

August 2013



**The West Central Texas**

**Multimodal Facility & Transit**

**Enhancement Feasibility Study**

*Presented to:*



*Presented by:*

The Goodman  Corporation



# Table of Contents

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<b>Executive Summary</b> .....	<b>ES-1</b>
Project Need.....	ES-1
Passenger Demand .....	ES-3
Multimodal Facility Building Plan .....	ES-3
Transit Enhancement Master Plan .....	ES-4
Site Selection .....	ES-4
Project Cost.....	ES-5
Project Benefits.....	ES-5
Risk Assessment .....	ES-6
<b>Chapter One: Background</b> .....	<b>1-1</b>
Introduction.....	1-1
Multimodal Facility Need .....	1-1
Previous Studies.....	1-2
Background .....	1-3
County Profiles .....	1-7
Abilene Profile .....	1-10
Transit Service Provider Profiles .....	1-11
<b>Chapter Two: Transit Demand</b> .....	<b>2-1</b>
Introduction.....	2-1
Transit Needs .....	2-1
Demand For Multimodal Facility .....	2-4
Conclusion .....	2-10
<b>Chapter Three: Joint Development Assessment</b> .....	<b>3-1</b>
Introduction.....	3-1
Joint Development in the Multimodal Facility .....	3-2
Summary .....	3-3
<b>Chapter Four: Provider Needs Assessment &amp; Building Program</b> .....	<b>4-1</b>
Introduction.....	4-1
CityLink Needs Assessment .....	4-1
CARR Needs Assessment.....	4-4
SPARTAN and DMC Needs Assessment.....	4-7
ICB Carrier.....	4-7
Joint Development – Abilene MPO .....	4-8
Building Program.....	4-8
<b>Chapter Five: Site Selection</b> .....	<b>5-1</b>
Introduction.....	5-1
Site Selection Process .....	5-1
Site Descriptions .....	5-4
Site Selection Criteria .....	5-5
Site Rankings .....	5-38

# Table of Contents

---

<b>Chapter Six: Transit Enhancements</b> .....	<b>6-1</b>
Introduction.....	6-1
FTA Policy.....	6-1
Transit Enhancement Target Area .....	6-2
Transit Enhancement Rankings.....	6-3
Transit Enhancement Conditions by Corridor .....	6-6
Summary .....	6-10
<b>Chapter Seven: Facility &amp; Transit Enhancements Capital Costs</b> .....	<b>7-1</b>
Capital Costs for Transit Enhancements .....	7-2
Project Cost Summary .....	7-3
<b>Chapter Eight: Benefit &amp; Risk Assessment</b> .....	<b>8-1</b>
Introduction.....	8-1
State of Good Repair.....	8-3
Economic Competitiveness.....	8-4
Livability.....	8-8
Sustainability.....	8-16
Safety .....	8-18
Risk Assessment .....	8-19
Summary .....	8-20
<b>Chapter Nine: Finance &amp; Implementation</b> .....	<b>9-1</b>
Impact of MAP-21 .....	9-1
Federal and Local Share.....	9-1
Five-Year Project Implementation.....	9-1
Federal and State Funding Sources .....	9-2
Local Match Funding Sources .....	9-5
Funding Strategy Summary .....	9-7

## Figures

Figure ES.1: West Central Texas Region and Transit Provider Service Areas .....	ES-2
Figure 1.1: City of Abilene .....	1-3
Figure 1.2: WCT Region and Transit Provider Service Areas.....	1-5
Figure 2.1: WCT Transit Needs Index .....	2-2
Figure 5.1: Location of Candidate Sites.....	5-3
Figure 5.2: Candidate Sites Parcel Maps .....	5-3
Figure 5.3: Site Selection Zoning Map .....	5-10
Figure 5.4: Boundaries of Affected Planning Areas .....	5-14
Figure 5.5: Transit Enhancement Area .....	5-17
Figure 5.6: Sensitive Receptors .....	5-21
Figure 5.7: Access to Services .....	5-22
Figure 5.8: CityLink Bus Routes .....	5-27

# Table of Contents

---

Figure 5.9: 24-Hour Traffic Counts .....	5-31
Figure 5.10: Downtown Abilene TNI .....	5-34
Figure 6.1: Transit Enhancement Area .....	6-2
Figure 6.2: Example of Score “0” Excellent Condition .....	6-4
Figure 6.3: Example of Score “1” Good Condition .....	6-4
Figure 6.4: Example of Score “2” Fair Condition.....	6-5
Figure 6.5: Example of Score “3” Poor Condition .....	6-5
Figure 6.6: Walnut Street and East-West Block Faces between Pine and Walnut .....	6-6
Figure 6.7: North 2nd Street .....	6-6
Figure 6.8: North 3rd Street .....	6-7
Figure 6.9: North 4th Street .....	6-7
Figure 6.10: North 5th Street .....	6-8
Figure 6.11: North 6th Street .....	6-8
Figure 6.12: Mesquite Street .....	6-8
Figure 6.13: Plum Street .....	6-9
Figure 6.14: Ash Street .....	6-9
Figure 6.15: Treadaway Boulevard.....	6-10
Figure 8.1: Short-Term Job Creation .....	8-5
Figure 8.2: Long-Term Job Creation .....	8-6
Figure 8.3: Induced Job Creation.....	8-6
Figure 8.4: Parcels with Property from SoDA Plan.....	8-8
Figure 8.5: Travel Zones.....	8-10
Figure 8.6: Height-to-Width Ratio.....	8-11
Figure 8.7: Downtown Abilene TNI.....	8-12

## Tables

Table ES.1: Rural and Urban Passenger Peak Demand .....	ES-3
Table ES.2: Summary of West Central Texas Multimodal Facility .....	ES-3
Table ES.3: Transit Enhancement Capital Costs .....	ES-4
Table ES.4: Summary of Site Selection Criteria Ranking .....	ES-5
Table ES.5: Project Capital Costs .....	ES-5
Table 1.1: Top Ten Abilene Employers.....	1-4
Table 1.2: WCT Region Demography (2010 U.S. Census).....	1-6
Table 1.3: Abilene Demography.....	1-11
Table 1.4: CityLink Service Statistics.....	1-12
Table 1.5: CARR Service Statistics .....	1-13
Table 1.6: SPARTAN Service Statistics.....	1-14
Table 1.7: DMC Service Statistics.....	1-12
Table 2.1: TNI Weights .....	2-2
Table 2.2: WCT Region, Unlinked Trips per Capita .....	2-4
Table 2.3: Estimate of Peak Rural Demand for Multimodal Facility .....	2-6

# Table of Contents

---

Table 2.4: CityLink Estimated Transfer County and Passenger Demand..... 2-8

Table 2.5: Rural and Urban Passenger Peak Demand for Multimodal Facility ..... 2-8

Table 4.1: CityLink Vehicle Inventory ..... 4-4

Table 4.2: Estimated ICB Carrier Space Requirements ..... 4-8

Table 4.3: Administration and Operation Facility Program..... 4-8

Table 4.4: Maintenance Office and Facility..... 4-10

Table 4.5: Vehicle Storage..... 4-11

Table 4.6: Employee and Customer Parking..... 4-11

Table 4.7: Summary of West Central Texas Multimodal Facility Building Program..... 4-12

Table 5.1: Candidate Sites ..... 5-2

Table 5.2: Site Selection Criteria ..... 5-6

Table 5.3: Summary of Site Selection Criteria Ranking ..... 5-39

Table 6.1: Individual Pedestrian-Transit Element Scoring ..... 6-3

Table 7.1: Capital Cost of Multimodal Facility ..... 7-1

Table 7.2: Transit Enhancement Capital Costs ..... 7-2

Table 7.3: Transit Enhancement Cost per Corridor ..... 7-3

Table 7.4: Project Capital Costs..... 7-3

Table 8.1: Benefit Cost Analysis Overview..... 8-2

Table 8.2: Recommended and Programmed Maintenance Components ..... 8-4

Table 8.3: Estimated Property Tax Redevelopment Incremental Revenue..... 8-7

Table 8.4: Summary of PLOS Rankings..... 8-13

Table 8.5: Average Existing Conditions PLOS Ranking within Corridor ..... 8-14

Table 8.6: Pedestrian LOS Adjustment Factors on Bus LOS ..... 8-14

Table 8.7: Ridership and Removed Vehicle Trip Increases..... 8-15

Table 8.8: VMT and Cold Start Reductions from Increased Pedestrian Activity ..... 8-16

Table 8.9: VMT Reductions from Increased Transit Ridership & Pedestrian Activity ..... 8-16

Table 8.10: Emission Reductions from Transit Activity..... 8-17

Table 8.11: Emission Reductions from Pedestrian Activity ..... 8-17

Table 8.12: Summary Daily Emission Reductions ..... 8-17

Table 9.1: Project Capital Costs..... 9-1

Table 9.2: Five-Year Project Implementation Schedule ..... 9-2

Table 9.3: Funding Strategy Summary ..... 9-7

*This project was funded in part through the Federal Transit Administration. The contents of this report reflect the analysis of The Goodman Corporation which is responsible for the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Transit Administration.*

# EXECUTIVE SUMMARY

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City and Rural Rides (CARR) conducted a feasibility study to determine how a multimodal facility could help urban and rural transit providers better serve their passengers and operate more efficiently. The proposed West Central Texas Multimodal Facility will be located in Abilene, Texas, and will be the home of Abilene’s municipal transit agency, CityLink, and provide a satellite office for CARR and driver and passenger amenities for South Plains Community Action Agency (SPARTAN) and Double Mountain Coach (DMC). The facility will also house administration functions for the Abilene Metropolitan Planning Organization (Abilene MPO). (Figure ES.1)

This report includes a Transit Enhancement Master Plan. It identifies corridors within a half-mile of the proposed multimodal facility site and recommends sidewalk, lighting, shelter, and landscape capital improvements. These investments will enhance the area’s pedestrian environment, sense of place, safety and security.

## **PROJECT NEED**

The multimodal facility is needed due to the following:

- The lack of a common space where transit providers can coordinate trips and passenger transfers. Abilene is a common destination for medical and shopping trips for all the providers who travel to the city. The multimodal facility will serve to facilitate the coordination of trips within Abilene by creating a shared passenger waiting area for all providers’ passengers. The facility will also serve as a transfer location for trips that cross CityLink, CARR, SPARTAN, or DMC service boundaries.
- The poor condition of CityLink’s administration and operation facility. CityLink staff works within an overcrowded, aging building with significant deferred maintenance. A new facility would improve the working environment to support the growth of transit.
- The lack of an Abilene-based administration, operation, and maintenance facility large enough for CARR. Abilene is one of the primary destinations for CARR. Because of this, it maintains a small satellite office in the city where it stores between five and ten vehicles and houses some administrative staff. This satellite office is small and does not include any passenger or driver amenities. CARR maintains its vehicles using private providers, but would like to partner with CityLink for the maintenance and storage of its Abilene-based vehicles.
- The lack of an Abilene-based bus terminal that can support passenger and driver amenities for other rural providers operating in the Abilene area. SPARTAN and DMC travel to Abilene for medical, shopping, and other trips on a daily basis. While in

Abilene, there is no location where passengers can wait for their trips home and where drivers can coordinate pick-ups. The consequence of this is many medically fragile and/or elderly people sit on the bus for hours at a time. The proposed multimodal facility would provide a safe and comfortable location where these passengers can wait.

- The lack of a modern and conveniently located terminal for Greyhound Bus, the intercity provider. The Greyhound Bus has left its Abilene downtown terminal and now uses a convenience store parking lot to pick up and drop off passengers. This is likely a very low-cost option for Greyhound Bus, but it does not provide much driver or passenger support or package delivery capacity. Future inclusion of Greyhound Bus in the facility will be considered as a desired outcome.

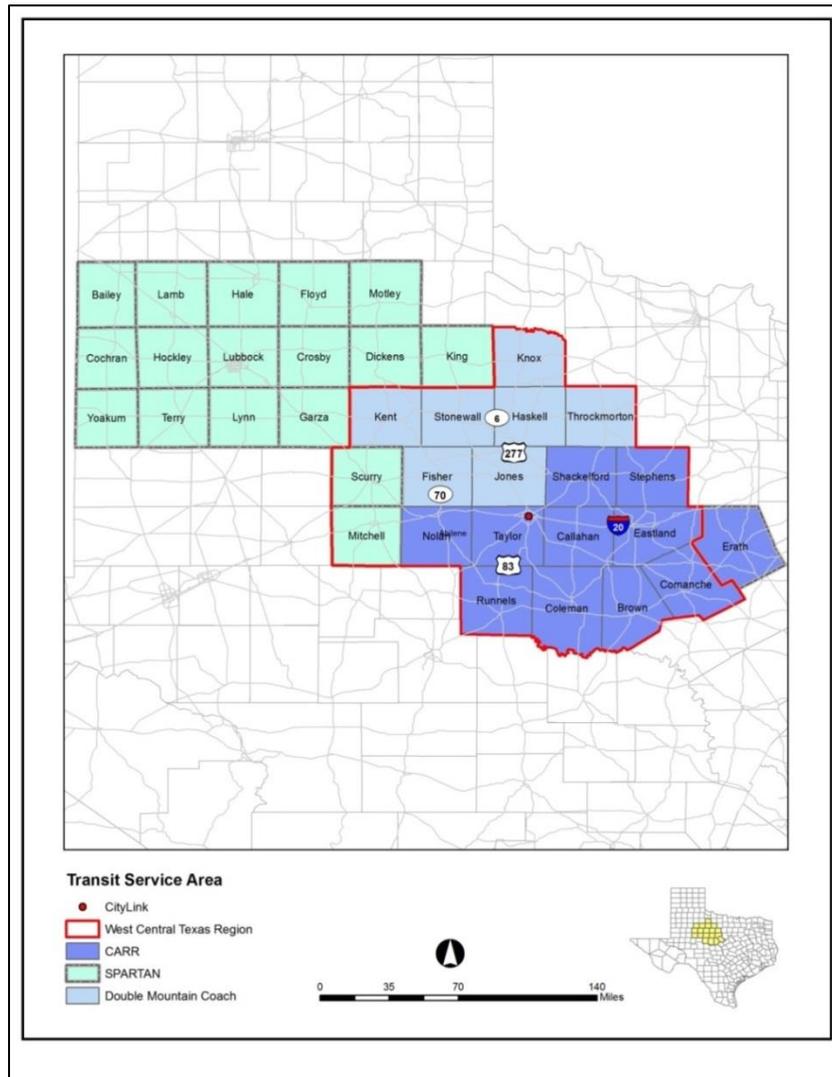


Figure ES.1: West Central Texas Region and Transit Provider Service Areas

## PASSENGER DEMAND

Abilene’s growth is estimated to be slower than the national or state rate. Because of this, the growth in passenger demand is expected to be low to moderate. Under existing conditions, the proposed multimodal facility will accommodate an estimated peak demand of 49 passengers. This demand represents passengers from CityLink, CARR, SPARTAN, and DMC. Increases to demand from population growth and the growth in elderly and/or transit dependent populations are expected to be low. (Table ES.1)

<b>Transit Provider</b>	<b>Estimated Peak Passenger Demand</b>
CityLink	24
CARR	10
SPARTAN	5
DMC	10
<b>Total</b>	<b>49</b>

## MULTIMODAL FACILITY BUILDING PLAN

The multimodal facility will provide administration and operation space for CityLink staff, CARR staff, and the Abilene MPO. It will include driver and passenger support space for CityLink, CARR, SPARTAN, and DMC. Space will provide for an intercity bus carrier (ICB) and common meeting and training rooms. In total, the administration and operations facility will be 11,965 square feet. The maintenance facility will be expanded to meet the added demand for an additional 10 to 15 CARR vehicles. The bays will be expanded from six to ten for general bays, from two to four for service bays, and from one to two for bus wash bays. Space for a maintenance office, supplies, parts storage, mechanic’s tool room, and break room will be expanded. Vehicle storage will expand to accommodate CARR vehicles. Vehicle staging for fixed route buses will be expected to remain the same. Parking will be increased for passengers, the public, and employees. In total, the program reflects an increase from approximately 67,154 square feet to 133,293 square feet. (Table ES.2)

<b>Type of Space</b>	<b>Current CityLink Facility (approx.)</b>	<b>WCT Multimodal Facility</b>
Admin Operations Facility	5,950	11,965
Maintenance Office	1,600	3,613
Maintenance Facility	10,350	23,040
Vehicle Staging	14,100	14,136
Vehicle Storage	26,000	42,120
Employee Parking	2,000	16,524
Customer Parking	3,000	6,075
Outdoor Public Area	NA	6,780
Sidewalks	2,510	6,780
Landscaping	1,644	2,260
<b>Total</b>	<b>67,154</b>	<b>133,293</b>

## TRANSIT ENHANCEMENT MASTER PLAN

The Transit Enhancement Master Plan (TE Master Plan) includes sidewalks, curbs, Americans with Disabilities Act (ADA)-compliant ramps, crosswalks, landscaping buffers between pedestrian and street, and pedestrian lighting within a half-mile of the recommended site. By having a TE Master Plan, along with an environmental clearance and inclusion in local and state planning documents, project sponsors will be positioned to respond quickly to funding opportunities. If federal guidelines are met, transit enhancements paid for locally can be eligible for 80 percent federal reimbursement or used as local share match for a project like the Multimodal Facility. In addition, project sponsors will be prepared to respond to calls for “shovel ready” projects. The TE Master Plan does not commit project sponsors to execute any or all of the recommendations; rather it gives sponsors flexibility to “capture the federal value” of any eligible improvements that are made. (Table ES.3)

<b>Program Element</b>	<b>No. of Units</b>	<b>Unit Cost</b>	<b>Total</b>
Square feet sidewalk improvements	136,337	\$ 5.25	\$ 715,769
Linear feet curb improvements	18,455	\$ 18.00	\$ 332,190
Total Number of Trees w/ Grates added	158	\$ 2,300.00	\$ 363,400
Amount of new Sod/Ground Cover	35,919	\$ 0.18	\$ 6,465
Number of pedestrian lights added	190	\$ 5,000.00	\$ 950,000
Number of crosswalks improved	61	\$ 200.00	\$ 12,200
Number of ADA ramps improved	116	\$ 900.00	\$ 104,400
Number of benches added	4	\$ 2,000.00	\$ 8,000
Number of waste cans added	4	\$ 600.00	\$ 2,400
Square feet concrete landing improvements	288	\$ 6.00	\$ 1,728
Square Feet of Driveway Bibs improved	9,956	\$ 7.10	\$ 70,690
Sidewalk Demolition Costs	32,126	\$ 0.53	\$ 17,027
Curb Demolition Costs	12,319	\$ 0.16	\$ 1,971
Driveway Demolition Costs	9,956	\$ 0.53	\$ 5,277
<b>Total Inventory (Linear Feet)</b>	<b>27,887</b>		<b>\$ 2,591,518</b>

## SITE SELECTION

A site selection committee was created and included staff from City of Abilene, CityLink, CARR, and the Abilene MPO. The committee initially considered 15 sites. Of these, nine were quickly eliminated due to obvious deficits or problems. The remaining six sites were ranked against 13 weighted criteria. The best performing site is located at Plum and North 4<sup>th</sup> Street. The Cherry and South 5<sup>th</sup> Street site and Cotton Warehouse site scored only slightly lower, by one and two points respectively.

Plum and North 4<sup>th</sup> Street ranked high in size, ease of acquisition, revitalization impact, compatibility with adopted plans, traffic impacts and accessibility. The site ranked low in the following categories: impact to sensitive receptors, zoning, and visibility. If this site is chosen,

management of project risks associated with these issues will be required. For example, public outreach to impacted businesses and neighborhoods may be needed to measure potential opposition to the project and project design may be needed to address expressed concerns. (Table ES.4)

		<b>CityLink</b>	<b>North Treadaway</b>	<b>Plum &amp; N 4th</b>	<b>Grape &amp; N 1st</b>	<b>Cherry &amp; S 5th</b>	<b>Cotton Warehouse</b>
<b>Criteria</b>	<b>Weight</b>	<b>Site 1</b>	<b>Site 2</b>	<b>Site 3</b>	<b>Site 4</b>	<b>Site 5</b>	<b>Site 6</b>
<b>Size</b>	2	4	8	12	2	12	6
<b>Zoning</b>	2	4	12	2	6	12	12
<b>Ease of Acquisition</b>	2	10	4	10	6	2	12
<b>Compatibility w/Adopted Plan</b>	2	2	12	4	10	8	6
<b>Revitalization Impact</b>	2	10	2	12	4	6	8
<b>Impact to Sensitive Receptors</b>	2	6	10	2	12	4	8
<b>Access to Services</b>	2	8	2	10	12	6	4
<b>Environmental Considerations</b>	2	10	4	10	2	12	6
<b>Traffic Impacts &amp; Accessibility</b>	2	4	2	12	6	12	12
<b>Impact to CityLink Routes</b>	1	6	1	4	2	3	4
<b>Impact Historical Structures</b>	1	4	5	2	3	6	1
<b>Pedestrian Access</b>	1	4	1	5	6	2	3
<b>Visibility</b>	1	1	5	3	6	2	4
<b>Total</b>		<b>73</b>	<b>68</b>	<b>88</b>	<b>77</b>	<b>87</b>	<b>86</b>

## PROJECT COST

Table ES.5 outlines the estimated capital costs. The West Central Texas Multimodal Facility capital and land costs are approximately \$9.6 million or 74 percent of the total program. The transit enhancements are \$3.4 million or 26 percent of the program. The maximum federal share is \$10.4 million and the minimum local share is \$2.6 million.

	<i>Capital Costs</i>	<i>Federal Share</i>	<i>Local Share</i>
WCT Multimodal Facility	\$9,600,000	\$7,680,000	\$1,920,000
Transit Enhancements	\$3,420,800	\$2,736,640	\$684,160
<b>Total</b>	<b>\$13,020,800</b>	<b>\$10,416,640</b>	<b>\$2,604,160</b>

## PROJECT BENEFITS

The West Central Texas Multimodal Facility will support greater transit coordination among the four agencies. Coordination will eliminate redundant trips, increase vehicle utilization, and allow agencies to provide services to more people. In addition to the coordination benefits, other benefits generated by the project include:

- **Ability to create short- and long-term jobs:** The project will create an estimated 104 short-term jobs, most of which will be in construction, and about 15 long-term jobs, which will include both new direct jobs such as maintenance and induced jobs from increased local expenditures.
- **Ability to stimulate development and increase property tax revenue:** A \$9.6 million investment in a new multimodal facility along with \$4.3 million in transit enhancements will create a more inviting environment for follow-on property development.
- **Improved pedestrian environment:** The proposed transit enhancements will increase the walkability, sense of place, and the safety and security for the impacted area.
- **Increased transit ridership and reduced emissions:** Ridership is expected to increase by nine riders daily due to improved pedestrian access to transit stops. This increase in transit ridership will reduce vehicle miles travelled by 108 miles daily, save \$14,200 in personal automobile costs, and reduce gas consumption by 1,200 gallons.

## RISK ASSESSMENT

The risks to the West Central Texas Multimodal Facility change depending on the project stage. At this time, the following risks were identified as posing a challenge to the project's success:

### *Simultaneous Development of Administration, Operations, and Maintenance*

This study reviews the feasibility of simultaneous redevelopment of the administration, operations, and maintenance facilities. Tackling all three components simultaneously increases the amount of capital that must be raised and the property that must be acquired. Furthermore, finding an acceptable location close to downtown for both operations/administration and maintenance may be difficult as maintenance and vehicle storage are more likely to raise concerns from adjacent property owners. For the recommended site at Plum and North 4<sup>th</sup>, vehicle maintenance and storage may be perceived as an unsuitable use for the redevelopment of the Warehouse District.

### *No intercity bus carrier*

ICB funds have played a big part in funding terminals in small urban and rural areas. These funds are managed by TxDOT and are usually given to ICB carriers. If an ICB will be using a

planned facility, then the project is eligible to apply for ICB funds for its construction. At the time of this report, Greyhound Bus (the ICB in Abilene) has relocated its passenger pick-up to a convenience store that is on its route. This is likely a very low-cost option for Greyhound. In order to attract the ICB to the new project, very attractive pricing and/or terms would likely be needed. If an ICB were not a partner in the multimodal facility, the project would not be eligible for this category of funding.

### ***Change in federal discretionary funding policy***

The 2013-2014 transportation authorization is called Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21). This authorization eliminates some discretionary capital programs and focuses more on formula funding. Discretionary funding is substantially limited and competitive. In order to effectively compete for the funding, the project will need to generate a good cost/benefit ratio and/or represent significant local match. Given the size and cost of the building program, a competitive return on investment may be hard to achieve.

### ***Lack of project consensus and vision***

For the project to succeed, a local consensus to prioritize the project will be required. Strong stakeholder support from key players will be needed to both raise funds locally and compete for federal funds. Future visioning of the re-development benefits that can stem from the multimodal facility is needed to excite the community and gain support. For example, this project can play a key role in realizing the Warehouse District improvements described in the South Downtown Abilene (SoDA) plan. By focusing on the synergy between these two plans, a common goal is created for project supporters and the community to rally behind.



# CHAPTER ONE: BACKGROUND

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## INTRODUCTION

In January 2012, City and Rural Rides (CARR) began a feasibility study for a multimodal facility that would be used by rural, urban, and intercity transit providers. The proposed facility would be located in Abilene, Texas, because it is an operation hub for both municipal and regional transit providers. It will be the home of the Abilene municipal transit agency, CityLink, and provide a support base for rural transit agencies CARR, South Plains Community Action Agency (SPARTAN), and Double Mountain Coach (DMC) when they are in Abilene. The facility will also provide for the potential use by intercity bus (ICB) providers. This report outlines the passenger demand, transit provider assessment, building program, site selection, budget, and benefits analysis for the West Central Texas Multimodal Facility.

This report establishes a Transit Enhancement (TE) Master Plan that links the multimodal facility to the surrounding land uses by improving the pedestrian corridor with recommended sidewalk, lighting, shelter, and landscaping enhancements. The TE Master Plan will increase the walkability, safety and security, and economic attractiveness of the improved area. The TE Master Plan includes a corridor inventory, capital cost estimate, and benefits analysis.

## MULTIMODAL FACILITY NEED

Currently, there is no multimodal facility serving the West Central Texas (WCT) region. ICB carriers, rural transportation providers, and municipal transit services are each staged from different facilities with little to no coordination. This lack of coordination is wasteful as redundant services or capital assets require more financial resources to maintain. Coordination can eliminate redundant costs and increase financial performance while maintaining or improving service. In addition, the need for the multimodal facility is based upon the following transit provider needs:

- The deteriorating condition of the CityLink administration and operation facility. CityLink is overcrowded in an aging building with significant deferred maintenance. According to staff, the roof leaks, the building has termites, and restrooms are too few and small to meet the needs of the administration and operations staff. Office space is shared between managers, leaving little space for private communication. In some instances, hall space and common areas have been converted into offices. Some interior hallways and doorways are narrow and do not meet ADA requirements. A new facility would provide a better working environment to support the growth of Abilene transit.

- The lack of an Abilene-based administration, operation, and maintenance facility that is big enough to meet the needs of CARR. Abilene is one of the primary destinations for CARR. Because of this, it maintains a small satellite office in the city where it stores between five and ten vehicles and houses some administrative staff. Currently, CARR maintains its vehicles using private providers but would like to partner with CityLink for the maintenance of its Abilene-based vehicles. Since 1998, CARR has experienced considerable growth when it became a separate organization and later when it assumed the lead role in providing and brokering non-emergency medical transportation (NEMT) for the region. CARR requires a larger facility to manage its operations, to maintain and store its vehicles, and to support its passengers in the Abilene area.
- The lack of a suitable central location to host passenger and driver amenities for other rural providers operating in the Abilene area. SPARTAN and DMC travel to Abilene for medical, shopping, and other trips on a daily basis. While in Abilene, there is no location where passengers can wait for their trips home and drivers can coordinate pick-ups. The consequence of this is many medically fragile and/or elderly people wait on the bus for hours at a time. The proposed multimodal facility would provide a safe and comfortable location where these passengers can wait.
- The lack of an ICB terminal. According to the Texas Department of Transportation (TxDOT) ICB Inventory, the ICB station located in downtown Abilene was over 30 years old and in need of repair. The ICB provider, Greyhound, has since moved out of the building and now uses a convenience store parking lot on Texas State Highway 351 for its pick-ups and drop-offs. This is a very economical approach for Greyhound and one that it may not wish to change. However, the ability to accommodate ICB providers in the future is a desired outcome for the multimodal facility plan.

## **PREVIOUS STUDIES**

In 2002, the City of Abilene completed a multimodal feasibility study. The study identified a preferred site that would support both facility program requirements and downtown redevelopment initiatives. However, the project was never implemented. Concerns raised by local historic preservation advocates as to the significance of the preferred site proved too controversial to overcome and the project was postponed. Interest would not gain traction again until development of the West Central Texas Regional Transit Coordination Plan in 2006. In this report, “Lack of a Multimodal Facility in the West Central Texas Regional”, the absence of a multimodal facility is the key obstacle to coordination.

The plan cited several advantages of a multimodal facility in Abilene including: providing a convenient transfer location for all public transportation service providers; creating an opportunity for greater inter-agency collaboration and coordination; reducing social service

and/or medical service costs by facilitating a single pick up point for clients/patients; and incorporating joint uses that serve public interests. In response to this need, CARR secured funding through the 2011 TxDOT Coordinated Call to complete a new multimodal facility feasibility study.

## BACKGROUND

### *Connectivity*

Interstate Highway 20, State Highway 36, and US Highways 80, 83, 84, and 277 provide roadway connections into Abilene, while east-west rail tracks split the city center. As the only urban area within the WCT region, Abilene serves as a major destination for rural communities across more than nineteen counties. The closest neighboring major cities are Fort Worth (150 miles) and Midland-Odessa (170 miles). Abilene is also connected through the Abilene Regional Airport, where commercial flights are operated by American Eagle.

### *Employment*

The arrival of railroads in January 1881 attracted hundreds of people to Abilene. Under the auspices of a “Future Great City of West Texas,” town lots were quickly purchased for new businesses and other establishments, and by March 1881, the City of Abilene was officially founded. Two years later Abilene became the seat of Taylor County. Over the past 100 years, Abilene has transformed from an exclusively agricultural-based economy to one that includes oil, commerce, service, and light manufacturing.<sup>1</sup>

Today, principal employment sectors include education, construction, health and social services, and public administration. Major employers are dominated by federal, state, and local institutions, as well as education and medical facilities. Of great importance to the region’s transit operators is Abilene’s role as a medical services hub. In Abilene, two of the ten largest employers are healthcare providers. It is the concentration of medical services, along with the



Figure 1.1: City of Abilene

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<sup>1</sup><http://www.abilenetx.com/About/history.htm>

region's growing senior population, that drives much of the demand for transit services. See Table 1.1.<sup>2</sup>

<b>Table 1.1: Top Ten Abilene Employers</b>		
<b>Employer</b>	<b>Sector</b>	<b>Employees</b>
<b>Dyess Air Force base</b>	Defense Military/Civilian	5,919
<b>Hendrick Health System</b>	Health Care	2,800
<b>Abilene ISD</b>	Education	2,579
<b>Abilene State Supporting Living Center</b>	School for Disabled	1,539
<b>Texas Department of Criminal Justice</b>	Correctional Facility	1,253
<b>BlueCross BlueShield of Texas</b>	Claims Center	1,200
<b>City of Abilene</b>	Government	1,160
<b>Abilene Christian University</b>	Education	833
<b>Abilene Regional Medical Center</b>	Health Care	805
<b>Taylor County</b>	Government	548

### ***Population***

The City of Abilene is the county seat of Taylor County and sits at the heart of sparsely populated West Central Texas. The city covers 110.6 square miles and has a population of 117,063 people, or about 1,058 people per square mile. Taylor County covers 916 square miles and has a population of 131,506, or about 144 people per square mile. Similarly, the WCT planning region encompasses 19 counties and over 18,000 square miles. Excluding Abilene, the region has a population of 207,282 people, or about 12 people per square mile.<sup>3</sup>

### ***Transit Service Area***

The region is served by one urban provider within the city limits of Abilene, CityLink, and three rural providers, CARR, SPARTAN, and DMC. CARR is the rural operator for eleven counties, ten of which are located within the West Central Texas planning region; SPARTAN is the rural operator for 17 counties, two of which are in the WCT planning region; and DMC is the rural operator for seven counties in the West Central Texas planning region. See Figure 1.2.

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<sup>2</sup> Abilene Industrial Foundation, February 2011.

<sup>3</sup> American Factfinder. [www.factfinder.census.gov](http://www.factfinder.census.gov). Accessed December 20, 2004.

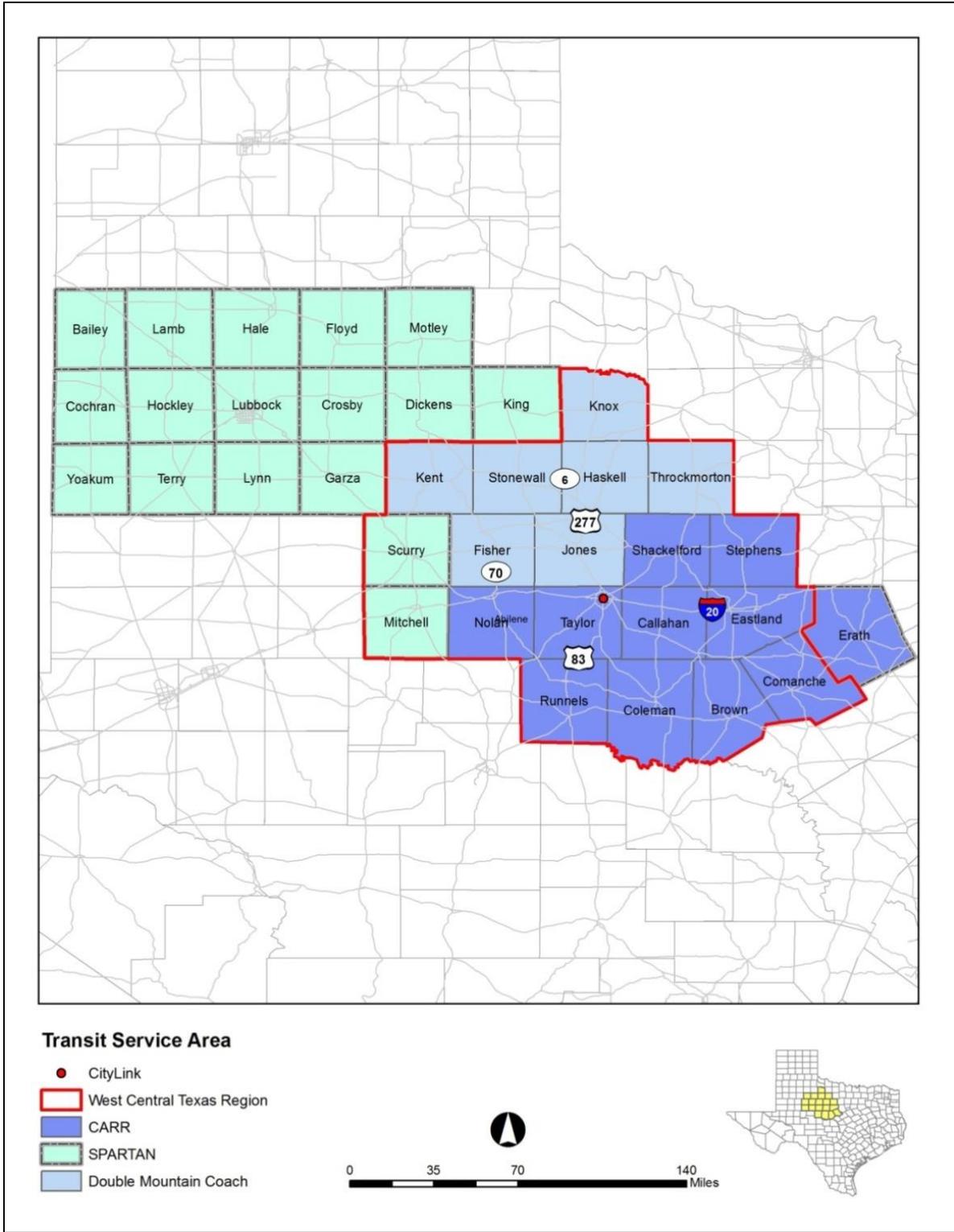


Figure 1.2: WCT Region and Transit Provider Service Areas

## Regional Profile

The WCT region is comprised of 19 counties. This largely rural area encompasses close to 18,000 square miles. A demographic analysis presented in the 2011 West Central Texas Regionally Coordinated Transportation Plan reports 13 counties experienced population decreases; population densities averaged less than one-quarter of the density compared to Texas' average of 96.3 (excluding Taylor County); 18 percent of the region is over 65; and 18 counties have lower than state average household median incomes (excluding Kent County). See Table 1.2.

	POP	POP Growth	POP Density	HH	Person Over 65 (pct)	HH with Zero Car (pct)	Persons 16-64 w/ Disability (pct)	Estimate per Capita Income
<b>Brown</b>	38,106	1.10	40.3	14,080	17.3	1.54	13	20,417
<b>Callahan</b>	13,544	5.00	15.1	5,093	18.2	3.33	11	22,103
<b>Coleman</b>	8,895	-3.70	7	3,534	21.7	1.88	12	16,458
<b>Comanche</b>	13,974	-0.40	14.9	5,433	20.9	1.46	15	18,438
<b>Eastland</b>	18,583	1.60	20.1	7,126	19.9	2.32	14	18,299
<b>Fisher</b>	3,974	-8.50	4.4	1,777	22.2	1.25	14	21,143
<b>Haskell</b>	5,899	-3.20	6.5	2,496	21.8	1.54	12	21,106
<b>Jones</b>	20,202	-2.80	21.8	6,156	13.7	2.66	10	15,847
<b>Kent</b>	808	-5.90	0.9	387	25.7	2.66	10	29,389
<b>Knox</b>	3,719	-12.60	4.4	1,670	21.2	1.27	10	22,887
<b>Mitchell</b>	9,403	-3.00	10.3	2,802	13.1	2.42	9	15,058
<b>Nolan</b>	15,216	-3.70	16.7	5,945	16.6	1.74	14	19,820
<b>Runnels</b>	10,501	-8.60	10	4,038	19.5	2.69	13	20,572
<b>Scurry</b>	16,921	3.40	18.7	5,966	14.1	2.72	10	20,062
<b>Shackelford</b>	3,378	2.30	3.7	1,227	17.4	0.88	10	21,357
<b>Stephens</b>	9,630	-0.50	5.5	3,658	18.2	2.78	14	19,248
<b>Stonewall</b>	1,490	-12.00	1.6	578	23.7	0.72	13	23,143
<b>Taylor</b>	131,506	3.90	143.6	48,968	13.2	1.96	11	21,581
<b>Throckmorton</b>	1,641	-11.30	1.8	738	24.6	2.50	11	20,075
<b>Total</b>	327,390	NA	NA	121,672	NA	NA	NA	NA
<b>Average</b>	NA	-3.10	18.28	NA	19.10	2.02	11.89	20,369
<b>Abilene</b>	117,063	1.00	1096	42,705	12.5	2.10	14.13	20,826
<b>Texas</b>	25,145,561	20.60	96.3	8,269,046	10.3	2.56	7	24,318

These demographic data sets point to a higher level of transit need. For example, an aging population, and more households without an automobile or a lower median income suggest a relatively higher transit need in the WCT region. Given this potential need, better coordination among providers may enable them to provide more service to their communities with a corresponding saving of administrative costs.

## COUNTY PROFILES<sup>4</sup>

**Brown County** is the second most populated county in the WCT region. With the second highest density in WCT, the city of Brownwood is a key attractor for adjacent communities. CARR provides countywide demand-response service and fixed schedule service to Abilene on Thursdays, depending on resource availability and demand. West Central Texas Area Agency on Aging (AAA) is responsible for coordinating transportation to and from area senior centers. Also, transportation funding is provided for qualified persons by the Department of Assistive and Rehabilitative Services (DARS), Division for Blind Services and Rehabilitation. Trip purposes include medical, shopping in Brownwood, and other purposes.

**Callahan County** is home to Clyde, the largest community in the county. Baird, the second largest community, is 21 miles east of Abilene. CARR provides countywide demand-response service and three daily trips from the county to Abilene. West Central Texas AAA is responsible for coordinating transportation to and from area senior centers. Transportation funding is provided to qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping in Abilene and Brownwood, medical, and other purposes.

**Coleman County** is located in the southern part of the WCT region. The closest urban area is Brownwood, only 30 miles from Coleman. CARR provides countywide demand-response service with frequent trips to Brownwood and Abilene. West Central Texas AAA is responsible for coordinating transportation to and from area senior centers. Coleman residents have transportation access for doctor visits and other special outings through Coleman Healthcare Center. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping in Abilene and Brownwood, medical, and other purposes.

**Comanche County** is in the east WCT region. The largest city is Comanche located 26 miles from Brownwood. CARR provides countywide demand-response service within Comanche County to Brownwood and Stephenville in Erath County. West Central Texas AAA is responsible for coordinating transportation to and from area senior centers. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Eastland County** borders Comanche County to the north. Local education institutions include Cisco College and Ranger College. Students attending these schools are a source of transit demand for the county. CARR provides countywide demand-response service with two trips each from Eastland County to Abilene and Brownwood. West Central Texas AAA is responsible

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<sup>4</sup> County profile information is taken from the West Central Texas Regionally Coordinated Transportation Plan, 2011

for coordinating transportation to and from area senior centers. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Fisher County** has experienced a population decrease since the last decennial. Countywide demand-response service with service to Abilene is provided by DMC. Transportation to senior centers is provided by Fisher County Senior Citizens and West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Haskell County** is located in north WCT region. Haskell is the largest community. Like Fisher County, its population has decreased since 2000. Countywide demand-response service with service to Abilene is provided by DMC. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Jones County** has experienced a population decrease since the last decennial. The largest city is Stamford. Countywide demand-response service with service to Abilene is provided by DMC. Of the seven counties served by DMC, Jones County encompasses an estimated fifty percent of its service area. The Abilene MPO helps to coordinate transportation planning functions for the county. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. A human services agency, Betty Hardwick Center, provides transportation to eligible recipients. Trip purposes include shopping, medical, and other purposes.

**Kent County** has the lowest population within the WCT region, with 808 residents reported in 2010. Countywide demand-response service with service to Abilene and Lubbock is provided by DMC. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Knox County** is the northern most county in WCT region and the furthest from any metropolitan area. The closest community is Munday, which is 76 miles from both Wichita Falls and Abilene. Countywide demand-response service with service to Abilene is provided by DMC. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Mitchell County** is in the southwest of the WCT region. SPARTAN provides countywide demand-response service with service to Sweetwater, Abilene, Big Spring, San Angelo, Midland, Odessa, and Lubbock. Transportation to senior centers is provided by West Central Texas AAA.

Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, as well as other purposes.

**Nolan County** is home to Texas State Technical College in Sweetwater, the largest community in the county. CARR provides countywide demand-response service with trips to Abilene. Transportation to Senior Centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping in Abilene, medical, and other purposes.

**Runnels County** is located in south central WCT region. CARR provides countywide demand-response service and three daily trips to San Angelo from Runnels. Two daily trips are scheduled to Abilene from Runnels. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. The Betty Hardwick Center provides transportation to eligible recipients. Trip purposes include shopping in Abilene and San Angelo, medical, and other purposes.

**Scurry County** borders Mitchell County to the north. SPARTAN provides countywide demand-response service with service to Sweetwater, Abilene, Big Spring, San Angelo, Midland, Odessa, and Lubbock. Transportation to senior centers is provided by West Central Texas AAA and Scurry County Senior Center. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping, medical, and other purposes.

**Shackelford County** is in east central WCT region. CARR provides countywide demand-response service with two trips to Abilene per day. Transportation to senior centers is provided by West Central Texas AAA. Shackelford County Community Services provide seniors transportation to medical appointments. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. The Betty Hardwick Center provides transportation to eligible recipients. Trip purposes include shopping in Abilene, medical, and other purposes.

**Stephens County** in east WCT region is home to Texas State Technical College in Breckenridge. CARR provides countywide demand-response service with two trips to Abilene per day. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. The Betty Hardwick Center provides transportation to eligible recipients. Trip purposes include shopping in Abilene, medical, and other purposes.

**Stonewall County** is west of Haskell County. The largest city, Aspermont, has a population of 871 people. Countywide demand-response service with service to Abilene is provided by DMC. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding

is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping in Abilene, medical, and other purposes.

**Taylor County** is the most populous of the region's counties. Important institutions include Hardin-Simmons University, McMurry University, Texas Tech University Health Science Center Abilene Campus, American Commercial College, Abilene Christian University, and campuses for Texas State Technical College and Cisco College. CARR provides demand-response service within rural Taylor County, providing daily connections to Abilene. Services originating in Abilene are provided by CityLink. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. The Betty Hardwick Center provides transportation to eligible recipients. Trip purposes include shopping in Abilene, medical, and other purposes.

**Throckmorton County** is on the northeastern edge of WCT region. Countywide demand-response service with service to Abilene is provided by DMC. Transportation to senior centers is provided by West Central Texas AAA. Transportation funding is provided for qualified persons by DARS Division for Blind Services and Rehabilitation. Trip purposes include shopping in Abilene, medical as well as other purposes.

## **ABILENE PROFILE**

Abilene is home to 117,063 people.<sup>5</sup> Compared to Texas, the data reflects a population that is slower growing, older, with a higher poverty rate and a lower median income. Excluding the growth rate, these demographic data indicate a higher need for public transportation. See Table 1.3.

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<sup>5</sup> 2010 U.S. Census

	<b>Abilene</b>	<b>Texas</b>
<b>Population, 2010</b>	117,063	25,145,561
<b>Population, percent change 2000 to 2010</b>	1.00%	20.60%
<b>Population, 2000</b>	115,930	20,851,820
<b>Persons under 5 years percent, 2010</b>	7.50%	7.70%
<b>Persons under 18 years, percent 2010</b>	23.40%	27.30%
<b>Persons 65 years and over, percent 2010</b>	12.50%	10.30%
<b>White persons, percent 2010</b>	75.50%	70.40%
<b>Black persons, percent 2010</b>	9.60%	11.80%
<b>American Indian and Alaska Native person, percent 2010</b>	0.70%	0.70%
<b>Asian persons, percent 2010</b>	1.70%	3.80%
<b>Native Hawaiian and Other Pacific Islander, percent 2010</b>	0.10%	0.10%
<b>Percent of Hispanic or Latino origin, percent 2010</b>	24.50%	37.60%
<b>Language other than English spoken at home</b>	15.60%	33.60%
<b>High School graduates, percent of persons age 25+</b>	81.50%	79.30%
<b>Bachelor's degree or higher, pct of persons age 25+</b>	22.40%	25.40%
<b>Mean travel time to work, workers 16+</b>	14.40%	24.70%
<b>Housing units, 2010</b>	37,783	9,977,436
<b>Persons per household, 2005-2009</b>	2.41	2.81
<b>Median household income, 2005-2009</b>	\$38,994	\$48,199
<b>People of all ages in poverty, percent, 2005-2009</b>	18%	16.80%
<b>Land area in square miles, 2010</b>	106.79	261,231.71
<b>Persons per square mile, 2010</b>	1,096	96

## **TRANSIT SERVICE PROVIDER PROFILES**

There are four transit service providers that operate within the nineteen counties of the WCT region. CityLink is the urban operator, and CARR, SPARTAN, and DMC are the rural operators.

### *CityLink*

CityLink is the public transit system for the City of Abilene. Available services include fixed route, Americans with Disabilities Act (ADA) complementary paratransit, and evening demand response. Fixed route and ADA paratransit services operate Monday through Friday, from 6:15 a.m. to 6:15 p.m. On Saturday, the service operates 6:30 a.m. to 6:15 p.m. service. Evening demand response service is available Monday through Saturday, from 6:15 p.m. to 12 a.m. and is supported in part by Job Access Reverse Commute (JARC) funds. A contract with CARR authorizes CityLink to provide all NEMT trips originating and ending within Abilene city limits. CityLink also coordinates trips



with the Abilene Senior Services and Betty Hardwick Center. Fares range from \$1.25 to \$2.25. CityLink’s transit fleet includes 20 buses and 25 vans.

**Service Statistics:** Table 1.4 reflects the service statistics for CityLink from FY 2008 to FY 2010. The data reflects a steady service – one that is not growing or shrinking significantly. Assuming a similar pattern in the future, the multimodal facility needs defined today should meet the needs of future operations as well. CityLink will be the core user of the proposed multimodal facility.

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
<b>No. of Fixed Route Trips</b>	480,575	476,924	459,750
<b>No. of Demand Response Trips</b>	102,079	104,497	82,500
<b>Population</b>	117,063	117,063	117,063
<b>Vehicle Miles</b>	1,031,870	1,036,820	1,031,288
<b>Vehicle Hours</b>	76,864	78,503	84,646
<b>Trips per Capita</b>	4.98	4.97	4.63
<b>Trips per Vehicle Mile</b>	0.56	0.56	0.53
<b>Trips per Vehicle Hour</b>	7.58	7.41	6.41

## ***RURAL TRANSIT SERVICE PROVIDERS***

### ***CARR***

CARR is a rural transit provider serving ten of the region’s 19 counties: Brown, Callahan, Coleman, Comanche, Eastland, Nolan, Runnels, Shackelford, Stephens, and Taylor County (excluding Abilene). CARR also serves Erath County, which is outside the WCT region.



CARR’s administrative and operations center is headquartered in the city of Coleman. CARR operates Monday through Friday, from 7:30 a.m. to 5:30 p.m. Brown County has extended JARC service hours Monday through Saturday, from 5:30 a.m. to 7:00 p.m. Trips must be scheduled one business day in advance. Fares start at \$1.00 and can reach over \$18.00, depending on trip distance. In an effort to reduce deadhead miles and hours, CARR strategically locates its vehicles throughout its service area, including five to ten vehicles in Abilene. Approximately 90 percent of all rural trips in WCT region are provided by CARR. Ridership in 2010 totaled 157,563 trips. Fifty percent were rural public trips, while less than 20 percent of trips were NEMT or other. CARR both brokers and provides service for the region’s NEMT program and coordinates transportation with various Health and Human agencies.

**Service Statistics:** Table 1.5 reflects CARR service statistics from FY 2008 to FY 2010. In 2010, CARR provided about 158,000 trips. The majority of its trips are for the rural public trips (90,097 trips or 57 percent). Medicaid trips represented 26,741 trips, or 17 percent. The remaining 40,725 trips, or 26 percent, include those for Head Start, Area Agency on Aging, and other contract services. CARR’s fleet is approximately 80 Type II and III vehicles. Its five-year goals include a multimodal facility in Abilene to facilitate coordination of services between itself and other transit providers. CARR is anticipated to be a primary user of the multimodal facility.

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
<b>No. of Fixed Route Trips</b>	NA	NA	NA
<b>No. of Demand Response Trips</b>	227,225	184,603	157,563
<b>Population</b>	184,925	184,925	184,925
<b>Vehicle Miles</b>	1,324,566	1,493,551	1,709,244
<b>Vehicle Hours</b>	70,504	76,655	87,599
<b>Trips per Capita</b>	1.23	1.00	0.85
<b>Trips per Vehicle Mile</b>	0.17	0.12	0.09
<b>Trips per Vehicle Hour</b>	3.22	2.41	1.80

### ***SPARTAN Public Transportation***

SPARTAN is the transportation division of South Plains Community Action Association, Inc. It provides services to 17 counties, two of which are located in the WCT region. Administration operations and vehicle maintenance are managed from the Levelland office. In addition to the headquarters, each county has a local operation center. SPARTAN provides traditional curb-to-curb demand response service (DMS) and door-to-door service upon request in Scurry and Mitchell counties. A modified DMS option includes schedule route service on shared-ride vehicles. This option does not deviate from a route/connection, but differs from a fixed route in that buses do not run all the time and flexible operating hours accommodate specific passenger schedules. DMS is also available to passengers with “standing reservations” for regular weekly activities such as trips to school or work. SPARTAN contracts with Citibus and CARR to provide NEMT trips in its region. Service is coordinated with CARR to provide trips and transfers from Sweetwater to Abilene, Big Spring, Midland, San Angelo, Odessa and Lubbock. SPARTAN also accepts trip request from DARS. SPARTAN’s total ridership was 116,399 in 2010. Sixty-seven percent of trips were rural based and 24 percent of all trips were NEMT. SPARTAN operates a fleet of 60 Type III, Type II Cutaways, and mini-vans which seat between 21 and 25 passengers.



**Service Statistics:** SPARTAN service statistics for FY 2008 to FY 2010 are reflected in Table 1.6. Compared with CityLink and CARR, SPARTAN provides fewer trips and is expected to be a secondary user of the proposed multimodal facility.

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
<b>No. of Fixed Route Trips</b>	NA	NA	NA
<b>No. of Demand Response Trips</b>	90,331	77,585	116,399
<b>Population</b>	145,716	145,716	145,716
<b>Vehicle Miles</b>	640,780	594,407	873,905
<b>Vehicle Hours</b>	31,580	27,753	42,138
<b>Trips per Capita</b>	0.39	0.4	0.80
<b>Trips per Vehicle Mile</b>	0.14	0.13	0.13
<b>Trips per Vehicle Hour</b>	2.86	2.80	2.76

***Aspermont Small Business Development Center, Inc. (DMC)***



DMC serves Kent, Fisher, Haskell, Jones, Throckmorton, Knox, and Stonewall counties in West Central Texas’ northwest region. All administrative and operations are based in its Aspermont office. The organization is represented by a Board of Directors, but is managed by an Executive Director. DMC employs a transportation director, a transit supervisor

and eight full or part-time operators. DMC provides demand response services Monday through Friday, from 8:00 a.m. to 5:00 p.m. Under a contract with CARR, DMC provides NEMT trips Monday through Saturday, from 5:30 a.m. to 7:00 p.m. Fares range from \$0.50 to \$5.00, depending on distance. In 2010, DMC’s ridership totaled 15,176, of which 41 percent represented NEMT trips. Travel to Abilene accounts for many of the general public transportation trips. DMC’s fleet consists of 16 vehicles that vary from 4- to 12-seat vehicles.

**Service Statistics:** DMC service statistics for FY2008 to FY2010 are reflected in Table 1.7. Like SPARTAN, DMC provides a relatively fewer trips compared to CARR and CityLink, and it is expected to be a secondary user of the proposed multimodal facility.

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
<b>No. of Fixed Route Trips</b>	NA	NA	NA
<b>No. of Demand Response Trips</b>	15,583	16,035	15,176
<b>Population</b>	39,887	39,887	39,887
<b>Vehicle Miles</b>	382,197	389,972	381,566
<b>Vehicle Hours</b>	16,246	14,526	13,565
<b>Trips per Capita</b>	0.39	0.4	0.38
<b>Trips per Vehicle Mile</b>	0.04	0.04	0.04
<b>Trips per Vehicle Hour</b>	0.96	1.10	1.12

# CHAPTER TWO: TRANSIT DEMAND

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## INTRODUCTION

The proposed West Central Texas Multimodal Facility is affected by three types of demand. First, demand can be characterized as passenger demand. Depending on the level of activity and schedules, the proposed multimodal facility would need to be sized to accommodate a reasonable estimation of the maximum number of simultaneous users (e.g. peak demand). Passenger demand is defined as the ridership that is expected when a given quantity of service is provided; if service levels are increased or decreased, the demand for the facility will likely change. Demand can include all services where a driver is acting on behalf of some other entity and can be broader than public transportation. For instance, demand for some services is restricted to eligible individuals (e.g. Medicaid, age, disability, or enrollment in a social services program). If the need for services provided for programs such as Medicaid change dramatically, the demand for the facility will likely be affected.

Second, demand can be characterized as transit service provider demand. Depending on the number of transit providers that will use the facility, the proposed multimodal facility would need to be designed to accommodate multiple administrative, passenger service, and transit operation functions. The multimodal facility will need to accommodate: the operations and administration of CityLink; a satellite administration office, vehicle storage, and limited maintenance for CARR; and limited driver and passenger facilities for SPARTAN and DMC.

Lastly, demand can include potential cooperative uses that could be incorporated into the facility through joint-development agreements. These uses could include administrative space for specific organizations such as the Abilene Metropolitan Planning Organization (Abilene MPO), community service organizations, and organizations or businesses that reflect transit-compatible uses. This chapter presents the passenger and carrier demand analysis. Chapter 3 reviews the feasibility of incorporating joint-development uses.

## TRANSIT NEEDS

There are 19 counties in the WCT region. A demographic analysis reported in the 2011 West Central Texas Regionally Coordinated Transportation Plan stated:

- 13 counties experienced population decreases;
- 18 percent of the region is over age 65;
- Two percent of households are without an automobile; and
- 18 counties have an average household median income lower than the state average.

### *Transit Needs Index*

The Transit Needs Index (TNI) is a tool to assess an area’s transit need. To calculate the TNI scores for the WCT region, data for population density, median household income, minority population, zero car households, senior population, and instances of disability was collected. Each of these factors was then weighted based on the impact to transit as seen within small Texas cities. See Table 2.1.

<b>Factor</b>	<b>Weights</b>
Population Density	1.00
Low Median HH Income	2.50
Minority Population	1.00
Zero Car Households	1.50
Senior Population	2.00
Workforce Disability	2.00

The TNI results for the WCT region are illustrated in Figure 2.1. Transit demand in the region can be broadly characterized as population driven with areas of high need coinciding with the location of a county’s largest community. For example, Nolan County demand is highest in the city of Sweetwater, Stephen County demand is highest is in the city of Breckenridge, Taylor County demand is highest in the city of Abilene, Runnels County demand is highest in the city of Ballinger, Brown County demand is highest in the cities of Brownwood and Early, and Comanche County demand is highest in the city of Comanche. Where demand is lowest, population density is very low.

The highest transit demand is reflected in Taylor County, largely driven by a higher population density than that of the region but also affected by a relatively higher incidence of households with less than median incomes, higher incidence of households with zero cars, and a higher incidence of individuals with disabilities. Relative to Abilene, transit demand is driven largely by population density and a higher percentage of seniors and individuals with disabilities.

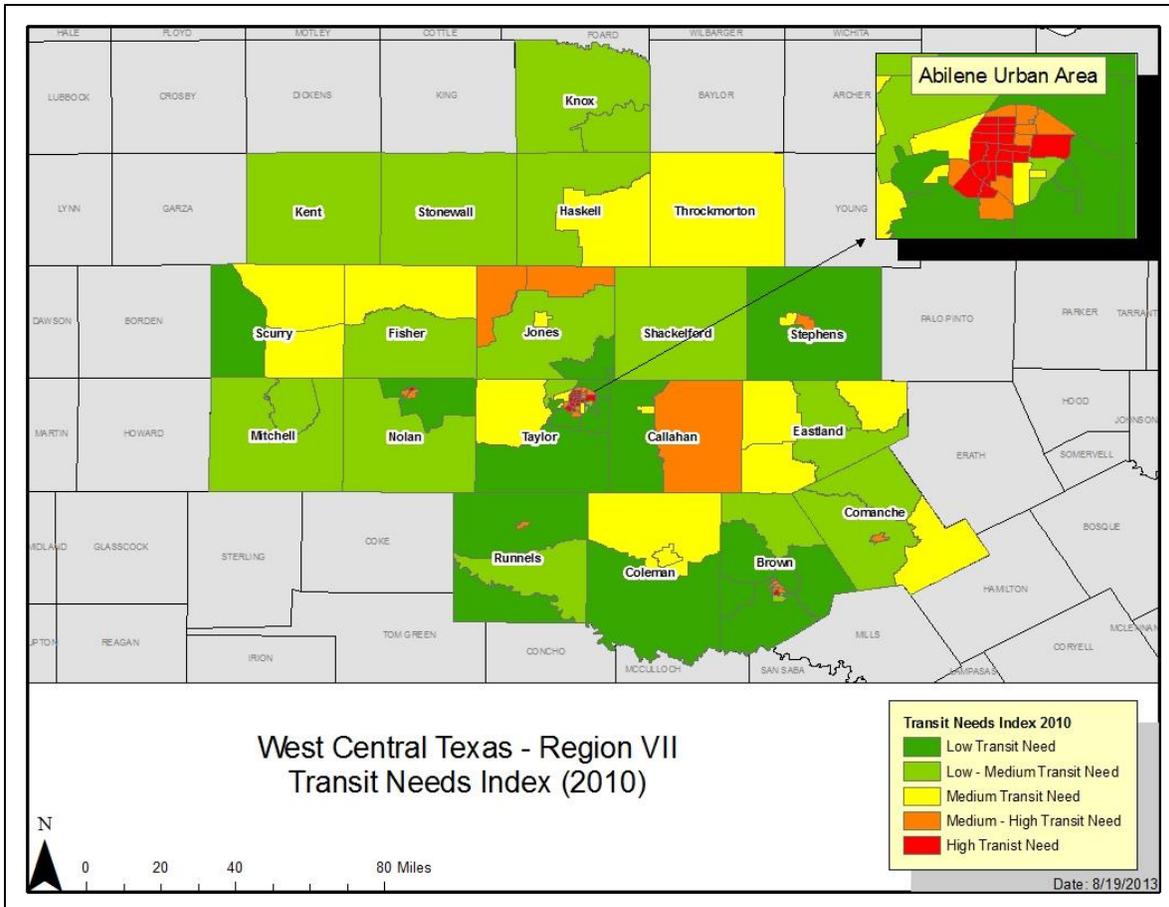


Figure 2.1: WCT Transit Needs Index

These demographic indicators reveal the level and the location of the need but they do not provide information about where people who depend on transit need to go. Typically, both the urban and rural transit agencies connect people with services that are located in the urban centers. All the rural providers travel to Abilene on a daily or weekly basis and CityLink provides both fixed route and ADA complementary paratransit in Abilene. Despite the fact that all four operators are working in the Abilene area, there is little to no coordination among them. This lack of coordination among providers is more costly and may negatively impact the level of service. Rural passengers could connect with multiple Abilene destinations through the CityLink bus system. A multimodal facility in Abilene would facilitate this coordination by providing a centralized hub for passenger transfers.

### ***Rural Demand Response Transit Gap***

The number of trips per capita is the number of trips compared to the area's population. This ratio is a simple and quick way to see if the number of trips being provided by CARR, SPARTAN, and DMC are more or less than those provided by peer systems. The number of trips included general public, NEMT, and contract services and was compared to peer systems

Panhandle Services/Amarillo, Heart of Texas Council of Governments/Waco, Concho Valley Rural Transit District/San Angelo, and West Texas Opportunities/Lamesa.

The analysis reflects fewer trips per capita in the WCT region compared to peer systems. The WCT rural providers delivered 0.61 trips per capita in 2009 and 0.72 trips per capita in 2010. By comparison, the peer group averaged 1.00 trips and 1.06 trips respectively.<sup>1</sup>

If the WCT region were to provide the same ratio of trips per capita, an additional 128,387 trips in FY 2009 and 110,548 trips in FY 2010 would have been delivered. See Table 2.2.

	<b>FY 2009</b>	<b>FY 2010</b>
<b>CARR</b>	0.85	0.97
<b>SPARTAN</b>	0.57	0.80
<b>DMC</b>	0.40	0.38
<b>Average</b>	0.61	0.72
<b>Peer Transit Providers</b>		
<b>Heart of Texas Council of Governments (Waco)</b>	0.33	0.32
<b>Concho Valley Council of Governments (San Angelo)</b>	1.45	1.48
<b>Panhandle Community Services (Amarillo)</b>	1.34	1.62
<b>West Texas Opportunities (Lamesa)</b>	0.89	0.81
<b>Average Peer Transit Providers</b>	1.00	1.06

Increasing in the number of passengers per trip is a potential benefit of the West Central Texas Multimodal Facility for rural providers operating in Abilene. The multimodal facility may improve service efficiency by supporting coordination of services for trips within Abilene and trips within the region. For example, one transit agency may provide a trip to the local supercenter, while another goes to the pharmacy and a third goes to the grocery store. In addition, the facility can serve as a transfer location for trips that cross service boundaries. For example, a trip and transfer for a rider from the CARR service area who needs to travel to Lubbock (SPARTAN service area) could be coordinated at the facility.

## **DEMAND FOR MULTIMODAL FACILITY**

### ***Rural Provider Facility Demand***

Passenger demand can be broadly characterized by peak demand and daily traffic flow. The maximum number of passengers to require service simultaneously, or peak demand, influences

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<sup>1</sup> Research by the Transportation Research Cooperative, “TRCP Project A-3: Rural Transit Demand Estimation Techniques,” posits four persons per capita as a reasonable maximum level of travel demand for highly rural areas. Four persons per capita are referred to as a maximum adequate demand level. One person per capita can be viewed as a minimum service level where basic demand is being met.



how large a facility should be. Daily traffic patterns, or how many passengers flow through the facility within any given period of time, also help define what joint development activities may be feasible. For example, a very high traffic facility that is busy throughout the day may be an attractive opportunity for some for-profit businesses.

For this report, the rural providers were asked for ridership data that would reflect the activity related to the facility. Common destinations for all the transit providers included medical facilities, doctors' offices, pharmacies, and shopping trips. Based on this data and interviews with service providers, the Abilene-centered activity for the region's rural providers reflects the following:

- CARR makes daily trips to Abilene. On average, it transports about 45 passengers and operates between 10 and 15 vehicles each day (three to five passengers per vehicle), either within or to Abilene. About 30 percent of trips both pick up and drop off within Abilene and are not expected to impact the need for a transit terminal.<sup>2</sup> CARR would use the facility to coordinate transfers of its passengers to CityLink, as well as to the other rural providers. For the purpose of planning, it is assumed that no more than two vehicles would be transferring at the same time.
- SPARTAN makes daily or weekly trips to Abilene, the primary destination for the southern portion of its service area. The morning vehicle typically departs at 9:00 a.m.



It travels from Snyder to Colorado City to Loraine to Sweetwater to Abilene with an estimated arrival time of 10:30 a.m. Depending on the demand, vehicles will travel

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<sup>2</sup>Other major origins for Abilene-destined trips are the cities of Clyde (14 percent of trips) and Sweetwater (10 percent). Based on CARR ridership data between August 1, 2011 and February 11, 2012.

between Abilene and Snyder and Colorado City for additional trips. Afternoon vehicles use the same route and arrive in the early afternoon. The passenger count is between one and five passengers. Typically drivers have a long layover in Abilene. The drivers and the passengers would use the multimodal facility as a resting place while they waited for other passengers to finish their trips. For the purpose of facility planning, it is assumed that one vehicle would use the facility in the morning and one vehicle would use it in the afternoon.

- DMC makes daily trips to Abilene. Typically, DMC takes four to five vehicles into Abilene each weekday and a single vehicle on Saturday for dialysis patients. Each vehicle transports between four and five passengers, departing for Abilene at 9:00 a.m. and returning home at 4:00 p.m. DMC does not transfer passengers between vehicles; each passenger leaves and returns on the same vehicle; consequently, there is a need for a comfortable waiting area for both passengers and drivers. For the purposes of facility planning, it is assumed that two vehicles would use the facility simultaneously.

Based on the following, the estimated peak demand for the multimodal facility is five drivers and 25 passengers for rural-based services. See Table 2.3.

	<b>Passengers</b>	<b>Drivers / Vehicles</b>	<b>Total Persons</b>
<b>CARR</b>	10	2	12
<b>SPARTAN</b>	5	1	6
<b>DMC</b>	10	2	12
<b>Total</b>	25	5	30

### ***Urban Provider Facility Demand***

Unlike the rural providers which operate a demand response service, CityLink operates a fixed route with complementary ADA paratransit service. Consequently, CityLink’s need for the multimodal facility is different from the rural providers. In addition to a waiting area for drivers and passengers, CityLink’s need includes administrative and operations functions. This section describes CityLink’s demand for passenger services within the multimodal facility.

**Methodology to Measure CityLink Passenger Demand:** CityLink is a pulse system so multiple routes converge at the passenger terminal simultaneously. With the exception of the downtown trolley which operates on 30-minute headway, all routes operate on a one-hour headway and connect at the CityLink transfer station. Routes pulse according to the following schedule:

- Routes 5 and 8 pulse on the hour (example, 7:00 a.m.)
- Routes 1, 2, 6, 7, 9, 10, and 12 pulse at quarter past the hour (example, 7:15 a.m.)
- Routes 3, 11, and 13, pulse at a quarter to the hour (example, 7:45 a.m.)

Much of CityLink’s passenger demand is “bursty” with a relatively higher number of passengers concentrating demand during short transfer periods. For example, it is estimated that 50 percent of CityLink passengers will transfer between routes. Some of these passengers will catch a bus that is pulsing at the same time. In that case, passengers will be at the terminal for a very short transfer time (less than five minutes) and do not represent a significant demand on the facility. Other passengers will wait for buses that will pulse within 15 or 30 minutes. These passengers are more likely to represent a demand on the facility.

Based on FY 2010 National Transit Database (NTD) reporting, CityLink fixed route provides an average of 16.50 trips per hour. Some of these trips will connect passengers to their destination using only one route. Some of these trips will require that passengers transfer between routes. For purposes of this estimate, it was assumed that 50 percent of trips transfer between routes (or approximately eight passengers per hour). Transferring passengers were then assigned to each route and routes were then organized by pulse period. For each pulse period, an estimate of passengers who will wait between 15 and 30 minutes was calculated:

- Routes 5 and 8: For routes that pulse on the hour, it is estimated that 85 percent of the passengers will wait to transfer. That is, 11 out of 13 vehicles will pulse at the station within 15 to 30 minutes.
- Routes 1, 3, 11, and 13: For routes that pulse on the quarter to hour, it is estimated that 69 percent of passengers will wait to transfer. That is nine out of 13 vehicles will pulse at the station within 15 to 30 minutes.
- Routes 1, 2, 6, 7, 9, 10, and 12: For routes that pulse at quarter past the hour, it is estimated that 46 percent of passengers will wait to transfer. That is six out of 13 vehicles will pulse at the station within 15 to 30 minutes.

Using this methodology, the number of passengers who may use the passenger terminal was estimated. Based on these assumptions, the passenger transfer traffic will range from a low of 16 passengers to a high of 52 passengers. As mentioned, some of these passengers will transfer immediately while others may wait 15 to 30 minutes for the next bus or walk to their destination. Based on the number of routes that pulse during a time period, it is estimated that between 46 percent and 84 percent of passengers will wait 15 to 30 minutes to transfer between routes. This equates to 13 to 24 passengers which may use the terminal for its passenger amenities. See Table 2.4.

	<b>On the Hour</b>	<b>Quarter to Hour</b>	<b>Quarter Past Hour</b>
<b>Route 1 - Downtown Trolley</b>		4	4
<b>Route 2 – ACU/Wal-Mart NE</b>			8
<b>Route 3 – Radford Hills/Judge Ely</b>		8	
<b>Route 5 – S. 0Treadaway/Cisco</b>	8		
<b>Route 6 – Mall / ARMC</b>			8
<b>Route 7 – Barrow / Southwest</b>			8
<b>Route 8 – S. 14<sup>th</sup> / S. Clack</b>	8		
<b>Route 9 - Westgate</b>			8
<b>Route 10 – N. Willis</b>			8
<b>Route 11 – Grape / Mockingbird</b>		8	
<b>Route 12 – Hickory / Grape</b>			8
<b>Route 13 – Hickory / Pine</b>		8	
<b>Total</b>	16	28	52
<b>Percentage of Passengers Who Will Wait to Transfer within 15 to 30 minutes</b>			
	84%	67%	46%
<b>Estimated Passenger Demand for Multimodal Facility</b>			
	13	19	24

Based on this methodology, it is estimated that a maximum of 49 passengers (maximum 24 urban and 25 rural) would need to be accommodated simultaneously. This includes all passengers and transferring from CityLink as well as rural passengers.

	<b>Peak Passenger Demand</b>
<b>CityLink</b>	24
<b>CARR</b>	10
<b>SPARTAN</b>	5
<b>DMC</b>	10
<b>Total</b>	<b>49</b>

**Potential Change to Demand from Demography:** The estimate reflected in Table 2.5 represents the daily peak passenger demand under current conditions. The long-range population growth estimate for Abilene and the WCT region is modest. Consequently, the population-driven demand for the multimodal facility is not anticipated to change significantly.

However, there is a trend that points to a small but growing need. Within the WCT region, over 19 percent of the population is over age 65, compared with 12.5 percent for Abilene, and 10.3 percent for Texas. Moreover, an estimated 14 percent of the elderly population lives below the poverty level (or estimated 2,206 individuals). These populations tend to be transit dependent and rely on services provided by organizations like CityLink, CARR, SPARTAN, and DMC. Assuming that the elderly population will continue to grow in regions like WCT where the cost of living is lower and the climate is relatively mild, this trend points to a continued need for transit facilities, and especially ones that provide amenities for the elderly.

**Potential Changes to Demand/Operations Influences:** Changes to operations and service delivery may change demand for a multimodal facility. One opportunity presented by the multimodal facility is the consolidation of trips, using the terminal as a collection/dispersion point for passengers. CityLink has the capacity on its fixed route system to provide connections to many high-demand destinations like retail supercenters and grocery stores. Rural providers who use the multimodal facility would be able to more easily transfer passengers to these CityLink routes. By encouraging the use of the fixed route, rural vehicles will be more available to deliver trips that are off the fixed route system or within the region. Based on interviews with rural service providers, there is an interest in using the CityLink fixed route system:

- CARR would like to use the facility to better coordinate with CityLink. In addition, CARR is interested in coordination with other rural providers, and it would like to improve connectivity between urban and rural trips. For example, trips originating in Abilene and travelling to Buffalo Gap.
- SPARTAN has expressed interest in coordinating shopping and other types of trips within Abilene with other rural providers and/or CityLink. The providers would use the facility as an organizing location. However, SPARTAN does not anticipate it will begin transferring any of its passengers for regional trips; the organization plans to continue door-to-door service since many of its passengers are elderly and/or medically fragile.
- DMC has expressed interest in the coordination of local trips within Abilene. Like SPARTAN, it does not anticipate it will begin transferring any of its passengers for regional trips.

**Potential Changes to Demand/Carrier Influences:** The needs reflected in this report could differ if there are significant changes to the operations of the partners. For example:

- CityLink's fixed route system is organized as a pulse system, but it may incrementally transform into a network. In the long-term, this transformation would affect the number of bus slips needed to simultaneously accommodate CityLink vehicles and the number of passengers that may use the terminal.
- Rural transportation systems differ from urban-based systems in that they may be more heavily influenced by passenger demand stemming from program-related activities. For example, 17 percent of CARR's service in FY 2010 was in support of NEMT. Medicaid contracts represent 41 percent of CARR's revenue. Therefore, one change that could have far-reaching effects for CARR would be the loss of the Medicaid contract. It would result in a decrease in its passenger demand, as well as eliminate a significant source of revenue, which it currently uses to fund its programs. If this change were to incur, CARR's ability to maintain a satellite office may be challenged.

## **CONCLUSION**

Abilene sits in the heart of the WCT region. The city's and region's growth, while expected to continue, is estimated to be at slower pace than the national or state rate. Because of this, the growth in passenger demand is expected to be low to moderate. The proposed multimodal facility will need to accommodate an estimated peak demand of 49 passengers. Increases to demand from population growth and the growth in elderly and/or transit dependent populations are expected to be low.

# CHAPTER THREE: JOINT DEVELOPMENT ASSESSMENT

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## INTRODUCTION

Local government officials are seeking new approaches to land use and development that will address environmental impacts of increased automobile traffic and loss of open space and alleviate financial pressures on governments and their constituents. Among these approaches is Transit-Oriented Development (TOD), which emphasizes that where transit facilities are in place, or planned to be put in place. For TODs, there should be a mix of commercial, retail, residential, and civic uses that are within close proximity to the facilities and are designed for the best possible interface.

Closely related to TOD is Transit Joint Development (TJD). While the distinction between the two is not always clear, in general their differences lie with scale. TOD generally encompasses a larger neighborhood area, while TJD tends to be project-specific and tied to a single real estate development. Regardless of the approach, when public and private interests work together, they can both benefit through a sharing of costs and benefits.

The Federal Transit Administration (FTA) defines joint development as “any income-producing activity with a transit nexus related to a real estate asset in which FTA has an interest.” TJD projects can be commercial, residential, industrial, or mixed-use and can be developed by public, private, for-profit, or non-profit entities. However, in order to qualify for FTA funds, these activities must retain some transit orientation. Nutritional centers that serve transit-dependent seniors, childcare facilities that serve parents who are dependent on the bus, and coffee shops or cafés that attract riders to the facility are all examples of joint-development projects that meet the transit-related criterion.

TOD and TJD stimulate economic returns in at least the following four ways:

- First, both TOD and TJD may increase property values located in the vicinity of the transit investment. If privately held, these increased values may generate added property tax in the years following the initial investment.
- Second, both TOD and TJD can earn returns through additional sales tax. Regardless of whether the property is publicly or privately owned, TOD and TJD can attract new and/or stimulate existing retail businesses. These businesses, in turn, generate higher sales tax.
- Third, another source of support would be parking revenue. Transit facilities may incorporate for-profit parking and then use these revenues to offset other transit costs.

- Fourth, another tool to generate economic value is leasing. Property developed by transit authorities with FTA funding can be leased to other interests for a fair and equitable return.

TJD and TOD, like all development, are affected by the economic climate. When jobs are plentiful, production and productivity high, and interest rates low, developers of all types are more likely to invest in projects now in the hopes of future gain. Regardless of the economic climate, high-risk projects (large capital investment with pay-offs far in the future) are more sensitive to timing and risk and are more difficult to achieve than low-risk projects (low capital investment with pay-offs in the near term). Likewise, privately-funded projects are more sensitive than government-sponsored projects. The inclusion of federal funding to build infrastructure reduces the risk of private investment and increases the chance of successful related development. Large TJD and TOD projects that are developed incrementally over the years by multiple sponsors represents a lower risk approach than a “clean slate” approach, where a single project sponsor must bear the full cost of project.

The following section discusses the general regional and local economic context and how it may impact the success of a TOD or TJD. The next section presents an analysis of TJD and TOD options and provides recommendations of which uses, if any, should be incorporated into the facility for the preferred site alternative.

## **JOINT DEVELOPMENT IN THE MULTIMODAL FACILITY**

Regional and local economic context, market conditions for proposed uses, and the characteristics of the project site all influence the decision about which uses, if any, should be targeted under a TOD or TJD initiative.

### ***Abilene Economic Context***

From 2010 to 2011, Abilene non-agricultural employment fell over five percent to 62,100 jobs. By comparison, the employment base in Texas grew by two percent and the U.S. base grew by almost two percent. However, Abilene reflects a lower unemployment rate compared to the rest of the state; in April 2012, Abilene’s unemployment rate was 5.7 percent compared to the state’s unemployment rate of 6.9 percent.

- **Average Wages / Average Wage Growth:** Average hourly wages for Abilene in 2011 were \$16.72 per hour compared to the state average of \$20.30, or about 21 percent below the state average.
- **Gross Retail Sales:** The average gross retail sales per capita for Abilene in 2010 was \$13,288 and was comparable to the state average of \$15,110. New retail activity

continues to concentrate along Hwy 20 with national “big box” retailers, restaurants, hotels, and shopping centers all recent additions to this area.

- **Cost of Living:** It costs about 17 percent less to live in Abilene than compared to the national average (82.90 percent).

The slow rate of growth for the Abilene economy points to a joint development strategy that is based on identified and not speculative uses.

### *Site Characteristics*

The recommended site is located west of downtown at 4<sup>th</sup> Street and North Plum. The surrounding land uses are Light Industrial, Heavy Commercial, and Multifamily. The average cost per square foot is approximately \$1.23.<sup>1</sup> By comparison, downtown average cost per square foot ranges from \$2.77 to over \$25.00 per square foot. The relatively inexpensive land costs may make joint development a more economically feasible alternative for an organization that would benefit from locating close to downtown and in connection to a transit facility. A nonprofit organization, such as the Abilene Aging and Disability Resource Center (ADRC), is an example of an organization that reflects a “transit nexus” and is compatible with the proposed facility. Similarly, a governmental organization, such as the Abilene MPO, would benefit from co-locating with the transit provider yet remaining close to other downtown city offices.

The traffic counts for surrounding streets are low (up to 1,200) compared with many downtown streets (2,500 to over 9,000).<sup>2</sup> The relatively low traffic count would not appeal to retail which typically locates in areas with a high traffic count and good visibility. Likewise, the estimated transit traffic flow through the facility itself is not high enough to support retail businesses.

The SoDA Plan calls this area the Warehouse District and recommends future development of “mixed-use center of offices, storage, general warehousing, institutions, lodging (if market conditions support), art incubation/production/classes, upper floor loft housing and dining establishments (located close to the historic downtown area).”

## **SUMMARY**

TJD/TOD efforts should largely be based on identified demand with a modest amount of speculative commercial development. TJD uses that have been suggested for the West Central Texas Multimodal Facility includes office space for compatible organizations such as the ADRC and the Abilene MPO. These organizations reflect a “transit-nexus” and are compatible uses with the proposed facility.

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<sup>1</sup> Master Plan for South Downtown Abilene. May 2010

<sup>2</sup> Texas Department of Transportation, Traffic Counts 2010



# CHAPTER FOUR: PROVIDER NEEDS ASSESSMENT & BUILDING PROGRAM

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## INTRODUCTION

This chapter outlines the needs for each of the transit providers and the resulting building program for small urban transit provider CityLink; rural transit providers CARR, SPARTAN, and DMC; joint development partners, Abilene MPO; and speculative space to accommodate an ICB carrier.

## CITYLINK NEEDS ASSESSMENT

The following section contains a description of the characteristics of CityLink. For each characteristic, potential changes that may affect the facility needs are noted. CityLink is currently in a 16,600 square foot building. It houses administration, operations, passenger amenities, and maintenance functions.



### *Type of Service*

**Description:** CityLink operates 12 fixed routes, complementary ADA paratransit, and an evening demand response. CityLink is also a NEMT sub-contractor under CARR for Abilene-based non-emergency medical trips. CityLink operates a pulse system. Currently, a maximum of seven vehicles pulse simultaneously. These vehicles will need bus slips at the passenger transfer center.

**Notes for Facility Planning:** Route changes could affect the number of vehicles that may need to be simultaneously accommodated during pulse periods. A new facility would need to have space for at least seven CityLink vehicles. A move from a pulse system to a network system may reduce the number of vehicles that would need to be accommodated simultaneously. Alternatively, the system could be expanded or the scheduled changed resulting in the need for more than seven bus slips. Site planning for the facility should consider a modest expansion of the number of bus slips to accommodate vehicles.

### *Administrative Staff*

**Description:** CityLink maintains a staff of 72 to 74 people. Administrative staff includes a general manager, office manager, grants/procurement manager, administrative assistant, safety

and training manager, and safety and training assistant (position unfilled). Currently, offices for the office manager and administrative assistant are shared with the reception area. The safety training manager and assistant work in a hallway that leads to the maintenance area. Offices for the grants and procurement manager are small. There is no dedicated space for mail, copy, or other paperwork tasks. Storage and file space is minimal. Administrative restrooms have one stall each and the restrooms are shared with drivers. In general, hallways are narrow and do not allow for good circulation. Parts of the facility are not ADA-compliant.

**Notes for Facility Planning:** For facility planning purposes, most administrative staff members who currently share office space are given their own office. No specific staffing changes are noted, however, unassigned office space for two additional administrative positions has been included to account for growth. A small reception area has been programmed, along with file, storage, and copy/mail rooms. Administrative restrooms have been expanded to four stalls in each unit.

### *Operations Staff*

**Description:** Fixed route operations staff includes a supervisor, three dispatch personnel, and 20 operators. Demand response operations include a supervisor, five dispatch personnel, and 21 operators. For the evening service, there is one supervisor, one dispatcher, and eight operators. Currently, fixed route and demand response supervisors share an office. There is insufficient work space and storage, and there are no accommodations for confidential human resources conversations. The driver break room also functions as the locker room and is too small for the number of drivers it must accommodate.

**Notes for Facility Planning:** Fixed route and demand response supervisors are assigned separate offices. Facility planning for demand response dispatch is expanded from five to seven positions. Driver facilities include a larger break room with small kitchenette, a separate mail room/locker room, a small shower room, and flexible office space. At the current specifications, the driver break room will accommodate 54 people based on 15 square feet per person, or 36 people based on 22 square feet per person.<sup>1</sup> The locker room will accommodate 90 lockers.

### *Maintenance Staff*

**Description:** CityLink maintains its vehicles at its maintenance facility which adjoins the administration and operations building. Staff includes a maintenance manager, a parts manager and parts assistant, four mechanics, and a custodian. The maintenance manager has a small office adjacent to the garage and the parts manager and assistant maintain a work space within the parts

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<sup>1</sup> International Building Code guidelines for standard (15 square feet) and specialty/formal dining (22 square feet).

inventory room. Mechanics provide their own tools which are secured in the tool room. There is a separate restroom and shower for mechanics.

**Notes for Facility Planning:** No specific changes to the maintenance management staff are noted; however, one unassigned office has been programmed to accommodate growth. Additional mechanics may be needed if the facility expands to service CARR and other regional vehicles. Additional square footage has been programmed to accommodate two additional mechanics in the tool storage, break room, and locker areas.

### *Passenger Amenities*

**Description:** Currently, CityLink maintains an 850-square foot passenger lobby that has seating, vending machines, and men's and women's restrooms with two stalls each. There is a window to the fixed route dispatch office where passengers can purchase tickets and passes.

**Notes for Facility Planning:** The passenger lobby has been expanded to 1,250 square feet. This can accommodate up to 83 passengers based on 15 square feet per passenger and should comfortably accommodate the projected peak demand of 49 passengers (CityLink as well as CARR, SPARTAN, and DMC passengers).<sup>2</sup> Passenger restrooms have been expanded to accommodate four stalls in each unit.

### *Common Areas*

**Description:** There is a single conference room that can accommodate approximately 30 people. There is no reception area, training room, or other shared community common areas.

**Notes for Facility Planning:** The conference room has been expanded to 1,250 square feet. According to the International Building Code (IBC), this can accommodate 250 people standing, 178 people with chairs (no table), or 64 people with table and chairs. This space will accommodate CityLink as well as Abilene MPO and other community meetings. A separate training room that can accommodate 18 people with tables and chairs, and a small reception area has also been programmed. In total, common areas are 1,650 square feet.

### *Vehicles Storage*

**Description:** CityLink maintains 20 fixed route vehicles, 23 demand response vehicles and five service vehicles. These vehicles are stored in a lot behind the maintenance facility and within the maintenance bays. Currently, CityLink has approximately 26,000 square feet dedicated to vehicle storage. See Table 4.1.

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<sup>2</sup>International Building Code guidelines for standard (15 square feet) and specialty/formal dining (22 square feet).

Type of Vehicle	Number of Vehicles	Notes
Chance Trolley	2	Used primarily for charter.
Fixed Route 2000 El Dorado Type XV	6	35 feet long. Accommodate 29 seated and 2 wheelchair
Fixed Route 2007 El Dorado Type XVI	6	35 feet long. Accommodate 29 seated and 2 wheelchair
Fixed Route 2009 – 2010 El Dorado Type XVI	6	35 feet long. Accommodate 29 seated and 2 wheelchair
DR 2005 – 2010 El Dorado / Aerotech 240	23	22.5 feet long
DR Glavel Type II	2	20 feet long

**Notes for Facility Planning:** For the purposes of facility planning, storage has expanded to accommodate 20 fixed route and 35 demand response vehicles in an uncovered, secure lot. The proposed plan expands storage to approximately 42,000 square feet in order to accommodate the expansion of its demand response fleet as well as rural provider vehicles.

### ***Vehicle Maintenance***

**Description:** CityLink operates an approximately 12,700-square foot maintenance facility with six bays. There are three general purpose bays, one long-term repair work bay, one work bay with pit, and one work bay with a lift. There is also service bay, a bus wash, and a diesel fueling station.

**Notes for Facility Planning:** CityLink would like to expand its maintenance capabilities to include all major and minor maintenance for approximately 10 Abilene-based CARR vehicles, as well as occasional minor maintenance and bus washing for SPARTAN vehicles and occasional major maintenance and bus washing for DMC vehicles. Bays are expanded from six to ten general purpose bays; of these, two bays will have a pit and two will have a lift. Service bays are expanded from one to four units. The bus wash is expanded from one to two units. The total estimated square footage for the vehicle maintenance facility is 23,040 square feet.

## **CARR NEEDS ASSESSMENT**

### ***Type of Service***

**Description:** CARR operates a general public demand-response service in its ten county service area. It is also the contractor for the region’s NEMT (Medicaid) service. Depending on the trip origin and destination, CARR sub-contracts these trips to CityLink,



SPARTAN, and DMC.

**Notes for Facility Planning:** At this time, there are no anticipated changes to CARR's service that would impact facility needs. Unlike CityLink, which requires space to queue fixed route vehicles, CARR will require a facility to stage vehicles while delivering demand response service in the city. Staging will not require public access and can be accommodated in the vehicle storage area.

### *Hours of Service*

**Description:** Hours of Service are Monday through Friday, 7:30 a.m. to 5:30 p.m., except for Brown County which operates Monday through Saturday, 5:30 a.m. to 7:30 p.m.

**Notes for Facility Planning:** No changes to service hours are anticipated. However, CARR will require access to the facility from very early morning (3:00 a.m.) to late at night (11:00 p.m.) to meet its trip demands. Like CityLink, 24-hour access to the facility is necessary.

### *Administrative Staff*

**Description:** CARR employs a general manager, an assistant general manager, a support service manager, and a mobility manager. On its operations staff, CARR employs an operations manager, one operations assistant, a driver supervisor, fleet manager, and fleet assistant. The majority of staff is assigned to CARR's headquarters in Coleman, Texas; however, CARR does lease a small satellite office in Abilene where two individuals work.

**Notes for Facility Planning:** CARR would like to relocate its Abilene office to the multimodal facility. For planning purposes, office space for one administrative personnel and a mobility manager has been programmed along with file and storage space.

### *Operations Staff*

**Description:** CARR's operations staff is managed primarily from its Coleman headquarters, except for its Abilene-based operations. CARR is also in the process of planning for an intermodal terminal in Brownwood, Texas.

**Notes for Facility Planning:** For planning purposes, operators will be accommodated in the proposed 850-square foot driver break room and adjoining locker room. As mentioned, the break room is programmed to accommodate between 36 and 54 people. This is sufficiently large to accommodate both urban and rural operators.

### *Maintenance Staff*

**Description:** CARR currently maintains its vehicles using private providers that are located in Abilene and elsewhere in its service area.

**Notes for Facility Planning:** CARR would prefer to have all major and minor maintenance for its Abilene-based vehicles performed at the proposed multimodal facility. For planning purposes, capacity to serve an additional 15 vehicles has been programmed through the addition of two mechanics.

### ***Passenger Amenities***

**Description:** In its satellite office, CARR maintains a small waiting area for passengers.

**Notes for Facility Planning:** CARR passengers, as well as those of the other rural providers, can be accommodated within the proposed CityLink passenger lobby which has been expanded from approximately 850 square feet to 1,250 square feet. No special amenities for rural passengers are noted.

### ***Common Areas***

**Description:** There are no common areas or training rooms in CARR's Abilene office.

**Notes for Facility Planning:** Space to conduct meetings and trainings is important to CARR. CARR, as well as other rural providers, can be accommodated within the proposed CityLink common areas, which include a 1,250-square foot meeting room and an 850-square foot training room.

### ***Vehicles Storage***

**Description:** CARR maintains an inventory of approximately 80 demand response vehicles with the largest majority being Type III. Of these, between five and ten vehicles are stationed at the Abilene satellite office. The vehicles are stored in a secure, uncovered lot adjacent to the office.

**Notes for Facility Planning:** For planning purposes, storage for 15 CARR vehicles has been programmed. CARR requested that storage be covered.

### ***Vehicle Maintenance***

**Description:** CARR maintains its vehicles through private providers who are stationed throughout its service area. In the future, it would like to maintain its Abilene-based vehicles at the proposed multimodal facility.

**Notes for Facility Planning:** For planning purposes, the number of CARR vehicles that would be maintained at the proposed facility has been increased from ten vehicles to 15 vehicles. The maintenance facility expansion from six to ten general purpose bays and additional service areas and bus wash can accommodate this demand.

## SPARTAN AND DMC NEEDS ASSESSMENT

Both SPARTAN and DMC indicated that their organization's needs for the proposed multimodal facility were minimal.

### *Operations Staff*

**Description:** Both SPARTAN and DMC have described a need for a break room for their drivers.

**Notes for Facility Planning:** For planning purposes, a driver break that can accommodate between 36 and 54 people has been programmed.



### *Passenger Amenities*

**Description:** Both SPARTAN and DMC travel to Abilene for medical, shopping, and other trips. While in Abilene, passengers are waiting on the vehicle for the return trip home. These waiting times can be lengthy. A passenger lobby that is comfortable is needed.

**Notes for Facility Planning:** For planning purposes, it is estimated that five SPARTAN passengers and five DMC passengers would utilize the passenger lobby simultaneously. The passenger lobby has been programmed to accommodate up to 83 people. The peak demand is estimated to be 49 people.

### *Vehicle Maintenance*

**Description:** Both SPARTAN and DMC perform the majority of their maintenance in their service area. It is anticipated this will continue.

**Notes for Facility Planning:** SPARTAN has indicated a need for minimal minor maintenance and bus wash for vehicles in the Abilene service area. DMC has indicated a need for major or specialized maintenance that cannot be performed in its region (e.g. wheelchair lift repair).

## ICB CARRIER

One organization that has declined to participate in the planning of the proposed multimodal facility is Greyhound Bus. Should an ICB carrier relocate to the proposed facility, the building plan will need to accommodate the larger over-the-road coaches, as well as baggage and package handling and storage, and administrative and office space. Based on other multimodal facilities in the region, it is estimated that the dedicated operations and administration space that would be required by an ICB is approximately 1,000 square feet and the vehicle queuing space for two vehicles is approximately 1,900 square feet. See Table 4.2.

<b>Facility Component</b>	<b>Space Needs</b>
<b>Office and Administrative</b>	200 square feet
<b>Baggage and Package</b>	550 square feet
<b>Total Facility Need</b>	750 square feet

## **JOINT DEVELOPMENT – ABILENE MPO**

The Abilene MPO will be included in the building program for the administration and operations facility. The building will need to accommodate a staff of three, including the director, one planner, and one GIS technician. Each person will have their own office. The Abilene MPO will also have exclusive use of a small conference room, storage, and IT closet. In addition to the exclusive space, Abilene MPO will have use of the shared spaces such as the training room or the conference room, where meetings can be held. The estimated space requirements are 1,061 square feet.

## **BUILDING PROGRAM**

### *Administration and Operations Facility*

Based on the above noted needs, a preliminary building program for 11,965 square feet was constructed. It reflects the needs of each transit provider as well as the Abilene MPO. Square footage of approximately 750 square feet has been programmed on a speculative basis for an ICB carrier. The program notes space by type, dimensions, and square footage.

<b>Type of Space</b>	<b>Dimensions</b>	<b>Square Footage</b>
<b>Administrative Staff</b>		
<b>General Manager</b>	24X10	240
<b>Office Manager</b>	16X10	160
<b>Grants Administrator / Procurement</b>	16X10	160
<b>Administrative Assistant</b>	12X10	120
<b>Safety and Training</b>	10X20	200
<b>Safety and Training Assistant (not filled)</b>	<i>Share with Safety and Training Director</i>	
<b>CityLink Unassigned</b>	12X10	120
<b>CityLink Unassigned</b>	12X10	120
<b>CARR - Admin</b>	16X10	160
<b>CARR - Mobility Manager Office</b>	16X10	160
<b>CARR - Storage</b>	7.5X10	75
<b>Subtotal</b>		<b>1,515</b>

Type of Space	Dimensions	Square Footage
Fixed Route Supervisor	12X10	120
FR Dispatch	12x10	120
DR Supervisor	12X10	120
DR Dispatch	16X32, 7 cubicles	512
Evening Dispatch	Share with Day Crew	0
Evening Operators	Share with Day Crew	0
Operator Break Room	20X40	800
Operator Locker Room	10X16	160
Mail Room / Additional Locker	10X16	160
Driver Quiet Room/Flexible Op Space	10x16	160
Shower Room	10X16, 2 units at 5X8	160
<b>Subtotal</b>		2,312
<b>Shared/General Space</b>		
File Room	7.5X10	100
Administrative Storage	7.5X10, 2 storage spaces	150
Admin Print/Fax/Mail	10x10	100
Admin & Op Restrooms	4 stalls per unit, 2 units at 200 sq. ft. each	400
<b>Subtotal</b>		750
<b>Passenger Amenities / Lobby</b>		
Passenger Lobby	25X50	1,250
Passenger Restrooms	4 stalls per unit, 2 units at 200 sq. ft. each	400
<b>Subtotal</b>		1,650
<b>Common Areas</b>		
Reception Area	10X10	100
Community Meeting Room	25X50	1,250
Training Room	20X20	400
<b>Subtotal</b>		1,650
<b>MPO Offices</b>		
Director Office	12X20	240
Small Conference Room	14X24	350
Planner Office	12X10	120
Planner Office	12X10	120
Copy Room and File	12X10	120
IT Closet	6X6	36
Storage	7.5X10	75
<b>Subtotal</b>		1,061
Joint Development (ICB Speculative)		750
<b>Other</b>		
Mechanical	6.5X9.5	64
Electrical	7X7	49
IT Closet and Phone Lines	6X8	48
Fire Riser	6X6	36
Janitorial	2, 6X7 closets with each restroom	84
<b>Subtotal</b>		281
<b>Subtotal</b>		9,971
Circulation	at 20 percent	
<b>Total</b>		<b>11,965</b>

## ***Maintenance Office and Facility***

Based on the assessed needs for expanded maintenance capacity to serve CityLink and CARR vehicles and occasional maintenance of SPARTAN and DMC vehicles, a maintenance office building program of 3,613 square feet for maintenance office, storage, and support services was estimated. A maintenance facility of approximately 23,000 square feet was estimated for additional work bays, bus, and service area. Maintenance bays currently use 10,350-square foot space. Specifically:

- **Parts Room, General Storage, and Tire Storage:** Square footage is calculated based on the revenue miles of vehicles to be served because this is the cost driver for maintenance.
- **Maintenance Office and Mechanic Support Services:** Square footage is calculated based on the number of mechanics who will work in and use the facility.<sup>3</sup>
- **Maintenance, Service and Wash Bays:** Bays are allocated based on the projected CityLink and CARR needs. They are sized to accommodate larger fixed route vehicles and are 60 feet by 20 feet, or 1,200 square feet.

<b>Table 4.4: Maintenance Office and Facility</b>		
<b>Type of Space</b>	<b>Dimensions</b>	<b>Square Footage</b>
<b>Maintenance Office</b>		
<b>Parts Room</b>	Currently 960 sq. ft.	1,339
<b>Tire</b>	Currently 108 sq. ft.	420
<b>General/Equip Storage</b>	Currently 216 sq. ft.	326
<b>Maintenance Office</b>	Currently 144 sq. ft.	226
<b>Maintenance Office</b>		120
<b>Mechanic Tool Room</b>	Currently 140 sq. ft.	140
<b>Mechanic Locker Room</b>	Accommodate 6 people at 50 sq. ft. per person	275
<b>Mechanic Break Room</b>	Accommodate 11 at 15 sq. ft. per person	165
<b>Subtotal</b>		<b>3,011</b>
<b>Circulation</b>	at 20 percent	
<b>Total</b>		<b>3,613</b>
<b>Maintenance Facility</b>		
<b>Undesignated Bays</b>	10 Bays at 60X20	12,000
<b>Service Bays</b>	4 Bays at 60X20	4,800
<b>Bus Wash</b>	2 Bay at 60X20	2,400
<b>Subtotal</b>		<b>19,200</b>
<b>Circulation</b>	at 20 percent	
<b>Total</b>		<b>23,040</b>

<sup>3</sup> Formulas used to estimated space needs are taken from the Transit Garage Planning Guidelines by SG Associates, 1997.

## Vehicle Storage

Table 4.5: Vehicle Storage		
Type of Space	Dimensions	Square Footage
CityLink Fixed Route Vehicles	20 vehicles at 15X40	12,000
CityLink ADA Vehicles	35 vehicles at 12X30	12,600
Chance Trolley	2 vehicles at 15X40	1,200
Service Vehicles	5 vehicles	None – Vehicles will be parked in maintenance garage or parking lot.
CARR Demand Response Vehicles	15 at 12X30	5,400
<b>Subtotal</b>		31,200
Circulation	at 35 percent	10,920
<b>Total</b>		<b>42,120</b>

## Employee and Customer Parking

Table 4.6: Employee and Customer Parking		
Type of Space	Dimensions	Square Footage
<b>Employee Parking</b>		
Admin	8 spaces at 18X9	1,296
Operations, Excluding Drivers	12 spaces at 18X9	1,944
Driver Parking	25 spaces at 18X9	4,050
Maintenance	10 spaces at 18X9	1,620
MPO	3 spaces at 18X9	486
CARR	10 spaces at 18X9	1,620
<b>Subtotal</b>		11,016
Circulation	at 50 percent	5,508
<b>Total</b>		16,524
<b>Customer Parking</b>		
Customer Parking	25 spaces at 18X9	4,050
Circulation	at 50 percent	2,025
<b>Subtotal</b>		6,075
<b>Total</b>		<b>22,599</b>

## Summary of Facility and Site Needs

The multimodal facility will provide administration and operation space for CityLink staff, Abilene-based CARR staff, and the Abilene MPO. The facility includes driver and passenger support space for CityLink, CARR, DMC, and SPARTAN. Space is provided for an ICB carrier and common meeting and training rooms. In total, the space increases from approximately 5,950 square feet to 11,965 square feet.

The maintenance facility is expanded in order to meet the added demand from CARR vehicles. The maintenance bays are expanded from six to ten for general, from two to four for service, and from one to two for bus wash. Maintenance office, supply, parts storage, and mechanic tool room and break room is expanded. Vehicle storage is expanded to accommodate CARR vehicles.

Vehicle staging for fixed route buses is expected to remain the same. Parking is increased for passengers/public and employees.

In total, the program reflects an increase from approximately 67,154 square feet to 133,293 square feet. See Table 4.7.

<b>Table 4.7: Summary of West Central Texas Multimodal Facility Building Program</b>		
<b>Type of Space</b>	<b>Current Facility (sq. ft. approx.)</b>	<b>New Facility (sq. ft.)</b>
<b>Admin Operations Facility</b>	5,950	11,965
<b>Maintenance Office</b>	1,600	3,613
<b>Maintenance Facility</b>	10,350	23,040
<b>Vehicle Staging</b>	14,100	14,136
<b>Vehicle Storage</b>	26,000	42,120
<b>Employee Parking</b>	2,000	16,524
<b>Customer Parking</b>	3,000	6,075
<b>Outdoor Public Area</b>	NA	6,780
<b>Sidewalks</b>	2,510	6,780
<b>Landscaping</b>	1,644	2,260
<b>Total</b>	<b>67,154</b>	<b>133,293</b>

# CHAPTER FIVE: SITE SELECTION

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## INTRODUCTION

The site for the West Central Texas Multimodal Facility needs to be a minimum of 133,300 square feet. The facility must accommodate bus staging and customer service functions for CityLink, CARR, SPARTAN, and DMC; administration/operations for CityLink and a satellite administration/operation facility for CARR; expanded maintenance, vehicle storage and parking; and joint development uses such as office space for the Abilene MPO. This chapter reviews the sites that were considered for the West Central Texas Multimodal Facility, presents information about each candidate site and then discusses and ranks six sites in detail. The chapter ends with a site recommendation.

## SITE SELECTION PROCESS

Candidate sites were identified by members of a site selection committee, which included representatives from the City of Abilene, CityLink, CARR, and the Abilene MPO. Among the committee members, it was agreed that the new multimodal facility site should be located in or near the downtown area. Therefore, candidate sites were restricted to properties between Grape Street and Treadaway Boulevard and from North 7<sup>th</sup> Street to South 7<sup>th</sup> Street. Fifteen sites were considered in this preliminary evaluation. See Table 5.1.

After the identification of candidate sites, a preliminary evaluation was conducted to reduce the candidate pool from 15 to six sites. These sites were then analyzed and ranked against 13 site selection criteria. These criteria included size, zoning, ease of acquisition, compatibility with adopted plans, revitalization impact, impact to sensitive receptors, access to services, environmental considerations, impact to CityLink routes, impact to historical structures, traffic impacts and accessibility, pedestrian access, and visibility.

Following this evaluation, the preliminary recommendation was reviewed with members of the site selection committee, as well as TxDOT. This recommendation was then refined and brought forward to the City of Abilene for further discussion and consideration.

<b>Site Description</b>	<b>Location</b>	<b>Comments</b>
<b>CityLink</b>	Between South 2 <sup>nd</sup> and South 3 <sup>rd</sup> Streets, and Elm and Sycamore Street	Site was retained as a final candidate for site selection analysis.
<b>North Treadaway</b>	Between E Hwy 80 and North 4 <sup>th</sup> Streets, and North Treadaway Boulevard and Cottonwood Street	Site was retained as a candidate for final site selection.
<b>Plum at North 4<sup>th</sup></b>	Between North 4 <sup>th</sup> and North 5 <sup>th</sup> Streets, and Plum and Ash Streets; and adjacent parcels	Site was retained as a candidate for final site selection.
<b>Grape at North 1<sup>st</sup></b>	North 1 <sup>st</sup> to North 2 <sup>nd</sup> Streets, and Grape to Mulberry Streets	Site was retained as a candidate for final site selection.
<b>Cherry at South 5<sup>th</sup></b>	South 3 <sup>rd</sup> to South 5 <sup>th</sup> Streets, and Cherry to Willow Streets	Site was retained as a candidate for final site selection.
<b>Historic Cotton Warehouse</b>	Between North 1 <sup>st</sup> and North 3 <sup>rd</sup> Streets, and Plum and Ash	Site was retained as a candidate for final site selection.
<b>Mesquite at North 1<sup>st</sup></b>	Between North 1 <sup>st</sup> and North 2 <sup>nd</sup> Streets, and Mesquite and Plum Streets; and adjacent to Frontier Texas and Historic Cotton Warehouse	Site was eliminated due to potential conflicts with current use as parking for Farmer's Market and Frontier Texas. Also concerns over compatibility of uses between proposed facility and Frontier Texas.
<b>Walnut at North 1<sup>st</sup></b>	Between North 1 <sup>st</sup> and North 2 <sup>nd</sup> Streets, and Walnut and Mesquite Streets	Site eliminated as too small to accommodate all functions.
<b>Pine Street</b>	Between North 1 <sup>st</sup> and North 2 <sup>nd</sup> Streets, and Pine and Walnut Streets	Site was eliminated due to existing uses for the site (parking for adjacent office building and on-going businesses in other parcels); and concerns over compatibility with downtown land uses.
<b>Grain Warehouse</b>	Between South 2 <sup>nd</sup> and South 3 <sup>rd</sup> Streets, and Locust and Cherry Streets	Site was eliminated due to potential historical and environmental issues; cost concerns for the demolition of the existing structure; and limited connectivity to other uses and neighborhoods.
<b>Historic Warehouse</b>	Between South 1 <sup>st</sup> and South 2 <sup>nd</sup> Streets, and Oak to Locust	Site was eliminated due to cost of demolition for historic warehouse and other structures on site.
<b>Locust at South 3<sup>rd</sup></b>	Between South 1 <sup>st</sup> and South 3 <sup>rd</sup> Streets, and Pecan to Locust Streets	Site was eliminated due to demolition of historic warehouse and other substantial structures on site would add to cost.
<b>Historic Lincoln School Campus</b>	Between South 1 <sup>st</sup> and South 3 <sup>rd</sup> Streets, and Vine and Peach Streets	Site was eliminated since the City is exploring other uses for the location.
<b>Civic Center</b>	North of North 7 <sup>th</sup> Streets, between Cedar and Cypress Streets	Site was eliminated since this is used for Civic Center parking and the City had plans to expand additional parking to that site.
<b>Boy Scout and Greyhound</b>	Between North 5 <sup>th</sup> and North 6 <sup>th</sup> Street, and either side of Cedar Street	Site was eliminated due to other plans for the site.

From this list of candidate sites, six sites were chosen for final evaluation. These include the current CityLink facility, North Treadaway Boulevard at Hwy 20 Business Route, Plum at North 4<sup>th</sup> Street, Grape at North 1<sup>st</sup> Street, Cherry at South 5<sup>th</sup> Street and the Historic Cotton Warehouse sites. The locations of the six candidate sites are illustrated in Figure 5.1, and a parcel map is provided in Figure 5.2.

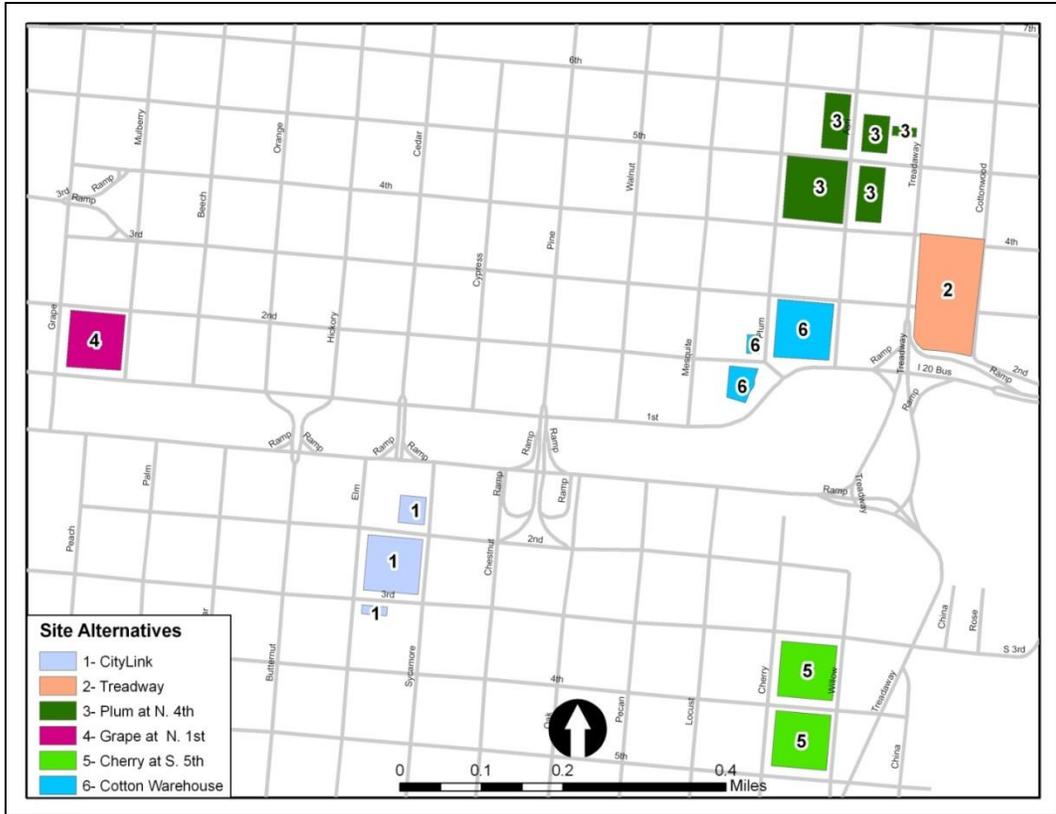


Figure 5.1: Location of Candidate Sites

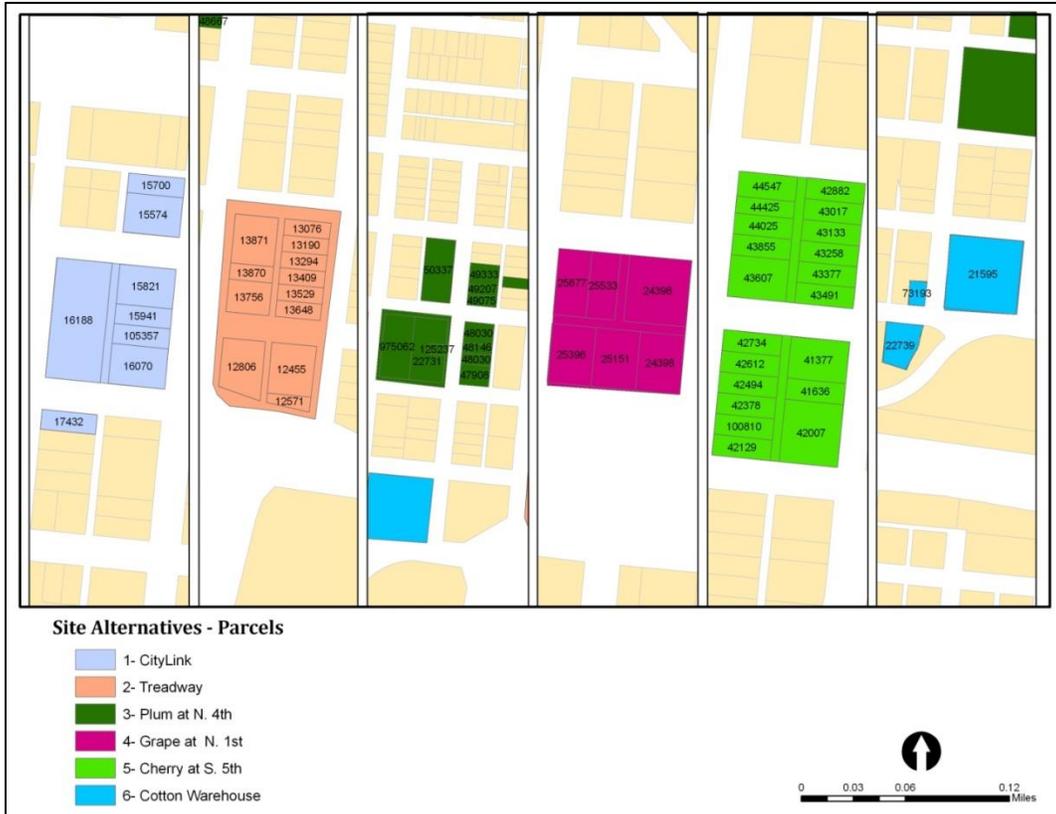


Figure 5.2: Candidate Site Parcel Maps

## SITE DESCRIPTIONS

### *Site 1- CityLink*

The CityLink site is the current location where operations, administration and maintenance occur. The site would be expanded to include all the property bounded by South 2<sup>nd</sup> Street and South 3<sup>rd</sup> Street. The site also consists of two other parcels: one located on the northwest corner of Sycamore Street and South 2<sup>nd</sup> Street, and one at the southeast corner of Elm and South 3<sup>rd</sup> Street.



### *Site 2 – North Treadaway*

The North Treadaway site is located between North Treadaway Boulevard and Cottonwood Street and between E Hwy 80 and North 4<sup>th</sup> Streets.



### *Site 3 – Plum Street at North 4<sup>th</sup> Street*

The Plum Street at North 4<sup>th</sup> site is located between Plum and Ash Streets and North 4<sup>th</sup> Street to North 5<sup>th</sup> Street. Additional parcels include a ½ block on the west side of Ash Street between North 5<sup>th</sup> Street and North 6<sup>th</sup> Street; a ½ block on the east side of Ash Street between North 4<sup>th</sup> Street and North 5<sup>th</sup> Street; and most of the half block on east side of Ash Street between North 5<sup>th</sup> Street and North 6<sup>th</sup> Street.



***Site 4 – Grape Street at North 1<sup>st</sup>***

The Grape Street at North 1<sup>st</sup> Street site is contained within the city block bounded by Grape Street and Mulberry Street and North 1<sup>st</sup> and North 2<sup>nd</sup> Streets.



***Site 5 – Cherry Street at South 5<sup>th</sup>***

The Cherry Street at South 5<sup>th</sup> site consists of two city blocks. It extends from Cherry Street to Willow Street and from South 3<sup>rd</sup> Street to South 5<sup>th</sup> Street.



***Site 6 – Historic Cotton Warehouse***

The Cotton Warehouse site extends from North 1<sup>st</sup> and North 3<sup>rd</sup> Streets, and Plum and Ash Streets. It includes two smaller sites on the west side of 2<sup>nd</sup> Street and Plum.



**SITE SELECTION CRITERIA**

The site selection committee agreed to 13 site selection criteria. These criteria included size, zoning, ease of acquisition, compatibility with adopted plans, revitalization impact, impact to sensitive receptors, access to services, environmental considerations, traffic impacts and accessibility, impact to CityLink routes, impact to historical structures, pedestrian access, and visibility.

The six candidate sites were ranked relative to one another with the site ranked the highest given a value of “6”, and the second highest given a “5”, and so on, down to the site ranked sixth given a value of “1”. If two sites meet a criterion equally, they are assigned the same value. Each criterion was assigned a weight of either 1 or 2, with 1 reflecting criteria which were less critical and 2 reflecting criteria which were more critical. The approach is a ranking of the sites relative to one another and not a scoring of sites relative to the criteria. The criteria and weights are reflected in Table 5.2.

<b>Criteria</b>	<b>Weight</b>	<b>Criteria</b>	<b>Weight</b>
Size	2	Environmental Considerations	2
Zoning	2	Traffic Impacts and Accessibility	2
Ease of Acquisition	2	Impact to City Link Routes	1
Compatibility with Adopted Plans	2	Impact to Historical Structures	1
Revitalization Impact	2	Pedestrian Access	1
Impact to Sensitive Receptors	2	Visibility	1
Access to Services	2		

### ***Criteria 1- Size***

The proposed site development program is approximately 133,000 square feet. Properties that can accommodate all proposed uses without requiring staging of vehicles on streets or construction of multi-story buildings are preferred. Larger sites that can allow for more flexible development, future expansion of CityLink, and/or the inclusion of future joint development partners are preferred. Sites that are not composed of parcels separated by street or other rights-of-way are preferred. If parcels are separated by road right-of-way, those that may be suitable for abandonment (road closure) are preferred. Smaller sites that would require the separation of operations and administration functions from maintenance are not preferred.

### **SITE RANKINGS**

- 1. Cherry at South 5<sup>th</sup>*
- 1. Plum at North 4<sup>th</sup>*
- 3. North Treadaway*
- 4. Cotton Warehouse*
- 5. CityLink*
- 6. Grape at North 1<sup>st</sup>*

- **CityLink**

- ◆ The site is 112,400 square feet.
- ◆ The site is too small to accommodate all uses within property boundaries. It would require the staging of vehicles on the street and/or the construction of a multi-story administration and operations facility. In discussions with stakeholder, bus staging has been discussed on South 2<sup>nd</sup> Street between Elm Street and Sycamore Street, and on Sycamore Street, between South 2<sup>nd</sup> Street, and South 3<sup>rd</sup> Street. The ability for flexible site development is limited.
- ◆ The site parcels are separated by street right-of-way. A small parcel, suitable for demand response vehicle storage, is located on the southeast corner of Elm and South 3<sup>rd</sup> Street. Two parcels, suitable for either vehicle storage or parking, are located on the northwest corner of Sycamore Street and South 2<sup>nd</sup> Street. The abandonment of street right-of-way to create a contiguous site would be a significant issue and is unlikely.

- **North Treadaway**

- ◆ The site is 132,900 square feet.
- ◆ The site is adequately sized to accommodate all uses within the property boundaries. On-street staging of vehicles would not be required. The ability for flexible development is limited.
- ◆ The site consists of two large tracts separated by North 3<sup>rd</sup> Street, which is a local road with low traffic volume. The abandonment of the street right-of-way to create a contiguous site may be possible.
- ◆ There is a drainage ditch on the northwest portion of the site that takes up at least 4,000 square feet of the property. The drainage ditch would need to be buried in order for the site to be large enough.

- **Plum at N 4<sup>th</sup>**
  - ◆ The site is 202,000 square feet.
  - ◆ The site is adequately sized to accommodate all identified uses within property boundaries and allow for flexible site development. On-street staging of vehicles would not be required.
  - ◆ The site consists of one large tract (a city block) with smaller adjacent tracts separated by streets. The abandonment of North 5<sup>th</sup> Street right-of-way would be a significant issue and is unlikely; however, abandonment of Ash Street, between North 4<sup>th</sup> and North 5<sup>th</sup> streets, may be achievable.
- **Grape at N 1<sup>st</sup>**
  - ◆ The site contains 86,200 square feet.
  - ◆ The site would not accommodate all identified uses and would be suitable for only the operations and administration functions. Maintenance and vehicle storage (approximately 70,000 square feet) would need to be accommodated at the existing CityLink site or another location. The site does not accommodate on-street staging of vehicles.
  - ◆ The site consists of one large tract; there is no separation by street right-of-way.
- **Cherry at S 5<sup>th</sup>**
  - ◆ The site contains 168,000 square feet.
  - ◆ The site would accommodate all the identified uses and allow for flexible site development. On-street staging of vehicles would not be required.
  - ◆ The site consists of two large tracts separated by South 4<sup>th</sup> Street. There are fewer issues with road right-of-way than the Plum and North 4<sup>th</sup> site, but this site is smaller.
- **Cotton Warehouse**
  - ◆ The site contains 120,937 square feet.
  - ◆ The site is too small to accommodate all uses within property boundaries. It would require the staging of vehicles on the street and/or the construction of a multi-story administration and operations facility. Maintenance and vehicle storage (approximately 70,000 square feet) would need to be accommodated at the warehouse site.
  - ◆ The site parcels are separated by street right-of-way. A small parcel, suitable for demand response vehicle storage, is located on southwest corner of 2<sup>nd</sup> Street and Plum. One small parcel, suitable for either vehicle storage or parking, is located at the northwest corner of 2<sup>nd</sup> Street and Plum. The abandonment of street right-of-way to create a contiguous site would be a significant issue and is unlikely.

## ***Criteria 2 – Zoning***

The City of Abilene Land Development Code defines permitted uses by zoning type. The passenger ground transportation terminal component is a permitted use in the districts zoned Central Business (CB), General Commercial (GC), Heavy Commercial (HC), and Light Industrial (LI). Office space is permitted use within these districts as well. Maintenance of heavy vehicles and large trucks is a permitted use only in districts zoned HC or LI, or conditionally within GC. Sites that reflect parcels zoned HC or LI are preferred over sites zoned GC. Parcels with conditional permitting are preferred over sites that would require re-zoning. The difficulty to re-zone parcels is subjectively considered. See Figure 5.3.

### **SITE RANKINGS**

- 1. North Treadaway*
- 1. Cotton Warehouse*
- 1. Cherry at South 5<sup>th</sup>*
- 4. Grape at North 1<sup>st</sup>*
- 5. CityLink*
- 6. Plum at North 4<sup>th</sup>*

- **CityLink**

- ◆ The site is zoned CBD and an administration and operations facility is a permitted use.
- ◆ Maintenance of large vehicles is not a permitted use and the expansion of the maintenance facility may require the re-zoning of parcels since it is a non-conforming use.

- **North Treadaway**

- ◆ The site is LI and is properly zoned for administration and operations, maintenance and vehicle storage.

- **Plum at N 4<sup>th</sup>**

- ◆ The site is zoned LI, HC, planned development (PD) and multifamily residential (MF). The MF parcel zoning conflicts with the administration and operations facility. These Taylor County Appraisal District parcels are 49333, 49207, and the north two-thirds of 50337. These parcels are also near a church and some single-family residential developments. The rezoning of these parcels may be difficult to achieve.
- ◆ The rezoning of Parcel 49333 may be difficult for maintenance and vehicle storage.

- **Grape at N 1<sup>st</sup>**

- ◆ The site is zoned CBD and GC and the administration and operations facility is a permitted use.
- ◆ Maintenance of large vehicles is not a permitted use. However, the site is too small to accommodate maintenance, which would be located at a separate site.

- **Cherry at S 5<sup>th</sup>**

- ◆ The site is LI and is properly zoned for administration and operations, maintenance and vehicle storage.

- **Cotton Warehouse**

- ◆ The site is LI and is properly zoned for administration and operations, maintenance and vehicle storage.

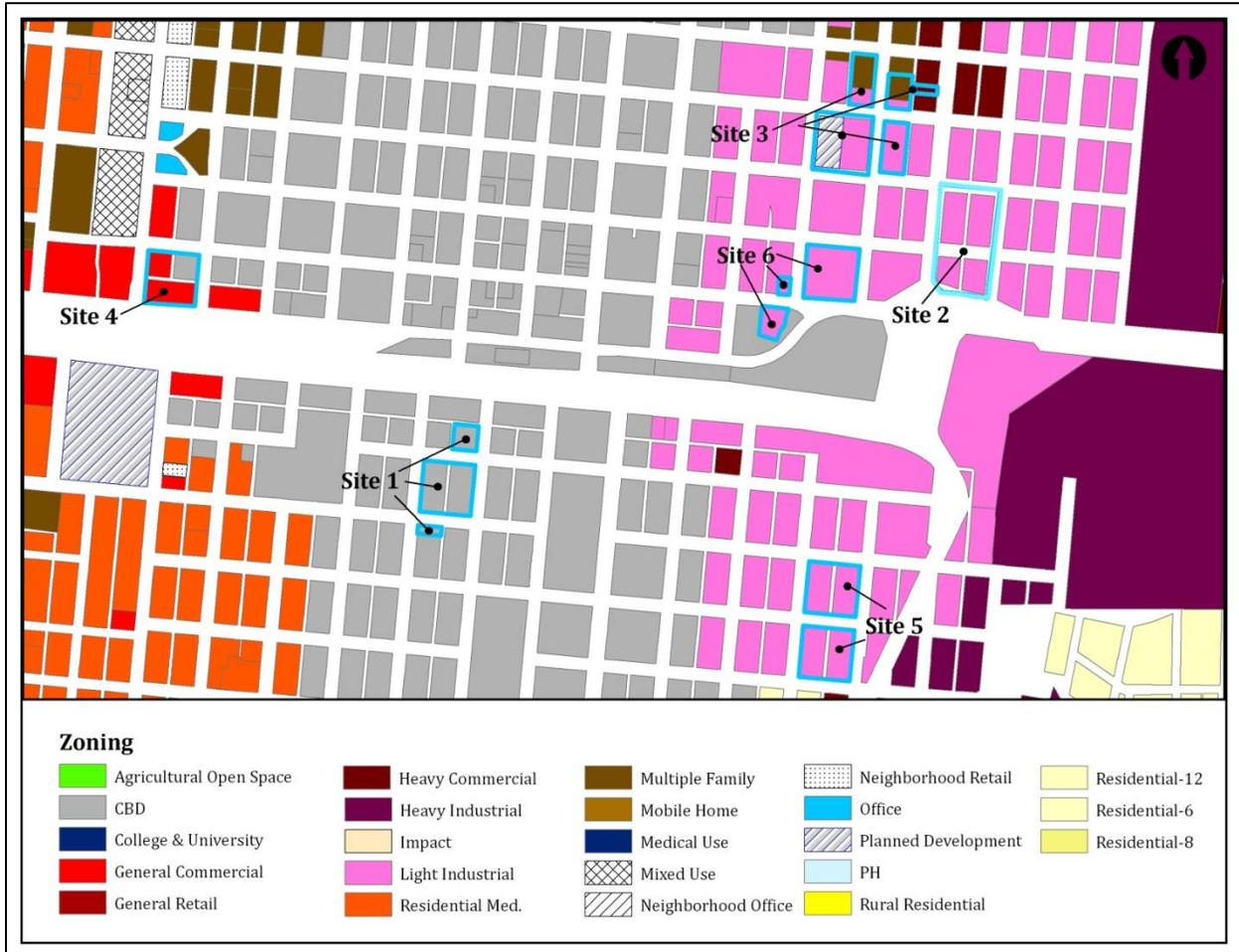


Figure 5.3: Site Selection Zoning Map

### ***Criteria 3 - Ease of Acquisition***

Sites under single ownership are preferred over sites with multiple owners since the expense and time to assemble property can be considerable. Sites that are either for sale, undeveloped, or vacant, are preferred over sites with active businesses and/or occupied homes. (If a site currently contains an active business or occupied home, the project would incur relocation costs. Relocation costs are eligible for reimbursement under the FTA. However, in the event the property owner is unwilling to sell, acquisition of the property would require condemnation, which would generate increased costs, risks, and time to develop.)

### **SITE RANKINGS**

- 1. Cotton Warehouse*
- 2. CityLink*
- 2. Plum at North 4<sup>th</sup>*
- 4. Grape at North 1<sup>st</sup>*
- 5. North Treadaway*
- 6. Cherry at South 5<sup>th</sup>*

- **CityLink**

- ◆ There are five property owners.
- ◆ The City of Abilene is owner of 70,000 square feet. Two parcels within the primary block and totaling 21,000 square feet are for sale for \$139,500. The two parcels north of South 2<sup>nd</sup> Street are not listed for sale.
- ◆ Excluding CityLink, there are no parcels with active businesses or residences.

- **North Treadaway**

- ◆ There are ten property owners.
- ◆ No properties are currently listed for sale. One of the property owners is Lone Star Railroad, which holds an easement on the north side of the property where there are two rail spurs.
- ◆ The site contains several active uses including three residential properties which are occupied, a metal recycler, and a food manufacturer.

- **Plum at N 4<sup>th</sup>**

- ◆ There are six property owners, one of which is First Mexican Baptist Church.
- ◆ One property owner has two parcels for sale. For-sale parcels total 1.45 acres and are on the market for \$65,000, or about \$45,000 per acre.
- ◆ Visual inspection of the site did not reveal any evidence of active businesses.

- **Grape at N 1<sup>st</sup>**

- ◆ There are five property owners. The City of Abilene is largest property owner (39,200 square feet for the old Central Fire Station and the adjacent parking lot). At the time of this report, the City has expressed no opposition to the re-development of the site for a multimodal facility.
- ◆ No properties are currently listed for sale.
- ◆ There are active businesses on the site including a doctor's office and a tire shop. There is also a single family residence.

- **Cherry at S 5<sup>th</sup>**
  - ◆ There are 13 property owners.
  - ◆ None of the property is currently listed for sale.
  - ◆ The site contains an active wrecker business and two parcels contain occupied residences.
- **Cotton Warehouse**
  - ◆ There are two property owners.
  - ◆ One land owner is willing to donate the land of the cotton warehouse site to the City for the purposes of the multimodal facility.
  - ◆ One property owner, Texas Presbyterian Foundation, has two vacant parcels for sale (Taylor County Appraisal District parcel numbers 22739 and 73193). For-sale parcels are 0.7 acres and have the combined market value of \$70,390.
  - ◆ There are no parcels with active businesses or residences.

#### ***Criteria 4 – Compatibility with Adopted Plans***

The City of Abilene adopted its Comprehensive Plan in 2004. More recent plans that have been adopted that impact the study area include: the SoDA Plan, which was adopted in May 2010; and the Carver Neighborhood Plan Update, which was adopted in August 2011. The SoDA Plan consists of three districts which each have a different development concept: the Warehouse District, the South Downtown District, and the Treadaway District. The SoDA Plan describes each of these districts:

- **South Downtown District:** This district currently contains an intense cluster of government uses, professional offices, and transportation facilities, with some limited amount of convenience, retail, dining, warehousing, light manufacturing, open storage, and single- and multifamily housing. The physical condition and use of some buildings and lots in this district, particularly some number of housing units, vacant commercial structures, and open storage lots, are unsightly and in an advanced stage of deterioration, resulting in a significant blighting influence in parts of the district.
- **Warehouse District:** This district contains an eclectic mix of warehousing, light manufacturing, and institutional uses, including the post office, city hall, and Frontier Texas Museum. The Warehouse District should be further enhanced and developed as a mixed use center of offices, storage, general warehousing, institutions, lodging, art incubation, upper-floor loft housing, and dining establishments (located close to the historic downtown area).
- **Treadaway District:** This district is currently the eastern boundary of the South Downtown Abilene project area. The district is best characterized as a high traffic, north/south auto-oriented commercial corridor of aging commercial structures that contain auto service and repair shops, construction materials businesses, and light-manufacturing businesses. The further enhancement and development of this district will depend on what occurs both north and south of this portion of the Treadaway Commercial Corridor which extends well beyond the boundaries of the South Downtown Abilene project area.

Sites that are compatible with the proposed uses noted in these plans are preferred.

In the SoDA Plan, the Current and Future Market Orientation section states that, “If the transportation center currently located in the district is relocated in the future, as is currently being considered, an appropriate location for a new center would be at the eastern edge of this district, on or near Treadaway Boulevard.” Sites that are compatible with this suggestion are preferred. Sites that are on or near a major thoroughfare are preferred.

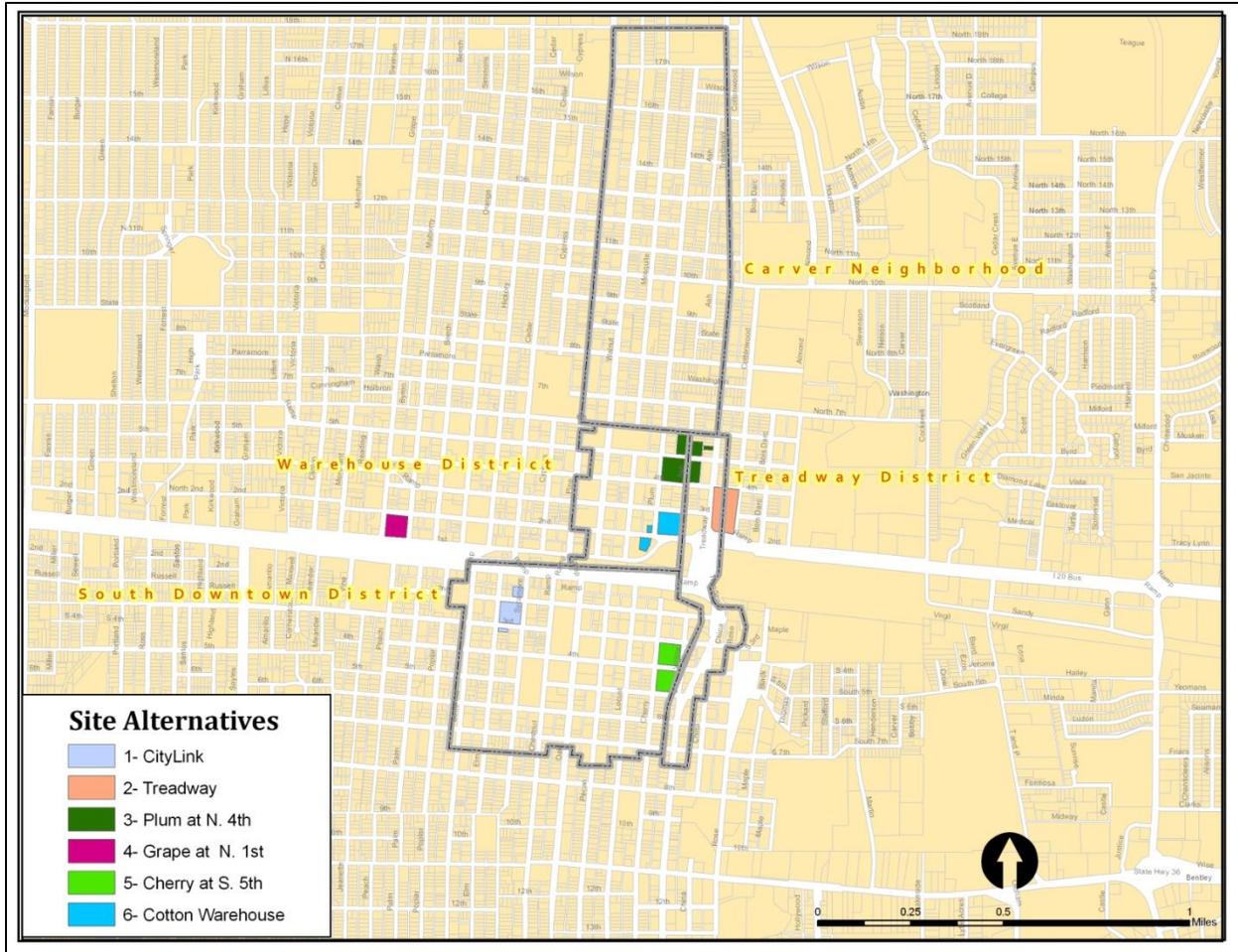


Figure 5.4: Boundaries of Affected Planning Areas

- **CityLink**

- ◆ Site is located in the SoDA Plan’s South Downtown District, which reflects maintaining the existing use at this site, with the exception of vehicle storage. The sub-area is characterized as maintaining a strong presence of federal and local governments. Multi-story buildings are considered appropriate for this district. An administration and operations facility would be compatible with the character of the sub-area, as defined in the SoDA Plan. However, the continued presence of maintenance may be incompatible. The multimodal facility may not be compatible with the SoDA Plan, which shows the site as a potential park site. The SoDA Plan recommends moving the CityLink bus storage out of the South Downtown District.



### SITE RANKINGS

1. *North Treadaway*
2. *Grape at North 1<sup>st</sup>*
3. *Cherry at South 5<sup>th</sup>*
4. *Cotton Warehouse*
5. *Plum at North 4<sup>th</sup>*
6. *CityLink*

- **North Treadaway**

- ◆ Site is located partially in the SoDA Plan’s Treadaway District. In the plan, the sub-area is targeted for low-level industrial and commercial uses. In addition, Treadaway Boulevard is specifically mentioned as a potential corridor for the re-location of CityLink and Greyhound. Within the 2004 Comprehensive Plan, the potential to create a gateway into Abilene at BI-20 and Treadaway is cited as a strategy for future development (Strategy 36).

- **Plum at N 4<sup>th</sup>**

- ◆ Site is located in the SoDA Plan’s Warehouse District. North 4<sup>th</sup> Street and Plum Street are identified as “Gateway” Streets in the SoDA Plan. However, the multimodal facility may not be compatible with the SoDA Plan, which reflects the site as mixed-use with pocket park. Site is located just outside the south boundary of the Carver Neighborhood Plan (North 6<sup>th</sup> Street). In the Carver Neighborhood Plan, residents indicated overall approval of CityLink as an organization and stressed the need for higher levels of transit service. In addition, the plan notes the needs for improved sidewalks, shelters, and lights to improve the safety of the area and its “walkability.”

- **Grape at N 1<sup>st</sup>**

- ◆ Site is located outside the SoDA Plan’s boundaries. No known contradictions to Comprehensive Plan.

- **Cherry at S 5<sup>th</sup>**

- ◆ Site is located in the eastern edge SoDA Plan’s South Downtown District. Presence of maintenance would not be compatible with projected mixed-use development reflected in the SoDA Plan, but the SoDA Plan recommends that if the CityLink facility were to remain in the South Downtown District that it should be moved to the eastern edge.

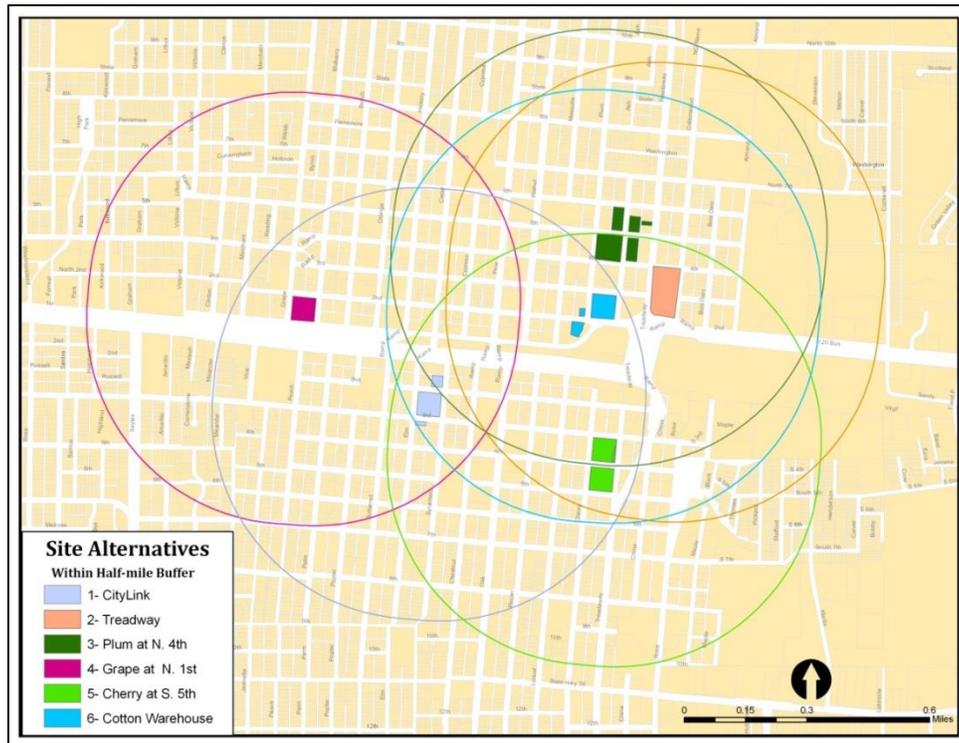
- **Cotton Warehouse**

- ◆ Site is located in the SoDA Plan's Warehouse District. The multimodal facility may not be compatible with the SoDA Plan, which recommends mixed-use developments, offices, general warehousing and restaurants. Site is located just outside the south boundary of the Carver Neighborhood plan (North 6<sup>th</sup> Street). In the Carver Neighborhood Plan, residents indicated overall approval of CityLink as an organization and stressed the need for higher levels of transit service. In addition, the plan notes the needs for improved sidewalks, shelters, and lights to improve the safety of the area and its "walkability."

### ***Criteria 5 – Revitalization Impact***

Sites located in areas where they can positively impact revitalization and/or redevelopment efforts are preferred over sites where there is little or no revitalization or redevelopment impact. Within the general site selection area, there are physical barriers to revitalization. One physical barrier is the North 1<sup>st</sup> Street/Union Pacific Railroad (UPRR)/South 1<sup>st</sup> Street corridor which divides the Abilene downtown north and south. The limited ability to bridge this barrier decreases the revitalization impact that the multimodal facility may have on the opposing side. Likewise, Cedar Creek and its quarter mile-wide floodway and the north/south short line railroad diminish the revitalization impact on the east side of the area by limiting the ability to expand in this direction.

FTA capital projects have the potential to stimulate follow-on real estate investment through its ability to fund pedestrian linkages. These pedestrian-level capital improvements can create a more attractive environment for retail businesses. Pedestrian improvements within a ½ mile of the facility are federally eligible and are described in the Transit Enhancement chapter. Improvements include sidewalks, crosswalks, ADA ramps, pedestrian-level lighting, landscaping and irrigation, shelters and benches, way-finding, and public art. The eligible improvement areas for each candidate site are reflected in Figure 5.5.



*Figure 5.5: Transit Enhancement Area*

- **CityLink**

- ◆ The ability to stimulate redevelopment north of the 1<sup>st</sup> Street/UPRR corridor may be limited.
- ◆ The site is located in a developed area. The City is planning to make significant sidewalk improvement to South 1<sup>st</sup> Street, between Butternut Street and Locust Street using Transportation Enhancement Funds. A local developer has acquired a number of properties to the south of the site and previously expressed interest in redevelopment of the area.
- ◆ The ability to stimulate redevelopment south of 1<sup>st</sup> Street/UPRR corridor is limited.

- **North Treadaway**

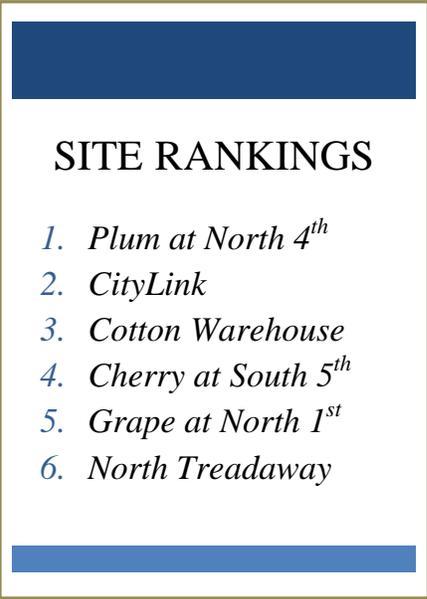
- ◆ The ability to stimulate redevelopment east of the site may be limited due to Cedar Creek and the presence of the railroad.
- ◆ The ability to stimulate redevelopment south of 1<sup>st</sup> Street/UPRR corridor is limited. The ability to stimulate redevelopment east of North Treadaway Boulevard may be limited due to the traffic volume and size of the roadway as well.
- ◆ The site is located in a low development area. Uses are largely industrial, manufacturing, and warehouse. Revitalization impact of pedestrian-level improvements on Treadaway Boulevard may be limited since the corridor is largely auto-centric.

- **Plum at N 4<sup>th</sup>**

- ◆ The ability to stimulate redevelopment east of North Treadaway Boulevard may be limited due to the traffic volume and size of the roadway; it may also be limited by Cedar Creek and the railroad.
- ◆ Site is located in a low development area. Vacant or abandoned property is present and uses are largely warehouse. However, it is located within proximity to the downtown, which could have a stimulating effect.
- ◆ Site is located in the SODA Plan's Warehouse District. North 4<sup>th</sup> Street and Plum Street are identified as "Gateway" Streets in the SoDA Plan. Development of the multimodal facility provides an opportunity to leverage FTA funding to extend sidewalk, lighting, landscaping, and public art within a ½ mile of the facility to support gateway development goals.

- **Grape at N 1<sup>st</sup>**

- ◆ The ability to stimulate redevelopment south of 1<sup>st</sup> Street/UPRR corridor is limited.
- ◆ The site is located in developed area where there are active local businesses. Ability to stimulate significant follow-on investment is more limited than more undeveloped areas.



### SITE RANKINGS

1. *Plum at North 4<sup>th</sup>*
2. *CityLink*
3. *Cotton Warehouse*
4. *Cherry at South 5<sup>th</sup>*
5. *Grape at North 1<sup>st</sup>*
6. *North Treadaway*

- **Cherry at S 5<sup>th</sup>**
  - ◆ The ability to stimulate development north of the 1<sup>st</sup> Street/UPRR corridor and east of the floodway of Cedar Creek and the railroad may be limited.
  - ◆ The site is located in a low development area. It is surrounded by vacant land, storage and salvage yards, and a small number of single family residences. It is located close to the commercial development along South Treadaway, one block to the east.
  - ◆ Site is located in the SoDA Plan's Warehouse District. South 4<sup>th</sup> Street is identified as "Gateway" Streets in the SoDA Plan. Development of the multimodal facility provides an opportunity to leverage FTA funding to extend sidewalk, lighting, landscaping, and public art within a ½ mile of the facility to support gateway development goals.
- **Cotton Warehouse**
  - ◆ The ability to stimulate redevelopment east of North Treadaway Boulevard and North 1<sup>st</sup> Street may be limited due to the traffic volume and size of the roadway.
  - ◆ Site is located in a low development area. Vacant or abandoned property is present and uses are largely warehouse. However, it is located within proximity to the downtown, which could have a stimulating effect.
  - ◆ Site is located in the SoDA Plan's Warehouse District. Plum Street is identified as "Gateway" Street in the SoDA Plan. Development of the multimodal facility provides an opportunity to leverage FTA funding to extend sidewalk, lighting, landscaping, and public art within ½ mile of the facility to support gateway development goals.

### ***Criteria 6 – Impact to Sensitive Receptors***

Sensitive receptors are land-uses that could potentially be incompatible with the presence of higher transit activity due to noise, emissions, level of human activity, and traffic impacts. They typically include residences, schools, churches, daycare facilities, and hospitals. Sensitive receptors can also include neighborhood and business associations within the vicinity of the site which can perceive a multimodal development as negative. Sites that are not adjacent to sensitive receptors are preferred. Sites that are not anticipated to generate high levels of disapproval from adjacent property owners are preferred. In the event the preferred site is located close to sensitive receptors and/or within the vicinity of negatively impacted neighborhoods, the layout of the site or the construction of barriers can potentially mitigate impacts. See Figure 5.6.

### **SITE RANKINGS**

- 1. Grape at North 1<sup>st</sup>*
- 2. North Treadaway*
- 3. Cotton Warehouse*
- 4. CityLink*
- 5. Cherry at South 5<sup>th</sup>*
- 6. Plum at North 4<sup>th</sup>*

- **CityLink**

- ◆ Sensitive receptors in the vicinity of the site include a triplex at 242 Elm Street, a quadraplex at 1217 South 3<sup>rd</sup> Street, and a single family residence at 1226 South 3<sup>rd</sup> Street.
- ◆ There is a history of low levels of acceptance of the continued presence of CityLink on the behalf of at least one property owner, and there is a risk that the development of the multimodal facility at this site would be opposed.

- **North Treadaway**

- ◆ Site impacts sensitive receptors. Residential housing abuts the site on Cottonwood Street from North 2<sup>nd</sup> to North 4<sup>th</sup>. Primera Iglesia Bautista Church (First Mexican Baptist Church) is located on 442 North Treadaway Boulevard, which is on the west side of North Treadaway Boulevard, just north of the site.
- ◆ There is no known neighborhood or business opposition to the site.

- **Plum at N 4<sup>th</sup>**

- ◆ Site impacts sensitive receptors. A portion of the site abuts the Primera Iglesia Bautista, another portion abuts the parking lot of the New Light Baptist Church, and another portion abuts the Plum Street United Methodist Church. To the north of the site, there are a limited number of single-family residences bordering North 6<sup>th</sup> Street. There is potential opposition to the project from these adjacent property owners.
- ◆ There is potential business opposition to the development of the site based on the perception that the presence of a multimodal facility will be a dis-incentive for other businesses to relocate to the area and therefore impact the SoDA Plan. The Carver Neighborhood Association, located north of the site, may perceive the development

negatively; however, the Carver Neighborhood Plan does reflect a desire for greater transit connectivity.

- **Grape at N 1<sup>st</sup>**
  - ◆ Site impacts a drug and alcohol treatment facility (Serenity House of Abilene).
  - ◆ There is no known neighborhood or business opposition to the site; however, the drug and alcohol treatment center may perceive the multimodal facility as a negative development.
- **Cherry at S 5<sup>th</sup>**
  - ◆ Site impacts three single family residences located adjacent to the property. There is no known neighborhood or business opposition to the site.
- **Cotton Warehouse**
  - ◆ Site impacts no sensitive receptors.
  - ◆ There is potential business opposition to the development of the site based on the perception that the presence of a multimodal facility will be a dis-incentive for other businesses to relocate to the area and therefore impact the SoDA Plan.

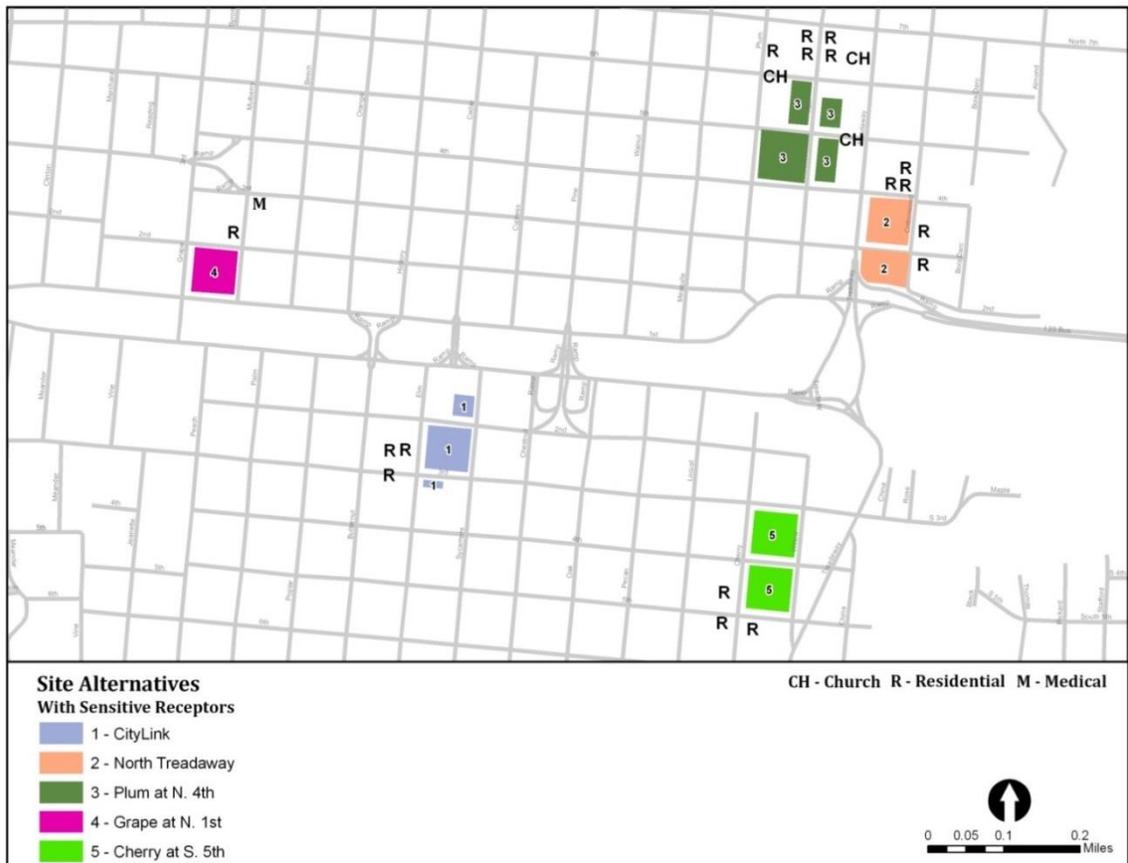


Figure 5.6: Sensitive Receptors

### Criteria 7 – Access to Services

Sites adjacent to or have good connectivity to goods and services needed and wanted by transit customers are preferred over isolated sites. Good connectivity is defined as services located within a ½ mile of the multimodal facility and connected by continuous sidewalks. In general, the 1<sup>st</sup> Street/UPRR corridor is a barrier to access services due to limited pedestrian and auto crossings of the railroad.

Goods and services that were considered for this analysis include grocery store/convenience (including dollar stores), drug stores, restaurants, daycare centers, and government services, such as public health, criminal justice, and post office. In general, the study area has no ready access to grocery stores and limited access to convenience stores. Restaurants are concentrated in north downtown. County services are concentrated in the south downtown area while municipal services are concentrated in north downtown. See Figure 5.7.

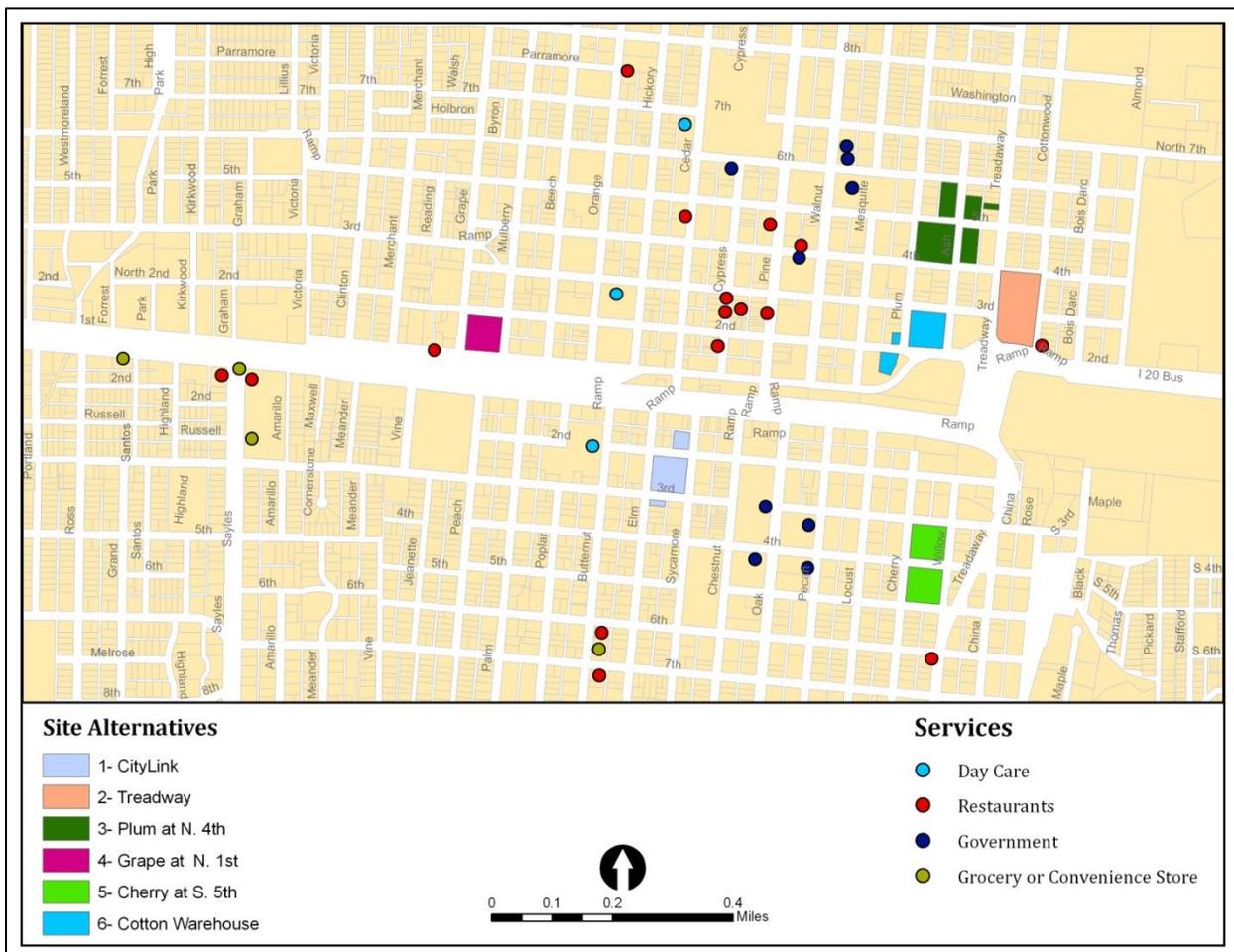


Figure 5.7: Access to Services

- **CityLink**

- ◆ The site has limited access to retail services. There are no grocery stores within a ½ mile radius of the site, but a convenience store is located at 641 Butternut Street, which is about a third of a mile from the site. The site is located close to Taylor County offices, such as the courthouse, law enforcement center, and indigent health care.
- ◆ Pedestrian infrastructure is fair. There is a pedestrian crossing and sidewalks at Butternut/Hickory Street that accesses downtown. There are sidewalks on one or both sides of the streets in the area around the county office complex.

## SITE RANKINGS

1. *Grape at North 1<sup>st</sup>*
2. *Plum at North 4<sup>th</sup>*
3. *CityLink*
4. *Cherry at South 5<sup>th</sup>*
5. *Cotton Warehouse*
6. *North Treadaway*

- **North Treadaway**

- ◆ The site has limited access to needed services. Currently, North Treadaway Boulevard is a barrier to connectivity to restaurant and municipal services in north downtown since it lacks good pedestrian crosswalks and pathways.
- ◆ Pedestrian infrastructure is poor or absent within the vicinity of the site.

- **Plum at N 4<sup>th</sup>**

- ◆ The site has limited access to needed services. There are no grocery stores or convenience stores within ½ mile to the site. It is located approximately three to four blocks from north downtown where a number of restaurants are located. It is located within ½ mile of a daycare. It is located two blocks from City Hall and the Post Office, and three blocks from the Health Department. The site is within a block of a major road barrier, North Treadaway Boulevard.
- ◆ Pedestrian infrastructure is poor immediately surrounding the site but improves as it reaches the historic downtown to the west.

- **Grape at N 1<sup>st</sup>**

- ◆ Site is located near a fast food restaurant and seven other restaurants are located within ½ mile, most of which are in the north downtown. Other services within ½ mile of the site include a grocery store, a dollar store, a convenience store, and a daycare facility. Site does not have good access to federal, county or municipal offices.
- ◆ Pedestrian infrastructure is average on North 1<sup>st</sup> Street and uneven along other corridors in the vicinity of the site. That is, some corridors have sidewalks while others do not. In general, the pedestrian infrastructure improves as one travels east and approaches the historic downtown.

- **Cherry at S 5<sup>th</sup>**

- ◆ Site has eight restaurants and two convenience stores that are located within ½ mile. There are no grocery stores within a ½ mile radius of the site. The site is close to the

Taylor County complex which includes the courthouse, law enforcement center, and indigent health care.

- ◆ Pedestrian infrastructure within the immediate vicinity of the site is largely absent but it improves as one travels west and approaches the Taylor County complex.

- **Cotton Warehouse**

- ◆ Site has limited access to needed services. There are no grocery stores, convenience stores or day cares within close proximity to the site. There are several restaurants located several block faces away in the historic downtown area.
- ◆ Pedestrian infrastructure is poor immediately surrounding the site but improves as it reaches the historic downtown to the east.

### ***Criteria 8 – Environmental Considerations***

Environmental considerations include potential risks from past or current uses. A site that has no or limited probability of generating an environmental mitigation cost is preferred over a site with potential environmental liabilities. While environmental mitigation is a federally eligible cost, the FTA prefers any environmental mitigation activities to be completed by the original owners, prior to purchase by the FTA. However, “informed clean-up” at a reasonable cost is eligible for federal reimbursement as long as it is identified prior to construction. For the purposes of this study, known past uses were identified using the City of Abilene online permit database and internet property searches and through conversations with stakeholders. A Phase 1 Environmental Assessment will be completed on the preferred site.

### SITE RANKINGS

1. *Cherry at South 5<sup>th</sup>*
2. *CityLink*
2. *Plum at North 4<sup>th</sup>*
4. *North Treadaway*
5. *Grape at North 1<sup>st</sup>*
6. *Cotton Warehouse*

One environmental consideration that may be common among many of the sites is groundwater contamination. Much of the site study area is within one of two Municipal Setting Designation (MSD) zones approved by the Abilene City Council in 2011. The MSD recognizes the likelihood of groundwater contamination within the zones and while the designation “does not alleviate all requirements for the clean-up of contaminated property, it does make the clean-up process much more manageable for developers.”<sup>1</sup> Concerns regarding groundwater contamination can be further exacerbated by run-off created from the transit traffic, facility, and maintenance activities.

None of the candidate sites is in or adjacent to a federally designated floodplain.

- **CityLink**

- ◆ The site is within an MSD zone. With the exception of groundwater contamination concerns generated by increased traffic and maintenance activities, it is not anticipated that expansion of current uses on the site will generate significant environmental issues. Environmental concerns over known past uses are limited. Parcels 16070 and 105357 were previously used as a furniture store. Parcels 15700 and 15574 previously had been owned by Avila Art and Crain Machine; however, no improvements were noted for the property, so it is likely that it functioned as a parking lot. The parcels that are currently home to CityLink had previously been a car dealership.

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<sup>1</sup> <http://www.abilenetx.com/agendapackets/RegularAgenda/2011/09-08-2011.pdf>

- **North Treadaway**
  - ◆ The site is located outside an MSD zone. Environmental concerns over known past uses are limited. Known past uses for the site includes a roofing company (parcel 12806), an acoustics company (parcel 12455), and a communication solutions company (parcel 12571) – none of which are expected to generate environmental issues.
  - ◆ There is an abandoned railroad spur that may require further research about ownership to determine activity or if it has reverted back to prior owners. Research will be conducted if site is chosen.
- **Plum at N 4<sup>th</sup>**
  - ◆ The site is located within an MSD zone. Environmental concerns over known past uses are limited. Parcel 49075 was part of the Henderson Grain Mill and has since been demolished and cleared for asbestos. Parcel 50337 contains another abandoned Henderson Grain Mill structure. Testing for and abatement of asbestos may be required prior to demolition of the structure. Existing structures include a single warehouse (concrete block construction) and a concrete pad (a foundation of a former warehouse) that is being used as open-air storage of miscellaneous construction materials.
- **Grape at N 1<sup>st</sup>**
  - ◆ The site is located within an MSD zone. Re-development of site would require demolition of abandoned municipal fire station, a medical office and a tire shop. The fire station (parcel 24398) will require asbestos abatement. The tire shop (parcel 25396) had previously been a gas station so underground petroleum storage tanks may be an issue.
- **Cherry at S 5<sup>th</sup>**
  - ◆ The site is located within an MSD zone. No known past uses for the properties. No known environmental issues at this time.
- **Cotton Warehouse**
  - ◆ The site is located within an MSD zone. The main parcel (21595) was formerly a cotton warehouse, one parcel was formerly a cotton mill and the other housed several occupants. Testing for asbestos and other contaminants, may be needed. Most of the properties have been used for open-air storage of miscellaneous construction and mill materials.

**Criteria 9 – Impact to CityLink Routes**

A site that requires minimal re-configuration of CityLink routes will be preferred over one that requires considerable re-routing. Sites that are located close to the “spine” where many routes travel (Pine, Hickory, Butternut, and Chestnut streets) are preferred over sites located in the periphery. In the site selection process, candidate sites were limited to those between Grape Street to the west and Treadaway Boulevard to the east; and between North and South 7<sup>th</sup> Streets in order to minimize the impact on routes.

CityLink operates 13 weekday routes and seven Saturday routes. With the exception of one Saturday route, all routes begin and end each run at the CityLink transfer facility. Since all candidate sites are located in or near the downtown, the basic route structure will remain the same. For the current CityLink site, the route structure will not change. For all other sites, the beginning and ending portions of the routes will need to be changed, affecting the length and time of the route. An equivalent or shorter length route will not significantly impact system operations. A route that is longer may impact operations if it needs more time to make the schedule. This would require either alteration of the route service area to reduce route time or alteration of the schedule to accommodate the longer route time. See Figure 5.8.

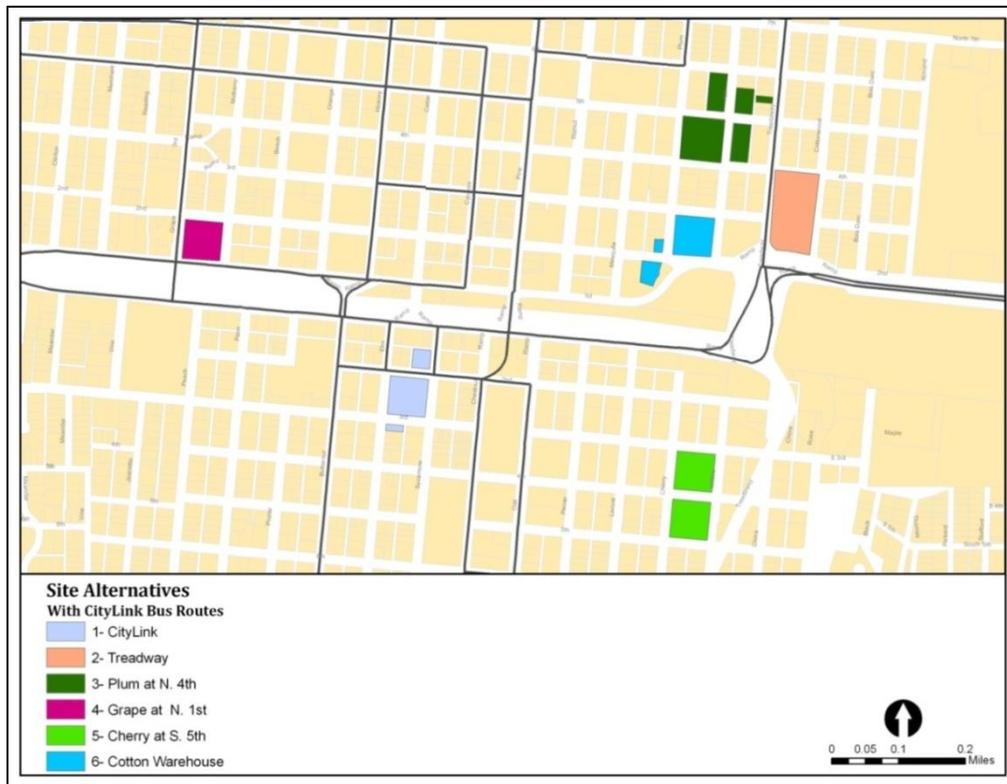


Figure 5.8: CityLink Bus Routes

- **CityLink**
  - ◆ No impact to CityLink routes. However, re-development of the site will disrupt services and present a challenge to operations.
- **North Treadaway**
  - ◆ Number of shorter routes: two weekday routes and one Saturday route
  - ◆ Number of longer routes: ten weekday routes and five Saturday routes
- **Plum at N 4<sup>th</sup>**
  - ◆ Number of equivalent routes: five weekday routes and two Saturday routes
  - ◆ Number of shorter routes: two weekday routes and one Saturday route
  - ◆ Number of longer routes: five weekday routes and three Saturday
- **Grape at N 1<sup>st</sup>**
  - ◆ Number of shorter routes: two weekday routes and two Saturday routes
  - ◆ Number of longer routes: ten weekday routes and four Saturday routes
- **Cherry at S 5<sup>th</sup>**
  - ◆ Number of shorter routes: three weekday routes and one Saturday route
  - ◆ Number of longer routes: nine weekday routes and five Saturday routes
- **Cotton Warehouse**
  - ◆ Number of equivalent routes: five weekday routes and two Saturday routes
  - ◆ Number of shorter routes: two weekday routes and one Saturday route
  - ◆ Number of longer routes: five weekday routes and five Saturday

## SITE RANKINGS

1. *CityLink*
2. *Plum at North 4<sup>th</sup>*
3. *Cotton Warehouse*
4. *Cherry at South 5<sup>th</sup>*
5. *Grape at North 1<sup>st</sup>*
6. *North Treadaway*

### ***Criteria 10 – Impact to Historical Structures***

Sites that contain or may impact historically significant structures are not preferred. Sites that are adjacent to or otherwise visually impact historically important locations will require an evaluation by the State Historical Preservation Offices (SHPO). Sites that contain any structure older than 45 years will require an evaluation by the SHPO to determine its historical significance. In the event a historically significant structure is adversely impacted, mitigating measures may be required to preserve and/or protect the structure.

In general, much of the property within the study area would require historical clearance. However, the presence of structures greater than 50 years old is not expected to significantly impact a site’s attractiveness. The ranking is based on the number of structures and an estimation of any historical significance.

### **SITE RANKINGS**

- 1. Cherry at South 5<sup>th</sup>*
- 2. North Treadaway*
- 3. Grape at North 1<sup>st</sup>*
- 4. CityLink*
- 5. Plum at North 4<sup>th</sup>*
- 6. Cotton Warehouse*

- **CityLink**

- ◆ The site contains three structures that are at least 45 years old. Two of the structures are noted as “other building with historic architectural characteristics” in the SoDA Plan.
- ◆ As noted in the SoDA Plan, the site is located amid of cluster of buildings which are defined as having “historic architectural characteristics.” Four of these buildings are adjacent to the property.

- **North Treadaway**

- ◆ There are nine structures which are at least 45 years old. However, it is not anticipated that any of these structures would be considered historically significant.
- ◆ As noted in the SoDA Plan, the site is not located adjacent to any historically significant buildings.

- **Plum at N 4<sup>th</sup>**

- ◆ There are four structures that would require historical clearance. Structure on Parcel 22731 is listed as “Other building with historic architectural characteristics” in the SoDA Plan.
- ◆ As noted in the SoDA Plan, the site is located adjacent to one building identified as having “historic architectural characteristics,” and another building identified by the Abilene Register of Historic Properties.

- **Grape at N 1<sup>st</sup>**

- ◆ There are four structures that would require historical clearance. It is anticipated that they would not be considered historically relevant.
- ◆ Site is located adjacent to a building identified by the Abilene Register of Historic Properties (American Red Cross Building).

- **Cherry at S 5<sup>th</sup>**
  - ◆ There are three structures that would require historical clearance. It is anticipated that they would not be considered historically relevant.
  - ◆ There are no noted historic properties adjacent to the site.
- **Cotton Warehouse**
  - ◆ There are three structures that would require historical clearance. The main cotton warehouse site has had historical clearance issues in the past and is on the Abilene Register of Historic Properties. One site is listed on the Abilene Register of Historic Properties and the other site is listed as “Other building with historic architectural characteristics.”
  - ◆ As noted in the SoDA Plan, there are three adjacent historic properties (according to the Abilene Register of Historic Properties) including Ganey Peanut Company (341 Plum). There are also three adjacent properties listed as “Other building with historic architectural characteristics.”

**Criteria 11 – Traffic Impacts and Vehicle Accessibility**

Bus traffic generated from the proposed multimodal facility may impact congestion and existing traffic patterns in the vicinity of the site. Sites with adequate roadway capacity are preferred over sites located adjacent to more congested roadways. In general, all the sites are located on roads that can accommodate the expected level of bus traffic. Sites that are located on arterial corridors that are designed to manage higher traffic volumes and larger vehicles are preferred over sites that impact local streets. However, high-traffic arterials can also present challenges to ingress and egress, particularly from left turns. Sites that can accommodate easy ingress and egress from multiple directions are preferred over sites with limited accessibility. Figure 5.9 illustrates the 24-hour traffic volume as measured by the Texas Department of Transportation in 2010.

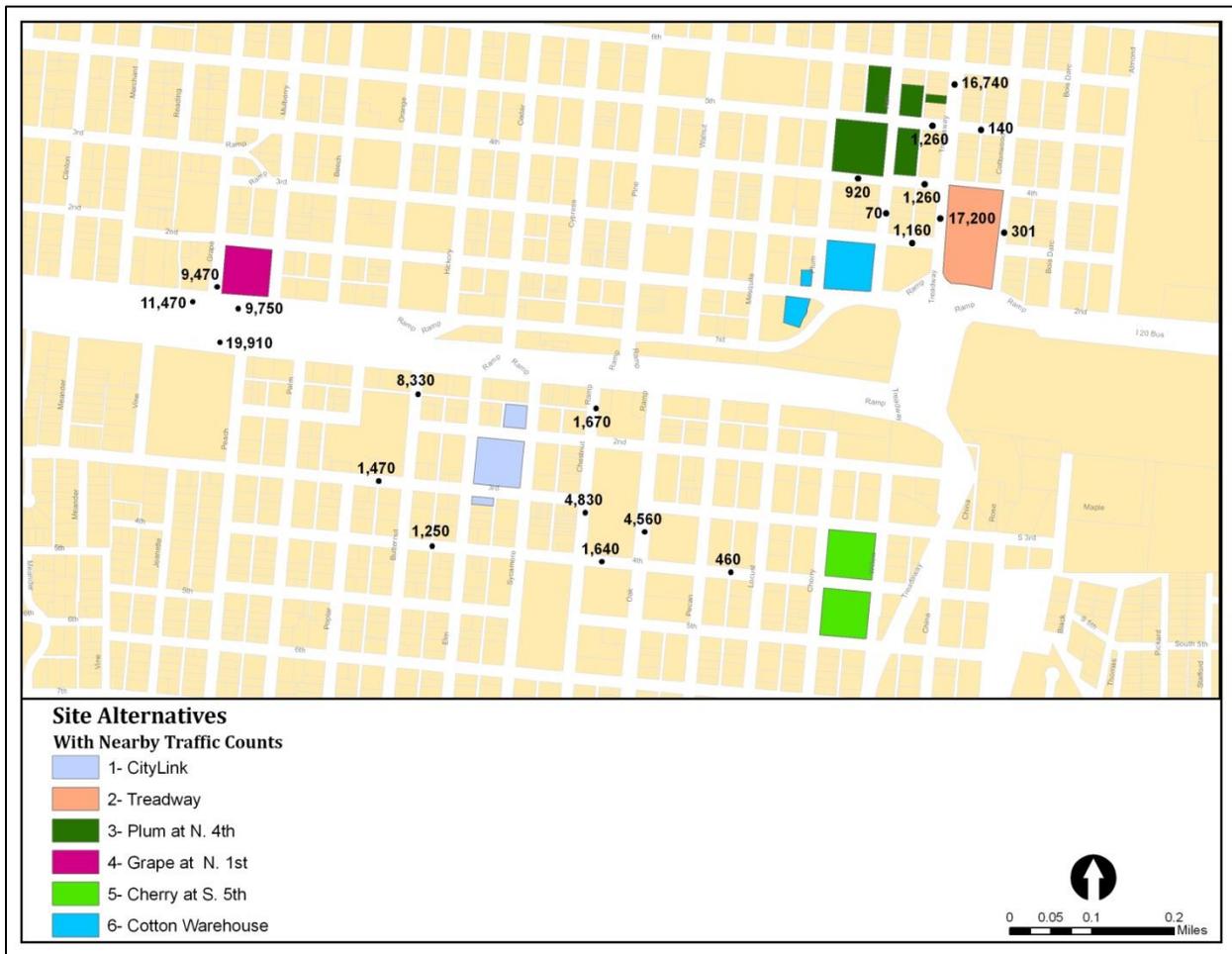
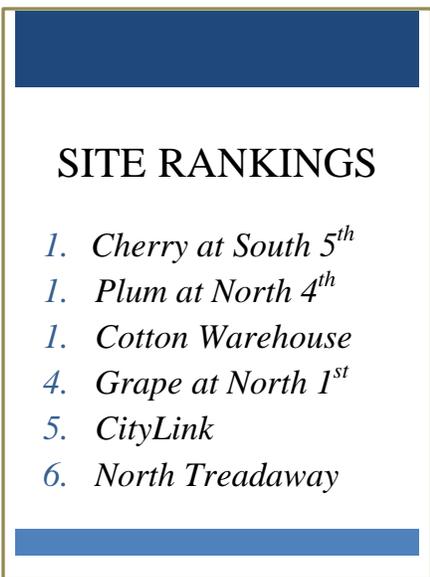


Figure 5.9: 24-Hour Traffic Counts

- **CityLink**

- ◆ The streets abutting the site are classified as local and are two-way. Average daily traffic counts for arterial and collector streets in the vicinity include 8,330 vehicles on Butternut Street between South 1<sup>st</sup> and South 2<sup>nd</sup> Streets; and 4,830 vehicles on Chestnut Street between South 3<sup>rd</sup> and South 4<sup>th</sup> Streets. Traffic counts for local streets in the vicinity of the site are between 1,200 and 1,700 vehicles. On-street or head-in parking is common on the streets adjacent to the site.
- ◆ Site is located one block from South 1<sup>st</sup> Street, a major road. Close proximity to a major road facilitates access.

A rectangular box with a thin gold border and a white background. At the top and bottom are solid blue horizontal bars. The text "SITE RANKINGS" is centered at the top in a bold, black, sans-serif font. Below it is a numbered list of six items, each starting with "1." followed by the name of a location. The list is: 1. Cherry at South 5<sup>th</sup>, 1. Plum at North 4<sup>th</sup>, 1. Cotton Warehouse, 4. Grape at North 1<sup>st</sup>, 5. CityLink, and 6. North Treadaway.

**SITE RANKINGS**

1. *Cherry at South 5<sup>th</sup>*
1. *Plum at North 4<sup>th</sup>*
1. *Cotton Warehouse*
4. *Grape at North 1<sup>st</sup>*
5. *CityLink*
6. *North Treadaway*

- **North Treadaway**

- ◆ The site is located at the intersection of two arterials, Treadaway Boulevard, and East Highway 80 (BI-20). South 1<sup>st</sup> Street, an arterial, would also feed traffic to the site. Treadaway Boulevard is four lanes, with a turning lane; it has an average daily traffic count of 17,200 vehicles at the intersection of North 3<sup>rd</sup> Street. The high traffic on Treadaway can make it difficult for southbound traffic to turn left into the site location. Traffic counts on the local streets adjacent to the site are low, less than 350 vehicles. Traffic counts on the local streets to the west of Treadaway Boulevard are higher but less than 1,200 vehicles. Signalization at North 3<sup>rd</sup> Street and/or North 4<sup>th</sup> Street would be required for vehicles traveling southbound on Treadaway Boulevard or eastbound on North 3<sup>rd</sup> or North 4<sup>th</sup> Street for safe pedestrian travel to access downtown. According to City staff, the likelihood of either of these intersections being signalized is very low. There is no on-street parking on Treadaway. On-street parking was noted for adjacent local streets.
- ◆ Given that the site is located on a major road (Treadaway), this generally facilitates site access for vehicles traveling on that road, particularly northbound traffic. However, there are difficulties with access from State Highway 80 eastbound due to the placement of the left-turn “cut-through” serving south-bound Treadaway vehicles, which completely blocks access for eastbound Highway 80 traffic.

- **Plum at N 4<sup>th</sup>**

- ◆ Site is located on two-way roadways classified as local, and some of which are lacking curbs to allow for pull-in to warehouses. The average daily traffic counts are low with 920 vehicles on North 4<sup>th</sup> Street between Ash and Plum and 1,260 vehicles on North 5<sup>th</sup> Street between North Treadaway Boulevard and Ash Street. Treadaway Boulevard is four lanes, with a turning lane; it has an average daily traffic count of 17,200 vehicles at the intersection of North 3<sup>rd</sup> Street. Signalization at North 3<sup>rd</sup> Street and/or North 4<sup>th</sup> Street

would be required for vehicles traveling southbound on Treadaway Boulevard or eastbound on North 3<sup>rd</sup> or North 4<sup>th</sup> Street for safe pedestrian travel to the east side.

- ◆ Site is located one block from Treadaway Boulevard, a major road. Close proximity to a major road facilitates access.
- **Grape at N 1<sup>st</sup>**
  - ◆ Site is located adjacent to two, four-lane arterials, Grape Street and North 1<sup>st</sup> Street. The intersection includes a protected left turn. The average daily traffic count for the adjacent streets is 9,470 vehicles and 9,750 vehicles respectively. Site is also located at North 2<sup>nd</sup> Street, which is a one-way westbound street.
  - ◆ Site is located on a major road which facilitates access.
- **Cherry at S 5<sup>th</sup>**
  - ◆ Site is located adjacent to two-way roadways classified as local. The average daily traffic counts for roadways in the vicinity are low with 660 vehicles on South 4<sup>th</sup> Street, between Pecan Street and Locust Street.
  - ◆ Site is located one block from Treadaway Boulevard, a major road. Close proximity to a major road facilitates access. Treadaway Boulevard is four lanes, with a turning lane. Signalization would be required for vehicles traveling on Treadaway Boulevard for safe pedestrian travel.
- **Cotton Warehouse**
  - ◆ Site is located adjacent to two-way roadways classified as local. The average daily traffic counts for roadways in the vicinity are low; there are 70 vehicles on Ash Street and 1,160 on North 3<sup>rd</sup> Street.
  - ◆ Site is located one block from Treadaway Boulevard, a major road. Close proximity to a major road facilitates access

**Criteria 12 – Pedestrian Access**

Since some transit patrons may rely on walking or bicycling to reach the multimodal facility or surrounding services, a site that is linked by good pedestrian infrastructure is preferred. Sites that are close to (or can be linked to) high transit-dependent neighborhoods are preferred.

The TNI is one tool to measure the transit dependency of a census tract. It is based on the relative population density and presence of populations that are typical transit users and includes people over 65, people with disabilities, zero car and low-income households. See Figure 5.10 for an illustration of site locations relative to transit need based on the index.

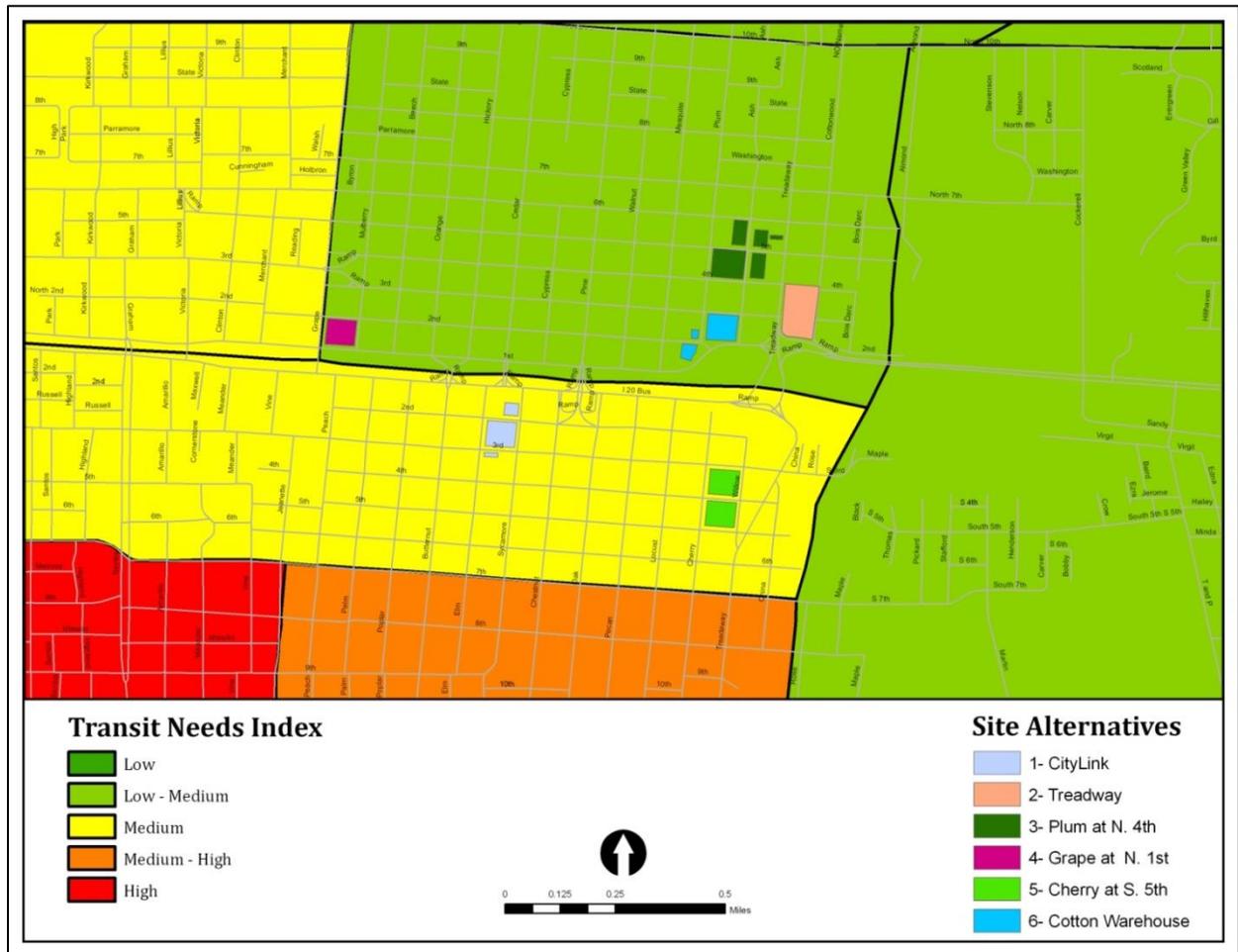


Figure 5.10: Downtown Abilene TNI

- **CityLink**

- ◆ Site is located close to residential neighborhoods to the southwest, but the linking pedestrian infrastructure is poor. Pedestrian infrastructure is fair to good from the site to the county complex to the east. Site is located close to a signalized pedestrian crossing into north downtown Abilene at Hickory Street.
- ◆ Site is located in an area defined as medium transit need.

- **North Treadaway**

- ◆ Site has poor pedestrian infrastructure adjacent to the site while the pedestrian environment is poor on Treadaway Boulevard. The site does not reflect good pedestrian connectivity to the downtown area. This could be addressed through signalization and a crosswalk at North 3<sup>rd</sup> Street and/or North 4<sup>th</sup> Street; however, the likelihood of signalization at these intersections is low, according to city staff. The property is located close to a proposed greenway trail/bike path to the east on Cedar Creek; however, this path is separated from the site by a railroad line and will likely have no significant impact on the pedestrian accessibility of the site.
- ◆ Site is located in an area defined as low to medium transit need.

- **Plum at N 4<sup>th</sup>**

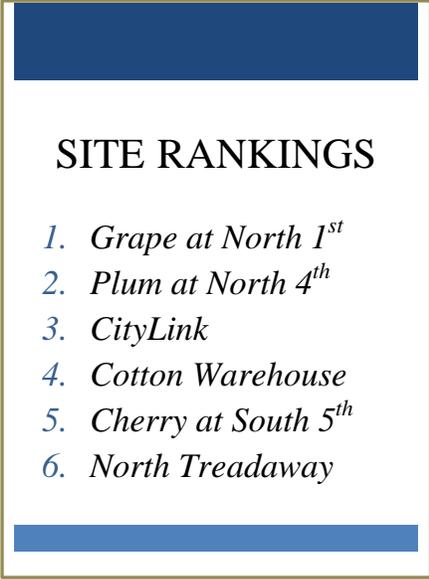
- ◆ Pedestrian infrastructure is poor to absent throughout most of the area immediately surrounding the facility. The site is within two blocks of the sidewalk infrastructure of downtown, but there are no clear pedestrian connections from the site to the downtown at this time.
- ◆ Site is located in an area defined as low to medium transit need.

- **Grape at N 1<sup>st</sup>**

- ◆ Sidewalk infrastructure is above average for the city in the vicinity of the site. On Grape Street, sidewalks extend more than ½ mile from the site. Along North 1<sup>st</sup> Street, sidewalks extend within a ½ mile or more. Crosswalks are not complete to South 1<sup>st</sup> Street. Other pedestrian amenities such as lighting and landscaping are lacking.
- ◆ Site is located in an area defined as low to medium transit need but is adjacent to an area which is medium transit need.

- **Cherry at S 5<sup>th</sup>**

- ◆ Pedestrian infrastructure is poor to absent throughout most of the surrounding area. There are no clear pedestrian connections to the county complex or downtown.
- ◆ Site is located in an area defined as medium transit need.



## SITE RANKINGS

1. *Grape at North 1<sup>st</sup>*
2. *Plum at North 4<sup>th</sup>*
3. *CityLink*
4. *Cotton Warehouse*
5. *Cherry at South 5<sup>th</sup>*
6. *North Treadaway*

- **Cotton Warehouse**

- ◆ Pedestrian infrastructure is poor to absent throughout most of the area immediately surrounding the facility. The site is within two blocks of the sidewalk infrastructure of downtown, but there are no clear pedestrian connections from the site to the downtown at this time.
- ◆ Site is located in an area defined as low to medium transit need.

### **Criteria 13 - Visibility**

A site with good visibility is preferred over a site that is isolated and/or difficult to find. Good visibility allows for customers to find the site easier and may make the development more attractive to potential joint development activity.

- **CityLink**

- ◆ Visibility is limited. The site is not adjacent to any arterials or main corridors. However, it is located only one block from South 1<sup>st</sup> Street so there is some potential for increasing visibility.

- **North Treadaway**

- ◆ Visibility is excellent. The site is located close to the intersection of BI-20 and U.S. 83 Business.

- **Plum at N 4<sup>th</sup>**

- ◆ Visibility is limited, but the site is located between the north downtown area and North Treadaway Boulevard. This site is located within a few blocks of South 1<sup>st</sup> Street so there is some potential for increasing visibility.
- ◆ As noted in the SoDA Plan, North 4<sup>th</sup> Street is designated as a “gateway” street. If this street is further developed as suggested in the plan, then site visibility will increase.

- **Grape at N 1<sup>st</sup>**

- ◆ Visibility is excellent. The site is located at the intersection of North 1<sup>st</sup> Street and Grape Street, two minor arterials. It is located across the UPRR from another minor arterial, South 1<sup>st</sup> Street.

- **Cherry at S 5<sup>th</sup>**

- ◆ Visibility is limited. The site is not adjacent to any arterials or main corridors. This site is located within a few blocks of South 1<sup>st</sup> Street so there is some potential for increasing visibility.
- ◆ As noted in the SoDA Plan, South 4<sup>th</sup> Street is designated as a “gateway” street. If this street is further developed as suggested in the plan, then site visibility will increase.

- **Cotton Warehouse**

- ◆ Visibility is good. The site is adjacent to North 1<sup>st</sup> Street and is across the street from Frontier Texas.

### **SITE RANKINGS**

1. *Grape at North 1<sup>st</sup>*
2. *North Treadaway*
3. *Cotton Warehouse*
4. *Plum at North 4<sup>th</sup>*
5. *Cherry at South 5<sup>th</sup>*
6. *CityLink*

## SITE RANKINGS

The six candidate sites were ranked relative to one another with the site ranked the highest given a value of “6”, the second highest given a “5”, and so on, down to the site ranked sixth given a value of “1”. If two sites met a criterion equally, they were assigned the same value. Each criterion was assigned a weight of either 1 or 2, with 1 reflecting criteria which were less critical and 2 reflecting criteria which were more critical.

There were thirteen criteria that were used to rank sites. Criteria that were weighted as 2 include: size, zoning, ease of acquisition, environmental considerations, revitalization impact, compatibility with adopted plans, impact to sensitive receptors, access to services, and traffic impacts and accessibility. Criteria that were weighted as 1 include: impact to CityLink routes, impact to historical structures, pedestrian access, and visibility.

Based on the rankings and criteria in the analysis, the Plum at North 4<sup>th</sup> Street ranked higher (88 points) than the Cherry at South 5<sup>th</sup> Street (87 points) and Cotton Warehouse (86 points) sites. The Plum at North 4<sup>th</sup> Street site ranked high in the following categories: size, ease of acquisition, revitalization impact, compatibility with adopted plans, and traffic impacts and accessibility. The site ranked low in the following categories: impact to sensitive receptors, zoning, and visibility. If this site is chosen as the preferred site, management of project risks associated with these issues will be required. For example, public outreach to impacted businesses and neighborhoods will be needed to measure potential opposition to the project and to design project development solutions to address expressed concerns.

The Cherry at South 5<sup>th</sup> Street site ranked high for: size, environmental considerations, and traffic impacts and accessibility. Criteria where the site ranked low include ease of acquisition, compatibility with adopted plans, pedestrian access, and visibility. The Cotton Warehouse site ranked high in zoning, ease of acquisition, and traffic impacts and accessibility. Criteria where the site ranked low include environmental considerations and impact to historical structures.

The Grape at North 1<sup>st</sup> site ranked almost as well as the previous three sites. The Grape at North 1<sup>st</sup> site ranked high in the following categories: zoning, impact to sensitive receptors, and access to services. However, the site is too small and would require that administration and operation functions be separated from maintenance and vehicle storage.

The CityLink site scored 73 points. The CityLink site ranked high in the following categories: ease of acquisition, revitalization impact, access to services, and environmental considerations.

### SITE RANKINGS

1. *Plum at North 4<sup>th</sup>* – 88 points
2. *Cherry at South 5<sup>th</sup>* – 87 points
3. *Cotton Warehouse* – 86 points
4. *Grape at North 1<sup>st</sup>* – 77 points
5. *CityLink* – 73 points
6. *North Treadaway* – 68 points

However, redevelopment of the site while maintaining operations would be challenging. See Table 5.3 for a summary of all scores.

		<b>CityLink</b>	<b>North Treadaway</b>	<b>Plum &amp; N 4th</b>	<b>Grape &amp; N 1st</b>	<b>Cherry &amp; S 5th</b>	<b>Cotton Warehouse</b>
<b>Criteria</b>	<b>Weight</b>	<b>Site 1</b>	<b>Site 2</b>	<b>Site 3</b>	<b>Site 4</b>	<b>Site 5</b>	<b>Site 6</b>
<b>Size</b>	2	4	8	12	2	12	6
<b>Zoning</b>	2	4	12	2	6	12	12
<b>Ease of Acquisition</b>	2	10	4	10	6	2	12
<b>Compatibility with Adopted Plans</b>	2	2	12	4	10	8	6
<b>Revitalization Impact</b>	2	10	2	12	4	6	8
<b>Impact to Sensitive Receptors</b>	2	6	10	2	12	4	8
<b>Access to Services</b>	2	8	2	10	12	6	4
<b>Environmental Considerations</b>	2	10	4	10	2	12	6
<b>Traffic Impacts and Accessibility</b>	2	4	2	12	6	12	12
<b>Impact to CityLink Routes</b>	1	6	1	4	2	3	4
<b>Impact Historical Structures</b>	1	4	5	2	3	6	1
<b>Pedestrian Access</b>	1	4	1	5	6	2	3
<b>Visibility</b>	1	1	5	3	6	2	4
<b>Total</b>		<b>73</b>	<b>68</b>	<b>88</b>	<b>77</b>	<b>87</b>	<b>86</b>



# CHAPTER SIX: TRANSIT ENHANCEMENTS

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## INTRODUCTION

This chapter details the condition of transit enhancements along key corridors within ½ mile of the recommended site. Information on the federal policy for funding transit enhancements is provided in the first section. The inventory method and the corridor conditions are reviewed. Recommendations are given for installing or replacing components such as sidewalks, ADA-compliant ramps, crosswalks, landscaping, and lighting. Transit enhancement costs are included in Chapter 7. The benefits from transit enhancements are in Chapter 8.

## FTA POLICY

FTA can fund enhancements within ½ mile for pedestrian access to transit facilities and services.<sup>1</sup> Improvements eligible for funding include transit shelters, sidewalks and curbs, ADA-compliant ramps, landscape barriers between pedestrians and autos, benches and waste cans, pedestrian-oriented lighting, and hike-and-bike trails. In addition to pedestrian support, expanded federal support of bike connectivity to transit has recently been placed into effect. Bus stops and bicycle improvements are eligible within three miles. This policy was updated in November 2009 and further finalized in August 2011 in an FTA publication entitled *Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law*<sup>[2]</sup>.

Figure 6.1 shows the corridors that were evaluated, the location of the proposed multimodal facility and bus stops, and the area eligible for pedestrian improvements.

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<sup>[2]</sup> *Federal Register* / Vol. 76, No. 161 / Docket No. FTA-2009-0052 / Friday, August 19, 2011.

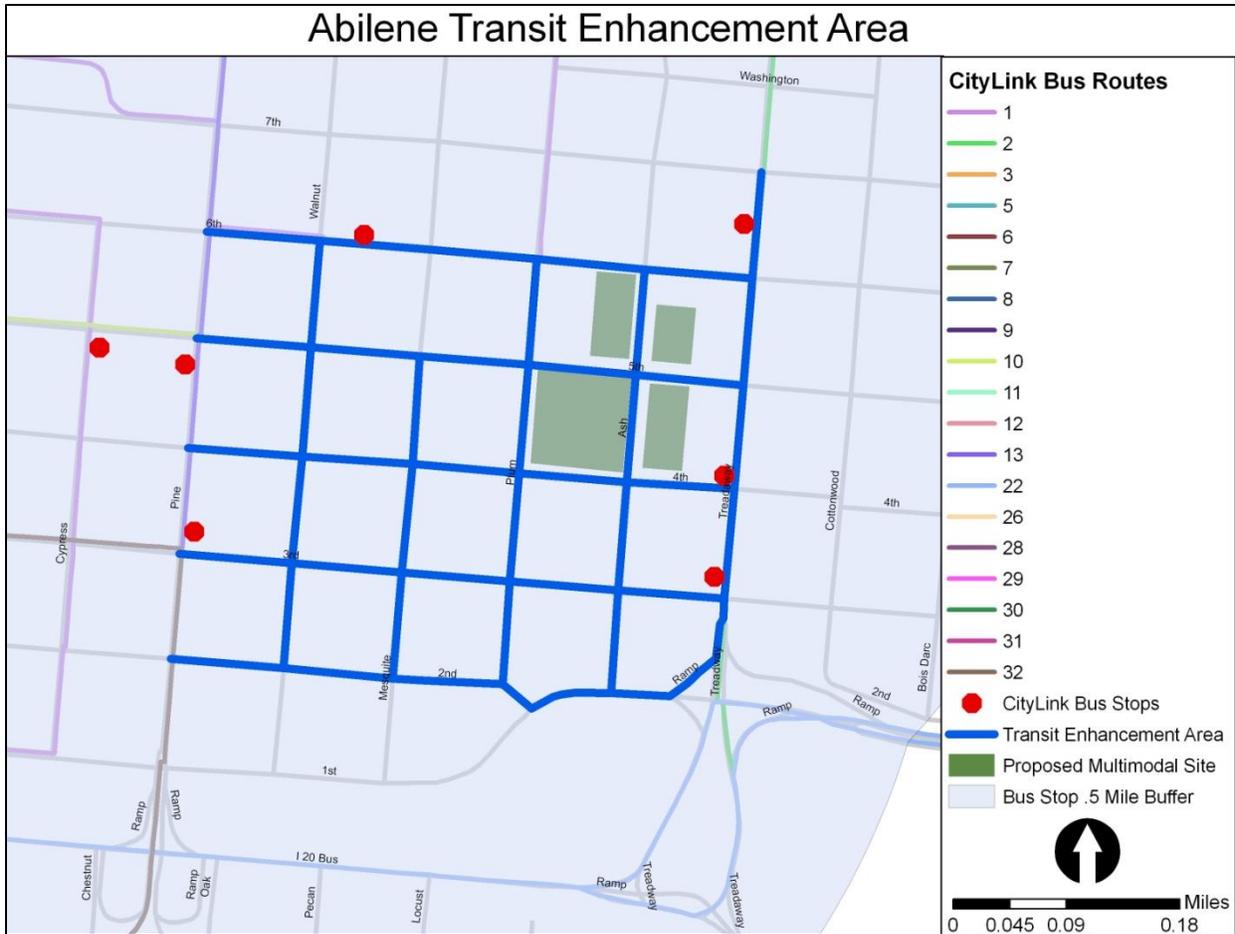


Figure 6.1: Transit Enhancement Area

**TRANSIT ENHANCEMENT TARGET AREA**

Corridors identified for future transit enhancements are within ½ mile of the recommended site at Plum and North 4<sup>th</sup> Street (Figure 6.1). FTA recognizes a “de facto” relationship between pedestrian improvements and transit within ½ mile of a stop. When local authorities invest local funds to improve pedestrian infrastructure within ½ mile of transit facilities, eligible capital items may become eligible for future FTA reimbursement and/or can be used as local share. In order to qualify for federal reimbursement, the procurement and construction process must be “federalized.” That is, the processes must meet all federal procurement and construction guidelines and should be carried out as if the project were already federally funded.

Corridor inventories were conducted as follows:

- **Identify corridors to be inventories:** Corridor segments were selected and cut into smaller sections called “block faces.” A block face is one side of a street between two intersections.

- **Inventory pedestrian-transit infrastructure:** Each block face was physically inventoried. Measurements for sidewalks, curbs, ADA ramps, etc., were used to calculate the replacement cost. (Chapter 7).
- **Describe and rank the existing streetscape conditions:** Both general block face conditions and individual infrastructure elements were described and, in some instances, ranked. Elements were assessed from the point of view of a pedestrian or disabled person trying to travel the corridor. The following items encompass the transit enhancements that were inventoried for each block face:
  - ◆ **Sidewalks and curbs:** Measured for width and length along block face and examined for condition
  - ◆ **Driveways:** Measured for total width along block face
  - ◆ **ADA-compliant ramps at street crossings, driveways, and alleys:** Counted where relevant and examined for conditions
  - ◆ **Crosswalks and stop bars:** Counted and examined for current conditions
  - ◆ **Planting strips and landscaping, between sidewalks and the roadway:** Measured for width and length along block face and examined for current conditions
  - ◆ **Bus stop infrastructure and furniture:** counted where relevant and examined for current conditions

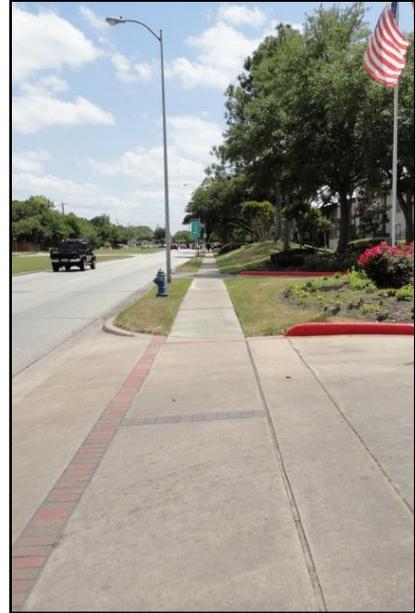
## TRANSIT ENHANCEMENT RANKINGS

The purpose of the rankings is to determine whether or not a particular transit enhancement needs to be replaced. This determination is made from the perspective of a pedestrian or disabled individual who uses a network of sidewalks, isolated from automobile traffic, to safely access transit stops, origins, and destinations.

0	=	No Treatment Necessary (Excellent)
1	=	Minimum Treatment Needed (Good)
2	=	Moderate Treatment Needed (Fair)
3	=	Maximum Treatment Needed (Poor)

Table 6.1 reflects the scoring for individual pedestrian/transit infrastructure items. The ranking criteria used per infrastructure item then are described.

**“0” No Treatment Necessary (Excellent):** Sidewalks are of sufficient width to support both pedestrian and disabled individuals; sidewalks and curbs are unbroken and are in very good condition, fully supporting pedestrian and disabled traffic; all sidewalks meet ADA standards at driveway intersections; ADA ramps have the proper slope and design; crosswalks are properly striped with stop bars; planting strips are of the appropriate width, acting as a sufficient buffer between pedestrians and motorized vehicles; landscaping in the planting strips is appropriate for the area and has supportive irrigation. **Replacement is not recommended.**



*Figure 6.2: Example of Score “0”  
Excellent Condition*

**“1” Minimum Treatment Needed (Good):** Sidewalks are of sufficient width to support both pedestrians and disabled individuals; sidewalks and curbs have minor surface damage or cracks but are unbroken and are otherwise in very good condition, needing little to no repair work; all sidewalks meet ADA standards at driveways and intersections; ADA ramps may show some wear, but have the proper slope and design; crosswalks are properly striped with stop bars; planting strips are of the appropriate width, acting as a sufficient buffer between pedestrians and vehicles; landscaping in the planting strip is appropriate for the area and has supportive irrigation. **Regardless of minor flaws, replacement is not recommended.**



*Figure 6.3: Example of Score “1”  
Good Condition*

**“2” Significant Treatment Needed (Fair):** Sidewalks are either too narrow or have moderate damage such as holes, gaps, or large cracks, making travel difficult for both pedestrians and disabled individuals; sidewalks may be raised or lowered at driveways and intersections; utilities may be obstructing the pedestrian right-of-way; curbs are crumbling or have gaps; ADA ramps are of an outdated design or show moderate wear; crosswalk striping is faded or may not include stop bars for motorized vehicles; planting strips are too narrow and do not serve as a sufficient perceived barrier between pedestrians and motorized vehicles; landscaping in planting strip is poor or may lack supportive irrigation. **Replacement is recommended.**



*Figure 6.4: Example of Score “2”  
Fair Condition*

**“3” Maximum Treatment Needed (Poor):** Sidewalks are either too narrow or have major damage such as severe surface breaks or missing sections, making travel impossible for both pedestrians and disabled individuals; sidewalks may be raised or lowered at driveways and intersections; utilities may be obstructing the pedestrian right-of-way; curbs are crumbling or have missing sections; ADA ramps are badly damaged, pooling water, or missing altogether; crosswalk striping is completely faded or nonexistent without stop bars for motorized vehicles; planting strips are too narrow and do not serve as a sufficient perceived barrier between pedestrians and motorized vehicles; landscaping is poor, absent, and lacking supportive irrigation. **Replacement is recommended.**



*Figure 6.5: Example of Score “3”  
Poor Condition*

Elements ranked as “Excellent” or “Good” are not recommended for repair or replacement. Elements ranked as “Fair” or “Poor” are recommended for complete replacement. A cumulative rating for each block face is given to identify which are in the worst condition and require the

most improvements. A complete detailed existing conditions inventory is included in *Appendix A - Existing Conditions Inventory*.

## **TRANSIT ENHANCEMENT CONDITIONS BY CORRIDOR**

This section summarizes the general condition of corridor segments for the 82 block faces that were inventoried.

### Walnut Street and East-West Block Faces between Pine and Walnut (N 2<sup>nd</sup> Street to N 6<sup>th</sup> Street, 18 block faces — .79 miles)

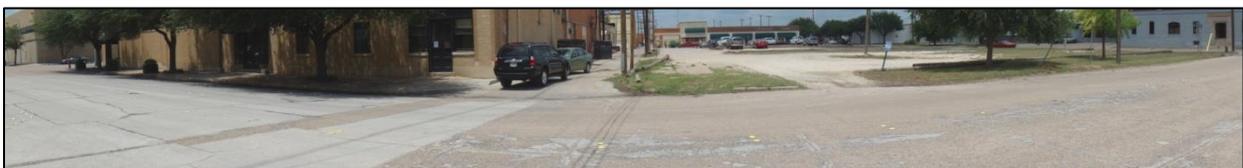


*Figure 6.6: Walnut Street and East-West Block Faces between Pine and Walnut, 2<sup>nd</sup> to 6<sup>th</sup> Streets- West Side*

This section is located on the west side of the inventory area and near Downtown Abilene. The Abilene City Hall is located near Walnut and 5<sup>th</sup> Street. Sidewalks are generally in good condition. Curbs vary between good and fair condition. When driveway and planting strips are present, they are in good condition. Planting strips in this section are mainly trees in grates along the wide sidewalks. Most block faces do not have driveways or planting strips. Some curb cuts are needed for pedestrian passage along the sidewalk. There are no pedestrian lights. Several block faces along Walnut had utility boxes in the pedestrian right-of-way. All ADA-compliant ramps are in fair condition. While some crosswalks are in good condition, most are in fair condition.

**Recommendations: Replace pedestrian infrastructure areas that are in “fair” condition, including ADA-compliant ramps, crosswalks, and curbs. Install pedestrian lighting where needed.**

### North 2<sup>nd</sup> Street (Pine Street to N 1<sup>st</sup> Street, 5 block faces or 0.16 miles)



*Figure 6.7: North 2<sup>nd</sup> Street, Pine Street to N 1<sup>st</sup> Street- North Side*

North 2<sup>nd</sup> Street is an east-west running street that terminates at Frontier Texas. There are parking lots along this street, including satellite parking for Frontier Texas. Within the vicinity of Frontier Texas, the sidewalk, ADA-compliant ramps, and planting strip are in better condition than the rest of the corridor. Otherwise, the sidewalks are generally not contiguous along this street or too narrow for safe passage. Driveways and curbs range from good to poor condition.

When present, planting strips were in poor condition. Besides at the intersections near Walnut and North 1<sup>st</sup> Street, ADA-compliant ramps and crosswalks are nonexistent. There are no pedestrian lights present.

**Recommendations: Add or improve pedestrian infrastructure throughout corridor and make sidewalks contiguous. Install pedestrian lighting, ADA-compliant ramps, and crosswalks, where needed.**

North 3<sup>rd</sup> Street (Pine Street to Treadaway Boulevard, 8 block faces or 0.28 miles)



*Figure 6.8: North 3<sup>rd</sup> Street, Pine Street to Treadaway Boulevard- North Side*

North 3<sup>rd</sup> Street is a one-way street that runs west to east to Treadaway. Where there are sidewalks and curbs, they are generally older and some sections need to be replaced. Planting strips have trees and concrete, where present. Tree roots cause the concrete to be uneven in some cases, but generally it is in good condition. Where pedestrian infrastructure is limited, there are curbs that are generally in fair condition. Loading docks, dumpsters, and sign and utility poles are in the pedestrian right-of-way. Excluding the intersection of North 3<sup>rd</sup> and Walnut, there are no ADA-compliant ramps or crosswalks. There are no pedestrian lights.

**Recommendations: Add or improve pedestrian infrastructure throughout corridor and make sidewalks contiguous. Install pedestrian lighting, ADA-compliant ramps, and crosswalks, where needed.**

North 4<sup>th</sup> Street (Pine Street to Treadaway Boulevard, 8 block faces or 0.28 miles)



*Figure 6.9: North 4<sup>th</sup> Street, Pine Street to Treadaway Boulevard- North Side*

North 4<sup>th</sup> Street is a one-way street that runs east to west to Pine. In general, sidewalks and curbs are not contiguous or are missing. When driveways are present, they are generally in good condition. Loading docks and railroad tracks are in the pedestrian right-of-way. There are no planting strips along the corridor. Excluding the intersection of North 4<sup>th</sup> and Walnut, there are no ADA-compliant ramps or crosswalks. There are no pedestrian lights present.

**Recommendations: Add or improve pedestrian infrastructure throughout corridor and make sidewalks contiguous. Install pedestrian lighting, ADA-compliant ramps, and crosswalks, where needed.**

North 5<sup>th</sup> Street (Pine Street to Treadaway Boulevard, 7 block faces, or 0.28 miles)



*Figure 6.10: North 5<sup>th</sup> Street, Pine Street to Treadaway Boulevard- South Side*

North 5<sup>th</sup> Street is a one-way street that runs west to east to Treadaway. In general, sidewalks and curbs are not contiguous or are missing. When driveways are present, they are generally in good condition. There are no planting strips along the corridor. Besides at the intersection with Walnut, there are no ADA-compliant ramps or crosswalks. There are no pedestrian lights present.

**Recommendations: Add or improve pedestrian infrastructure throughout corridor and make sidewalks contiguous. Install pedestrian lighting, ADA-compliant ramps, and crosswalks, where needed.**

North 6<sup>th</sup> Street (Pine Street to Treadaway Boulevard, 7 block faces or 0.28 miles)



*Figure 6.11: North 6<sup>th</sup> Street, Pine Street to Treadaway Boulevard- North Side*

North 6<sup>th</sup> Street is the northern edge to the inventory area. It is a two-way, east-west street with several government buildings. Sidewalks conditions widely vary along the corridor, from excellent condition near City Hall, to very poor, to nonexistent. Generally, the sidewalks are older and cracked. Driveways and curbs also vary along the corridor. If planting strips are present, they are in fair condition, but sidewalks are mainly adjacent to the road. ADA-compliant ramps varied between good and poor condition, when present. The few crosswalks that are present are in fair condition. There are no pedestrian lights present.

**Recommendations: Add sidewalks and other pedestrian infrastructure where needed, including ADA-compliant ramps and crosswalks.**

Mesquite Street (N 2<sup>nd</sup> Street to N 5<sup>th</sup> Street, 6 block faces, or 0.21 miles)



*Figure 6.12: Mesquite Street, N 2<sup>nd</sup> Street to N 5<sup>th</sup> Street- West Side*

Mesquite Street is a two-way, north-south street. This corridor's land use is more commercial, but has some industrial. Some sidewalks are present in this corridor, but they are not contiguous. Driveways and curbs range from good to fair condition, when present. Planting strips are not present, except for a small portion of the corridor. There are no ADA-compliant ramps, crosswalks, or pedestrian lights in this corridor.

**Recommendations: Install new or replace worn pedestrian infrastructure, where pedestrian right-of-way is available.**

Plum Street (N 2<sup>nd</sup> Street to N 6<sup>th</sup> Street, 8 block faces, or 0.28 miles)

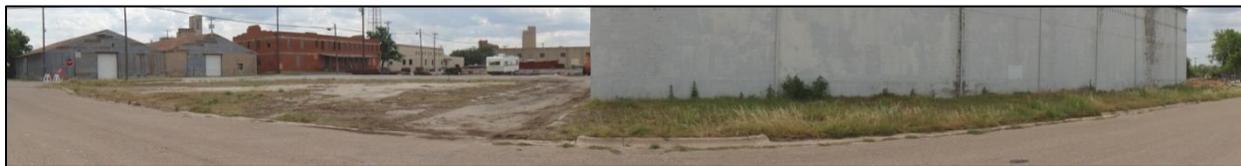


*Figure 6.13: Plum Street, N 2<sup>nd</sup> Street to N 6<sup>th</sup> Street- East Side*

Plum Street is a two-way street that runs north-south. The land use in this corridor is mainly industrial and commercial. Little to no pedestrian infrastructure is present. There are no sidewalks. There are very few driveways, but those are in good condition. Where present, curbs are generally in good condition. Railroad tracks, loading docks, and dumpsters are in the pedestrian right-of-way. There are no ADA-compliant ramps, crosswalks, or pedestrian lights in this corridor.

**Recommendations: Install new or replace failing pedestrian infrastructure, where pedestrian right-of-way is available.**

Ash Street (N 1<sup>st</sup> Street to N 6<sup>th</sup> Street, 8 block faces, or 0.28 miles)



*Figure 6.14: Ash Street, N 2<sup>nd</sup> Street to N 6<sup>th</sup> Street- West Side*

Ash Street is a two-way street that runs north-south. The land use in this corridor is mainly industrial. Little to no pedestrian infrastructure is present. There are no sidewalks, except for a small portion in front of one building. Driveways are in fair or poor condition. Curbs are in fair condition. There is multitude of impediments in the pedestrian right-of-way including railroad tracks, utility poles, dumpsters, and landscaping. There are some driveways that do not lead to anywhere, or phantom driveways, along this corridor as well. There are no ADA-compliant ramps, crosswalks, or pedestrian lights in this corridor.

**Recommendations: Install new or replace failing pedestrian infrastructure, where pedestrian right-of-way is available.**

Treadaway Boulevard (US 83 BUS)(N 1<sup>st</sup> Street to N 7<sup>th</sup> Street)(5 block faces — .35 miles)



*Figure 6.15: Treadaway Boulevard, N 1<sup>st</sup> Street to N 7<sup>th</sup> Street- West Side*

Treadaway Boulevard is a two-way arterial street that runs north-south. The speed limit is 45 miles per hour so pedestrian travel needs to be separated from the road. Little to no pedestrian infrastructure is present. There are no sidewalks except for a small portion in front of one building. Driveways are in fair or poor condition. Curbs are in fair condition. There are many street signs blocking the pedestrian right-of-way. There are some new ADA-compliant ramps, but no crosswalks or pedestrian lights in this corridor.

**Recommendations: Install new or replace failing pedestrian infrastructure, where pedestrian right-of-way is available.**

North 1<sup>st</sup> Street (N 2<sup>nd</sup> Street to Treadaway Boulevard, 2 block faces, or 0.12 miles)

North 1<sup>st</sup> Street is an east-west street that runs in front of Frontier Texas. There are existing sidewalks and planting strips in good to fair condition. Driveways and curbs are typically in good condition along the street. There is one loading dock that is blocking the pedestrian right-of-way. Two ADA-compliant ramps need to be replaced or installed; all others are in good condition. There is no crosswalk striping.

**Recommendations: Add or improve pedestrian infrastructure throughout corridor and make sidewalks contiguous. Install pedestrian lighting, ADA-compliant ramps, and crosswalks, where needed.**

## **SUMMARY**

In general, the conditions surrounding the recommended site are fair to poor. Basic improvements are needed along many corridors. Sidewalks are frequently missing or in poor condition, and ADA-compliant ramps are sometimes absent or noncompliant. Improvements that create an inviting, “walkable” environment are largely absent. In general, there are little to no trees, landscaping, and/or pedestrian lighting. Recommendations for transit enhancements include:

- **Sidewalks:** Recommend constructing or replacing 136,000 square feet of sidewalk.
  - ◆ The majority of corridors in Abilene lack contiguous sidewalk infrastructure throughout the transit enhancement capture area. Most sidewalks are in worn condition except for those near government buildings and/or near downtown. It is

recommended that contiguous sidewalk be constructed or replaced throughout much of the target area.

- **ADA-compliant Ramps and Crosswalks:** Recommend constructing or replacing 116 ADA-compliant ramps and 61 crosswalks.
  - ◆ Most ADA-compliant ramps that are in good condition are either near the downtown Abilene area or Frontier Texas. Pedestrians and handicapped individuals need compliant ADA-compliant ramps and well-striped crosswalks. It is recommended that new ADA-compliant ramps and crosswalks be constructed, where applicable.
- **Landscaping:** Recommend installing 158 trees.
  - ◆ Most block faces have little to no planting strips. Those with some landscaping have trees with grates and concrete. Most sidewalks present are adjacent to the road. For both beautification and safety purposes, it is recommended that trees be included in all applicable planting strips or lining the sidewalk in the inventory area.
- **Pedestrian Lighting:** Recommend installing 160 pedestrian lights.
  - ◆ There are no pedestrian lights in the inventory area. For safety reasons, pedestrian-oriented lighting should be installed on all appropriate blocks for safe nighttime sidewalk access.
- **Bus Stops:** Recommend adding benches and waste cans at four bus stops.
  - ◆ There are several bus stops near the inventory area, but there were very few bus stop amenities observed in the area. It is recommended that each stop have identifiable bus stop signs as well as appropriate amenities.



# CHAPTER SEVEN: FACILITY & TRANSIT ENHANCEMENTS CAPITAL COSTS

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This chapter outlines the capital and operating costs for the West Central Texas Multimodal Facility and transit enhancements. The estimated construction cost for the multimodal facility is \$9.6 million. Unit costs are based on a comparison of recently completed facilities of a similar type and TxDOT 2012 contract per-unit cost. The land cost represents assessed value, not market value. (Table 7.1)

<b>Table 7.1: Capital Cost of Multimodal Facility</b>				
<b>Program Element</b>	<b>No. of Units (sq. ft.)</b>	<b>Unit Cost</b>	<b>Unit Measure</b>	<b>Total</b>
<b>Land</b>	<b>209,000</b>	<b>\$ 1.01</b>	<b>Sq. ft.</b>	<b>\$ 212,000</b>
Admin Operations Facility	11,965	\$ 225.00	Sq. ft.	\$ 2,692,125
Maintenance Office	3,613	\$ 175.00	Sq. ft.	\$ 632,275
Maintenance Facility	23,040	\$ 125.00	Sq. ft.	\$ 2,880,000
Vehicle Staging	14,136	\$ 7.50	Sq. ft.	\$ 106,020
Vehicle Storage	42,120	\$ 7.50	Sq. ft.	\$ 315,900
Employee Parking	16,524	\$ 7.50	Sq. ft.	\$ 123,930
Customer Parking	6,075	\$ 7.50	Sq. ft.	\$ 45,563
Public Area (30% of common parking area)	6,780	\$ 9.00	Sq. ft.	\$ 61,017
Sidewalks (30% of common parking area)	6,780	\$ 5.00	Sq. ft.	\$ 33,899
Landscaping & Irrigation (10% common parking area)	2,260		Lump Sum	\$ 100,000
<b>Facility Subtotal</b>	<b>133,292</b>			<b>\$ 6,990,728</b>
<b>Soft Costs</b>				
Mobilization and Initial Expense		6.00%	Construction Cost	\$ 419,444
Permits		0.75%	Construction Cost	\$ 52,430
Insurance		2.00%	Construction Cost	\$ 139,815
Bond		2.00%	Construction Cost	\$ 139,815
Preliminary Engineering		4.00%	Construction Cost	\$ 279,629
Design		6.00%	Construction Cost	\$ 419,444
Construction Administration		2.00%	Construction Cost	\$ 139,815
Construction Management		2.00%	Construction Cost	\$ 139,815
<b>Subtotal</b>				<b>\$ 1,730,205</b>
<b>Contingency</b>		10.00%	Construction Cost	<b>\$ 699,073</b>
<b>Total</b>				<b>\$ 9,632,000</b>

## CAPITAL COSTS FOR TRANSIT ENHANCEMENTS

Areas within a half-mile radius of a transit stop are eligible for transit enhancements. Table 7.2 presents the unit costs for transit enhancements. The unit costs are from TxDOT and reflect recent infrastructure expenditures. Proposed enhancements include:

- Construct or replace sidewalks, where needed.
- Replace driveway bibs where their condition affects the pedestrian right of way.
- Construct or replace curbs, where needed.
- Construct or replace ADA-compliant ramps at applicable intersections using specialty paving.
- Stripe or restripe crosswalks and stop bars at applicable intersections.
- Replace or install grass sod and area-appropriate landscaping, where needed and desired.
- Install bollards on corridors with limited ROW for enhanced pedestrian protection.
- Install pedestrian-oriented street lighting, where needed.
- Install street furniture such as benches, waste receptacles, and concrete landings, where needed and desired.
- Install shelters along the transit route, where prescribed by the client and transit provider.

<b>Program Element</b>	<b>No. of Units</b>	<b>Unit Cost</b>	<b>Total</b>
Square feet sidewalk improvements	136,337	\$ 5.25	\$ 715,769
Linear feet curb improvements	18,455	\$ 18.00	\$ 332,190
Total Number of Trees w/ Grates added	158	\$ 2,300.00	\$ 363,400
Amount of new Sod/Ground Cover	35,919	\$ 0.18	\$ 6,465
Number of pedestrian lights added	190	\$ 5,000.00	\$ 950,000
Number of crosswalks improved	61	\$ 200.00	\$ 12,200
Number of ADA-compliant ramps improved	116	\$ 900.00	\$ 104,400
Number of benches added	4	\$ 2,000.00	\$ 8,000
Number of waste cans added	4	\$ 600.00	\$ 2,400
Square feet concrete landing improvements	288	\$ 6.00	\$ 1,728
Square Feet of Driveway Bibs improved	9,956	\$ 7.10	\$ 70,690
Sidewalk Demolition Costs	32,126	\$ 0.53	\$ 17,027
Curb Demolition Costs	12,319	\$ 0.16	\$ 1,971
Driveway Demolition Costs	9,956	\$ 0.53	\$ 5,277
<b><i>Total Inventory (Linear Feet)</i></b>	<b>27,887</b>		<b>\$ 2,591,518</b>

Table 7.3 summarizes the transit enhancement costs per corridor. Detailed costs per block face are included in *Appendix B*.

<b>Corridor</b>	<b>Totals</b>
<i>Walnut Street and East-West Block Faces between Pine and Walnut</i>	\$ 521,647
<i>North 2<sup>nd</sup> Street</i>	\$ 104,501
<i>North 3<sup>rd</sup> Street</i>	\$ 105,511
<i>North 4<sup>th</sup> Street</i>	\$ 498,756
<i>North 5<sup>th</sup> Street</i>	\$ 107,947
<i>North 6<sup>th</sup> Street</i>	\$ 154,161
<i>Mesquite Street</i>	\$ 112,017
<i>Plum Street</i>	\$ 494,587
<i>Ash Street</i>	\$ 144,204
<i>Treadaway Street</i>	\$ 152,531
<i>North 1st Street</i>	\$ 79,056
<b>Total Corridor Costs</b>	\$ 2,474,918
<b>Shared Infrastructure Costs</b>	<b>Totals</b>
<i>ADA Ramps</i>	\$ 104,400
<i>Crosswalks</i>	\$ 12,200
<b>Total Corridor + Shared Infrastructure</b>	<b>\$ 2,591,518</b>
20% PE/Design	\$ 518,304
10% Contingency	\$ 310,982
<b>Total</b>	<b>\$ 3,420,804</b>

## PROJECT COST SUMMARY

The estimated capital cost for the project is \$13.0 million. The West Central Texas Multimodal Facility capital and land cost is approximately to be \$9.6 million or 74 percent of the total program. The transit enhancements are \$3.4 million or 26 percent of the program. The maximum federal share is \$10.4 million and the local share minimum is \$2.6 million.

	<b>Capital Costs</b>	<b>Federal Share</b>	<b>Local Share</b>
WCT Multimodal Facility	\$9,600,000	\$7,680,000	\$1,920,000
Transit Enhancements	\$3,420,800	\$2,736,640	\$684,160
<b>Total</b>	<b>\$13,020,800</b>	<b>\$10,416,640</b>	<b>\$2,604,160</b>



# CHAPTER EIGHT: BENEFIT & RISK ASSESSMENT

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## INTRODUCTION

Determining benefits are an important part of a project's feasibility because, without benefits, there are no project supporters. The degree to which benefits can be fully described and/or quantified will directly impact the ability of the project to attract support on both the federal and local levels. On the federal level, benefit analysis is needed in order to compete effectively for discretionary funds. For example, federal funding opportunities include Transportation Investment Generating Economic Recovery (TIGER) grants, and the funding announcements for it requires specific types of benefits be addressed. On the local level, benefits are needed to win support for the project. For example, the degree to which a project can deliver either cost efficiencies and/or generate general revenue will impact its ranking among competing local priorities.

This chapter describes the benefits associated with the West Central Texas Multimodal Facility. Benefits are organized by type and include: state of good repair, economic competitiveness, livability, sustainability, and safety. In this chapter, benefits are described and when possible quantified and/or monetized. See Table 8.1 for a list of the benefit types.<sup>1</sup>

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<sup>1</sup> The methodologies presented are the product of research by the Transportation Coordination Research Program, the Transportation Research Board, National Research Council and the Government Accountability Office.

	<b>Benefit(s)</b>	<b>Description</b>	<b>Qualitative Description</b>	<b>Quantified Benefit</b>	<b>Monetized Benefit</b>
<b>State of Good Repair</b>	Replacing Infrastructure Savings	Extends life cycle of existing infrastructure.	<b>X</b>		
<b>Economic Competitiveness</b>	Job Creation Opportunity	Projects the number of short- and long-term employment.	<b>X</b>	<b>X</b>	
	Property Value Increase	Outlines how the project will enhance the surrounding property values.	<b>X</b>		
<b>Livability</b>	Transit Livability Elements	Targets the six key elements of the Livability Partnership.	<b>X</b>		
	Context Sensitivity	Creates a sense of place and ensures the comfort and safety of all users of a particular corridor, regardless of transportation.	<b>X</b>		
	Transportation Linkage	Describes how projects will interface with other modes of transportation.	<b>X</b>		
	Pedestrian-Transit Access	Describes how enhanced pedestrian-transit access benefits transit and surrounding land-uses.	<b>X</b>		
	New Annual Boardings	Increases in transit boardings.		<b>X</b>	
	Increased Fare Recovery	Increases in fare box revenue from new ridership.		<b>X</b>	<b>X</b>
	Increase in Parking Revenues	Increases in parking revenue from new parking/mixed use facility.		<b>X</b>	<b>X</b>
<b>Sustainability</b>	CO	Reductions in harmful air pollutants and greenhouse gasses due to auto use reduction.		<b>X</b>	
	CO2				
	VOC Reduction			<b>X</b>	<b>X</b>
	NOX Reduction			<b>X</b>	<b>X</b>
	PM Reduction				
	SOx Reduction				
	Fuel Cost Savings	Reductions in fuel consumption due to reductions in automobile uses.		<b>X</b>	<b>X</b>
Auto Cost	Reductions in average auto cost due to reductions in automobile uses.		<b>X</b>	<b>X</b>	
<b>Safety</b>	Accident Reduction	Reductions in property losses, injuries, and fatalities due to reductions in automobile uses.			<b>X</b>
	Crime Prevention Through Environmental Design	Designs infrastructure to reduce fear and incidences of crime.	<b>X</b>		

## STATE OF GOOD REPAIR

The multimodal facility seeks to replace the aging City of Abilene Transit Administration and Operations Facility that is in a state of significant disrepair, and expand and improve maintenance operations. Grant applications can be evaluated by their demonstrated need which includes: the age and existing useful life of the current structure; the amount of substantiated deferred maintenance; the ability to improve maintenance and condition of fleet; and the degree to which the project addresses a capacity constraint that is limiting the agency to maintain vehicles in a state of good repair.

- **Age and Existing Useful Life of Structure:** The City of Abilene Transit Administration and Operations Facility was purchased by the City of Abilene in 1994. The building was a car dealership that had been renovated and expanded to provide more maintenance area. The age of the building is not known.<sup>2</sup>
- **Substantiated Deferred Maintenance:** Deferred maintenance includes mechanical (air-conditioning and heating equipment), roof, plumbing, electrical, structural issues including termites and roof repair, and other structural issues. According to City staff, the cost to renovate the building ranges from \$90 and \$120 per square foot, or \$1.5 million to \$1.9 million.<sup>3</sup>
- **Ability to Improve Maintenance and Condition of Fleet:** The proposed facility plan increases the regional capacity to improve maintenance and the condition of vehicles. It increases the maintenance area (not including the office) from 10,350 square feet to 26,650 square feet. The expansion increases work bays from six bays to ten bays; service bays from one to four bays; and bus washing from one to two bays. It will increase the number of bays with lifts or pits from two to six. This increase in capacity is needed in order to maintain 20 fixed route and 35 demand response CityLink vehicles, about ten CARR Abilene-stationed vehicles, and minor and/or occasional maintenance for SPARTAN and DMC vehicles.

Table 8.2 lists some of the major maintenance components, along with current square footage, recommended square footage, and programmed square footage.<sup>4</sup> The current CityLink maintenance facility is undersized by approximately 9,600 square feet, if it is to meet the recommended requirements. The programmed facility expands service lanes from the recommended two to four and the non-specialized service bays from seven to ten. This expansion will give CityLink the flexibility to maintain more region vehicles in the future.

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<sup>2</sup> TGC staff contacted the Odis Dalton, Finance Department, (325) 676-6496 for building history and CityLink staff.

<sup>3</sup> Based on CityLink building that is 16,600 square feet. This does not include the maintenance facility.

<sup>4</sup> Recommended square footage is derived from formulas that can be found in Transit Garage Planning Guidelines by Frank Speilberg and Stephen Anderle, 1987.

<b>Component</b>	<b>Current</b>	<b>Recommended</b>	<b>Programmed</b>
<b>Maintenance Facility-Total</b>	10,500	20,156	26,653
<b>Service Lanes</b>	1 bay	2 bays	4 bays
<b>Non-Specialized Service Bays</b>	6 bays	7 bays	10 bays
<b>Parts Room</b>	960	1,339	1,339
<b>Storage Room</b>	216	326	326
<b>Tire Storage</b>	108	420	420
<b>Maintenance Offices</b>	144	226	346
<b>Mechanic Locker Room</b>	108	275	275

- **CityLink:** The proposed facility increases the number of bays, vehicle lifts, and vehicle pits. In addition, the new facility will facilitate easier and quicker servicing of vehicles. To evaluate the current performance of CityLink maintenance, NTD information was analyzed and compared to similar systems to see if CityLink performs on-par with its peers. The peers used for this evaluation include: Amarillo City Transit, Beaumont Municipal Transit System, Brazos Transit District, City of Mesquite Transit, and Concho Valley Transit District.
  - ◆ Based on reported NTD data, CityLink experiences 0.73 major mechanical incidents per 100,000 miles of revenue service. The average for the peer group is 3.14 major mechanical incidents per 100,000 miles of revenue service. By this measure, the maintenance of CityLink vehicles is better than their peers. However, maintaining this level of maintenance for both CityLink and CARR vehicles would be challenging without additional capacity.
- **Rural Providers:** Maintenance is particularly challenging for rural providers who frequently must deal with a high-mileage fleet and a lack of local technical expertise. Because of their long travelling distances, rural vehicles often need replacing more frequently than those in urban settings.<sup>5</sup>

## **ECONOMIC COMPETITIVENESS**

Economic competitiveness benefits of the project include job creation stimulated by new construction; improved business climate; and property value increases within the vicinity of the new facility.

### ***Job Creation***

The West Central Texas Multimodal Facility will generate economic benefits by creating short- and long-term jobs, which in turn spur additional economic activity. Short-term jobs are those that are directly related to the construction of the facility. These jobs end when construction is complete. Long-term jobs are those that are created because a new facility was constructed; for example, a new facility maintenance position may be created to care for the upkeep of the new

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<sup>5</sup> The Concept of a Regional Maintenance Center, M. Beruvides, et al. <http://www.nctr.usf.edu/jpt/pdf/JPT12-3Waters.pdf>. Accessed May 30, 2012.

building. The creation of both short- and long-term jobs impact economies through direct-, indirect-, and induced-effects.

- Direct effects are generated by the expenditures received by businesses in the study area (e.g. construction expenditures).
- Indirect effects represents the impact of the additional business spending that is generated as businesses sell more output and, in turn, purchase additional inputs from suppliers (e.g. machinery manufacturers).
- Induced effects represent the increase in economic activity associated with increased labor wages that accrue to workers and is spent on household goods and services purchased from businesses in the area.

**Short-Term Jobs:** The methodology used to measure short-term job creation was devised by the White House Council of Economic Advisors for measuring the impact of federal expenditures made through the American Recovery and Reinvestment Act of 2009 (ARRA).<sup>6</sup> The calculation equates one-job year to every \$92,000 of expenditures. The cost estimate for the West Central Texas Multimodal Facility is \$9,600,000, which equates to an estimated 104 jobs created. Of these 104 jobs, 64 percent are direct and indirect effects (67 jobs) and 36 percent are induced effects (37 jobs). See Figure 8.1.

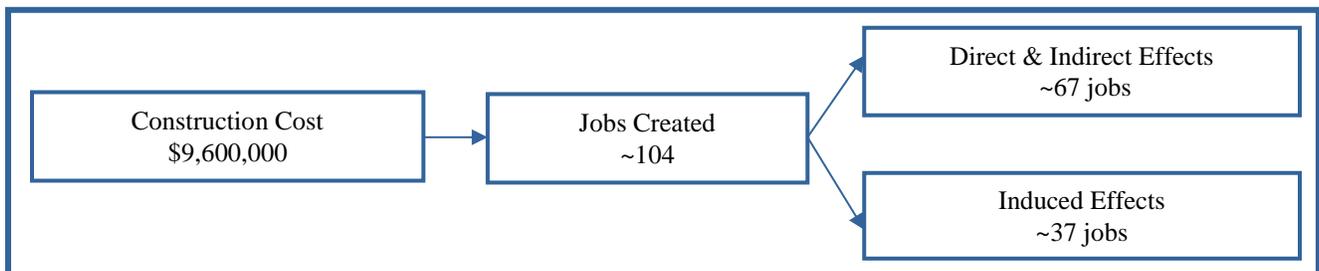


Figure 8.1: Short-term Job Creation

**Long-Term Jobs:** Long-term job created by the new facility includes facility operations and maintenance. It is assumed that the average cost for all building maintenance is \$1.30 per square foot and for grounds care is \$0.26 per square foot<sup>7</sup>; this equates to \$34,650 for building

<sup>6</sup> Executive Office of the President, Council of Economic Advisors, “Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009,” Washington, D.C. Accessed June 26, 2012. <http://www.whitehouse.gov/administration/eop/cea/Estimate-of-Job-Creation>

<sup>7</sup> Council on Competitive Government, Texas Facilities Commission Maintenance 2008 Program Review, page 11. <http://www.ccg.state.tx.us/documents/CCGFacilitiesReport.pdf>. Accessed June 26, 2012. (Cost has been adjusted for inflation.)

maintenance and \$600 for grounds care, for a total of \$35,250.<sup>8</sup> The average wage for building cleaning workers is \$11.03 per hour; this equates to approximately 1.58 long-term jobs created.<sup>9</sup>

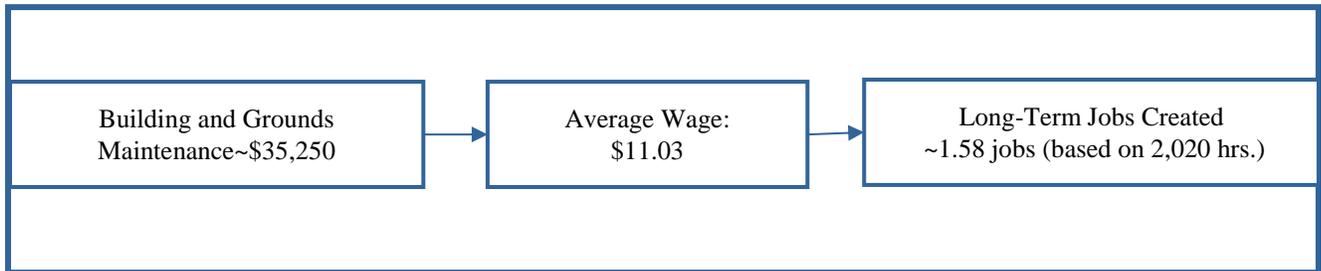


Figure 8.2: Long-term Job Creation

**Induced Effects:** Induced effects occur when people hired by the construction firms spend their income at regional businesses, such as retail or doctor’s offices, thus injecting more money into the regional economy. The American Public Transportation Association (APTA) has researched the economic impact of transportation expenditures. It estimates that for every \$1 million in capital expenditures, there are 0.71 jobs created. Assuming a \$9,600,000 construction cost for the facility, there will be 6.82 jobs created through induced effects.<sup>10</sup>

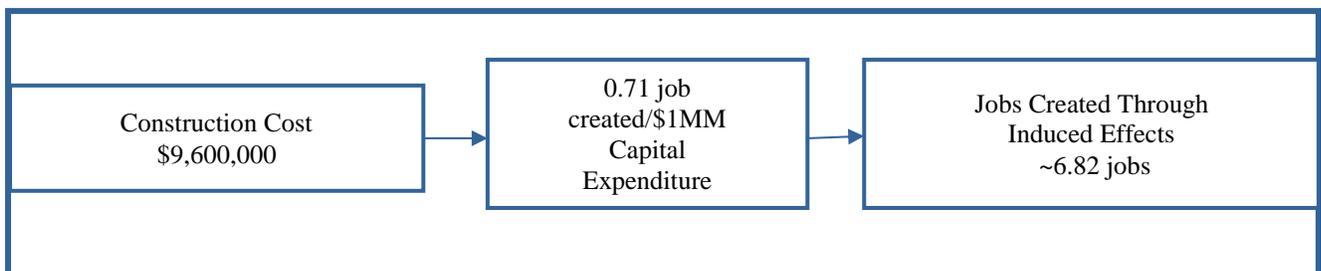


Figure 8.3: Induced Job Creation

### **Increased Property Values**

In the APTA report, *The Benefits of Public Transportation: Building Investment Value in Our Economy and Marketplace*, the impact of new public transportation construction on surrounding property values was measured for not only large urban markets like Portland, Oregon, and Dallas, Texas, but smaller markets like Corpus Christi, Texas, and Tampa, Florida:

- **Corpus Christi, Texas:** Investment in the Regional Transportation Authority’s Six Point Station has spurred occupancy in empty store fronts and development of new, high-

<sup>8</sup> Square footage for building maintenance is based on 100% of administration, operation, and maintenance office square footage and approximately 35% of maintenance facility square footage.

<sup>9</sup> Bureau of Labor Statistics for Amarillo Region. <http://www.bls.gov/ncs/ocs/sp/ncbl1552.txt>. Accessed June 26, 2012.

<sup>10</sup> American Public Transportation Association, *Economic Impact of Public Transportation Investment*, Glen Weisbrod and Arlee Reno, October 2009. Page 25. Accessed June 26, 2012. <http://www.apta.com/>

quality retail and business services in an economically diverse neighborhood. Commercial property valuations have risen from \$5 million to \$8 million.

- **Tampa, Florida:** The HARTline bus system coordinated development of its new University Area Transit Center in a chronically depressed neighborhood with development of a nearby community center and renovation of a major mall. The result – over \$75 million of development near the transit center, bringing new vitality, higher land values, and increased tax revenue to the area.<sup>11</sup>

Results from these cities and others are promising; on average property values that are within a five to ten minute walk from a high quality transit facility are being valued 20 to 25 percent higher than comparable properties farther away. However, the mixture of elements that fuel these increases encompasses more than just transit infrastructure investment and each situation must be evaluated within its specific context.

In May 2010, the City of Abilene completed its SoDA Plan. The plan contains a map of vacant parcels with the study area, which includes the recommended site at Plum Street and 4<sup>th</sup> Street. The map illustrates the significant inventory of developable property that exists within the vicinity of the recommended site. See Figure 8.4.

Within the immediate vicinity of the recommended site for the multimodal facility, there are about 12 acres of industrial, vacant, commercial, and utility properties. Twenty properties adjacent to the site were analyzed for the property tax impact of redevelopment. By comparing the current land and improvement values to average values in the Central Business District, the potential annual increase in property tax was estimated to be between \$5,098 and \$13,306.

**Table 8.3: Estimated Property Tax Redevelopment Incremental Revenue**

	Land	Improvements	Total
<b>Property to Redevelop</b>	464,059	248,548	-
<b>Current Value (per Sq. Ft.)</b>	\$0.86	\$5.69	-
<b>Current Value (Total)</b>	\$400,105	\$1,413,968	-
<b>Tax Current @ \$0.68/\$100</b>	\$2,721	\$9,615	-
<b>Est. Value Inc. Sq. Ft. Low</b>	\$1.24	\$8.00	-
<b>Est. Value Low</b>	\$575,433	\$1,988,384	-
<b>Tax Low Value</b>	\$3,913	\$13,521	-
<b>Tax Increment Low</b>	\$1,192	\$3,906	\$5,098
<b>Est. Value Inc. Sq. Ft. High</b>	\$2.77	\$10.00	-
<b>Est. Value High</b>	\$1,285,442	\$2,485,480	-
<b>Tax High Value</b>	\$8,741	\$16,901	-
<b>Tax Increment High</b>	\$6,020	\$7,286	\$13,306

*Current values are from 2012 Taylor CAD. New land values are based on values reported in SoDA Plan for property adjacent to the CBD. New improvement values are based on a sampling of recent rental values.*

<sup>11</sup> Ibid, The Benefits of Public Transportation: Building Investment Value in Our Economy and Marketplace. September 2005.

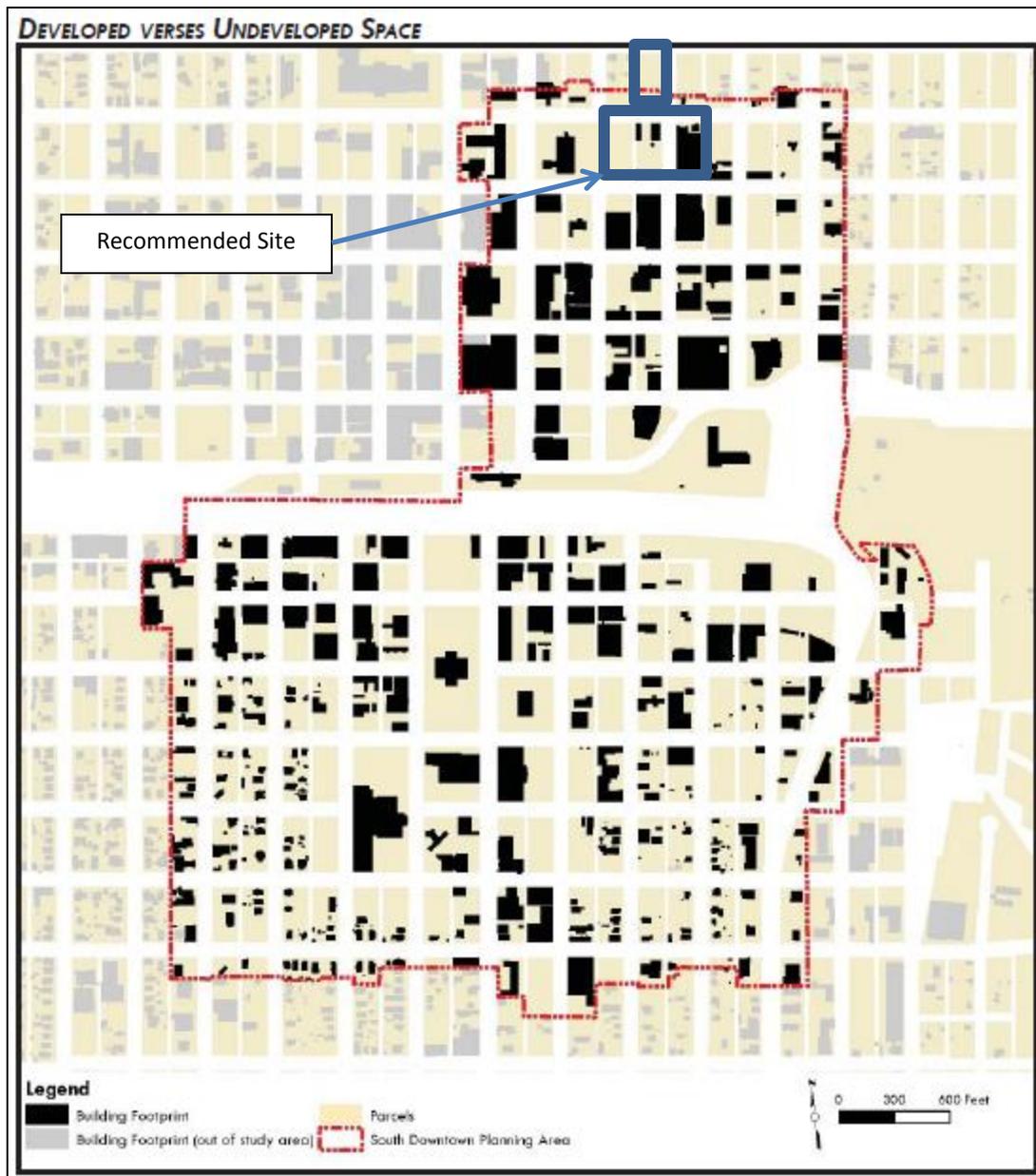


Figure 8.4: Parcels with Property, from SoDA Plan

## LIVABILITY

The Department of Transportation (DOT), Environmental Protection Agency (EPA), and the Department of Housing and Urban Development (HUD) established the Sustainable Communities Partnership, also known as the Livability Partnership, in 2011. The Livability Partnership is leading an effort to integrate community planning and investment into a sustainable growth framework that would include livability measure and tools.<sup>12</sup>

<sup>12</sup> HUD-DOT-EPA Interagency Partnership for Sustainable Communities. <http://www.epa.gov/dced/partnership/>. Accessed June 26, 2012.

The DOT has identified livability as a key priority for transportation and may include livability measures in its assessment of grant applications.<sup>13</sup> Under the Livability Initiative, federal policy will enable communities to:

- Better integrate transportation and land use planning.
- Foster multimodal transportation systems and effective multimodal connections.
- Provide more transportation options to improve access to housing, jobs, businesses, services, and social activities.
- Increase public participation and enhance coordination of transportation and housing and healthy communities.
- Reduce emissions.
- Plan for unique needs.

The TIGER grant program requires livability benefits be addressed. According to the DOT, “the TIGER program’s broad, multi-modal scope enables DOT to fund projects that strengthen local and regional economics, support communities by expanding transportation choices and foster connections to places people work, play and live.”

### ***Transit Livability Elements***

The Livability Partnership also emphasizes the importance of transportation choices — whether that is bus, biking, walking, or rail. The FTA has created key transit elements that are encouraged under the FTA’s participation in the Livability Partnership. The proposed project addresses some of these elements as follows:

**TOD:** TOD aims to develop mixed-use, high-density communities that are oriented near transit facilities. By design, TOD encourages pedestrian and bicycle activity and supports a higher level of transit use. The SoDA Plan’s Warehouse District calls for the development of mixed-used properties and the phase out of light manufacturing. The creation of a transit node in this area will provide more transit options for the new developments.

**TJD:** Where transit facilities are to be constructed, project stakeholders may have an opportunity to construct space for other transit-compatible uses. The capital cost to construct space for compatible uses can be funded, in part, with federal funding administered by the FTA. The proposed program includes joint development of administrative space for the Abilene MPO.

**Transit Enhancements:** Transit enhancements link neighborhoods and businesses to transit stops. Areas within ½ mile of a transit stop or transit terminal are eligible for FTA. Eligible improvements include repair and/or construction of sidewalks, curbs, ramps, driveways, and crosswalks. Landscaping and installation of street amenities, such as transit shelters, pedestrian-oriented lighting, benches, bike racks, and waste receptacles are also eligible items. The project

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<sup>13</sup> DOT Livability, Grants and Programs. <http://www.dot.gov/livability/grants-programs.html>. Accessed June 26, 2012.

would include pedestrian enhancements that would create a safe, inviting connection from nearby destinations as well as future developments to public transportation.

**Art in Transit:** This element supports the design and placement of art in and/or near transit facilities. The FTA encourages the participation of local artists. The inclusion of local art in the West Central Texas Multimodal Facility can add to a sense of place and enhance the community’s identity.

The proposed project would help meet most of the principles outlined in the Livability Partnership with the addition of the proposed facility, pedestrian streetscape and other related improvements, leveraging local dollars, and enhancing the community’s identity. The proposed project also falls in line with the SoDA Plan by providing a catalyst for future mixed-use development. A new transit node in the area will provide new business and residential developments in the area with a selection of transportation options. The proposed project focuses on key transit elements outlined by the FTA, which include joint development, transit improvements, and bicycle and pedestrian enhancements. A major goal of the proposed project is to increase livability and walkability for residents.

### ***Context Sensitivity***

Street design should be appropriate to its context (rural, rustic, urban, or suburban), the relationship with buildings, adjoining uses, and open spaces, as well as other considerations. As development becomes denser, context will become more important because the potential conflicts between different uses and building forms may become more intense and require better design solutions. A deeper understanding of the context helps identify when it is appropriate to blend in with the surroundings or when to stand out.

The proposed project, if successfully implemented, would reflect design excellence. It would add to the identity, durability, connectivity, and walkability of Abilene. For example, pedestrian-infrastructure is missing throughout most of the area and its installation would increase overall safety of pedestrians and define the local character through the use of context-appropriate materials.

Abilene has its own identity, and as a result, context sensitivity is important in relation to the improvements. The Institute of Transportation Engineers (ITE) report, *Recommended Practice,*

*Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities,* set guidelines for pedestrian design. The principle of context sensitivity supports

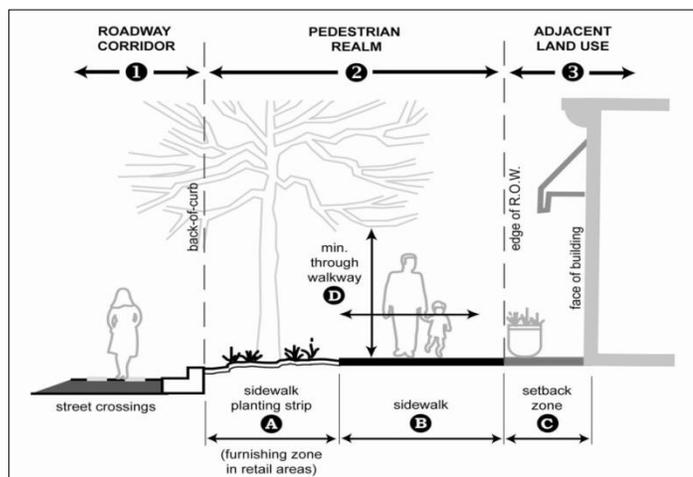


Figure 8.5: Travel Zones (Source: ITE)

urban design that ensures the comfort and safety of all users of a particular corridor, regardless of transportation mode (i.e., automobile, bicycle, or walking).

As shown in Figure 8.5, the area between the curb and the buildings has several zones. These zones include areas for landscaping and/or street furniture, sidewalks, and setbacks between the edge of the public right of way and the face of the building, which property owners may use as they want. Ideally, the sidewalk would be wide enough to ensure maximum comfort for pedestrians.

Adjustments to the zones can be made as needed, such as foregoing curbside landscaping in order to accommodate on-street parking.

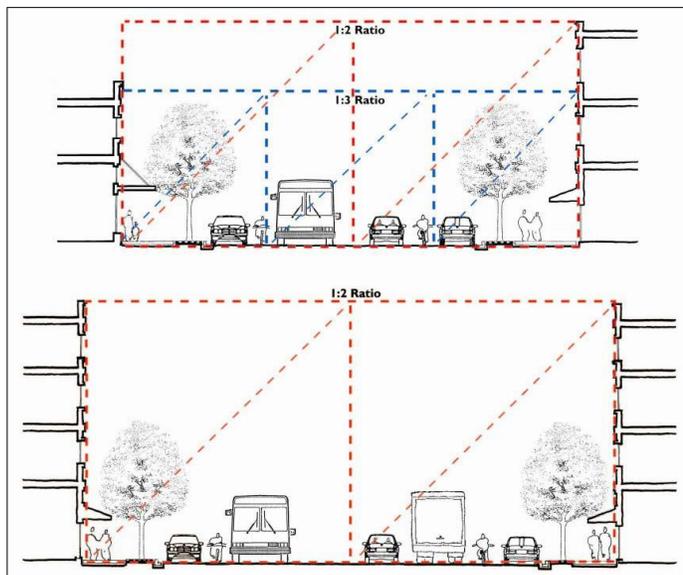


Figure 8.6: Height-to-Width Ratios (Source: ITE)

Another important factor in context sensitivity is building scale in relation to the street. Figure 8.6 illustrates building height-to-street width ratios of 1:2 and 1:3. These ratios create a “human” scale on the street that fosters a comfortable environment and encourages walking. Where feasible, the proposed project will adhere to the recommended height-to-width ratios.

### ***Transportation Linkages***

The proposed multimodal facility will provide a common base for the region’s four public transportation providers: CityLink, CARR, SPARTAN, and DMC. At the facility, riders will be able to transfer between providers. This will greatly enhance the rider’s ability to travel throughout the region. Because it is so large, the region is split into three sub-regions, making travelling more costly. However, some providers have indicated a reluctance to transfer riders from their vehicles if these individuals are elderly or in fragile health. In these instances, the provider adopts more of “caretaker” role and takes the responsibility for the entire trip. Transportation linkages may be improved if the intercity bus uses the facility because people would then be connected to the national transit network.

### ***Transit Needs Index***

The TNI is a tool to assess relative transit need based on weighting demographic characteristics to formulate a score. In order to calculate the TNI for the State of Texas, data was collected from the 2009 U.S. Census American Community Survey (ACS) by census tract for population density, median household income, minority population, zero car households, senior population, and workforce disability. Each demographic factor was weighted according to its historical ability to generate transit demand within each census tract.

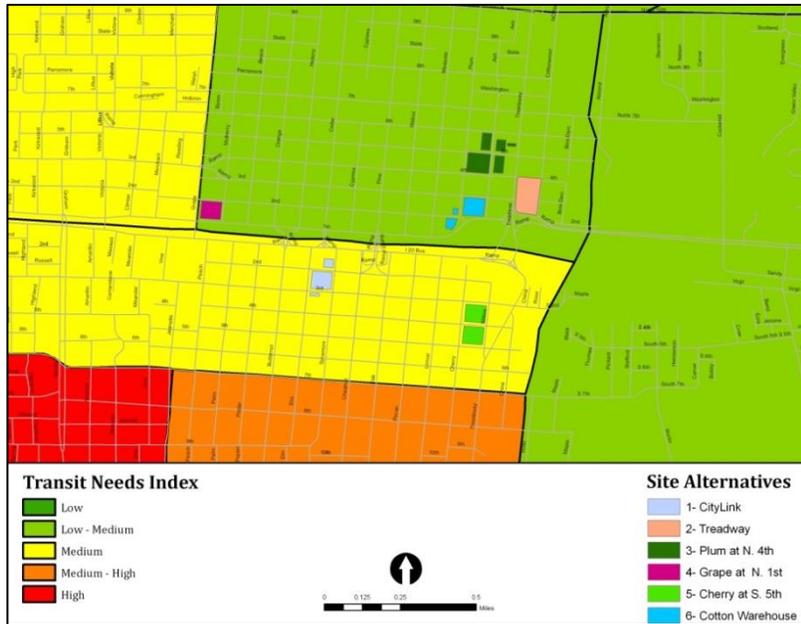


Figure 8.7: Downtown Abilene TNI

The Downtown Abilene TNI results indicate that the area has a relatively low-medium to medium transit need. Transit need in this area is generated primarily by higher relative household density, a higher percentage of seniors and distance traveled to work. These individuals typically rely on costly demand-response services. Reducing the dependency on demand response service would result in greater cost efficiencies and effectiveness.

### Pedestrian/Transit Access

Knowing the existing conditions of the pedestrian infrastructure and the bus level of service (BLOS) is important in selecting priority projects, both pedestrian and transit; however, the relationship between the pedestrian infrastructure and the BLOS directly affects ridership and environmental benefits. A report prepared for the Transit Coordination Research Program, Transit Research Board, and the National Research Council, in association with Texas Transportation Institute, states the following:<sup>14</sup>

*The passenger point of view, or quality of service, directly measures passengers' perception of the availability, comfort, and convenience of transit service. There are a number of factors that measure pedestrian and transit quality of service:*

- *Service coverage (near one's origin and destination)*
- *Pedestrian environment*
- *Scheduling and frequency of service*
- *Amenities*
- *Transit information*
- *Transfers*
- *Total trip time*
- *Cost*
- *Safety and security*
- *Passenger loads*
- *Appearance and comfort*

<sup>14</sup> *Transit Capacity and Quality of Service Manual*, Kittelson and Associates, Inc.

- *Reliability*

Of the factors listed above, the following items address pedestrian quality of service.

**Pedestrian Environment:** Even if a transit stop is located within a reasonable walking distance of one’s origin and destination, the areas around the transit stop must provide a comfortable walking environment for transit users. The proposed project would enhance the pedestrian environment surrounding the project area.

**Amenities:** The amenities that are provided within the walking distance of transit stops and stations help make transit more comfortable and convenient for transit users. Typical amenities include benches, shelters, informational signage, and waste receptacles. Amenities that will be beneficial to pedestrians will be included.

**Safety and Security:** Passenger perception of safety must be considered in addition to actual conditions. Transit corridors and stops must be well lit. Planting strips and/or on-street parking can provide barriers between pedestrians and vehicles. Development of the proposed facility would use a multidisciplinary approach to deterring criminal behavior through environmental design, which is also known as Crime Prevention Through Environmental Design (CPTED), as well as other best practices.

**Appearance and Comfort:** Having aesthetically pleasing and comfortable transit stops with amenities, pedestrian lighting, and landscaping improves transit’s image, which is especially important when trying to attract choice riders, who are riders that choose not to drive. The proposed facility development will include amenities, lighting, and landscaping.

The relationship between an improved pedestrian environment and its contribution to a better transit service and increased ridership has been documented in several studies nationwide. The most recent research is included in the 2009 *Quality and Level of Service Handbook*, prepared by the Florida Department of Transportation (FDOT). The handbook addresses the relationship between the pedestrian environment, which is measured in pedestrian level of service (PLOS), and the BLOS. The handbook presents evidence of a positive relationship between the quality of the pedestrian environment and the quality of the bus service. Similarly, the proposed facility will enhance transit access from adjacent land uses, thereby increasing transit ridership and improving BLOS. PLOS scores were calculated and the full listing of PLOS rankings for all 82 block faces in the inventory is included in *Appendix A*. Tables 8.4 and 8.5 summarize the number of block face per PLOS grade and average corridor rankings, respectively.

<b>PLOS Letter Grade</b>	<b>Number of Block Faces</b>
A	0
B	0
C	3
D	16
E	25
F	38

<b>Corridor</b>	<b>Average PLOS Letter Grade</b>
N 1 <sup>st</sup> Street	E
N 2 <sup>nd</sup> Street	E
N 3 <sup>rd</sup> Street	E
N 4 <sup>th</sup> Street	E
N 5 <sup>th</sup> Street	E
N 6 <sup>th</sup> Street	E
Walnut Street	D
Mesquite Street	E
Plum Street	F
Ash Street	F
Treadaway	F

According to the FDOT methodology, the level of PLOS improvement results in a corresponding increase in transit ridership which triggers the following community benefits.

### ***Reduced Automobile Trips***

Pedestrian infrastructure improvements lead to fewer automobile trips in two ways: increased transit ridership and increased pedestrian activity. Fewer automobile trips within a given area lead directly to a reduction in the amount of air pollutants that are emitted by vehicles. This section discusses how reduced automobile trips, through the increase in transit ridership and pedestrian activity, will ultimately bring reduced emission benefits to the region.

### **Increased Transit Ridership**

Most transit users start and/or end a trip as pedestrians. Therefore, streetscape improvements make accessing transit easier, resulting in higher transit ridership as some drivers choose to use transit instead of driving.

The close relationship between an improved pedestrian environment and its contribution to be better transit service and increased ridership has been documented in several studies nationwide. The 2009 Quality and Level of Service Handbook, prepared by FDOT has established a relationship between the quality of the PLOS and bus ridership, designated BLOS, as shown in Table 8.5.

<b>PLOS Letter Grade</b>	<b>Adjustment Factor on Bus LOS</b>
A	1.15
B	1.10
C	1.05
D	1.00
E	0.80
F	0.55

The difference between a PLOS “A” (1.15) and a PLOS “B” (1.10) is a BLOS adjustment of five percent. This five percent increase in BLOS translates directly to a five percent increase in transit

ridership. The expected ridership increases for each possible PLOS change are similarly calculated.

Using the difference between before and after PLOS scores, along with the ridership data provided by CityLink, it is possible to calculate the expected increase in ridership at each bus stop in the inventory area due to pedestrian improvements. Using the methodology described above, the streetscape improvements are projected to add another nine riders a day by improving the PLOS and making transit easier to access in the inventory areas. This represents a 1.14 percent increase in transit ridership in the district, attributable to improving the pedestrian realm.

The nine additional transit trips will result in a total of 18 daily single-occupant automobile vehicle trips removed. According to the American Public Transportation Association’s 2010 Public Transportation Fact Book, the average vehicle trip length is 5.2 miles. Removing 18 auto trips equates to a daily reduction of 94 Vehicle Miles Travelled (VMT).

New Ridership	9
Removed Vehicles Trips	18
Reduction in VMT	94

### **Increased Pedestrian Activity**

The second way in which streetscape improvements lead to fewer automobile trips is by facilitating increased pedestrian activity. A high-quality pedestrian environment makes walking more appealing. Proactive measures to facilitate pedestrian activity can result in a one-for-one replacement of auto trips of one-quarter mile or less with a pedestrian trip.<sup>15</sup> Some longer auto trips may also be replaced if good pedestrian infrastructure brings desirable destination within reach, eliminating the need to drive to a location much farther away.

The equation and factors to calculate emission benefits from improved bike and pedestrian facilities outlined in the Texas Guide to Accepted Mobile Source Emission Reduction Strategies include:

- Average Annual Daily Traffic (AADT)
  - ◆ Source – TxDOT Traffic Count Regional Map<sup>16</sup>
- Percent Mode Shift (PMS) from Driving to Bike/Pedestrian
  - ◆ Source – Texas Guide to Accepted Mobile Source Emission Reduction Strategies (0.004)<sup>17</sup>

<sup>15</sup> “Texas Guide to Accepted Mobile Source Emission Reduction Strategies.” Texas Department of Transportation August 2007.

[http://moser.tamu.edu/docs/Texas.Guide.to.Accepted.Mobile.Source.Emission.Reduction.Strategies\\_August.2007.pdf](http://moser.tamu.edu/docs/Texas.Guide.to.Accepted.Mobile.Source.Emission.Reduction.Strategies_August.2007.pdf)

<sup>16</sup> “2011 Houston District Transit Map.” Texas Department of Transportation. Accessed 6 Oct 2012

[http://ftp.dot.state.tx.us/pub/txdot-info/tpp/traffic\\_counts/2011/abl\\_base.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/tpp/traffic_counts/2011/abl_base.pdf)

<sup>17</sup> “Texas Guide to Accepted Mobile Source Emission Reduction Strategies.” Texas Department of Transportation August 2007. Accessed 6 Oct 2012

- Length of Facility (L)
  - ◆ Length of segments (0.25 miles)
- Emission Factor (EF)

The recommended formulas are:

$$\left. \begin{array}{c} \{ \\ \\ \} \end{array} \right\} AADT * PMS = \text{Daily Reduced Automobile Trips}$$

$$\left. \begin{array}{c} \{ \\ \\ \} \end{array} \right\} AADT * PMS * L * EF = \text{Grams per day Emission Benefit}$$

The average daily traffic count for the pedestrian improvement area is 14,600 vehicles. Since the traffic counts are only for roads along the inventory corridor, 50 percent of the total number will be used in calculations. By multiplying the 50 percent of the AADT Counts from TxDOT by the percent mode shift, traffic is projected to decrease by 29 vehicles over each 24-hour period as a result of streetscape improvements. Since PLOS improvements can spur the replacement auto trips of one-quarter or less with a pedestrian trip, a reduction of 29 vehicles each making a quarter-mile trip represents a daily VMT reduction of 14.5 miles. Each vehicle trip removed also corresponds to the removal of two cold starts. The VMT and cold starts reductions that result from increased pedestrian activity are summarized in Table 8.8.

Reduced Vehicles	<b>29</b>
Cold Starts	<b>58</b>
VMT	<b>14.5</b>

## SUSTAINABILITY

### *Emissions Benefits*

The combined reduced VMT and cold starts from increased transit ridership and increased pedestrian activity are shown in Table 8.9. The transit annual VMT reductions are based on 260 weekdays a year while the pedestrian annual VMT reductions are based on 365 days a year.

Daily VMT	<b>108.5</b>
Annual VMT	<b>28,210</b>

Estimates of the emission benefits due to increased transit ridership and increased pedestrian activity stem from the reductions in VMT and cold starts. These reductions are converted into reduced emission of three types of air pollutants: Nitrogen Oxides (NO<sub>x</sub>), Volatile Organic Compounds (VOC), and Carbon Monoxide (CO). Estimates assumed light duty gasoline vehicles and trucks (3:1 ratio), operating at 30 mph in city. Tables 8.10 and 8.11 present the reduction in emissions from increased transit and pedestrian activity. Table 8.12 presents the total reduction.

Type of Emissions	Daily VMT Reduced (2 trips)	Vehicle Emission Factors grams/mile	Net Daily Vehicle Grams Reduced	Daily Conversion to Pounds Reduced (0.0022046)	Daily Conversion to Tons Reduced (0.0005)	Annual Net Tons Reduced (260)
VOC	94	1.3635	128	0.28	0.000	0.04
CO	94	7.8691	737	1.62	0.001	0.21
NO <sub>x</sub>	94	0.4932	46	0.10	0.000	0.01
<b>Total</b>	<b>94</b>	<b>-</b>	<b>910.3</b>	<b>2.0</b>	<b>0.0</b>	<b>0.3</b>

Average One-Way Auto Trip Distance = 5.2 miles  
 New Ridership = 9  
 Each vehicle will reduce have a reduction of (2) cold starts  
 Source of Emission Factors 2010 CAMPO /EPA  
 Weighted vehicle average (75% LDGV, 25% LDGT1)

Type of Emissions	Daily VMT Reduced (2 trips)	Vehicle Emission Factors grams/mile	Net Daily Vehicle Grams Reduced	Daily Conversion to Pounds Reduced (0.0022046)	Daily Conversion to Tons Reduced (0.0005)	Annual Net Tons Reduced (365)
VOC	14.5	1.3635	20	0.04	0.000	0.01
CO	14.5	7.8691	114	0.25	0.000	0.05
NO <sub>x</sub>	14.5	0.4932	7	0.02	0.000	0.00
<b>Total</b>	<b>14.5</b>	<b>-</b>	<b>141.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.1</b>

Average One- Way Pedestrian Trip Distance= 0.25 miles  
 New Pedestrian Activity = 29  
 Source of Emission Factors 2010 CAMPO /EPA, Cold Starts Included

Types of Emission	Pedestrian Benefits Reduced Emissions (grams)	Transit Benefits Reduced Emissions (grams)	Grams Reduced Daily	Conversion to Pounds Reduced (.0022046)	Conversion to Tons Reduced (.0005)
VOC	20	128	147.39	0.32	0.0002
CO	114	737	850.65	1.88	0.0009
NO <sub>x</sub>	7	46	53.31	0.12	0.0001
<b>Total</b>	<b>141</b>	<b>910</b>	<b>1,051.36</b>	<b>2.32</b>	<b>0.0012</b>

### Reduction in Fuel Consumption

The U.S. dependence on oil is ever increasing as vehicle miles traveled increase. By enhancing transit facilities, the proposed project is estimated to reduce annual VMT by 28,210 miles. The

2010 EPA Corporate Average Fuel Economy (CAFE) standard for passenger cars is 27.5 miles per gallon (mpg) and for light-duty trucks 24.1 mpg. This analysis assumes not all vehicles will be operating at the 2010 CAFE standards. As a result, a conservative figure of 23.5 mpg was used for calculating the decrease in fuel consumption. The proposed improvements are estimated to reduce fuel consumption by approximately 1,200 gallons per year.

**Annual Decrease in Fuel Consumption = 1,200 gallons**

## **SAFETY**

### **Auto Cost Savings**

Operating a vehicle is one of the most expensive budget items for American households. The proposed project will provide the opportunity for thousands of residents to choose alternative modes of transportation, such as transit. According to the American Automobile Association, the average operating cost (minus fuel) for a vehicle in 2010 ranged from \$0.14 cents to \$0.17 per mile. This analysis uses \$0.15 per mile for annual vehicle operating cost. The proposed project is estimated to reduce VMT by 28,210 annually, which will save the region approximately \$4,231 annually in automobile cost.

**Annual Savings from Reduced Automobile Use = \$4,231**

### **Crime Prevention through Environmental Design (CPTED)**

CPTED guidelines will be part of the final design of the proposed facility.<sup>18</sup> According to the National Crime Prevention Institute, CPTED is “the proper design and effective use of the built environment which may lead to a reduction in the fear and incidence of crime, and an improvement of the quality of life.” CPTED is a concept that relates certain elements of good urban design to reducing the incidence of crime. In some communities, where CPTED has been successfully implemented, criminal activity has decreased by as much as 40 percent. CPTED involves four broad strategies:

- **Natural Surveillance:** A design concept directed primarily at keeping potential offenders easily observable. This is promoted by features that maximize visibility of people, parking areas, and building entrances; doors and windows that look out onto streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; and adequate nighttime lighting.
- **Territorial Reinforcement:** Physical design can create or extend a sphere of influence. Users develop a sense of territorial control, which discourages potential offenders who

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<sup>18</sup> “Crime Prevention Through Environmental Design.” CPTED Security Training.  
[http://cptedsecurity.com/cpted\\_design\\_guidelines.htm](http://cptedsecurity.com/cpted_design_guidelines.htm)

perceive this control. This is promoted by features that define property lines and distinguish private spaces from public spaces through the use of landscape plantings, pavement designs, gateway treatments, and fences.

- **Natural Access Control:** This is a design concept that attempts to decrease criminal opportunity by denying access to targets and creating a perception of risk in potential offenders. This is achieved by designing streets, sidewalks, building entrances, and neighborhood gateways to clearly indicate public routes and by discouraging access to private areas through the use of structural elements.
- **Target Hardening:** This design principle recommends the installation of features that prohibit entry or access to high-risk entryways, such as window locks, dead bolts for doors, and interior door hinges.

These strategies can be implemented in slightly different ways depending on the land use (i.e., single-family residential, multi-family residential, office, retail, industrial, parking). Specific guidelines for implementation are widely available from the International CPTED Association and other organizations.

## **RISK ASSESSMENT**

The risks to the West Central Texas Multimodal Facility change depending on project stage. At this time, the following risks were identified as posing a challenge to the project's success:

### ***Simultaneous Development of Administration, Operations, and Maintenance***

This study reviews the feasibility of simultaneous redevelopment of the administration, operations, and maintenance facilities. Tackling all three components simultaneously increases the amount of capital that must be raised and the property that must be acquired. Furthermore, finding an acceptable location close to downtown for both operations/administration and maintenance may be difficult as maintenance and vehicle storage are more likely raise concerns from adjacent property owners. For the recommended site at Plum and North 4<sup>th</sup>, vehicle maintenance and storage may be perceived as an unsuitable use for the redevelopment of Warehouse District.

### ***No intercity bus carrier***

ICB funds have played a big part in funding terminals in small urban and rural areas. These funds are managed by TxDOT and are usually given to ICB carriers. If an ICB will be using a proposed facility, then the project is eligible to apply for ICB funds for its construction. At the time of this report, Greyhound (the ICB in Abilene) had relocated its passenger pick-up to a retail site located along its route on the highway. This is likely a very low-cost option. In order to attract the ICB to the new project, very attractive pricing and/or terms would likely be needed. If an ICB were not a partner in the multimodal facility, the project would not be eligible for this category of funding.

### ***Change in federal discretionary funding policy***

The 2013-2014 transportation authorization is called Moving Ahead for the 21<sup>st</sup> Century (MAP-21). This authorization eliminates some discretionary capital programs and focuses more on formula funding. Discretionary funding is substantially limited and competitive. In order to effectively compete for the funding, the project will need to generate a good cost/benefit ratio and/or represent significant local match. Given the size and cost of the building program, a competitive return on investment may be hard to achieve.

### ***Lack of project consensus and vision***

For the project to succeed, a local consensus to prioritize will be required. Strong stakeholder support from key players will be needed to both raise the local match and compete for federal funds. Future visioning of the re-development benefits that can stem from the multimodal facility may be needed to excite the community and gain support. For example, this project can play a key role in realizing some of the Warehouse District improvements described in the SoDA Plan. By focusing on the synergy between these two plans, a common goal is created for project supporters and the community to rally behind.

## **SUMMARY**

The estimated benefits generated by the West Central Texas Multimodal Facility and Transit Enhancements include:

- **Ability to create short- and long-term jobs:** The project will create an estimated 104 short-term jobs, most of which will be in construction, and about 15 long-term jobs, which will include both new direct jobs such as maintenance and induced jobs from increased local expenditures.
- **Ability to stimulate development and increase property tax revenue:** A \$9.6 million investment in a new multimodal facility along with \$4.3 million in streetscape improvements will create a more inviting environment for follow-on property development. If properties within the immediate vicinity of the recommended site were re-developed, it would generate an estimated \$13,000 in increased property tax.
- **Improve safety and security:** The proposed transit enhancements will increase the walkability, sense of place, and the safety and security for the development area.
- **Improve transit ridership and reduce emissions:** Ridership is expected to increase by nine riders daily due to improved pedestrian access to transit stops. This increase in transit ridership will reduce vehicle miles travelled by 108 miles daily, save \$14,200 in personal automobile costs, and reduce gas consumption by 1,200 gallons.

# CHAPTER NINE:

## FINANCE & IMPLEMENTATION

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### IMPACT OF MAP-21

MAP-21 authorized significant changes to federal transportation funding. The bill increased public transportation funding 13.3 percent to \$10.6 billion, but it substantially changed the process for funding large transit projects. It eliminated many of the capital discretionary programs and consolidated some of the heretofore discretionary programs under FTA formula funding. The new State of Good Repair Program replaces the Fixed Guideway Modernization Program, and is now dedicated to fixed rail systems. The Bus and Bus Facilities Program (Section 5339) is funded at less than half the FY2012 level and the funds are distributed by formula rather than being discretionary. While “flex” programs that transfer funds from the Federal Highway Administration (FHWA) to the FTA were relatively unchanged, one exception was the Transportation, Community, and System Preservation program (TCSP) which was repealed. Recreational Trails, Safe Routes to Schools, and Transportation Enhancements were combined into the new Transportation Alternatives Program (TAP). The (JARC and New Freedom (NF) programs were consolidated under FTA Sections 5307 and 5310. Lastly, MAP-21 is free of project earmarking.

### FEDERAL AND LOCAL SHARE

FTA may fund up to 80 percent of the qualifying costs. Qualifying costs can include preliminary engineering, design, value engineering, mobilization, and construction administration and management. The local commitment is at least 20 percent for qualifying costs and 100 percent for non-qualifying costs. Table 9.1 shows the capital costs and the 80/20 split between federal and local funds.

	<i>Capital Costs</i>	<i>Federal Share (80%)</i>	<i>Local Share (20%)</i>
<b>WCT Multimodal Facility</b>	\$9,600,000	\$7,680,000	\$1,920,000
<b>Pedestrian Improvements</b>	\$3,367,000	\$2,693,600	\$673,400
<b>Total</b>	\$12,967,000	\$10,373,600	\$2,593,400

### FIVE-YEAR PROJECT IMPLEMENTATION

Table 9.2 provides an example of how corridor improvement implementation and the West Central Texas Multimodal Facility and associated transit enhancements can be constructed over a five-year period.

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Multimodal Facility</b>		x	x	x	x
<i>Walnut Street and East-West between Pine and Walnut</i>		x	x	x	
<i>North 2<sup>nd</sup> Street</i>	x				
<i>North 3<sup>rd</sup> Street</i>	x				
<i>North 4<sup>th</sup> Street</i>		x	x		
<i>North 5<sup>th</sup> Street</i>			x		
<i>North 6<sup>th</sup> Street</i>			x		
<i>Mesquite Street</i>			x		
<i>Plum Street</i>			x	x	
<i>Ash Street</i>	x				
<i>Treadaway Street</i>	x				
<i>North 1st Street</i>	x				
<i>Shared Infrastructure</i>	x	x	x	x	x
<b>Total</b>	\$ 795,095	\$2,494,000	\$6,220,000	\$2,498,000	\$960,000
<b>Federal (80%)</b>	\$ 636,076	\$1,995,200	\$4,976,000	\$1,998,400	\$768,000
<b>Local (20%)</b>	\$ 159,019	\$ 498,800	\$1,244,000	\$ 499,600	\$192,000

The following sections outline the funding sources and present a strategy to secure a combination of federal, state, and local resources to implement the proposed project.

## **FEDERAL AND STATE FUNDING SOURCES**

### ***Congressional Authorization and Appropriations***

MAP-21, combined with the congressional ban on “earmarks,” has narrowed opportunities to pursue discretionary federal funding for capital projects. It is recommended that the City engage the congressional delegation during the FY 2013 and FY 2014 Transportation Appropriation cycle to brief them about the project so that they may lend support for any competitive grant applications. Similarly, the City should monitor the implementation of MAP-21 and the next transportation authorizing cycle which may introduce more changes to formula and discretionary funding.

### ***FHWA Administered Funds***

#### **MPO Administered Funds**

The Abilene MPO programs and administers specific FHWA funding via the local Transportation Improvement Program (TIP). MPO administered FHWA funds include Federal Surface Transportation Program (STP) funding. STP-MM is a funding subset and transit projects are eligible for STP-MM funding. However, STP-MM is restricted to metropolitan areas with populations 200,000 and more. Abilene does not currently receive STP-MM funds.

## **TxDOT Administered Funds**

Texas also administers FHWA funding through TxDOT programs, including the following:

- **TAP**

The goal of TAP is to encourage diverse modes of travel, increase community benefits from transportation investment, strengthen partnerships between state and local governments, and promote citizen involvement in transportation decisions. To be eligible for consideration, all projects must demonstrate a relationship to the surface transportation system through either function or impact and go above and beyond standard transportation activities. The proposed project is eligible in the following categories:

- Provision of facilities for pedestrians and bicycles
- Landscaping and other scenic beautification

TAP is a statewide competitive program administered in accordance with applicable federal and state rules and regulations. Projects are submitted to TxDOT and the Abilene MPO for review and selected for funding by the Texas Transportation Commission. The funds provided by this program are on a cost-reimbursement basis and reimbursement is limited to 80 percent of allowable costs. The government entity nominating a project is responsible for the remaining cost including all cost overruns.

- **TIGER**

The TIGER program can be used to reimburse road-, rail-, and transit-related projects that address federal sustainability objectives. Thus, the TIGER program is a highly competitive discretionary grant program that has generally been used for larger projects. The minimum federal grant is \$1,000,000 and most successful applicants provide more than a 20 percent local match. The grantee needs significant local and congressional support for success.

## ***FTA Administered Funds***

The FTA is the DOT operating administration which oversees and funds transit operations. FTA funds that are available to a municipality via the state include.

## **TxDOT Administered Funds**

TxDOT is charged with the administration of FTA funding, which is apportioned to the state by formula.

- **49 U.S.C. 5307 – Urbanized Area Formula Program:** This program provides grants to Urbanized Areas (UZA) for public transportation capital, planning, job access, and reverse commute projects, as well as operating expenses in certain circumstances. In practice, transit agencies use these funds to support on-going operations. Typically little is left over to provide substantial funding for large capital projects.

- **49 U.S.C. 5310 – Enhanced Mobility of Seniors and Individuals with Disabilities Program:** This program is intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and ADA complementary paratransit services. In practice, transit agencies typically use Section 5310 funds to purchase new paratransit vehicles and/or pay for preventative maintenance. However, pedestrian improvements to fixed-route service are eligible for funding under this program.
- **49 U.S.C. 5339 – Bus and Bus Facilities Program:** This program funds the replacement, rehabilitation, and purchase of buses and related equipment and to construct bus-related facilities. Funds are eligible to be transferred by the state to supplement the Urbanized Area Formula Grant Program. *The Bus and Bus Facilities Program is retained in MAP-21, but has changed significantly. It is funded at approximately half the level of FY 2012 and it is distributed by formula with each state receiving a minimum allocation and the remaining funds allocated by population and service levels.*

***Other Federal Programs: Community Development Block Grant (CDBG)***

The CDBG program was developed to promote viable urban communities by providing decent housing, a suitable living environment and expanding economic opportunities primarily for persons of low and moderate income. One of the advantages of the CDBG program funding is the use of these funds as the local match for other federal grant programs referenced in this chapter.

**Section 108 Loan Program**

Section 108 is the loan guarantee provision of the CDBG program. Eligible activities for Section 108 financing include acquisition of real property and construction of public facilities including street, sidewalk, and other site improvements. The Section 108 Loan Program allows a community to transform a small portion of its CDBG funds into federally guaranteed loans large enough to pursue physical and economic revitalization projects that can renew entire neighborhoods. However, Section 108 loans are not risk free. Local governments borrowing funds guaranteed by Section 108 must pledge their current and future CDBG allocations to cover the loan amount as security for the loan.

**Brownfields Economic Development Initiative (BEDI)**

BEDI is a competitive grant program, which is administered by HUD, utilized to stimulate and promote economic and community development. BEDI grant funds are targeted for the redevelopment of abandoned or underused industrial and commercial facilities which may have environmental issues preventing expansion or redevelopment. BEDI funds minimize the potential loss of future CDBG allocations and must be used in conjunction with a new Section 108-guaranteed loan commitment.

HUD emphasizes the use of CDBG related funds such as Section 108 and BEDI to finance projects and activities that will provide near-term results and demonstrable economic benefits.

## **LOCAL MATCH FUNDING SOURCES**

For the City of Abilene to utilize the federal funding tools detailed in previous sections of this chapter, local funds, which typically constitute 20% of the project cost, must be identified. The following sections will briefly list match sources that the City can utilize, including the City's own funding resources.

### ***CDBG Funding***

As previously mentioned, an additional benefit of CDBG funded projects is the ability to further leverage the funds as local match for additional federal funding. CDBG funds represent one of the very few federal funding sources that can further leverage federal dollars. Both Section 108 and BEDI funds can be leveraged for additional federal funding.

### ***Transportation Development Credits (TDCs)***

A state may use toll revenues, which are generated and used by public, quasi-public, and private agencies to build, improve, or maintain highways, bridges, or tunnels serving the public purpose of interstate commerce, as credit toward the non-federal share requirement for any federal funds made available to implement eligible DOT-related capital projects. A transit authority or municipality may apply to TxDOT's Public Transportation Division for TDCs in lieu of the local share for eligible transit capital projects. The Texas Transportation Commission is responsible for awarding TDCs to applying projects.

TDCs can leverage federal funds but do not function as cash. Therefore, their applicability is based on the project's success in securing federal funds. Furthermore, TDCs may not be needed if sufficient local value is generated through the donation of right-of-way and/or property.

### ***City of Abilene***

As a taxing entity, the City of Abilene has a number of tools it can utilize to help fund the suggested improvements. The following tools are available to the City:

#### **General Fund**

The City of Abilene general fund receives most of its revenues from tax sources and is a portion of the City's overall budget. The City can direct excess funds to specific projects, without referendum, that aren't already budgeted. If the City so chooses, they can direct excess general funds towards the development of the proposed project.

## **Certificates of Obligation**

The City can choose to issue Certificates of Obligation, which do not require voter approval, for construction of any public work including the suggested improvements. Certificates of Obligation could help fund the project with the potential for future 80% reimbursement.

## **General Obligation Bonds**

General obligation bonds can fund transit improvements. General obligation bonds require a referendum with a majority vote. Recent discussion at City Council has indicated that a future bond issue might include support for capital infrastructure projects including public transit.

## **Other Local Match Sources**

Other sources of local match can come from partnerships with non-municipal governmental entities or private businesses. The list below contains suggestions of entities that may be able to engage in an agreement with the City to fund project elements.

### *Rotary Club of Abilene*

The Rotary Club of Texas is a non-profit organization comprised of a group of Abilene professionals whose mission is to promote free enterprise, high ethical standards in business, and the advancement of understanding, peace, and goodwill through community service. The Rotary Club raises funds annually for community projects that coincide with their mission. Since the Rotary Club raises local funds from their members and the community, the City could partner with the Rotary Club on the proposed project. Streetscape improvement projects in particular would have a direct positive impact on surrounding local area businesses.

### *Private Developers*

The City could partner with private developers who wish to develop land adjacent to any of the proposed pedestrian improvement corridors. These developers may elect to improve the pedestrian environment surrounding their project, in which case ensuring federal guidelines for procurement and construction are met may be important. If the developer is investing in sidewalk, ADA-compliant ramps, and other eligible pedestrian infrastructure, the value of these improvements may be counted toward local share or reimbursed if the federal guidelines are followed. A partnership between the City and these entities could ensure the benefits of federalizing the project are shared.

### *Capturing and Protecting Local Value: FTA Letter of No Prejudice (LONP)*

Using pre-award authority under an FTA approved LONP is a valuable strategy to an FTA grantee. Under a project's approved LONP, local expenditures in advance of a grant can be protected for federal reimbursement for up to five years. This tool allows local governments and transit authorities to advance project activities with local funds, build "local share" toward the overall project, and allow for subsequent federal reimbursement should state discretionary, STP,

TAP, or other federal funds become available. To receive an LONP, and protect its local investments, a project sponsor must meet FTA environmental clearance and advanced planning requirements, obtain approval of the LONP by the FTA Regional Office, and meet all FTA requirements for procurement of design, engineering, and construction, as well as fulfill all appropriate federal contractual clauses. The City of Abilene should obtain an LONP prior to spending any local funds on eligible improvements outlined.

## FUNDING STRATEGY SUMMARY

Table 9.3 provides a summary of applicable funding strategies available to the City of Abilene for funding the West Central Texas Multimodal Facility and Transit Enhancements. A successful strategy for funding capital improvements under the federal paradigm includes:

- Identifying potential federal funding resources and timing the availability of funding based on numerous calls for projects at the regional, state, and federal levels and federal authorizations and appropriations. In some cases, a given project or phase may be eligible for more than one program.
- Identifying and allocating local share resources to meet federal match requirements.
- Gaining a multi-year commitment by City Council to move the project forward through funding plan development, environmental documentation and other federal and state agency requirements.

<b>Funding Source</b>	<b>Revenue Source</b>	<b>Jurisdiction/ Organization</b>	<b>Frequency</b>
Congressional Authorization and Appropriations	Federal	Congress	Annually, as per authorizing legislation.
Surface Transportation Program	FHWA	MPO	Multi-year call for projects, competitive process.
Transportation Alternatives Program	FHWA	TxDOT	Annual call for projects, competitive process.
Transportation Investment Generating Economic Recovery	FHWA	TxDOT	Infrequent call for projects, competitive process.
FTA Section 5307	FTA	TxDOT	Annual Authorization as Direct Recipient
FTA Section 5310	FTA	TxDOT	Annual call for projects, competitive process.
FTA Section 5339	FTA	TxDOT	Annual call for projects, competitive process.
Section 108 Loan	HUD	CDBG	As Applied for.
Brownfields Economic Development Initiative	HUD	CDBG	Annual call for projects, competitive process.
Transportation Development Credits	State	TxDOT	Pursue credits for local match, as needed.
General Fund	City	City Council	As approved by City Council.
Certificates of Obligation	City	City Council	As approved by City Council.
General Obligation Bonds	City	Referendum	As scheduled by City Council.
Other Local Match	Local	Varies	Varies