DRAFT PURPOSE AND NEED STATEMENT

Cotton Belt Corridor Regional Rail Project

July 2010 | Version 1
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1.0 PURPOSE AND NEED

1.1 Project Overview

The Cotton Belt Corridor Regional Rail Project is a proposed 26-mile passenger rail alignment extending from Dallas-Fort Worth International Airport (DFWIA) eastward connecting with the existing Dallas Area Rapid Transit (DART) Red Line in Plano/Richardson area (Figure 1). The proposed project traverses through three Counties in the State of Texas, Tarrant, Dallas, and Collin, and seven cities, Grapevine, Coppell, Dallas, Carrollton, Addison, Richardson and Plano.

A passenger rail corridor concept from the DART Red Line in the Richardson/Plano area to the Green Line in Carrollton was included in the original 1983 DART Service Plan. In 1989, the DART Transit System Plan recommended the purchase and preservation of the Cotton Belt Corridor right-of-way from Wylie, Texas to north Fort Worth; the 52-mile corridor purchase was completed in 1990. During the development of the 1995 DART Transit System Plan, this corridor was combined with others as alternatives for further study to serve an expanded North Crosstown Corridor.

DART conducted a high level alternatives analysis and completed an existing conditions report on the North Crosstown Corridor as part of its 2030 Transit System Plan (TSP). The 2030 TSP identified the Cotton Belt Corridor as a focus area and concluded that by 2030, the North Crosstown Corridor area would experience notable insufficient roadway capacity equivalent to more than 10 freeway lanes. The report indicated that “express” passenger rail service on the Cotton Belt Corridor (from DFWIA to the DART Red Line), using 20 minute peak and 60 minute off-peak service, was the most cost-effective and direct route to serve this east-west crosstown corridor.
The Cotton Belt Corridor has also been recognized on a regional level. The Cotton Belt Corridor has been included in the Dallas-Fort Worth Metropolitan Planning organization, the North Central Texas Council of Governments (NCTCOG), regional transportation plan since 1986. In October 2008, the Fort Worth Transportation Authority (The T) completed a Draft Environmental Impact Statement for the section of the Cotton Belt from DFWIA to Fort Worth as part of their Southwest-to-Northwest (SW2NE) project.

The DART 2030 TSP identifies the Cotton Belt Corridor as a priority project with implementation in the year 2025-2030 timeframe. Given the regional desire to accelerate the segment from DFWIA to the DART Red Line, Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area identifies this project, and possibly portions of the SW2NE project, as a candidate for a public-private partnership (PPP) to design, build, operate, maintain and/or finance the corridor.

DART initiated the PPP effort in May 2009 with a Request for Information (RFI). On May 11, 2010 the DART Board of Directors authorized the President/Executive Director to execute the Memorandum of Understanding between DART and the Regional Transportation Council (RTC) Concerning the Identification of Funding Sources to Implement Passenger Rail Service on the Cotton Belt Corridor. As a result, the RTC/NCTCOG issued a Request for Proposals (RFP) entitled “Cotton Belt Passenger Rail Corridor Innovative Finance Initiative (Planning Services)”.

Based on early input during the DART PPP RFI, potential private partners noted that a more detailed project definition and environmental clearance would be needed before advancing the project. As a result, DART is advancing preliminary engineering and conducting an Environmental Impact Statement (EIS) which includes identification of environmental impacts, design considerations and cost estimates to inform the innovative finance effort. DART with the Federal Transit Administration (FTA) is conducting the EIS in accordance with the National Environmental Policy Act (NEPA: 42 U.S.C. 4321 et seq.) of 1969 and the regulations implementing NEPA set forth in 40 CFR Parts 1500-1508 and 23 CFR Part 771, as well as provisions of the enacted Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

1.2 Goals and Objectives

The Cotton Belt Corridor Regional Rail Project’s primary purpose is to provide passenger rail connections that will improve mobility, accessibility and system linkages to major employment, population and activity centers in the northern portion of the DART Service Area. The following goals have been identified for the Cotton Belt Corridor:

- **Enhance corridor mobility and accessibility**
  - Provide connectivity to existing and planned passenger rail facilities
  - Provide transportation investments serving future population and employment growth
  - Improve access to existing and emerging major activity centers
  - Increase transit usage for existing and new riders
  - Improve access to transit
  - Provide cost-effective options

- **Reduce congestion**
  - Increase transit capacity and improve travel times through more reliable transit
  - Improve air quality
Reduce demand on local roadways
Reduce number of single occupant vehicles

- **Encourage economic development**
  - Encourage employment opportunities
  - Encourage economic development opportunities
  - Encourage sustainable and livable development opportunities
  - Encourage consistency with regional and local transportation and comprehensive plans
  - Encourage strategies for land use development and redevelopment

- **Provide an environmentally-sensitive transit investment**
  - Minimize negative impacts to the community
  - Minimize negative impacts to the environment
  - Minimize negative impacts to natural, social and economic environments

### 1.3 Relevant System Planning Activities

The Cotton Belt Corridor has been studied and included in numerous transportation improvement plans since 1983. The following plans have included the Cotton Belt Corridor:

- **DART Final Service Plan, 1983** – DART Service Plan included an at-grade passenger rail service from downtown Carrollton to North Central Corridor (the existing Red Line).

- **Mobility 2000 – The Regional Transportation Plan for North Central Texas, May 1986** – This plan recommended the right-of-way preservation for the Cotton Belt Corridor from downtown Fort Worth to Plano.

- **DART Transit System Plan, June 1989** – The plan recommended the Cotton Belt Corridor right-of-way preservation and purchase. The purchase of 52 miles of right-of-way from Wylie, Texas to north Fort Worth was completed in 1990.

- **2010 DART Transit System Plan, November 1995** – This plan identified the North Crosstown Corridor which included the Cotton Belt, Kansas City Southern (KCS), and Burlington Northern Santa Fe (BNSF) railroad corridor alignments.

- **Mobility 2020 – The Metropolitan Transportation Plan, December 1996** – This plan included commuter rail on the Cotton Belt Corridor from Parker Road or Addison Transit Center to DFWIA and light rail from Addison Transit Center to IH 635/US 75.

- **Mobility 2025 – The Metropolitan Transportation Plan, January 2000** – This plan identified several options for the North Crosstown Study area including passenger rail along Santa Fe and Burlington Northern lines, passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail on the Cotton Belt Corridor from the Addison Transit Center to DFWIA, and light rail from the Addison Transit Center to IH 635/US 75.

- **Mobility 2025 Update – The Metropolitan Transportation Plan, May 2001** – The regional transportation plan was updated in 2001. The options for the North Crosstown Study area remained the same and included, passenger rail along Santa Fe and
Burlington Northern lines, passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail on the Cotton Belt Corridor from the Addison Transit Center to DFWIA, and light rail from the Addison Transit Center to IH 635/US 75.

- **Mobility 2025 – The Metropolitan Transportation Plan – 2004 Update, January 2004**
  - The updated regional transportation plan included options for the North Crosstown Study area. The options included, passenger rail along Santa Fe and Burlington Northern lines, passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail on the Cotton Belt Corridor from the Addison Transit Center to DFWIA, and light rail from the Addison Transit Center to Forest Lane Station on the DART Red Line.

- **Mobility 2025 – The Metropolitan Transportation Plan – April 2005 Amendment, April 2005**
  - The updated regional transportation plan included modified options for the North Crosstown Study area. The options included passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail service along BNSF and KCS Corridors from Carrollton to Richardson and light rail from the Addison Transit Center to Forest Lane Station on the DART Red Line.

- **DART 2030 Transit System Plan, October 2006**
  - The DART system plan included express rail on the Cotton Belt Corridor from the DART Red Line to DFWIA. As part of this plan, a high-level alternatives analysis and existing conditions report was completed. This report concluded that express passenger rail service from DFWIA to the DART Red Line along the Cotton Belt Corridor was the most direct and cost-efficient route.

- **Mobility 2030 – The Metropolitan Transportation Plan, June 2007**
  - The regional transportation plan included light rail/new technology for the Cotton Belt Corridor with the alignment from DFWIA to downtown Plano or Bush Turnpike Station.

- **Mobility 2030 – The Metropolitan Transportation Plan – 2009 Amendment, April 2009**
  - The amended plan included an option for the Cotton Belt Corridor with light rail/new technology and the alignment from DFWIA to downtown Plano or Bush Turnpike Station.

- **Cotton Belt Corridor Conceptual Engineering and Funding Study – April 2010**
  - This study completed by the NCTCOG provided background information on the existing environment, and compared various combinations of interlining with the western portion of the Corridor, Red Line termini, minor alignment deviations, and station locations on the Cotton Belt Corridor. The feasibility study will be used to inform and guide the scoping and EIS development for the Cotton Belt Corridor Regional Rail Project.

### 1.4 Overview of the Corridor

The Cotton Belt Corridor is served by a variety of transportation systems including, a major international airport, roadways, transit facilities, and freight trains. The corridor intersects several major freeways including, State Highway (SH) 121, Interstate Highway (IH) 635, the President George Bush Turnpike (PGBT), IH 35E, the Dallas North Tollway (DNT) and US 75 (North Central Expressway).
The Study Area consists of a one-mile radius from the Cotton Belt Corridor rail alignment. DFWIA is on the western terminus of the corridor. The airport hosts five terminals, which are connected by a people mover system, Skylink, and a bus shuttle service, Terminal Link. The airport is served by two DART bus routes, 310 and 408. The T also provides transit service to DFWIA through a shuttle bus that runs between the Trinity Railway Express (TRE) CentrePort/DFW Airport Station and the airport.

The Cotton Belt Corridor is connected by the DART bus system with a combination of local, express, suburban, crosstown and shuttle bus service. There are currently 33 DART bus routes operating in the Study Area and one transit center directly on the corridor, the Addison Transit Center.

Additionally, the corridor contains light rail transit (LRT), the DART Red Line, which traverses north-south on the eastern terminus of the corridor between Parker Road in Plano, through Downtown Dallas and terminating at Westmoreland Road in southwest Dallas County. The Cotton Belt would also connect with several transit rail lines currently under design and construction, including DART’s Orange and Green LRT lines. Two additional rail corridors would interface with the Cotton Belt: a proposed extension of the Denton County Transportation Authority (DCTA) A-Train service to downtown Carrollton and the proposed SW2NE rail corridor connection at DFWIA. A proposed corridor on the BNSF line between Frisco and Irving also could connect in downtown Carrollton. Figure 2 indicates the existing and proposed transit systems in the Cotton Belt Corridor Study Area.

DART is currently constructing the second phase of the Green Line LRT alignment. The 28-mile line runs north south from North Carrollton/Frankford through Downtown Dallas and terminates at Buckner Station in Pleasant Grove. The second phase will open for service in December 2010. The first phase between Victory Station and MLK, Jr. Station opened in September 2009.

The DART Orange Line is a 14-mile alignment currently under design and construction that will parallel the Green Line to the west through downtown Dallas to Bachman Station in Northwest Dallas. From Bachman Station the Orange Line will head northwest to the Los Colinas Urban Center in 2011 and terminate at DFWIA in 2013. The alignment would terminate just south of the proposed Cotton Belt Corridor. The last segment from Belt Line to DFWIA is currently completing the Preliminary Engineering/Environmental Assessment phase.

The A-Train, currently under construction by DCTA is a passenger rail line, connecting central and southern Denton County. The first phase from Lewisville to the Trinity Mills Station is anticipated to open with the Green Line LRT alignment in December 2010. The remainder of the corridor is scheduled to open in 2011. The 21-mile alignment has five stations between Denton and Carrollton and connects with the DART Dallas and other major destinations in the Dallas-Fort Worth area. A planned extension of the A-Train to Carrollton Square would provide a direct connection to the proposed Cotton Belt Corridor.

The proposed SW2NE rail corridor connects southwest Fort Worth with DFWIA. The project is conducting an EIS and Section 4(f) evaluation of the corridor through FTA and Federal Aviation Administration (FAA). The Cotton Belt Corridor would connect with the proposed SW2NE at DFWIA. The Draft EIS was published in October 2008.
Two future transit corridors have been identified that could connect to the Cotton Belt Corridor but do not have funding. These include the Frisco Corridor, a proposed alignment between Irving and Frisco, and a proposed passenger rail line from the DART Red Line at Parker Road to McKinney.

Three freight companies also operate within the corridor through agreements on tracks owned by DART: The Fort Worth and Western Railroad (FWWR), the KCS Railroad, and the Dallas Garland Northeastern (DGNO) short-line freight rail service. The Union Pacific (UP) Railroad has overhead rights but does not currently operate within the corridor. On January 22, 2010, the Surface Transportation Board (STB) approved freight abandonment in the north Dallas area from Knoll Trail in Dallas, Texas to Renner Junction in Richardson, Texas.
1.5 Population and Employment

Population has increased considerably in the Dallas-Fort Worth region over the past decades. Population has increased by 29 percent to 5,067,400 between 1990 and 2000. It is anticipated that this growth in population will continue. Over the next 20 years, the region’s population is expected to increase by approximately three million persons according to the NCTCOG. Table 1 provides the NCTCOG regional projections for population, households, and employment for the Dallas-Fort Worth urbanized areas. The Dallas-Fort Worth urbanized area includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties. However, the majority of growth in population is projected to focus within the Study Area including Dallas, Collin and Tarrant Counties.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Households</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 Census</td>
<td>3,920,094</td>
<td>1,462,047</td>
<td>2,033,973</td>
</tr>
<tr>
<td>2000 Census</td>
<td>5,067,400</td>
<td>1,886,700</td>
<td>3,158,200</td>
</tr>
<tr>
<td>2010</td>
<td>6,328,200</td>
<td>2,350,300</td>
<td>3,897,000</td>
</tr>
<tr>
<td>2020</td>
<td>7,646,600</td>
<td>2,851,400</td>
<td>4,658,700</td>
</tr>
<tr>
<td>2030</td>
<td>9,107,900</td>
<td>3,396,100</td>
<td>5,416,700</td>
</tr>
</tbody>
</table>

Source: NCTCOG Demographic Forecast Information (January 24, 2007) and US Census Bureau

The Dallas-Fort Worth region has also experienced considerable growth in employment over the past several decades which can be attributed to a favorable business climate, attractive tax policies and plenty of available land. Recently, this fast and steady growth has slowed due to the current recession. However, compared to the rest of the country, the Dallas-Fort Worth area economy has performed better during the recession and is expected to recover more quickly.

The Study Area hosts a number of large employers including 28 with 500 or more employees and 72 employment centers, which employ more than 250 people at one location. The largest employer in the Study Area with approximately 60,000 on-site employees is DFWIA. Additional major employers include Perot Systems, Alcatel, Hewlett Packard and the University of Texas at Dallas (UTD) which hosts 14,500 students. Several communities along the Corridor have more employment than population. For example, Addison had almost twice as much employment than residential population in 2000 and that ratio is anticipated to increase to three times by 2030.

Table 2 provides employment and population statistics between 2000 and 2030. The Study Area is projected to increase in both population and employment in each of the municipalities, by 15 and 43 percent respectively.


### Table 2

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Addison</td>
<td>14,454</td>
<td>19,313</td>
<td>33.6%</td>
<td>45,649</td>
<td>66,213</td>
<td>45.0%</td>
</tr>
<tr>
<td>Carrollton</td>
<td>109,364</td>
<td>124,086</td>
<td>13.5%</td>
<td>68,199</td>
<td>83,148</td>
<td>21.9%</td>
</tr>
<tr>
<td>Coppell</td>
<td>36,191</td>
<td>45,410</td>
<td>25.5%</td>
<td>18,401</td>
<td>29,380</td>
<td>59.7%</td>
</tr>
<tr>
<td>Dallas</td>
<td>1,202,592</td>
<td>1,404,847</td>
<td>16.8%</td>
<td>1,038,314</td>
<td>1,390,219</td>
<td>33.9%</td>
</tr>
<tr>
<td>Farmers Branch</td>
<td>28,028</td>
<td>43,978</td>
<td>56.9%</td>
<td>75,013</td>
<td>156,798</td>
<td>109.0%</td>
</tr>
<tr>
<td>Grapevine</td>
<td>41,909</td>
<td>49,484</td>
<td>18.1%</td>
<td>49,565</td>
<td>85,475</td>
<td>72.5%</td>
</tr>
<tr>
<td>Irving</td>
<td>196,632</td>
<td>225,714</td>
<td>14.8%</td>
<td>165,435</td>
<td>276,941</td>
<td>67.4%</td>
</tr>
<tr>
<td>Plano</td>
<td>222,498</td>
<td>257,061</td>
<td>15.5%</td>
<td>115,048</td>
<td>184,205</td>
<td>60.1%</td>
</tr>
<tr>
<td>Richardson</td>
<td>92,577</td>
<td>113,815</td>
<td>22.9%</td>
<td>94,792</td>
<td>163,014</td>
<td>72.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,944,245</strong></td>
<td><strong>2,238,708</strong></td>
<td><strong>17.5%</strong></td>
<td><strong>1,670,416</strong></td>
<td><strong>2,435,393</strong></td>
<td><strong>45.8%</strong></td>
</tr>
<tr>
<td><strong>Study Area</strong></td>
<td><strong>200,541</strong></td>
<td><strong>230,274</strong></td>
<td><strong>14.8%</strong></td>
<td><strong>256,704</strong></td>
<td><strong>366,017</strong></td>
<td><strong>42.6%</strong></td>
</tr>
</tbody>
</table>

*Source: NCTCOG 2030 Demographic Forecast*

This increase in employment and population has negatively impacted the region’s transportation network and created a need for a more developed and efficient transportation system.

### 1.6 Travel Patterns and Congestion

The Study Area’s employment and population centers are primarily accessible by automobile and development is largely characterized by suburban, low-density, auto-oriented land use patterns. The Dallas-Fort Worth area like many areas around the country has experienced the decentralization of the urban core. Employment centers have largely shifted away from the region’s core and developed along major interstates, contributing to urban sprawl. This trend has produced a strain on the region’s transportation network and inability for the region to build sufficient roadway capacity.

The Study Area includes numerous roadway facilities that intersect the corridor both north-south and east-west. The north-south roadways include IH 35E, Dallas North Tollway and US 75 (North Central Expressway). The east-west facilities include IH 635, Belt Line Road and PGBT.

- IH 635 is the fourth most congested highway in the State of Texas. The eight-lane highway with two (one in each direction) interim high-occupancy vehicle (HOV) lanes, is scheduled for roadway reconstruction in 2010. The planned improvements include an additional two travel lanes and six managed lanes that will replace the existing two HOV lanes. In 2007, IH 635 from IH 35E to US 75 (North Central Expressway) carried over 250,000 vehicles per day, and is projected to carry 429,000 vehicles per day by 2030.1

- The Belt Line Road is a six-lane regional arterial running east-west through the Study Area. In 2007, traffic was over 58,000 vehicles per day and it is projected to increase to 68,000 vehicles per day by 2030. A portion of the roadway is slated for widening from

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four lanes to six lanes between Denton Tap Road to MacArthur Boulevard in the near future.\textsuperscript{2}

- The PGBT is a six lane roadway that carried over 119,000 vehicles per day in 2007 and is projected to carry 167,000 vehicles per day by 2030. This roadway is slated to be widened to eight lanes prior to 2030.\textsuperscript{3}

The roadway network within the Study Area currently has moderate to severe traffic congestion. Congestion levels are measured by level of service (LOS). LOS is a rating system used to evaluate roadway performance. Performance is ranked “A” through “F”, with “A” operating at free flow acceptable conditions and “F” operating with breakdown flows or unacceptable conditions. Evaluation is based a combination of speed, delay and roadway design. In 2007, 19 percent of the roadway network in the Study Area operated at a LOS D or E and 29 percent operated at a LOS F. Conditions are projected to worsen by 2030 with 19 percent operating at LOS D or E and 41 percent operating at LOS F with an additional 1,500 lanes to the network. This will begin to shift traffic away from the congested arterials on to the minor arterials and collector road system.

Table 3 indicates that Vehicle Miles of Travel per day, Vehicle Hours of Travel per day, Vehicle Hours of Congestion Delay per day are all projected to increase by 2030 while constructing an additional 1,486 lane miles.

\textsuperscript{2} Ibid.
\textsuperscript{3} Ibid.
Table 3
Cotton Belt Corridor Transportation Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2007</th>
<th>2030</th>
<th>Percent Change</th>
</tr>
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<tbody>
<tr>
<td>Vehicle Miles of Travel per Day</td>
<td>42,201,065</td>
<td>60,302,476</td>
<td>42.9%</td>
</tr>
<tr>
<td>Vehicle Hours of Travel per Day</td>
<td>1,230,437</td>
<td>1,734,876</td>
<td>41.0%</td>
</tr>
<tr>
<td>Vehicle Hours of Congestion Delay per Day</td>
<td>217,526</td>
<td>360,891</td>
<td>65.9%</td>
</tr>
<tr>
<td>Lane Miles in Study Area</td>
<td>6,862</td>
<td>8,348</td>
<td>21.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Lane Miles at LOS D, E</th>
<th>2007</th>
<th>2030</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway/Toll Road</td>
<td>28.0%</td>
<td>31.0%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Principal Arterial</td>
<td>19.7%</td>
<td>22.1%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Minor Arterial</td>
<td>21.9%</td>
<td>17.1%</td>
<td>-21.1%</td>
</tr>
<tr>
<td>Collectors</td>
<td>9.3%</td>
<td>8.8%</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Freeway Ramps</td>
<td>16.6%</td>
<td>14.0%</td>
<td>-15.7%</td>
</tr>
<tr>
<td>Frontage Roads</td>
<td>18.3%</td>
<td>19.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>HOV</td>
<td>22.1%</td>
<td>27.9%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Total Roadway Network</td>
<td>18.9%</td>
<td>18.8%</td>
<td>-0.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Lane Miles at LOS F</th>
<th>2007</th>
<th>2030</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway/Toll Road</td>
<td>37.5%</td>
<td>48.4%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Principal Arterial</td>
<td>50.0%</td>
<td>53.7%</td>
<td>7.4%</td>
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<tr>
<td>Minor Arterial</td>
<td>26.4%</td>
<td>43.1%</td>
<td>63.3%</td>
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<td>Collectors</td>
<td>19.5%</td>
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<td>45.6%</td>
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<tr>
<td>Freeway Ramps</td>
<td>19.0%</td>
<td>27.4%</td>
<td>44.2%</td>
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<td>Frontage Roads</td>
<td>30.9%</td>
<td>40.0%</td>
<td>29.4%</td>
</tr>
<tr>
<td>HOV</td>
<td>9.8%</td>
<td>24.8%</td>
<td>153.1%</td>
</tr>
<tr>
<td>Total Roadway Network</td>
<td>28.4%</td>
<td>40.6%</td>
<td>43.0%</td>
</tr>
</tbody>
</table>

Source: NCTCOG, 2009

1.7 Existing Transit Conditions

The Study Area is served by light rail and local and express bus service that spans three transit service areas including DART, DCTA and The T.

DART provides the majority of transit service to the Corridor with both bus and light rail. The light rail line is the Red Line which runs north and south in the eastern terminus of the corridor. It has been operational since 2002. Weekly ridership on the Red Line is approximately 33,000 and weekday boardings at the Bush Turnpike Station located just south of the Cotton Belt intersection are approximately 1,140.

DART also operates 33 bus routes in the Study Area including five local routes, three express routes, 10 transit feeder lines, six cross-town buses, and nine special or shuttle routes, including those that serve the DFWIA. Route 400 which runs along Belt Line Road has the highest average weekday ridership in the Corridor with approximately 2,000 passenger trips. Routes 463 and 488 also average approximately 1,800 weekday passenger boardings.
The corridor has one transit center located in Addison. The Addison Transit Center can accommodate 300 vehicles and provides connections for 14 local and express routes. A station at this location is proposed for the Cotton Belt Corridor. The North Carrollton Transit Center is located north of the Cotton Belt alignment along the Green Line. It is anticipated that with the opening of the Cotton Belt, the operations at the North Carrollton Transit Center would be moved to the Green Line Trinity Mills Station. The Transit Center can accommodate 1,047 vehicles and will provide overflow parking for the Green Line.

The corridor is also served by DCTA which provides express bus service, Commuter Express, between Denton County and Downtown Dallas. Park and Ride facilities are located in Denton, Lewisville and University of North Texas. The Commuter Express line currently serves the North Carrollton Transit Center.

The T operates the TRE Commuter Rail service between Fort Worth and downtown Dallas. TRE serves the DFWIA at the Centre Port/DFWIA station with a shuttle service that runs between the station and DFWIA.

1.8 Need for the Proposed Action

The Cotton Belt Corridor currently has a number of employment centers, major corporate headquarters and jobs. As a result, traffic within the Study Area has been increasing. Congestion and travel delays on the existing roadway network are at moderate to severe levels. Current land use patterns exhibit low-density, auto-oriented development and lack connectivity to existing transit systems. However, some areas, such as Addison, have significant medium to high density developments focused on the Transit Center and future rail station. Over the next 20 years, the Study Area is projected to attract new employment and population, continuing to impact and strain the transportation network. The accessibility of the corridor will decline as congestion and travel delay increases. Even with the planned transportation improvements for the corridor, congestion and travel delays are expected to worsen. In order to meet the growing demands of the corridor, transportation improvements are needed to improve accessibility, connectivity and reduce congestion levels.

The following transportation needs have been identified for the Cotton Belt Corridor.

- Reduce congestion and travel delays along major roadway networks.
- Provide reliable connections between the existing and proposed local and regional transit systems.
- Improve accessibility to employment, activity centers and residential areas in the corridor.
- Promote sustainable development patterns in the study area.
1.9 Purpose of the Proposed Action

The Cotton Belt Corridor’s primary purpose is to provide passenger rail connections that will improve mobility, accessibility and system linkages to major employment, population and activity centers in the northern part of the DART Service Area. Travel patterns within the Cotton Belt Corridor are largely east to west, suburb to suburb and longer distance than the traditional suburb to central business district trip. The proposed Cotton Belt passenger rail system will be designed to provide high-speed, reliable transit options for long-distance commuters in the corridor with connections to the existing and planned transit systems. The vehicles are anticipated to be compliant with FRA safety regulations but have the look and feel of light-rail vehicles. The transit system will be unique to corridor and region.

The implementation of passenger rail within the Cotton Belt Corridor would provide an alternative mode of transportation to help alleviate traffic congestion within the Study Area. The connection of three LRT lines and two planned regional rail lines (DCTA A-Train and The T’s SW2NE Project) makes regional connectivity a key component of the Cotton Belt Corridor. The Cotton Belt Corridor also offers opportunities to connect with the proposed BNSF regional rail corridor between Frisco and Irving, with a connection in downtown Carrollton.

Regional demand for travel in the Study Area is projected to increase along with congestion. Implementation would improve transit performance in the Study Area by offering a new, more reliable service. By implementing a new transportation option, peak period congestion would be reduced, improving regional air quality.

1.10 Planning Context

1.10.1 Decision Framework

Since 1983, the Cotton Belt Corridor has been included in several transportation service plans and the NCTCOG Metropolitan Transportation Plan (MTP). In 1999 and 2000 DART identified a broad North Crosstown Corridor which included the Cotton Belt line as a key transportation corridor. In 2005, DART conducted a higher level of alternatives analysis and completed an existing conditions report of the North Crosstown Corridor, as part of its 2030 TSP. The Cotton Belt Corridor was identified as the preferred alignment in the 2030 TSP for transit service between DFWIA and the DART Red Line. NCTCOG also included the Cotton Belt Corridor in the region’s long range transportation plan, Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area – 2009 Amendment. Recently, NCTCOG completed a Conceptual Engineering and Funding Study for passenger rail the Cotton Belt Corridor. This study identified existing conditions, design options, potential rail station locations and potential impacts. This study will be used to inform and guide the EIS development for the Cotton Belt Corridor.

1.10.2 The Role of the EIS in Project Development

The EIS is being prepared by DART, in cooperation with FTA, and will follow the regulations set forth in the National Environmental Policy Act (NEPA) of 1969. In addition, FAA has been invited to serve as a cooperating agency as it has jurisdiction of DFWIA located within the Study Area.

A comprehensive public and agency involvement program (PAIP) has been developed and will be implemented as part of the Draft EIS (DEIS). The PAIP will include: agency and public
scoping meetings; community-wide public information meetings; public hearings; informational briefings to stakeholder groups, elected officials, and other local and regional officials; and information dissemination via a project website and newsletters.

Scoping meetings will provide the public an opportunity to comment on the scope of the EIS, specifically on the proposed project’s purpose and need, the alternatives to be evaluated and impacts of the alternatives considered. Public comments received during the scoping meetings will be used to further define the statement of Purpose and Need.

Additional alternatives that emerge during scoping that reasonably address the project’s Purpose and Need and that have not been previously evaluated will be considered for evaluation in the EIS process. The DEIS will identify impacts to the natural, social and economic environment and provide mitigation measures for any impacts. After its approval, the DEIS will be available for public and agency review and comment. In addition, a public hearing will be held on the DEIS in which the public can submit formal comments.

The Final EIS (FEIS) will consider comments received during the DEIS public review and will identify the preferred alternative. Opportunity for additional public comment will be provided throughout all phases of project development. It is anticipated that the EIS process will conclude with approval from FTA and the issuance of a Record of Decision (ROD). A ROD provides the clearance to begin final design and construction.

Funding for the project is under consideration and includes a combination of federal, state and local funding sources. In addition, the NCTCOG is also seeking innovative financing alternatives that may include private sector partners to design, build, operate, maintain and/or finance the project.
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1.0 PURPOSE AND NEED

1.1 Project Overview

The Cotton Belt Corridor Regional Rail Project is a proposed 26-mile passenger rail alignment extending from Dallas-Fort Worth International Airport (DFWIA) eastward connecting with the existing Dallas Area Rapid Transit (DART) Red Line in Plano/Richardson area (Figure 1). The proposed project traverses through three Counties in the State of Texas, Tarrant, Dallas, and Collin, and seven cities, Grapevine, Coppell, Dallas, Carrollton, Addison, Richardson and Plano.

A passenger rail corridor concept from the DART Red Line in the Richardson/Plano area to the Green Line in Carrollton was included in the original 1983 DART Service Plan. In 1989, the DART Transit System Plan recommended the purchase and preservation of the Cotton Belt Corridor right-of-way from Wylie, Texas to north Fort Worth; the 52-mile corridor purchase was completed in 1990. During the development of the 1995 DART Transit System Plan, this corridor was combined with others as alternatives for further study to serve an expanded North Crosstown Corridor.

DART conducted a high level alternatives analysis and completed an existing conditions report on the North Crosstown Corridor as part of its 2030 Transit System Plan (TSP). The 2030 TSP identified the Cotton Belt Corridor as a focus area and concluded that by 2030, the North Crosstown Corridor area would experience notable insufficient roadway capacity equivalent to more than 10 freeway lanes. The report indicated that “express” passenger rail service on the Cotton Belt Corridor (from DFWIA to the DART Red Line), using 20 minute peak and 60 minute off-peak service, was the most cost-effective and direct route to serve this east-west crosstown corridor.
The Cotton Belt Corridor has also been recognized on a regional level. The Cotton Belt Corridor has been included in the Dallas-Fort Worth Metropolitan Planning organization, the North Central Texas Council of Governments (NCTCOG), regional transportation plan since 1986. In October 2008, the Fort Worth Transportation Authority (The T) completed a Draft Environmental Impact Statement for the section of the Cotton Belt from DFWIA to Fort Worth as part of their Southwest-to-Northwest (SW2NE) project.

The DART 2030 TSP identifies the Cotton Belt Corridor as a priority project with implementation in the year 2025-2030 timeframe. Given the regional desire to accelerate the segment from DFWIA to the DART Red Line, Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area identifies this project, and possibly portions of the SW2NE project, as a candidate for a public-private partnership (PPP) to design, build, operate, maintain and/or finance the corridor.

DART initiated the PPP effort in May 2009 with a Request for Information (RFI). On May 11, 2010 the DART Board of Directors authorized the President/Executive Director to execute the Memorandum of Understanding between DART and the Regional Transportation Council (RTC) Concerning the Identification of Funding Sources to Implement Passenger Rail Service on the Cotton Belt Corridor. As a result, the RTC/NCTCOG issued a Request for Proposals (RFP) entitled “Cotton Belt Passenger Rail Corridor Innovative Finance Initiative (Planning Services)”. Based on early input during the DART PPP RFI, potential private partners noted that a more detailed project definition and environmental clearance would be needed before advancing the project. As a result, DART is advancing preliminary engineering and conducting an Environmental Impact Statement (EIS) which includes identification of environmental impacts, design considerations and cost estimates to inform the innovative finance effort. DART with the Federal Transit Administration (FTA) is conducting the EIS in accordance with the National Environmental Policy Act (NEPA: 42 U.S.C. 4321 et seq.) of 1969 and the regulations implementing NEPA set forth in 40 CFR Parts 1500-1508 and 23 CFR Part 771, as well as provisions of the enacted Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

1.2 Goals and Objectives

The Cotton Belt Corridor Regional Rail Project’s primary purpose is to provide passenger rail connections that will improve mobility, accessibility and system linkages to major employment, population and activity centers in the northern portion of the DART Service Area. The following goals have been identified for the Cotton Belt Corridor:

- **Enhance corridor mobility and accessibility**
  - Provide connectivity to existing and planned passenger rail facilities
  - Provide transportation investments serving future population and employment growth
  - Improve access to existing and emerging major activity centers
  - Increase transit usage for existing and new riders
  - Improve access to transit
  - Provide cost-effective options

- **Reduce congestion**
  - Increase transit capacity and improve travel times through more reliable transit
  - Improve air quality
• Reduce demand on local roadways
• Reduce number of single occupant vehicles

• **Encourage economic development**
  - Encourage employment opportunities
  - Encourage economic development opportunities
  - Encourage sustainable and livable development opportunities
  - Encourage consistency with regional and local transportation and comprehensive plans
  - Encourage strategies for land use development and redevelopment

• **Provide an environmentally-sensitive transit investment**
  - Minimize negative impacts to the community
  - Minimize negative impacts to the environment
  - Minimize negative impacts to natural, social and economic environments

### 1.3 Relevant System Planning Activities

The Cotton Belt Corridor has been studied and included in numerous transportation improvement plans since 1983. The following plans have included the Cotton Belt Corridor:

- **DART Final Service Plan, 1983** – DART Service Plan included an at-grade passenger rail service from downtown Carrollton to North Central Corridor (the existing Red Line).

- **Mobility 2000 – The Regional Transportation Plan for North Central Texas, May 1986** – This plan recommended the right-of-way preservation for the Cotton Belt Corridor from downtown Fort Worth to Plano.

- **DART Transit System Plan, June 1989** – The plan recommended the Cotton Belt Corridor right-of-way preservation and purchase. The purchase of 52 miles of right-of-way from Wylie, Texas to north Fort Worth was completed in 1990.

- **2010 DART Transit System Plan, November 1995** – This plan identified the North Crosstown Corridor which included the Cotton Belt, Kansas City Southern (KCS), and Burlington Northern Santa Fe (BNSF) railroad corridor alignments.

- **Mobility 2020 – The Metropolitan Transportation Plan, December 1996** – This plan included commuter rail on the Cotton Belt Corridor from Parker Road or Addison Transit Center to DFWIA and light rail from Addison Transit Center to IH 635/US 75.

- **Mobility 2025 – The Metropolitan Transportation Plan, January 2000** – This plan identified several options for the North Crosstown Study area including passenger rail along Santa Fe and Burlington Northern lines, passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail on the Cotton Belt Corridor from the Addison Transit Center to DFWIA, and light rail from the Addison Transit Center to IH 635/US 75.

- **Mobility 2025 Update – The Metropolitan Transportation Plan, May 2001** – The regional transportation plan was updated in 2001. The options for the North Crosstown Study area remained the same and included, passenger rail along Santa Fe and
Burlington Northern lines, passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail on the Cotton Belt Corridor from the Addison Transit Center to DFWIA, and light rail from the Addison Transit Center to IH 635/US 75.

• **Mobility 2025 – The Metropolitan Transportation Plan – 2004 Update, January 2004** – The updated regional transportation plan included options for the North Crosstown Study area. The options included, passenger rail along Santa Fe and Burlington Northern lines, passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail on the Cotton Belt Corridor from the Addison Transit Center to DFWIA, and light rail from the Addison Transit Center to Forest Lane Station on the DART Red Line.

• **Mobility 2025 – The Metropolitan Transportation Plan – April 2005 Amendment, April 2005** – The updated regional transportation plan included modified options for the North Crosstown Study area. The options included passenger rail on the Cotton Belt Corridor from Parker Road to DFWIA, passenger rail service along BNSF and KCS Corridors from Carrollton to Richardson and light rail from the Addison Transit Center to Forest Lane Station on the DART Red Line.

• **DART 2030 Transit System Plan, October 2006** – The DART system plan included express rail on the Cotton Belt Corridor from the DART Red Line to DFWIA. As part of this plan, a high-level alternatives analysis and existing conditions report was completed. This report concluded that express passenger rail service from DFWIA to the DART Red Line along the Cotton Belt Corridor was the most direct and cost-efficient route.

• **Mobility 2030 – The Metropolitan Transportation Plan, June 2007** – The regional transportation plan included light rail/new technology for the Cotton Belt Corridor with the alignment from DFWIA to downtown Plano or Bush Turnpike Station.

• **Mobility 2030 – The Metropolitan Transportation Plan – 2009 Amendment, April 2009** – The amended plan included an option for the Cotton Belt Corridor with light rail/new technology and the alignment from DFWIA to downtown Plano or Bush Turnpike Station.

• **Cotton Belt Corridor Conceptual Engineering and Funding Study – April 2010** – This study completed by the NCTCOG provided background information on the existing environment, and compared various combinations of interlining with the western portion of the Corridor, Red Line termini, minor alignment deviations, and station locations on the Cotton Belt Corridor. The feasibility study will be used to inform and guide the scoping and EIS development for the Cotton Belt Corridor Regional Rail Project.

### 1.4 Overview of the Corridor

The Cotton Belt Corridor is served by a variety of transportation systems including, a major international airport, roadways, transit facilities, and freight trains. The corridor intersects several major freeways including, State Highway (SH) 121, Interstate Highway (IH) 635, the President George Bush Turnpike (PGBT), IH 35E, the Dallas North Tollway (DNT) and US 75 (North Central Expressway).
The Study Area consists of a one-mile radius from the Cotton Belt Corridor rail alignment. DFWIA is on the western terminus of the corridor. The airport hosts five terminals, which are connected by a people mover system, Skylink, and a bus shuttle service, Terminal Link. The airport is served by two DART bus routes, 310 and 408. The T also provides transit service to DFWIA through a shuttle bus that runs between the Trinity Railway Express (TRE) CentrePort/DFW Airport Station and the airport.

The Cotton Belt Corridor is connected by the DART bus system with a combination of local, express, suburban, crosstown and shuttle bus service. There are currently 33 DART bus routes operating in the Study Area and one transit center directly on the corridor, the Addison Transit Center.

Additionally, the corridor contains light rail transit (LRT), the DART Red Line, which traverses north-south on the eastern terminus of the corridor between Parker Road in Plano, through Downtown Dallas and terminating at Westmoreland Road in southwest Dallas County. The Cotton Belt would also connect with several transit rail lines currently under design and construction, including DART’s Orange and Green LRT lines. Two additional rail corridors would interface with the Cotton Belt: a proposed extension of the Denton County Transportation Authority (DCTA) A-Train service to downtown Carrollton and the proposed SW2NE rail corridor connection at DFWIA. A proposed corridor on the BNSF line between Frisco and Irving also could connect in downtown Carrollton. Figure 2 indicates the existing and proposed transit systems in the Cotton Belt Corridor Study Area.

DART is currently constructing the second phase of the Green Line LRT alignment. The 28-mile line runs north south from North Carrollton/Frankford through Downtown Dallas and terminates at Buckner Station in Pleasant Grove. The second phase will open for service in December 2010. The first phase between Victory Station and MLK, Jr. Station opened in September 2009.

The DART Orange Line is a 14-mile alignment currently under design and construction that will parallel the Green Line to the west through downtown Dallas to Bachman Station in Northwest Dallas. From Bachman Station the Orange Line will head northwest to the Los Colinas Urban Center in 2011 and terminate at DFWIA in 2013. The alignment would terminate just south of the proposed Cotton Belt Corridor. The last segment from Belt Line to DFWIA is currently completing the Preliminary Engineering/Environmental Assessment phase.

The A-Train, currently under construction by DCTA is a passenger rail line, connecting central and southern Denton County. The first phase from Lewisville to the Trinity Mills Station is anticipated to open with the Green Line LRT alignment in December 2010. The remainder of the corridor is scheduled to open in 2011. The 21-mile alignment has five stations between Denton and Carrollton and connects with the DART Dallas and other major destinations in the Dallas-Fort Worth area. A planned extension of the A-Train to Carrollton Square would provide a direct connection to the proposed Cotton Belt Corridor.

The proposed SW2NE rail corridor connects southwest Fort Worth with DFWIA. The project is conducting an EIS and Section 4(f) evaluation of the corridor through FTA and Federal Aviation Administration (FAA). The Cotton Belt Corridor would connect with the proposed SW2NE at DFWIA. The Draft EIS was published in October 2008.
Two future transit corridors have been identified that could connect to the Cotton Belt Corridor but do not have funding. These include the Frisco Corridor, a proposed alignment between Irving and Frisco, and a proposed passenger rail line from the DART Red Line at Parker Road to McKinney.

Three freight companies also operate within the corridor through agreements on tracks owned by DART: The Fort Worth and Western Railroad (FWWR), the KCS Railroad, and the Dallas Garland Northeastern (DGNO) short-line freight rail service. The Union Pacific (UP) Railroad has overhead rights but does not currently operate within the corridor. On January 22, 2010, the Surface Transportation Board (STB) approved freight abandonment in the north Dallas area from Knoll Trail in Dallas, Texas to Renner Junction in Richardson, Texas.
1.5 Population and Employment

Population has increased considerably in the Dallas-Fort Worth region over the past decades. Population has increased by 29 percent to 5,067,400 between 1990 and 2000. It is anticipated that this growth in population will continue. Over the next 20 years, the region’s population is expected to increase by approximately three million persons according to the NCTCOG. Table 1 provides the NCTCOG regional projections for population, households, and employment for the Dallas-Fort Worth urbanized areas. The Dallas-Fort Worth urbanized area includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties. However, the majority of growth in population is projected to focus within the Study Area including Dallas, Collin and Tarrant Counties.

### Table 1
Dallas-Fort Worth Urbanized Area Demographics

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Households</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 Census</td>
<td>3,920,094</td>
<td>1,462,047</td>
<td>2,033,973</td>
</tr>
<tr>
<td>2000 Census</td>
<td>5,067,400</td>
<td>1,886,700</td>
<td>3,158,200</td>
</tr>
<tr>
<td>2010</td>
<td>6,328,200</td>
<td>2,350,300</td>
<td>3,897,000</td>
</tr>
<tr>
<td>2020</td>
<td>7,646,600</td>
<td>2,851,400</td>
<td>4,658,700</td>
</tr>
<tr>
<td>2030</td>
<td>9,107,900</td>
<td>3,396,100</td>
<td>5,416,700</td>
</tr>
</tbody>
</table>

Source: NCTCOG Demographic Forecast Information (January 24, 2007) and US Census Bureau

The Dallas-Fort Worth region has also experienced considerable growth in employment over the past several decades which can be attributed to a favorable business climate, attractive tax policies and plenty of available land. Recently, this fast and steady growth has slowed due to the current recession. However, compared to the rest of the country, the Dallas-Fort Worth area economy has performed better during the recession and is expected to recover more quickly.

The Study Area hosts a number of large employers including 28 with 500 or more employees and 72 employment centers, which employ more than 250 people at one location. The largest employer in the Study Area with approximately 60,000 on-site employees is DFWIA. Additional major employers include Perot Systems, Alcatel, Hewlett Packard and the University of Texas at Dallas (UTD) which hosts 14,500 students. Several communities along the Corridor have more employment than population. For example, Addison had almost twice as much employment than residential population in 2000 and that ratio is anticipated to increase to three times by 2030.

Table 2 provides employment and population statistics between 2000 and 2030. The Study Area is projected to increase in both population and employment in each of the municipalities, by 15 and 43 percent respectively.
### Table 2

**Base Year and Projected Population and Employment**

<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
<th>Employment</th>
<th>Population</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>2030</td>
<td>Percent Change</td>
<td>2000</td>
</tr>
<tr>
<td>Addison</td>
<td>14,454</td>
<td>19,313</td>
<td>33.6%</td>
<td>45,649</td>
</tr>
<tr>
<td>Carrollton</td>
<td>109,364</td>
<td>124,086</td>
<td>13.5%</td>
<td>68,199</td>
</tr>
<tr>
<td>Coppell</td>
<td>36,191</td>
<td>45,410</td>
<td>25.5%</td>
<td>18,401</td>
</tr>
<tr>
<td>Dallas</td>
<td>1,202,592</td>
<td>1,404,847</td>
<td>16.8%</td>
<td>1,038,314</td>
</tr>
<tr>
<td>Farmers Branch</td>
<td>28,028</td>
<td>43,978</td>
<td>56.9%</td>
<td>75,013</td>
</tr>
<tr>
<td>Grapevine</td>
<td>41,909</td>
<td>49,484</td>
<td>18.1%</td>
<td>49,565</td>
</tr>
<tr>
<td>Irving</td>
<td>196,632</td>
<td>225,714</td>
<td>14.8%</td>
<td>165,435</td>
</tr>
<tr>
<td>Plano</td>
<td>222,498</td>
<td>257,061</td>
<td>15.5%</td>
<td>115,048</td>
</tr>
<tr>
<td>Richardson</td>
<td>92,577</td>
<td>113,815</td>
<td>22.9%</td>
<td>94,792</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,944,245</strong></td>
<td><strong>2,238,708</strong></td>
<td><strong>17.5%</strong></td>
<td><strong>1,670,416</strong></td>
</tr>
<tr>
<td><strong>Study Area</strong></td>
<td><strong>200,541</strong></td>
<td><strong>230,274</strong></td>
<td><strong>14.8%</strong></td>
<td><strong>256,704</strong></td>
</tr>
</tbody>
</table>

Source: NCTCOG 2030 Demographic Forecast

This increase in employment and population has negatively impacted the region’s transportation network and created a need for a more developed and efficient transportation system.

### 1.6 Travel Patterns and Congestion

The Study Area’s employment and population centers are primarily accessible by automobile and development is largely characterized by suburban, low-density, auto-oriented land use patterns. The Dallas-Fort Worth area like many areas around the country has experienced the decentralization of the urban core. Employment centers have largely shifted away from the region’s core and developed along major interstates, contributing to urban sprawl. This trend has produced a strain on the region’s transportation network and inability for the region to build sufficient roadway capacity.

The Study Area includes numerous roadway facilities that intersect the corridor both north-south and east-west. The north-south roadways include IH 35E, Dallas North Tollway and US 75 (North Central Expressway). The east-west facilities include IH 635, Belt Line Road and PGBT.

- IH 635 is the fourth most congested highway in the State of Texas. The eight-lane highway with two (one in each direction) interim high-occupancy vehicle (HOV) lanes, is scheduled for roadway reconstruction in 2010. The planned improvements include an additional two travel lanes and six managed lanes that will replace the existing two HOV lanes. In 2007, IH 635 from IH 35E to US 75 (North Central Expressway) carried over 250,000 vehicles per day, and is projected to carry 429,000 vehicles per day by 2030.1

- The Belt Line Road is a six-lane regional arterial running east-west through the Study Area. In 2007, traffic was over 58,000 vehicles per day and it is projected to increase to 68,000 vehicles per day by 2030. A portion of the roadway is slated for widening from

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four lanes to six lanes between Denton Tap Road to MacArthur Boulevard in the near future.\(^2\)

- The PGBT is a six lane roadway that carried over 119,000 vehicles per day in 2007 and is projected to carry 167,000 vehicles per day by 2030. This roadway is slated to be widened to eight lanes prior to 2030.\(^3\)

The roadway network within the Study Area currently has moderate to severe traffic congestion. Congestion levels are measured by level of service (LOS). LOS is a rating system used to evaluate roadway performance. Performance is ranked “A” through “F”, with “A” operating at free flow acceptable conditions and “F” operating with breakdown flows or unacceptable conditions. Evaluation is based a combination of speed, delay and roadway design. In 2007, 19 percent of the roadway network in the Study Area operated at a LOS D or E and 29 percent operated at a LOS F. Conditions are projected to worsen by 2030 with 19 percent operating at LOS D or E and 41 percent operating at LOS F with an additional 1,500 lanes to the network. This will begin to shift traffic away from the congested arterials on to the minor arterials and collector road system.

Table 3 indicates that Vehicle Miles of Travel per day, Vehicle Hours of Travel per day, Vehicle Hours of Congestion Delay per day are all projected to increase by 2030 while constructing an additional 1,486 lane miles.

\(^2\) Ibid.
\(^3\) Ibid.
### Table 3

Cotton Belt Corridor Transportation Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2007</th>
<th>2030</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Miles of Travel per Day</td>
<td>42,201,065</td>
<td>60,302,476</td>
<td>42.9%</td>
</tr>
<tr>
<td>Vehicle Hours of Travel per Day</td>
<td>1,230,437</td>
<td>1,734,876</td>
<td>41.0%</td>
</tr>
<tr>
<td>Vehicle Hours of Congestion Delay per Day</td>
<td>217,526</td>
<td>360,891</td>
<td>65.9%</td>
</tr>
<tr>
<td>Lane Miles in Study Area</td>
<td>6,862</td>
<td>8,348</td>
<td>21.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Lane Miles at LOS D, E</th>
<th>2007</th>
<th>2030</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway/Toll Road</td>
<td>28.0%</td>
<td>31.0%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Principal Arterial</td>
<td>19.7%</td>
<td>22.1%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Minor Arterial</td>
<td>21.9%</td>
<td>17.1%</td>
<td>-21.1%</td>
</tr>
<tr>
<td>Collectors</td>
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<td>Freeway Ramps</td>
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<td>Frontage Roads</td>
<td>18.3%</td>
<td>19.1%</td>
<td>4.4%</td>
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<tr>
<td>HOV</td>
<td>22.1%</td>
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<td>26.2%</td>
</tr>
<tr>
<td>Total Roadway Network</td>
<td>18.9%</td>
<td>18.8%</td>
<td>-0.5%</td>
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<th>Percent Lane Miles at LOS F</th>
<th>2007</th>
<th>2030</th>
<th>Percent Change</th>
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<td>Frontage Roads</td>
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<tr>
<td>HOV</td>
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<td>153.1%</td>
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<td>Total Roadway Network</td>
<td>28.4%</td>
<td>40.6%</td>
<td>43.0%</td>
</tr>
</tbody>
</table>

Source: NCTCOG, 2009

1.7 Existing Transit Conditions

The Study Area is served by light rail and local and express bus service that spans three transit service areas including DART, DCTA and The T.

DART provides the majority of transit service to the Corridor with both bus and light rail. The light rail line is the Red Line which runs north and south in the eastern terminus of the corridor. It has been operational since 2002. Weekly ridership on the Red Line is approximately 33,000 and weekday boardings at the Bush Turnpike Station located just south of the Cotton Belt intersection are approximately 1,140.

DART also operates 33 bus routes in the Study Area including five local routes, three express routes, 10 transit feeder lines, six cross-town buses, and nine special or shuttle routes, including those that serve the DFWIA. Route 400 which runs along Belt Line Road has the highest average weekday ridership in the Corridor with approximately 2,000 passenger trips. Routes 463 and 488 also average approximately 1,800 weekday passenger boardings.
The corridor has one transit center located in Addison. The Addison Transit Center can accommodate 300 vehicles and provides connections for 14 local and express routes. A station at this location is proposed for the Cotton Belt Corridor. The North Carrollton Transit Center is located north of the Cotton Belt alignment along the Green Line. It is anticipated that with the opening of the Cotton Belt, the operations at the North Carrollton Transit Center would be moved to the Green Line Trinity Mills Station. The Transit Center can accommodate 1,047 vehicles and will provide overflow parking for the Green Line.

The corridor is also served by DCTA which provides express bus service, Commuter Express, between Denton County and Downtown Dallas. Park and Ride facilities are located in Denton, Lewisville and University of North Texas. The Commuter Express line currently serves the North Carrollton Transit Center.

The T operates the TRE Commuter Rail service between Fort Worth and downtown Dallas. TRE serves the DFWIA at the Centre Port/DFWIA station with a shuttle service that runs between the station and DFWIA.

### 1.8 Need for the Proposed Action

The Cotton Belt Corridor currently has a number of employment centers, major corporate headquarters and jobs. As a result, traffic within the Study Area has been increasing. Congestion and travel delays on the existing roadway network are at moderate to severe levels. Current land use patterns exhibit low-density, auto-oriented development and lack connectivity to existing transit systems. However, some areas, such as Addison, have significant medium to high density developments focused on the Transit Center and future rail station. Over the next 20 years, the Study Area is projected to attract new employment and population, continuing to impact and strain the transportation network. The accessibility of the corridor will decline as congestion and travel delay increases. Even with the planned transportation improvements for the corridor, congestion and travel delays are expected to worsen. In order to meet the growing demands of the corridor, transportation improvements are needed to improve accessibility, connectivity and reduce congestion levels.

The following transportation needs have been identified for the Cotton Belt Corridor.

- Reduce congestion and travel delays along major roadway networks.
- Provide reliable connections between the existing and proposed local and regional transit systems.
- Improve accessibility to employment, activity centers and residential areas in the corridor.
- Promote sustainable development patterns in the study area.
1.9 Purpose of the Proposed Action

The Cotton Belt Corridor’s primary purpose is to provide passenger rail connections that will improve mobility, accessibility and system linkages to major employment, population and activity centers in the northern part of the DART Service Area. Travel patterns within the Cotton Belt Corridor are largely east to west, suburb to suburb and longer distance than the traditional suburb to central business district trip. The proposed Cotton Belt passenger rail system will be designed to provide high-speed, reliable transit options for long-distance commuters in the corridor with connections to the existing and planned transit systems. The vehicles are anticipated to be compliant with FRA safety regulations but have the look and feel of light-rail vehicles. The transit system will be unique to corridor and region.

The implementation of passenger rail within the Cotton Belt Corridor would provide an alternative mode of transportation to help alleviate traffic congestion within the Study Area. The connection of three LRT lines and two planned regional rail lines (DCTA A-Train and The T’s SW2NE Project) makes regional connectivity a key component of the Cotton Belt Corridor. The Cotton Belt Corridor also offers opportunities to connect with the proposed BNSF regional rail corridor between Frisco and Irving, with a connection in downtown Carrollton.

Regional demand for travel in the Study Area is projected to increase along with congestion. Implementation would improve transit performance in the Study Area by offering a new, more reliable service. By implementing a new transportation option, peak period congestion would be reduced, improving regional air quality.

1.10 Planning Context

1.10.1 Decision Framework

Since 1983, the Cotton Belt Corridor has been included in several transportation service plans and the NCTCOG Metropolitan Transportation Plan (MTP). In 1999 and 2000 DART identified a broad North Crosstown Corridor which included the Cotton Belt line as a key transportation corridor. In 2005, DART conducted a higher level of alternatives analysis and completed an existing conditions report of the North Crosstown Corridor, as part of its 2030 TSP. The Cotton Belt Corridor was identified as the preferred alignment in the 2030 TSP for transit service between DFWIA and the DART Red Line. NCTCOG also included the Cotton Belt Corridor in the region’s long range transportation plan, Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area – 2009 Amendment. Recently, NCTCOG completed a Conceptual Engineering and Funding Study for passenger rail the Cotton Belt Corridor. This study identified existing conditions, design options, potential rail station locations and potential impacts. This study will be used to inform and guide the EIS development for the Cotton Belt Corridor.

1.10.2 The Role of the EIS in Project Development

The EIS is being prepared by DART, in cooperation with FTA, and will follow the regulations set forth in the National Environmental Policy Act (NEPA) of 1969. In addition, FAA has been invited to serve as a cooperating agency as it has jurisdiction of DFWIA located within the Study Area.

A comprehensive public and agency involvement program (PAIP) has been developed and will be implemented as part of the Draft EIS (DEIS). The PAIP will include: agency and public
scoping meetings; community-wide public information meetings; public hearings; informational briefings to stakeholder groups, elected officials, and other local and regional officials; and information dissemination via a project website and newsletters.

Scoping meetings will provide the public an opportunity to comment on the scope of the EIS, specifically on the proposed project’s purpose and need, the alternatives to be evaluated and impacts of the alternatives considered. Public comments received during the scoping meetings will be used to further define the statement of Purpose and Need.

Additional alternatives that emerge during scoping that reasonably address the project’s Purpose and Need and that have not been previously evaluated will be considered for evaluation in the EIS process. The DEIS will identify impacts to the natural, social and economic environment and provide mitigation measures for any impacts. After its approval, the DEIS will be available for public and agency review and comment. In addition, a public hearing will be held on the DEIS in which the public can submit formal comments.

The Final EIS (FEIS) will consider comments received during the DEIS public review and will identify the preferred alternative. Opportunity for additional public comment will be provided throughout all phases of project development. It is anticipated that the EIS process will conclude with approval from FTA and the issuance of a Record of Decision (ROD). A ROD provides the clearance to begin final design and construction.

Funding for the project is under consideration and includes a combination of federal, state and local funding sources. In addition, the NCTCOG is also seeking innovative financing alternatives that may include private sector partners to design, build, operate, maintain and/or finance the project.