$40,583,087	\$53,849,042	180	3.4%	208,290	299,161	40%	202,981
Electronics & Appliance	\$79,409,458	\$30,107,188	\$49,302,270	220	3.4%	143,308	224,101	40%	146,964
Bldg Materials, Garden	\$114,887,190	\$103,111,171	\$11,776,019	250	3.4%	182,454	47,104	60%	137,735
Food & Beverage (Grocery)	\$489,689,104	\$293,461,098	\$196,228,006	380	3.4%	511,633	516,389	70%	719,616
Health & Personal Care	\$92,551,073	\$53,524,033	\$39,027,040	350	3.4%	104,987	111,506	70%	151,545
Clothing and Accessories	\$111,060,556	\$99,689,008	\$11,371,548	220	3.4%	200,428	51,689	40%	100,847
Sporting,Hobby, Book, Music	\$35,646,111	\$30,098,739	\$5,547,372	215	3.4%	65,826	25,802	50%	45,814
General Merchandise	\$347,657,903	\$297,845,074	\$49,812,829	250	3.4%	552,121	199,251	50%	375,686
Miscellaneous Stores	\$53,030,143	\$37,933,268	\$15,096,875	200	3.4%	105,272	75,484	40%	72,303
Dining & Drinking Places	\$431,452,393	\$342,242,005	\$89,210,388	300	3.4%	570,997	297,368	40%	347,346
Other retail center space (est. @25%)	\$462,454,015	\$332,148,668	\$130,305,347	225	3.4%	816,034	579,135	40%	558,067
<b>Totals</b>	<b>\$2,312,270,075</b>	<b>\$1,660,743,339</b>	<b>\$651,526,736</b>			<b>3,461,352</b>	<b>2,426,991</b>		<b>2,858,903</b>

Sources: Claritas Inc. and Urban Land Institute.

- Forecasts for new household spending in the Trade Area over 10 years show demand for an additional 2.9 million square feet of retail space.
- Grocery-anchored retail will naturally be in high demand with continued area growth.
- Entertainment/dining-oriented retail will require more design and promotional effort, given non-central location.
- Consistent with exurban DFW trends, could consider having a “library-plus” with extensive home school resources, equipment for self-guided, but advanced hobby/job/arts training, etc.

Burleson Trade Area Retail Surplus/Leakage



# Employment Market

City of Burleson  
Economic Profile

Burleson’s employment-based development remains comparatively modest in size and building class, particularly when compared to “closer-in” communities. An expanding critical mass of housing across various price points, expanding regional access through transit and highway systems, and its growing connectedness suggest Burleson could be ready to emerge as a more prominent employment address for the southwest Metroplex.

Forecasts for new employment space in the Trade Area over 10 years show demand for an additional 1.1 million square feet of office space and 1.8 million square feet of industrial space.

## Office Demand Analysis Burleson Trade Area

Industry Category	Estimated 2010 Employees	Estimated Growth Rate 2010-2020	Estimated 2020 Employees	Estimated Net New Employees	Estimated % in Office Space	Estimated Net New Office Employees	Sq Ft per Office Employee	Estimated 10-yr New Office Demand
Natural Resources, Mining and Construction	4,503	2.4%	5,708	1,205	40%	482	180	86,769
Manufacturing	8,047	2.4%	10,200	2,154	5%	108	180	19,383
Wholesale Trade	4,675	2.4%	5,926	1,251	5%	63	180	11,261
Retail Trade	9,349	2.4%	11,852	2,502	5%	125	180	22,521
Transportation, Warehousing and Utilities	4,675	2.4%	5,926	1,251	10%	125	180	22,521
Information	1,403	2.4%	1,778	375	80%	300	180	54,057
Financial Activities	5,159	2.4%	6,540	1,381	90%	1,243	180	223,697
Professional and Business Services	9,180	2.4%	11,637	2,457	80%	1,966	180	353,808
Educational and Health Services	9,464	2.4%	11,997	2,533	20%	507	180	91,186
Leisure and Hospitality	8,607	2.4%	10,910	2,304	10%	230	180	41,464
Other Services	2,362	2.4%	2,994	632	30%	190	180	34,136
Government	11,437	2.4%	14,499	3,061	30%	918	180	165,907
<b>Totals</b>	<b>78,859</b>	<b>2.4%</b>	<b>99,966</b>	<b>21,107</b>	<b>6%</b>	<b>6,256</b>	<b>180</b>	<b>1,126,110</b>

Source: Texas Workforce Commission and Leland Consulting Group.

## Industrial Demand Analysis Burleson Trade Area

Industry Category	Estimated 2010 Employees	Estimated Growth Rate 2010-2020	Estimated 2020 Employees	Estimated Net New Employees	Estimated % in Industrial Space	Estimated 2020 Industrial Employees	Sq Ft per Industrial Employee	Estimated 10-yr New Industrial Demand
Natural Resources, Mining and Construction	4,503	2.4%	5,708	1,205	20%	241	350	84,359
Manufacturing	8,047	2.4%	10,200	2,154	80%	1,723	350	603,034
Wholesale Trade	4,675	2.4%	5,926	1,251	90%	1,126	350	394,120
Retail Trade	9,349	2.4%	11,852	2,502	10%	250	350	87,582
Transportation, Warehousing and Utilities	4,675	2.4%	5,926	1,251	20%	250	350	87,582
Information	1,403	2.4%	1,778	375	20%	75	350	26,278
Financial Activities	5,159	2.4%	6,540	1,381	5%	69	350	24,165
Professional and Business Services	9,180	2.4%	11,637	2,457	10%	246	350	85,995
Educational and Health Services	9,464	2.4%	11,997	2,533	10%	253	350	88,653
Leisure and Hospitality	8,607	2.4%	10,910	2,304	5%	115	350	40,313
Other Services	2,362	2.4%	2,994	632	10%	63	350	22,125
Government	11,437	2.4%	14,499	3,061	20%	612	350	214,286
<b>Totals</b>	<b>78,859</b>	<b>2.4%</b>	<b>99,966</b>	<b>21,107</b>	<b>5%</b>	<b>5,024</b>	<b>350</b>	<b>1,758,492</b>

Source: Texas Workforce Commission and Leland Consulting Group.

