TIGER II DISCRETIONARY PROGRAM
Project Application

Name of Project: Downtown Dallas – Oak Cliff Streetcar Project

Agency Submitting Project: North Central Texas Council of Governments and City of Dallas

Other Project Parties: Dallas Area Rapid Transit

Primary Contact:

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Type of Project: Transit/Other

Project Location:

City: Dallas
County: Dallas County
State: Texas
Congressional Districts: Eddie Bernice Johnson (District 30)
Joe Barton (District 6),
Kenny Marchant (District 24),
Pete Sessions (District 32)

Type of Jurisdiction: Urban Area

TIGER II Funds Requested: $25,000,000

Total Project Cost: $60,000,000

DUNS Number: 10-246-2256

Application ID: dalstrcar-0760

Application ID: aspnetsqlmembershipprovider:dalstrcar-0760

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I. Project Description

In order to implement the Livability Principles of the US DOT, HUD and EPA, the Dallas-Fort Worth Metropolitan Planning Organization (MPO) and the City of Dallas propose integrating housing, employment and rail transit through the linkage of downtown with surrounding urban neighborhoods. Anchoring the initial phase of this regional strategy, Union Station in Downtown Dallas is a passenger rail hub connecting the Trinity Railway Express (TRE), the Dallas Area Rapid Transit (DART) light rail system, and AMTRAK. This TIGER II Discretionary Grant is sought to fund the construction of Phase II of a streetcar system in Dallas to link walkable, mixed use neighborhoods in Oak Cliff with employment centers in Downtown Dallas and throughout the region.

Targeted Transportation Challenges

This project will improve transportation to and within the downtown core of Dallas by creating a seamless transit connection from the regional scale to the neighborhood scale. The implementation of the streetcar line in Dallas will provide a multi-modal link between jobs and residents. The project specifically targets commuters in mixed use districts adjacent to the downtown area. Ridership for the project is estimated at 5,636 riders per day. This project fulfills a significant urban need by linking both suburban and urban neighborhoods to employment, entertainment, and other economic opportunities along the TRE, Dallas light rail system, and the proposed streetcar system in Dallas.

Currently, North Oak Cliff is not serviced by the DART Light Rail System. The proposed streetcar would provide this critical linkage from North Oak Cliff into the Dallas CBD. North Oak Cliff is one of the most promising urban infill neighborhoods in Dallas. It is expected that up to 15,000 new units will be developed in this neighborhood in the next 10 to 15 years. Efforts by the City of Dallas to re-vision the historic Houston Street Viaduct as a multi-modal link began after uncovering the original 1912 bridge plans, which show that the bridge was constructed with the intent to develop the viaduct with two streetcar rail lines. Almost 100 years later, the Oak Cliff line will fulfill that original intent.

Exhibit 1 shows how the project fits into the regional transportation system. Exhibit 2 shows how the streetcar would interface with the urban environment including connectivity with existing and planned transit services.

Planned Operations

The full streetcar line will originate in Downtown Dallas at Harwood and Main Street, continuing down Main Street to Houston Street through the largest job center in the North Texas area. The alignment has a stop at Union Station in Downtown Dallas, which provides access to DART's Red/Blue light rail lines and Fort Worth via the TRE. The line then turns south, following Houston Street over the Trinity River into Oak Cliff,

Exhibit 1: Project Location

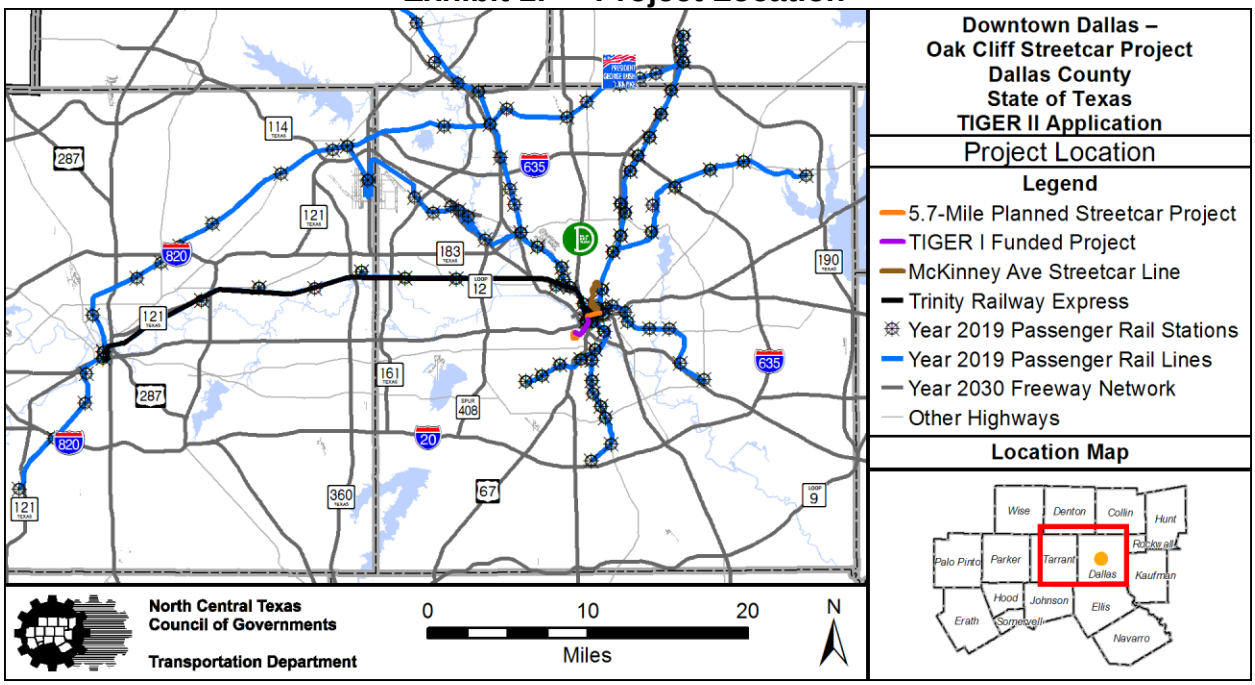
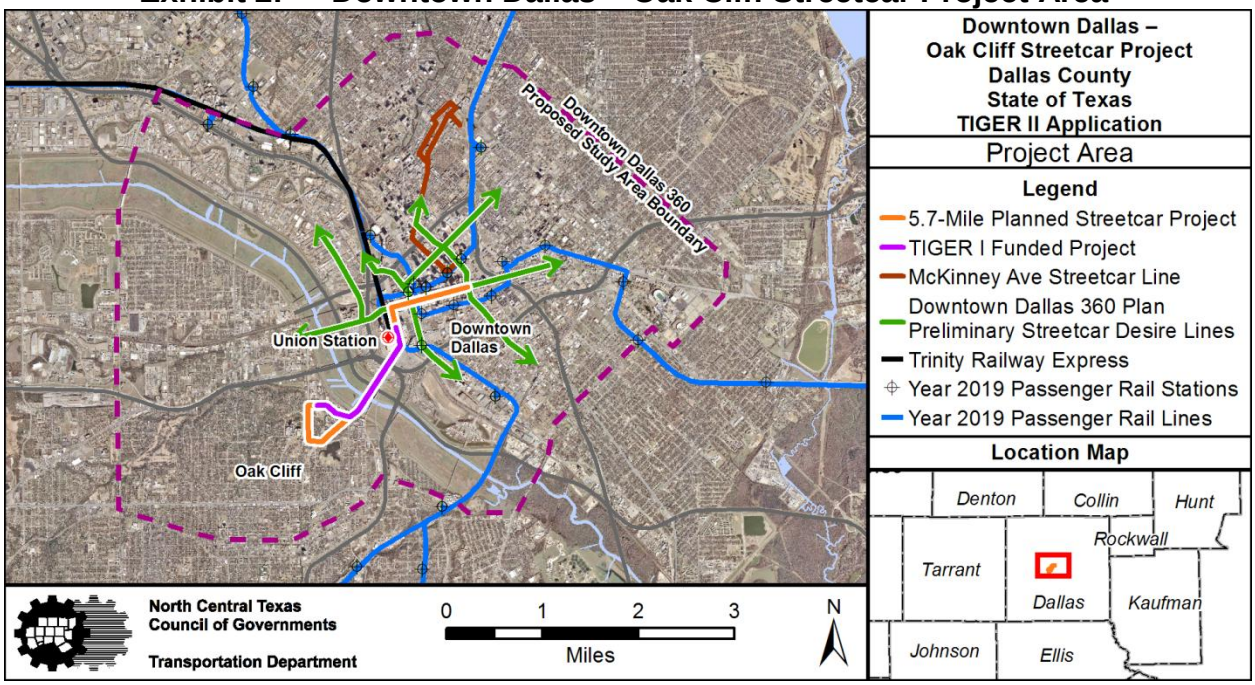


Exhibit 2: Downtown Dallas – Oak Cliff Streetcar Project Area



where it follows Greenbriar Lane to Beckley Road, and to Zang Boulevard before turning back to downtown. The alignment would include stops at the Dallas Convention Center and Hotel, Trinity River Park (which will be the largest urban park in the United States), Methodist Medical Center (the largest employer in Dallas' Southern Sector), the Oak Cliff Gateway area, and multiple residential areas. Exhibit 3 details proposed operational characteristics of the streetcar system.

Exhibit 3: Operating Characteristics

Characteristic	Information
Length	5.7 track miles (double-tracked)
Headways	10-15 minutes
Stop Spacing	Every 2-4 blocks
Number of Vehicles	6
Vehicle Characteristics	130-person capacity, modern, low-floor

The initial 1.5-mile Phase I segment, funded through a TIGER I grant, will be a starter line for both Downtown Dallas and North Oak Cliff, connecting the two areas across the Trinity River into Union Station (Downtown), along with needed start up facilities (maintenance facility, etc.). Construction of the 1.35-mile Phase II segment would be funded through a combination of local funds and the requested TIGER II Discretionary Grant.

II. Project Parties

a. North Central Texas Council of Governments (Submitting Agency)

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of cities, counties, school districts, and special districts which was established in January 1966 to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development.

It serves a 16-county metropolitan region centered around the two urban centers of Dallas and Fort Worth. Currently the Council has 233 members, including 16 counties, 165 cities, 23 independent school districts, and 29 special districts. The area of the region is approximately 12,800 square miles, which is larger than nine states, and the population of the region is over 6.4 million, which is larger than 35 states.

NCTCOG's structure is relatively simple; each member government appoints a voting representative from the governing body. These voting representatives make up the General Assembly which annually elects a 15-member Executive Board. The Executive Board is supported by policy development, technical advisory, and study committees, as well as a professional staff of 235.

Since 1974 NCTCOG has served as the MPO for transportation for the Dallas-Fort Worth area. NCTCOG's Department of Transportation is responsible for the regional planning process for all modes of transportation. The department provides technical support and staff assistance to the Regional Transportation Council (RTC) and its

technical committees, which compose the MPO policy-making structure. In addition, the department provides technical assistance to the local governments of North Central Texas in planning, coordinating, and implementing transportation decisions.

b. City of Dallas (Partnering Entity)

The City of Dallas is the ninth largest city in the nation with a total population of 1,299,543 according to the U.S. Census Bureau. Dallas is the largest city in the Dallas-Fort Worth metropolitan area, accounting for one third of the economic output, one half of the office space and one third of the industrial space in the region. The Dallas area is home to 46 Fortune 1000 companies and Dallas itself is home to 113 headquarters operations that each employ more than 1,000 globally. Dallas is forecast to continue adding jobs and residents in the coming decades.

City Council adopted Dallas' first comprehensive plan, *forwardDallas!*, in 2006. It provides a vision of a former suburban sunbelt boom town transformed into a thriving 21st century metropolis – a city that offers a balance of urban and suburban living and working opportunities. The vision calls for:

- An enhanced economy through balanced land use and strategic public investments
- Quality housing made more attainable
- Strong and healthy neighborhoods
- Enhanced transportation systems
- Environmental sustainability
- New development patterns

Dallas is channeling this growth into new developments and redevelopment sites in and around downtown, at transit stations and in Greenfield sites near the UNT Dallas campus and the inland port. The transit system is growing, with 43 rail stations complete or under construction. Area colleges and universities enroll 275,000 students and Dallas has the largest arts district in the U.S.

c. Dallas Area Rapid Transit (Other Project Party)

DART – a regional transit agency authorized pursuant to Chapter 452 of the Texas Transportation Code – was created by voters and funded with a one-cent local sales tax on August 13, 1983. The service area consists of 13 member cities: Addison, Carrollton, Cockrell Hill, Dallas, Farmers Branch, Garland, Glenn Heights, Highland Park, Irving, Plano, Richardson, Rowlett and University Park.

DART is governed by a 15-member board appointed by member-city councils based on population. Eight members are appointed by the City of Dallas and seven are appointed by the remaining cities. Board members serve two-year terms with no limits. Board officers are elected from the board membership and serve one-year terms.

Revenue from the voter-approved one-cent sales tax, federal funds, investment income, short- and long-term financing, and farebox revenue fund the operation and ongoing development of DART's multimodal Transit System Plan.

Currently, DART serves Dallas and 12 surrounding cities with approximately 130 bus routes, 48 miles of light rail transit (DART Rail), 84 freeway miles of high occupancy vehicle (HOV) lanes, and paratransit service for the mobility impaired. DART and the Fort Worth Transportation Authority (the T) jointly operate 35 miles of commuter rail transit (the TRE), linking downtown Dallas and Fort Worth with stops in the mid-cities and DFW International Airport.

III. Grant Funds and Sources/Uses of Project Funds

The Downtown Dallas – Oak Cliff Streetcar project received an award of $23 million from the TIGER I funding opportunity, which will construct the initial 1.5-mile Phase I of the streetcar plan. This TIGER II funding request of $25 million, combined with the local match, will construct an additional 1.35-mile Phase II of the streetcar plan. A total of $12 million in local funds will be used as the local match for this project – $4.4 million to fund planning, preliminary engineering, and environmental clearance, and $7.6 million to fund final engineering and construction. These local match funds are from the Dallas County allotment of a Regional Toll Revenue account created through an upfront payment by the North Texas Tollway Authority to the Texas Department of Transportation for the construction, operation, and maintenance of State Highway 121 in Collin, Dallas, and Denton Counties. Exhibit 4 provides a breakdown of costs and funding sources for the project.

Exhibit 4: Total Project Costs, Available Funding, and TIGER Request

Cost Category	Amount	Funding Source	Percent	Funding Amount
Planning and preliminary engineering	$3,840,000	Local Funding	100%	$3,840,000
Environmental review	$600,000	Local Funding	100%	$600,000
Final engineering, geotech, survey, project management, inspection, public involvement	$8,200,000	TIGER I Grant	32%	$2,640,000
		Local Funding	68%	$5,560,000
Utility relocation	$1,080,000	TIGER I Grant	100%	$1,080,000
Construction/vehicles	$46,280,000	Local Funding	4%	$2,000,000
		TIGER I Grant	42%	$19,280,000
		TIGER II Request	54%	$25,000,000
TOTAL	$60,000,000	Local Funding	20%	$12,000,000
		TIGER I Grant	38%	$23,000,000
		TIGER II Request	42%	$25,000,000

IV. Selection Criteria

This section contains information about how the project aligns with each of the primary and secondary selection criteria and a description of the results of the benefit-cost analysis.

a. Long-Term Outcomes

i. State of Good Repair

The streetcar will provide an alternative transportation option for residents, employees, and visitors of downtown Dallas and the Oak Cliff neighborhood. The utilization of the streetcar by these patrons will reduce the vehicle miles traveled by automobiles in these areas. The projected reduction in vehicle miles traveled (VMT), estimated at 2,818/day, combined with the expectation of a reduced level of bus service on the streetcar alignment prolong the lifecycle of the roadways in these areas. Quantifiable data is not available, but an E.D. Hovee study conducted for the City of Portland indicates that a high density streetcar neighborhood can reduce VMT by 55 percent (21.8 miles to 9.8 miles) when compared to a typical suburban neighborhood. The E.D. Hovee study is included in the supplementary material as **HoveeStudy_DDOC.pdf**.

ii. Economic Competitiveness

The Dallas-Fort Worth region is the 12th largest metropolitan economy in the world and the fourth largest metropolitan area in the United States. Between 1990 and 2000, this region ranked third in population growth, adding over one million people in that time. Estimates show that the Dallas-Fort Worth region is still growing by at least 100,000 people per year. Given these statistics, it is clear that the Dallas-Fort Worth region has a significant impact on both the United States and world economy.

This high growth rate has a distinct impact on traffic congestion and air quality within the region. Through the RTC, local elected officials have created and implemented a multimodal transportation plan based on principles of reducing congestion, improving air quality, and encouraging more sustainable development patterns. Implementing roadway projects is only one portion of a multimodal plan. Transit projects, such as the existing passenger and light rail systems, combined with the creation and extension of streetcar systems are imperative to providing alternative transportation options and more sustainable lifestyles.

Significant changes in travel mode choices and implementation of projects such as the streetcar system are necessary to sustain a competitive economy in the fourth largest (and growing) metropolitan area in the United States.

The Downtown Dallas – Oak Cliff Streetcar project is centrally located in downtown Dallas and connects to major employment centers and residential locations. The City of Dallas is spearheading major redevelopment efforts centered on the Trinity River which

runs near/through the downtown area. The City of Dallas is rezoning the Davis Street Corridor in preparation for multi-modal transit, mixed-use development. Moreover, efforts to revitalize the Historic Main Street and Jefferson Boulevard are underway to connect the retail/entertainment Bishop Arts District. As part of this effort, new development codes that promote mixed use, transit oriented development have been established and will continue to be expanded.

The emerging, multi-phased, Dallas Streetcar system will provide a network of intersecting streetcar lines that serve the Central Business District (CBD) and surrounding mixed-use neighborhoods. The lines will provide the bulk of the downtown core transit service, including service to the Farmers Market area, historic Deep Ellum cultural and residential district, high-density residential Arts District, the West End Historic District, Fair Park, West Dallas, North Oak Cliff, The Cedars, Uptown, Victory, and the Dallas Design District.

The existing McKinney Avenue Trolley Authority (MATA) line, operating in the Uptown area of Dallas, is currently served by a fleet of vintage and historic streetcars. The expansion of the system will utilize modern technology to provide the best and most efficient transportation options to Dallas commuters. This network has the potential to serve over 20,000 new workforce housing units in and around the CBD.

The Downtown Dallas – Oak Cliff Streetcar project represents the start of the Downtown Dallas 360 Streetcar System. The project runs along the Oak Cliff/Main Street alignment, which includes Downtown Dallas' Union Station (with access to DART's Red/Blue light rail lines, and the TRE commuter rail to Irving, Arlington, Hurst, and Fort Worth), the Downtown Main Street retail and entertainment corridor, Dallas Convention Center and Hotel, Trinity River Park (the largest urban park space in the United States), Methodist Medical Center (the largest employer in Dallas' Southern Sector), and multiple residential areas with the potential of 7,000 to 10,000 new workforce housing units.

The City of Dallas has devoted considerable resources toward the redevelopment of the CBD. Over the last five years, 4,000 housing units have been added and 8,000 additional units are anticipated to be constructed within the next ten years. The streetcar system will give many commuters an alternative option to personal vehicles for making local downtown trips and provide greater access to the DART light rail. This along with enhanced pedestrian and bicycle facilities will make a considerable impact on making the central city a more pedestrian-friendly community.

The City of Dallas has invested incredible resources toward the development of the community impacted by this project. The area is defined as the Oak Cliff Gateway Tax Increment Financing (hereinafter “the District”). The mission of the District is the promotion of the redevelopment, growth, and stabilization of the area. The accompanying goals are: 1) growth of the value of the area’s tax base through the promotion of residential and retail development and a positive reversal of urban decay through the placement of critical infrastructure improvement, 2) implementation of the

pertinent recommendations of the Urban Land Institute (ULI) Study on the tracts of land composing the north and northwestern portions of the District, and 3) establishment of direct linkages with the Trinity River Corridor and the capitalization of that effort toward growth and increased tax base value on the District.

Housing unit numbers were derived from a variety of sources. The primary source for current housing numbers for Downtown Dallas is the *InTown Housing Report*, created by Downtown Dallas, Inc. Supplemental measures, as well as projections, were then pulled from the annual reports and plans for the Downtown Connection TIF district. Housing units for the Oak Cliff portion of the route were derived using a baseline current year estimate from *SRC DemographicsNow* for three block groups adjacent to the line (20.001, 20.002 and 20.003) for 2008, with projections estimated using the Oak Cliff Gateway TIF plan. Projections are for the year 2020. These documents are included in the supplementary material as **TIFAnnualReports_DDOC.pdf**.

Currently, there are approximately 6,170 housing units along the proposed streetcar corridor. This number is projected to nearly double by 2020 to 12,443 units, with growth primarily continuing downtown due to the rapid conversion of obsolete office space to residential use in the Main Street core and the construction of new units in the Arts District in Downtown, the West End, and the Farmers Market area, Deep Ellum, the Cedars, the Bishop Arts District, and the River District of North Oak Cliff. The streetcar project is an integral part of this economic expansion initiative in a historically low income, minority community.

Special Generators of Economic Activity

The strategic location of the project is in the proximity of airports such as Dallas-Fort Worth International Airport, Dallas Love Field Airport, the Dallas Central Business District Vertiport, and a number of transit stations and rail lines operated by Dallas Area Rapid Transit (DART) and Trinity Railway Express (TRE).

Demographics of Project Area

The project area is defined as a two- and/or five-mile radius around each of the streetcar/bridge alignments. The NCTCOG 2030 Demographic Forecast estimates an increase in population of 19 percent, an increase in households by 22 percent, and an increase in jobs of 15 percent within a five-mile radius of the project between 2010 and 2030. Exhibit 5 shows the forecasted demographics for both the two-mile and five-mile areas.

Exhibit 5: Demographics of Project Area

Area	Demographic	Year		
		2010	2015	2030
Two-mile radius	Population	52,442	63,390	86,451
	Households	24,313	29,371	41,602
	Jobs	236,139	244,448	287,066
Five-mile radius	Population	384,816	407,525	456,624
	Households	148,394	157,239	181,271
	Jobs	502,789	517,422	576,314

Source: NCTCOG *2030 Demographic Forecast*, April 2003

Economically Disadvantaged Area

The area within a two-mile radius of the Downtown Dallas – Oak Cliff Streetcar project is an economically distressed area as defined under 42 U.S.C. 3161. According to the 2000 Census, the median income in the two-mile radius of the project area was $36,398 compared to the national average of $41,994. Eighteen of the 58 census block groups within the two-mile radius have a median household income below $22,050, the 2010 poverty threshold set by the US Department of Health and Human Services. The poverty rate within five-mile radius of the project area was 24.1 percent compared to the regional average at 17.1 percent. Exhibit 6 shows the median income geographically within both two-mile and five-mile radii of the project area. As can be seen in the map, census block groups with below average median incomes are centered on the project area. As can be seen in Exhibit 7, the poverty rate near the project area is higher than the regional average as well.

Exhibit 6: Median Income Near Project Area

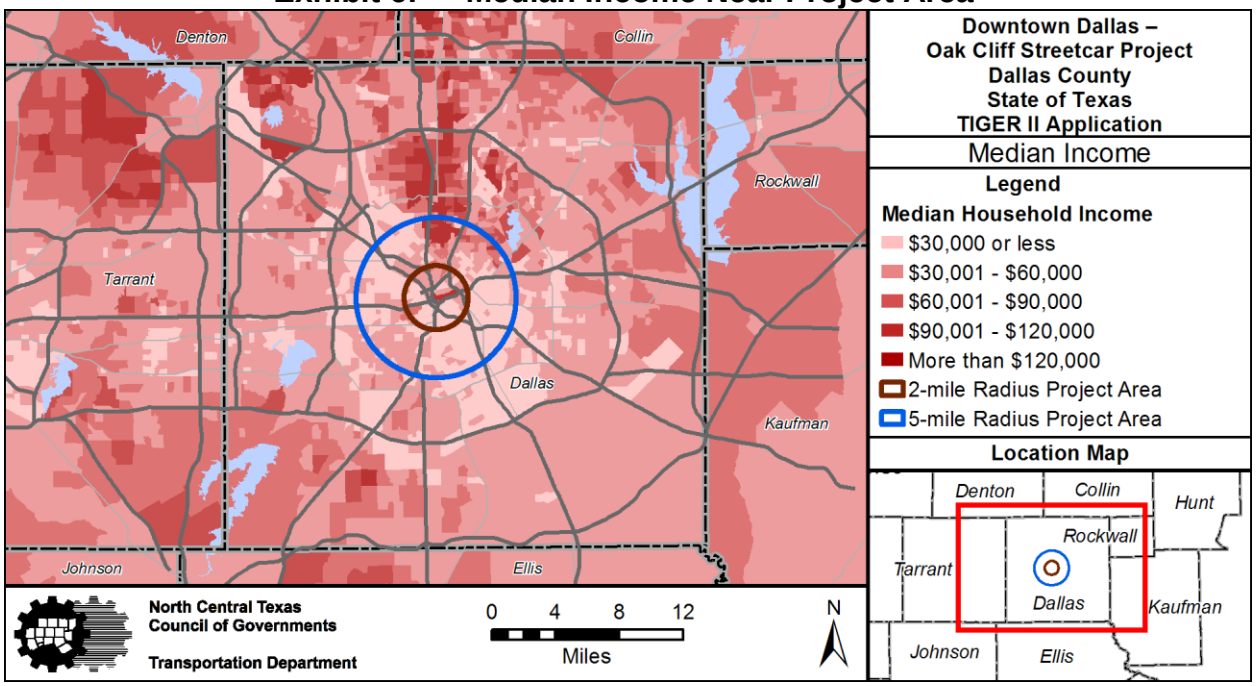
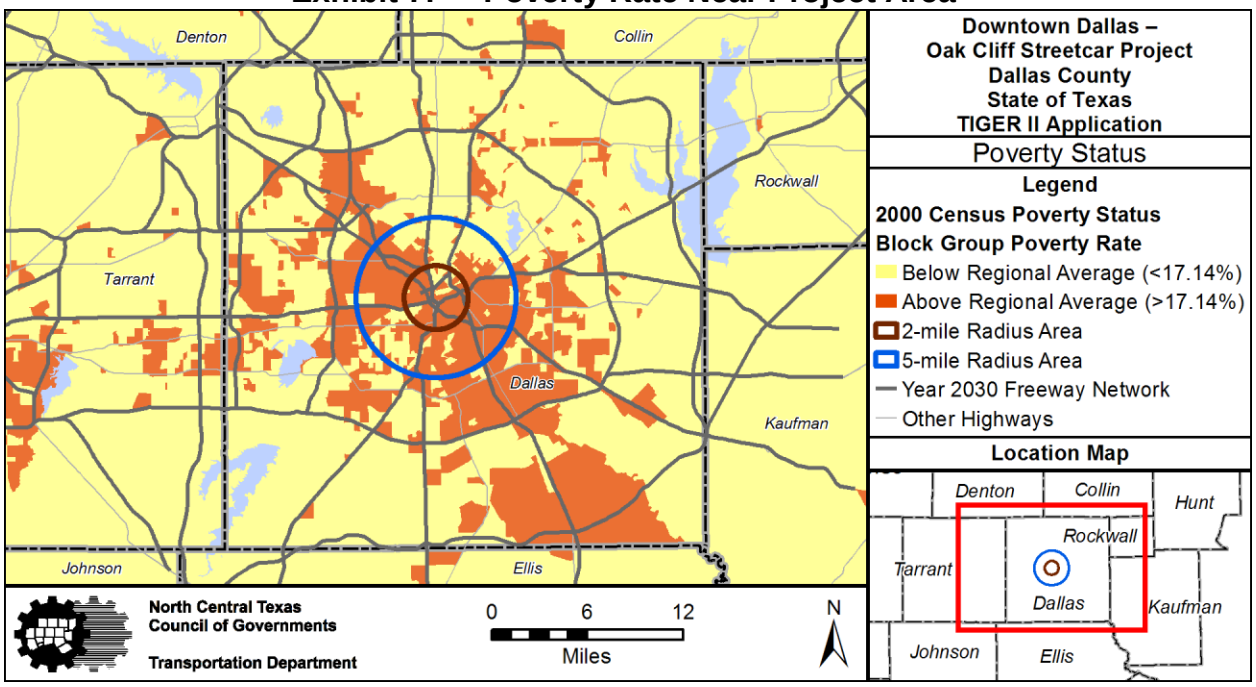
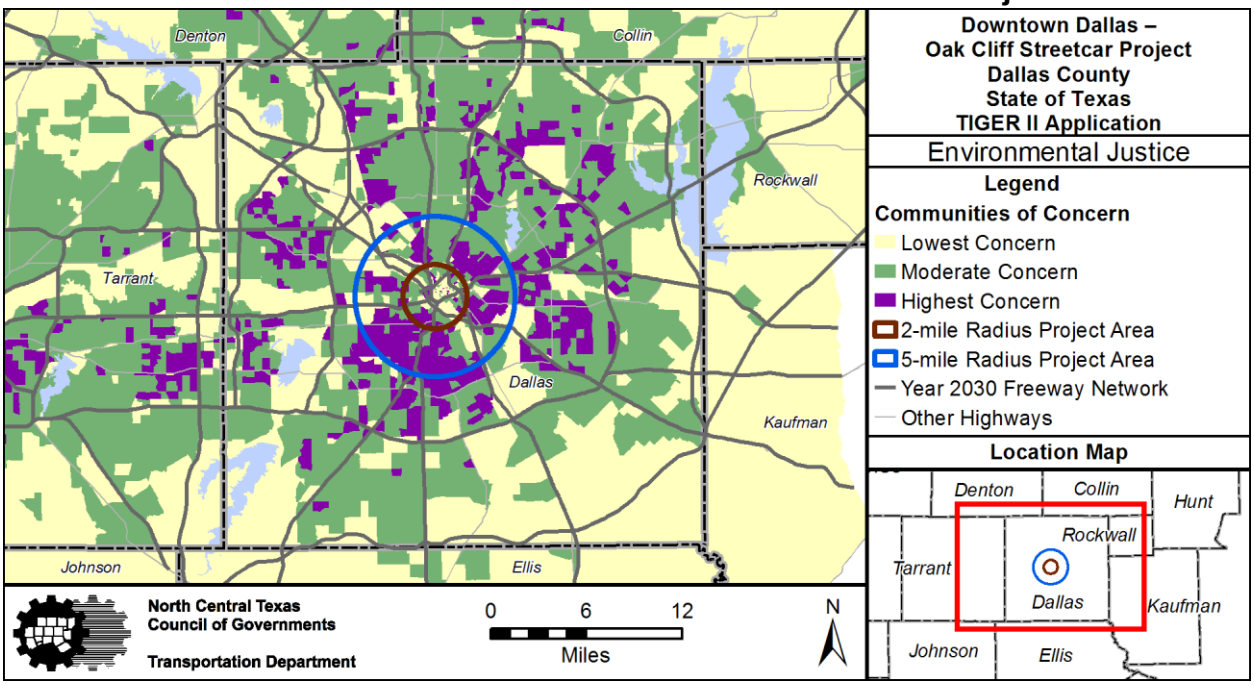


Exhibit 7: Poverty Rate Near Project Area



The metropolitan transportation plan for the Dallas-Fort Worth area addresses environmental justice communities through a comprehensive and inclusive approach. This process and analysis are explained at http://www.nctcog.org/trans/mtp/2030/ej.asp. Exhibit 8 shows that a significant portion of environmental justice communities live within the two-mile and five-mile radii of the project area. As previously indicated, the focus of economic redevelopment efforts in downtown Dallas is to improve economic conditions for these populations by bringing more affordable housing and more employment opportunities into the communities.

Exhibit 8: Environmental Justice Communities Near Project Area



The Downtown Dallas – Oak Cliff Streetcar project will significantly increase the potential for new investment, expansion, and private sector production in Dallas and Fort Worth. According to NCTCOG's 2030 Forecast, the number of jobs in the five-mile radius of the project area in 2000 was 545,148. The number of jobs was projected to increase to 608,845 in 2015 and to 676,645 by 2030 (an overall increase of 24 percent) in this project area. In 2030, the five-mile project area is projected to have a population of 467,117 persons. Given these demographics, it is readily apparent that this project will serve to increase population, employment opportunities, and income potential in the surrounding areas. The project will promote infill development and increase population and employment densities in and around the CBD.

iii. Livability

In the regional context, livability will be enhanced because the Downtown Dallas – Oak Cliff Streetcar investment will be a first critical step to link all the major activity centers in the region along major regional transit corridors and through urban villages. In other words, this Downtown Dallas – Oak Cliff Streetcar initiative will link the existing investment in regional rail along with local urbanism into a context, in which people can choose to access the transit system without relying on automobile travel and park-and-ride facilities.

The Downtown Dallas – Oak Cliff Streetcar initiative is not just about creating ad-hoc transit oriented development at one location or simply moving commuters from park-and-ride to park-and-ride; rather, it is about creating an entire transit network that links urban villages so that a person can live in one place and move around the region to another area conveniently by choosing to walk, cycle, and/or ride transit. As this system expands, it will make transit available to hundreds of thousands of "choice riders" so that transit becomes a way of life for anyone that chooses to live a more urban day-to-day lifestyle.

The impacted communities, covered in detail in the previous sections, would benefit by the regional nature of this project. The Downtown Dallas – Oak Cliff Streetcar project will provide more connectivity to existing passenger rail lines, allowing residents, employees, and employers in the project area to live, work, and play within any part of the project area (and even along transit corridors outside the project area) without having to own or operate a single occupant vehicle.

In Dallas the streetcar network will connect urban villages, along with major medical, cultural, and historic districts. Implementation of the streetcar will encourage greater travel and accessibility between these zones. In addition, the growing downtown (and downtown adjacent) residential populations will become less dependent upon automobile travel if streetcars are available as an alternative. The streetcar system will allow people to literally live, work, and play, without driving a car in a metropolitan area that developed around the automobile. Exhibits 9 and 10 demonstrate the large numbers of major employers (defined as having 250 or more employees) and the large population densities in and around the project area.

Exhibit 9: Major Employers Near Project Area

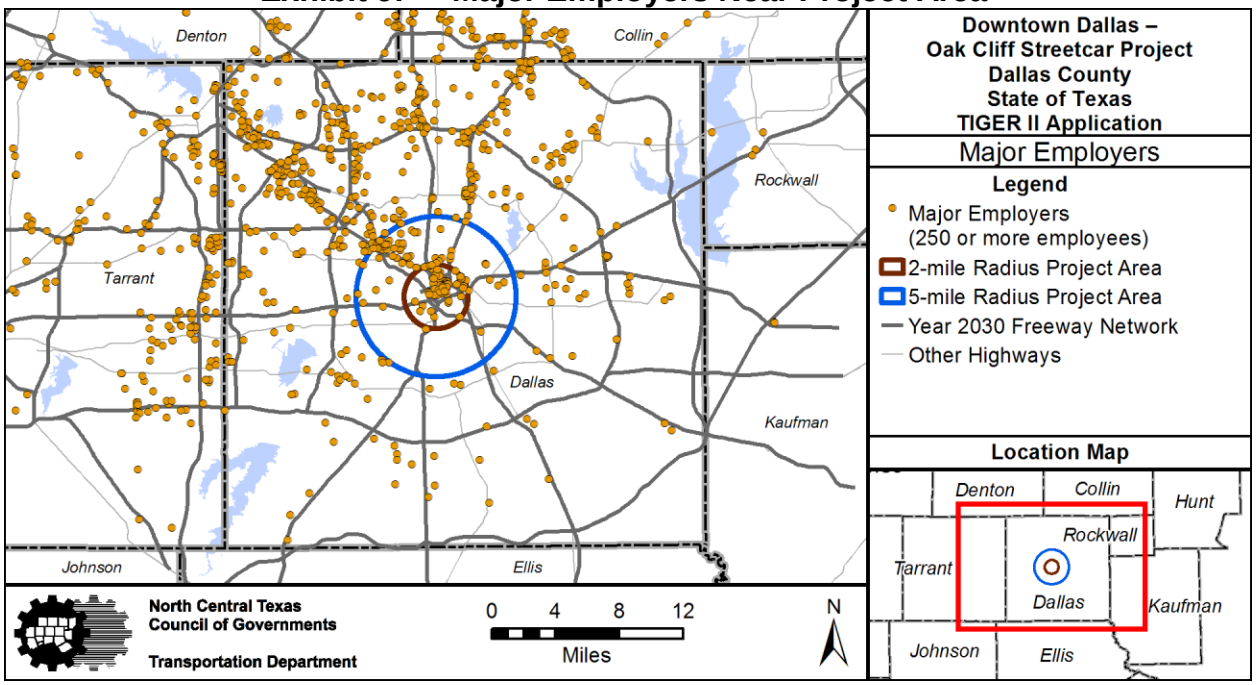
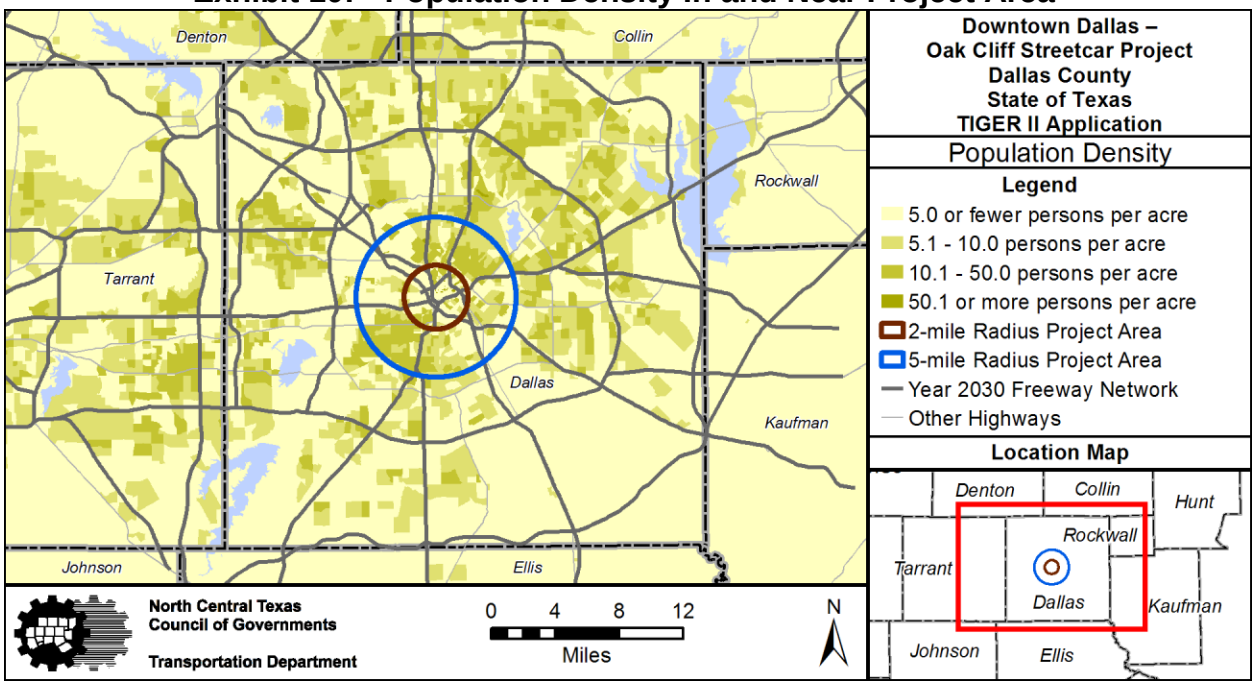


Exhibit 10: Population Density In and Near Project Area



This project, located at a transportation hub in downtown Dallas, is an integral component of the transportation network in Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area, 2009 Amendment (Mobility 2030 – 2009 Amendment). It improves transportation connectivity to existing roadway, transit, and airport facilities.

In 2001, the local elected officials of the RTC adopted a series of plans, programs, policies, and projects designed to encourage mixed use, infill, and transit oriented development. The transit connections provide a centerpiece on which to build a better land use/transportation interface that encourages development that will ultimately reduce vehicle miles of travel. Moreover, providing better land use/transportation connections will reduce the dependence of special populations (i.e., economically disadvantaged, non-drivers, senior citizens, persons with disabilities) on automobile travel. The type of development (dense, close to transit, walkable, ADA accessible) spurred by policies, programs, and projects, such as the streetcar project, will provide alternative travel options and reduce the isolation of these populations.

The public health effects of this project are immense. Walkable communities promote better overall health. Instead of having to drive to the convenience store, dry cleaners, salon, coffee shop, and even work, individuals living or working close to these areas can walk a short distance, jump on the streetcar, or bike to their destination. If their destinations are not adjacent, they can take the streetcar to the passenger rail system, including the network of light rail lines. The populations living and working in and beyond the project area will benefit from increased exercise and improved interactions with one another (more personal than vehicular interactions).

iv. Sustainability

Metropolitan regions such as Dallas-Fort Worth are critical to the wealth of the nation and are necessary for resolution of energy, climate change, and ozone objectives. Finding solutions to metropolitan area transportation congestion and reliability problems are critical to addressing the energy and air quality issues they create. NCTCOG and other MPOs across the country are also excellent organizations to implement environmental initiatives in transportation because of their experience executing projects in environmentally sensitive ways. Ridership was used as a performance measure to estimate VMT reduced, Carbon Dioxide (CO_2) emissions, and the global CO_2 benefit. Exhibit 11 shows the projected ridership on the proposed line.

Exhibit 11: Daily Ridership Projections (Year 2030)

Rider Type	Estimated Capture Rates	Estimated Streetcar Counts	Estimated Streetcar Ridership
Resident	15.5% - 16.1%	13,236	2,051
Employees	4.0% - 4.4%	122,479	4,899
Tourism	47.8% - 51.1%	8,200	3,919
Students	3.8%	10,600	403
Total Average Daily Ridership			11,272
Discounted Average Daily Ridership*			5,636

*Ridership discounted 50% due to future competing light rail line

The following assumptions were used to quantify the benefits of the project shown in Exhibit 12.

- Vehicle Miles of Travel (VMT) reduction: 0.5 miles of VMT reduction per rider was used to estimate VMT reduction from the Downtown Dallas – Oak Cliff Streetcar project.
- CO_2 Emission: 407 grams/mile, CO_2 Emission Factor (EF) from MOBILE6.2 year 2030 model run is utilized to estimate the CO_2 emission.
- Project Life: 30 years is used as project life for all Mass transit projects.
- Global CO_2 Emission Benefits: $33/metric tons of CO_2 emission was used to estimate the Global CO_2 Emission Benefits.

Exhibit 12: Benefits of Project

Performance Parameters	Daily Benefit	Annual Benefit	Lifecycle Benefit
Vehicle Miles of Travel Reduction (miles)	2,818	704,500	21,135,000
CO_2 Emission (Tons)	1.26	315	9,450
Global CO_2 Cost Benefit (Dollars)	$37.84	$9,460	$283,800

Anticipated environmental outcomes include reduced vehicle miles of travel, creation of workforce housing in both cities (and in economically disadvantaged areas), enhanced real estate values, enhanced recreational and tourist opportunities, and cleaner air from less vehicle miles of travel. By reducing vehicle miles of travel by 2,818 daily, the potential fuel savings are 88 gallons per day. The reduced VMT is estimated at over 21 million miles over the lifetime of the project. In addition, air pollution emissions of carbon dioxide (CO_2) are reduced by 1.26 tons per day and 9,450 tons over the lifetime of the project. CO_2 is the leading greenhouse gas emission. Using the assumptions provided in the TIGER II guidance, the global CO_2 benefit is $37.84/day or $283,800 over the lifetime of the streetcar project.

v. Safety

Data gathered from 2003 through 2008 indicates that no hazardous material spills occurred in the project limits. Crash data specific to this project area is also limited. However according to *"Safe Travels, Evaluating Mobility Management Traffic Safety Impacts"* published by the Victoria Transport Policy Institute, mobility management strategies that encourage transit ridership and increase average transit vehicle occupancy impose little incremental external risk and reduce crash rates per passenger-mile. Additionally travel demand management strategies that reduce total personal travel can provide large safety benefits. Each one percent reduction in motor vehicle travel typically reduces total crashes and casualties by 1.4 to 1.8 percent.

b. Job Creation and Economic Stimulus

The two-mile and five-mile radii of the project area contains 2,000 acres and 12,970 acres of vacant land, respectively. Though all of this land is not developable, the availability of large quantities of vacant land and the projections for households and populations shown in the 2030 Demographic Forecast provide an ample of opportunity and demand for new development of residential and employment centers in the area. The availability of transportation options, such as the streetcar, will significantly increase the development potential of the area and attract new businesses to the area.

In order to provide jobs and economic opportunities to the influx of people expected in the region by 2030, the region's goal is to attract new sustainable development to the region, not shuffle existing economic development within the region. By creating better transportation connections within existing infill areas, more development will be attracted from outside.

The total amount of funds to be expended on construction and construction-related activities is $60 million. During each of the two years when the project is under construction there will be an annual benefit to the economy of $45 million and 489 jobs (the net annual benefit is $15 million and 163 jobs). Exhibit 13 shows the short term benefits of the project due to construction related activities. The net benefits of the project add from $3.5 million to $5.3 million and from 38 to 58 jobs annually to the economy once complete. Exhibit 14 shows the long term benefits of the project. All dollar amounts are given in 2010 dollars. The following equations were used to calculate these measures:

Equation 1: $$W_t = B_t - C_t$$

Equation 2: $$J = W_t / Y$$

Equation 3: $$B_t = (CO_2 \times Z) + (G_t \times M_G) + (Pass_M \times M_T) + (Pass_T \times V_T)$$

Equation 4: $$C_t = \frac{PV \times (1+r)^t \times r}{(1+r)^t - 1}$$

Exhibit 13: Construction Related Net Benefits

Category	Value
Planning and Environmental Cost	$4,440,000
Engineering and Construction Cost	$55,560,000
Total Amount	$60,000,000
Annual Cost (**C_t**)	$30,000,000
Short Term Effects (Design and Construction)	
Spending Multiplier (**M_G**)	1.50
$/Jobs (**Y**)	$92,000
Benefit of Government Spending (**G_t**)	$45,000,000
Short Term Total Annual Benefit (**B_t**)	$45,000,000
Short Term Total Annual Jobs (**J**)	489
Short Term Net Annual Effect (**W_t**)	$15,000,000
Short Term Net Annual Jobs (**J**)	163

Exhibit 14: Long Term Net Benefits

Category	Discount Rate	
	7%	3%
Planning and Environmental Cost	$4,440,000	$4,440,000
Engineering and Construction Cost	$55,560,000	$55,560,000
Total Cost	$60,000,000	$60,000,000
Annualized Planning and Environmental Cost	$357,804	$226,526
Annualized Engineering and Construction Cost	$4,477,380	$2,834,630
Operations and Maintenance (**G_t**)	$2,000,000	$2,000,000
Annualized Total Cost (**C_t**)	$6,835,184	$5,061,156
Long Term Effects		
Spending Multiplier (**M_G**)	1.50	1.50
Value of Each Passenger (**V_T**)	$5.00	$5.00
Value of Each Passenger Mile (**M_T**)	$0.43	$0.43
Value of Reduced Pollution (per ton) (**Z**)	$33.00	$33.00
$/Jobs (**Y**)	$92,000	$92,000
Annual Passengers (**$Pass_T$**)	5,636	5,636
Annual Passenger Miles (**$Pass_M$**)	2,818	2,818
Pollution Reduced (tons) (**CO_2**)	1.26	1.26
Benefit of Government Spending	$3,000,000	$3,000,000
Benefit of Pollution Reduced	$10,395	$10,395
Benefit of Total Pass	$7,045,000	$7,045,000
Benefit of Pass Miles	$302,935	$302,935
Long Term Total Benefit (**B_t**)	$10,358,330	$10,358,330
Long Term Net Effect (**W_t**)	$3,523,146	$5,297,174
Jobs (**J**)	38	58

Exhibit 15 provides the long term cost/benefit analysis based on the project cost and projected environmental and economic benefits.

Exhibit 15: Cost/Benefit Analysis

Benefits	Unit	Daily Benefit	Annual Benefit	Annualized Cost/Benefit Outcome[1,2]
Vehicle Hours of Travel Saved	Hours	73	19,070	$265/Hour
Reduced Vehicle Miles of Travel	Miles	2,818	732,680	$6.91/Mile
CO_2 Emissions Reduced	Tons	1.26	327.6	$15,400/Ton
Fuel Saved	Gallons	88	22,824	$221/Gallon
Long-Term Net Jobs Created	Jobs	---	58	$87,300/Job
Net Jobs Created by Construction	Jobs	---	163	$184,000/Job

1. Based on a discount rate of 3% over 30 years, costs shown in 2010 dollars
2. Calculated by dividing the annualized project cost by the annual benefit

During construction, businesses indirectly associated with the construction will benefit due to the increased demand created by construction workers. These businesses spread across a variety of industries and include (but are not limited to): construction, engineering, carpentry, electrical, utility, manufacturing, transportation, administration, logistics, sales, retail, restaurants, tourism, maintenance, education, and government. After construction, jobs will be created to operate and maintain the streetcars and in the mixed-use commercial corridor as it grows and matures.

Based on NCTCOG's major employer data, there are over 100 major employers in the two-mile radius of the project area that employ over 250 employees. These major employers in two-mile radius employ about 81,000 employees.

According to NCTCOG's 2030 Forecast, the number of jobs in the five-mile radius of the project area in 2010 was 591,598. The number is projected to increase to 608,845 by 2015 and 676,645 by 2030 in the five-mile radius of the project area, which represents a 14 percent increase. These employers and businesses will benefit significantly by this project. Even if only 10 percent of the job growth expected in this area (73,525 jobs added by 2030) is spurred by this project, the result would be an additional 7,350 jobs created by the project in the long-term.

The development of a streetcar system will create a domino effect for construction and manufacturing industries. As the demand for the materials needed to build the streetcar system increases, so will the demand for those jobs needed to support the material demand. This effect will continue through (and beyond) all phases of the project. After the project has been completed, development and redevelopment along the streetcar pathways will continue, increasing construction demands into the foreseeable future. Recent studies in Portland have indicated that development within one block of a streetcar route is constructed on average at 90 percent of the allowed density. This high density development requires construction techniques and supplies not typically needed in low density suburban development.

New construction and manufacturing jobs would be created throughout each phase of the infrastructure project, beginning with design and engineering work in 2010 and followed by construction jobs in 2011. After the project has been completed, additional jobs will be created as redevelopment activity along the streetcar routes increase. Pedestrian-friendly, mixed-use development remains a priority of the cities, particularly along the proposed streetcar routes. As office and retail components come online, new jobs associated with these establishments will need to be filled.

With regard to the creation of jobs for low-income workers, due to the nature of this project and the increased pedestrian traffic at street-level retail shops, a variety of seasonal, part-time, and service jobs will be created to accommodate the increased need. Best practice hiring techniques will be used and apprenticeship programs will increase options for low-income workers.

Through the following efforts, opportunities will be provided to small, disadvantaged, veteran-owned, service-disabled businesses. The City of Dallas Business Development Services office provides a number of services including, but not limited to, business plan assistance, financing options, market research, minority- and women-owned business certification, access to a computer lab, procurement assistance, and access to capital. Local economic development organizations also provide assistance to small, disadvantaged, veteran-owned, or service-disabled businesses.

Dallas has a number of community-based organizations that help connect disadvantaged workers with new opportunities. For example, Goodwill Industries International, Inc., is one of North America's leading non-profit providers of education, training, and career services for people with disadvantages (i.e., low income and disabilities). Additional organizations include (but are not limited to) Veterans Services, United Way, and Workforce Solutions. Many of these organizations receive regional funding support through the Job Access/Reverse Commute and New Freedom programs (federal funds selected by the MPO).

"Economically distressed" as defined by the Governor of Texas' Office is, "an area that has a median household income that does not exceed 75 percent of the median state household income." The median household income for the state of Texas is $46,248. The streetcar would improve access to and stimulate economic development in Dallas neighborhoods that have a large percentage of residents meeting the definition of economically distressed. It is anticipated that the streetcar corridors will become high-density, mixed-income, mixed-use, walkable, urban neighborhoods with economically distressed residents benefiting greatly from the improved transit access and access to other neighborhood amenities.

Many areas within a two-mile radius of the Downtown Dallas – Oak Cliff Streetcar project in Dallas are economically distressed areas. According to the 2000 Census, the median income in the two-mile radius of the project area was $36,398, compared to the national average at $41,994. The poverty rate within five-mile radius of the project area

was 24.1 percent compared to the regional average at 17.1 percent. Please refer to the Exhibits 6 and 7 for geographic identification of these populations.

c. Innovation

This project is being funded by the City of Dallas, NCTCOG, and existing state and federal sources, in coordination with local transit authorities, but only in part by those organizations. TIF districts and MMDs are intimately involved in the process, making traditional federal and state entities "minority partners" in the financial arrangement.

With regard to technology, the MPO has funded multiple projects to provide real-time information to passengers and transit operators to ensure smooth transitions between different modes (i.e., bus to rail, light rail to regional rail). The same principles would apply to this project upon implementation.

This project would also be incorporated into other existing regional and innovative programs including the Employer Trip Reduction Program, which is designed to plan and implement trip reduction and transportation demand management strategies such as subsidized transit pass, walking, bicycling, ridesharing, alternative work schedule, telecommuting, parking management, and other transportation incentive programs.

The regional Try Parking It (www.tryparkingit.com) website is a commuter tracking application in which riders of the streetcar system would participate on a voluntary basis. There are 111 large employers located within the limits of this project area. Of these employers, 41 are registered on the Try Parking It website with a total of 371 employees participating in a variety of trip reduction activities.

d. Partnership

i. Jurisdictional and Stakeholder Collaboration

This joint application by the City of Dallas and NCTCOG has broad support from workforce housing advocates, transit authorities, and economic development organizations such as the Oak Cliff Chamber of Commerce.

From the beginning, the city, TIF districts, chambers of commerce, MPO, and transit authorities have been involved in the planning activities for this streetcar system. In addition, these partners have agreed to varying levels of financial commitment to capital, operating, and maintenance costs. Outside of traditional local and regional funding, financial support would be provided via the Oak Cliff Gateway TIF.

ii. Disciplinary Integration

Beyond traditional transportation agencies, other agencies involved in the project planning and development of this project include:

- Oak Cliff Gateway TIF District
- Oak Cliff Chamber of Commerce
- **DOWNTOWN**DALLAS

It is hoped that this project can lead the way in breaking down planning, funding, and implementation barriers between different organizations with different, but coordinating missions. By removing silos between transportation (roadway and transit), environmental, housing, and other such governmental and non-profit organizations, more comprehensive and effective projects can be implemented.

e. Performance Monitoring

It is expected that a streetcar system and associated development will bring substantial economic benefit to Dallas. These benefits can be demonstrated by monitoring increases in tax revenue, increases in residential and commercial development densities, and appreciation of land values along the corridors. Dallas tracks this information already, and these tracking efforts would continue if TIGER II funding is received. In addition, the transit agencies track ridership providing a regular report on actual ridership numbers. These efforts would also continue. Finally, NCTCOG produces an annual State of the Region report, which provides a performance based assessment of regional planning, policy, and project implementation. A copy of the latest State of the Region report is available online at http://www.nctcog.org/trans/outreach/stateofregion/index.asp.

V. Project Readiness and NEPA

a. Project Schedule

Exhibit 16: Schedule by Phase

Phase	Estimated Start Date	Estimated Completion Date
Environmental Review	August 2010	May 2011
Preliminary Design	August 2010	May 2011
Vehicle Procurement	September 2010	July 2013
Final Design	June 2011	February 2013
Construction	July 2012	November 2013

b. NEPA Status

Status of NEPA Process: In process
Anticipated Completion Date: May 2011

The Dallas and Fort Worth streetcar project engineering and environmental review have been funded by NCTCOG. This EA is tentatively scheduled to be completed by May 2011. The EA would address any impacts to historic properties and noise vibration issues, and a favorable outcome is anticipated. The applicants anticipate an expedited environmental process given the proposed streetcar routes and existing conditions with no major environmental challenges anticipated. A Finding Of No Significant Impact (FONSI) is the anticipated outcome of the environmental review process.

Description of Needed Federal Actions

An environmental finding will be needed on the streetcar project. Additional action may be needed by the US Army Corps of Engineers (bridge crossings) and the Texas Historical Society (as the Houston Street Viaduct is a historical bridge).

c. Legislative Approvals

Legislative approvals are not required for this project.

Letters of support for this project from the City of Dallas, Dallas Area Rapid Transit, Oak Cliff Chamber of Commerce, Downtown Dallas Inc., Oak Cliff Transit Authority, and Hamilton Properties are included in this submittal as **LettersOfSupport_DDOC.pdf**.

d. State and Local Planning

Local Planning

For the past year, the City of Dallas and DART have been engaged in local planning efforts for the Downtown Dallas and surrounding neighborhood streetcar line.

TIP/STIP Status

Dallas Streetcar project is listed in the current 2008-2011 Transportation Improvement Program (TIP)/Statewide Transportation Improvement Program document (STIP) and will be included in the new 2011-2014 TIP/STIP. A total of $4.44 million to fund planning and environmental review for the project and $5.56 million to fund final engineering and construction has been identified and allocated from the Dallas County allotment of a Regional Toll Revenue account created through an upfront payment by the North Texas Tollway Authority to the Texas Department of Transportation for the construction, operation, and maintenance of State Highway 121 in Collin, Dallas, and Denton Counties. An additional $2 million dollars for construction has been identified and will be added to this project through a future TIP/STIP amendment process.

Metropolitan Transportation Plan

The proposed streetcar project in the City of Dallas is consistent with the recommendations found in Mobility 2030 – 2009 Amendment. This project would link to

existing rail transit services including the Trinity Railway Express and the Dallas Area Rapid Transit light rail system.

Dallas County is classified as a nonattainment area for the pollutant ozone, therefore transportation conformity applies. The U.S. DOT has determined that this project is included in a conforming Metropolitan Transportation Plan and STIP.

Statewide Transportation Plan

This project supports the major goals of the Texas Metropolitan Mobility Plan (TMMP), including congestion relief, improved safety, air quality, and quality of life, enhanced economic opportunities, and streamlined project delivery.

e. Technical Feasibility

The Dallas will own this project and will contract with DART to build, operate, and maintain the project. It was concluded that the Dallas Streetcar system would be feasible as an at-grade system. Construction will use the "shallow slab design" pioneered by Portland to reduce costs and construction time. Utilizing shallow slab construction is far more cost efficient than alternative means, and causes less disruption to businesses, traffic operations, and utilities.

The selected route will not present significant challenges to existing traffic operations, as sufficient roadway capacity exists to accommodate a streetcar line along the corridor. There is nothing inherent in the street geometry that would be a detriment to streetcar operations. Preliminary evaluation does not anticipate any major utility relocation.

f. Financial Feasibility

As shown in the funding breakdown provided in Section III, except for the TIGER II funding request, the capital costs are covered by committed funding from existing federal and state sources, city bond funding, water district funding, TIF district funding, and transit authority funding. TIGER II funding provides the missing gap for the first major capital investment in these corridors.

The streetcar service will take advantage of key funding mechanisms including the TIFs and Municipal Management Districts (MMD) within each city. The estimated operating and maintenance cost of $2,000,000 per year. DART’s policy allows them, subject to board approval, to fund up to 50 percent of operations and maintenance costs. After a peer review of other streetcar operations, the city does not think that the operations and maintenance costs for a local streetcar would surpass the $2,000,000 cost. Any costs over the $2,000,000 range would be borne by a combination of MMD, TIF districts, and city bond funds.

VI. Federal Wage Rate Certification

The City of Dallas and NCTCOG support entities that comply with federal labor laws. Any procurement activities sponsored by these entities require compliance with all federal, state, and local laws. In addition, in order to qualify for incentives, businesses must abide by all federal, state, and local laws.

As indicated above, Dallas and NCTCOG comply with Title VII of the Civil Rights Act of 1964 and the Americans with Disabilities Act (ADA). Both of these laws require all private employers, state and local governments, and education institutions that employ 15 or more individuals, private and public employment agencies, labor organizations, and joint labor management committees controlling apprenticeship and training to comply. As a matter of policy and law, these agencies will follow these laws and principles for this (and all) projects.

As the submitting agency, NCTCOG certificates compliance with federal wage rate requirements as indicated on the next page.

VII. Material Changes to the Pre-Application Form

None

Federal Wage Rate Requirement

The North Central Texas Council of Governments (NCTCOG), as an applicant for TIGER II Discretionary Grants under the FY 2010 Appropriations Act, certifies that for TIGER II funds awarded to NCTCOG it will comply with the requirements of Subchapter IV of Chapter 31 of Title 40 of the United States Code (40 U.S.C. 3141, *et. seq.*) (Federal wage rate requirements) as required by the FY 2010 Appropriations Act.

Furthermore, NCTCOG annually certifies compliance with the Davis-Bacon Act as amended, 40 U.S.C. 3141 *et. seq.*, the Copeland "Anti-Kickback" Act, as amended, 18 U.S.C 874, and the Contract Work Hours and Safety Standards Act, as amended, 40 U.S.C 3701 *et. seq.*, regarding labor standards for federally assisted projects. NCTCOG certifies to this provision within its annual Certifications and Assurances to the Federal Transit Administration.

Dated: Aug 23, 2010

Monte Mercer, CPA
Deputy Executive Director
North Central Texas Council of Governments