IH 30/IH 35W Managed Lane Access Ramp

TIGER Discretionary Grant Application

April 2014



North Central Texas Council of Governments

Transportation Department



The Transportation Policy Body for the North Central Texas Council of Governments (Metropolitan Planning Organization for the Dallas-Fort Worth Region)

April 21, 2014

The Honorable Anthony Foxx Secretary of Transportation United States Department of Transportation 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Secretary Foxx:

On behalf of the Regional Transportation Council (RTC), which serves as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth area, I am pleased to support the 2014 Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant application to the US Department of Transportation from the North Central Texas Council of Governments (NCTCOG) for the Interstate Highway (IH) 30/35W Managed Lane Access Ramp Project in Fort Worth. A membership roster of the RTC is enclosed.

This project will provide enhanced mobility, safety and reliability benefits for the IH 35W corridor, which was ranked fourth among the Texas Department of Transportation (TxDOT) top 100 congested corridors in the state in 2013, and identified as the most delay-prone freeway facility in the North Texas region. The project would be built as part of the initial phase of the North Tarrant Express – Segment 3A Project, an elaborate public-private partnership initiative that was awarded a \$531 million Transportation Infrastructure Finance and Innovation Act (TIFIA) loan to advance the reconstruction of the IH 35W corridor between late 2014 and early 2018.

The new access ramp will provide more travelers the choice to utilize the full length of the proposed IH 35W managed lanes from IH 30 to IH 820. It will also provide an opportunity to relieve some of the congestion and weaving conditions on general purpose lanes within the Fort Worth Mixmaster prior to implementation of the ultimate North Tarrant Express-3A improvements, targeted for funding at a future date. The improved connectivity and enhanced access will support continued economic vitality for the city of Fort Worth, Tarrant County and the entire North Texas region.

This proposed project is consistent with <u>Mobility 2035: The Metropolitan Transportation Plan</u> <u>for North Central Texas – 2013 Update</u>. All federally funded surface transportation projects must also be included in the Transportation Improvement Program. The project is included in the <u>2013-2016 Transportation Improvement Program for North Central Texas</u>. The Honorable Anthony Foxx Page Two April 23, 2014

Again, the RTC supports NCTCOG's TIGER grant application for the IH 30/35W Managed Lane Access Ramp Project and the mobility, quality of life and economic benefits it would provide to the region. If you have any questions, please contact Michael Morris, P.E., Director of Transportation for NCTCOG, at (817) 695-9241.

Sincerely,

Kathryn Filemon

Kathryn Wilemon Chair, Regional Transportation Council Mayor Pro Tem, City of Arlington

RH:jh Enclosure



TIGER DISCRETIONARY GRANT PROGRAM Project Application

Name of Project: Interstate Highway (IH) 30/IH 35W Managed Lane Access Ramp

Agency Submitting Project: North Central Texas Council of Governments (Metropolitan Planning Organization)

Other Project Parties: Texas Department of Transportation (Implementing Agency)

Primary Contact:

Name:	Michael Morris
Phone Number:	817-695-9241
Email Address:	mmorris@nctcog.org
Street Address:	616 Six Flags Drive
	Arlington, TX 76011

Type of Project: Road and Bridge (IH 35W)

Project Location:

City:	Fort Wort	h
County:	Tarrant C	ounty
State:	Texas	
Congression	al Districts:	District 12 (Rep. Kay Granger)

Type of Jurisdiction: Urban Area

TIGER Funds Requested: \$12,500,000

Total Project Cost: \$25,000,000

DUNS Number: 10-246-2256



Table of Contents

Ι.	Project Description	1
	a. Socio-Economic Context	4
	b. Targeted Transportation Challenges	7
	c. Challenges Addressed	8
	d. Alternatives Considered	9
II.	Project Parties	9
	a. North Central Texas Council of Governments (Submitting Agency)	9
	b. Texas Department of Transportation (Implementing Agency)	9
III.	Grant Funds and Sources/Uses of Project Funds	10
	a. Technical Feasibility	10
	b. Financial Feasibility.	11
	c. Project Schedule	13
	d. Assessment of Project Risks and Mitigation Strategies	14
	e. Performance Monitoring	15
IV.	Selection Criteria	16
	a. Primary Selection Criteria	16
	i. State of Good Repair	17
	ii. Economic Competitiveness	17
	iii. Quality of Life	19
	iv. Environmental Sustainability	19
	v. Safety	20
	b. Secondary Selection Criteria	20
	i. Innovation	20
	ii. Partnership	22
	a) Jurisdictional and Stakeholder Collaboration	23
	b) Disciplinary Integration	23
	c. Results of Benefit-Cost Analysis	24
V.	Planning Approvals, NEPA, and other Environmental Reviews/Approvals	25
	a. NEPA Status	25
	b. Legislative Approvals	25
	c. State and Local Planning	25
VI.	Federal Wage Rate Certification	26

List of Exhibits

Exhibit 1: Project Location	. 1
Exhibit 2: Project Area	. 2
Exhibit 3: IH 30/IH 35W Managed Lane Access Ramp – Schematic Drawing	. 4
Exhibit 4: Population Trends and Forecasts for Project-Related Locations	. 5
Exhibit 5: Population Density near the Project Location	. 6
Exhibit 6: Major Employers near the Project Location	. 7
Exhibit 7: IH 30/IH 35W Managed Lane Access Ramp – Funding Sources	10
Exhibit 8: IH 30/IH 35W Managed Lane Access Ramp – Cost Estimate	10



Exhibit 9: IH 30/IH 35W Managed Lanes Access Ramp Project Schedule	13
Exhibit 10: North Tarrant Express Segment 3A Project Schedule	13
Exhibit 11: Project Risks and Mitigation Strategies	14
Exhibit 12: Performance Monitoring	15
Exhibit 13: Identification of Project Benefits	16
Exhibit 14: Total Project Benefits	24
Exhibit 15: Net Project Benefits	24

List of Abbreviations

ACS	American Community Survey
ADT	Average Daily Traffic
BCA	Benefit-Cost Analysis
BLS	Bureau of Labor Statistics
CBD	Central Business District
EA	Environmental Assessment
FHWA	Federal Highway Administration
FY	Fiscal Year
IH	Interstate Highway
MOVES	Motor Vehicle Emissions Simulator
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
MWSBE	Minority-Owned, Women-Owned and Small Business Enterprises
NCTCOG	North Central Texas Council of Governments
NTTA	North Texas Tollway Authority
PMIS	Pavement Management Information System
RTC	Regional Transportation Council
SH	State Highway
STIP	Statewide Transportation Improvement Program
TCEQ	Texas Commission on Environmental Quality
TIP	Transportation Improvement Program
TxDOT	Texas Department of Transportation
US	United States Highway



I. Project Description

This project is located in the city of Fort Worth, Tarrant County, Texas. The project is in an urbanized area and located immediately southeast of the Fort Worth central business district (CBD). The project identified for fiscal year 2014 (FY2014) Transportation Investments Generating Economic Recovery (TIGER) Discretionary Grant application will build a ramp to extend from the eastbound IH 30 to northbound IH 35W direct connector ramp into the proposed IH 35W managed lane facility soon to be constructed for the North Tarrant Express Segment 3A (NTE 3A) project. **Exhibit 1** displays the location of project area.



Exhibit 1: Project Location

In the project area, IH 30 travels in an east-west alignment and is named after the longstanding and highly-respected former head coach of the National Football League's Dallas Cowboys, Tom Landry. The Tom Landry Freeway intersects the north-south aligned IH 35W (named the North Freeway or South Freeway depending on the location north or south, respectively, of IH 30) in a sprawling five-level interchange built in the late 1990s to supplant an obsolete junction completed when the two freeways were originally constructed in the late 1950s. The IH 30/IH 35W interchange is part of a two-mile-long



freeway funnel, locally referred to as the Fort Worth Mixmaster, because the area contains the merging and diverging of ramps to/from four separate freeway facilities in addition to local access ramps in/out of the CBD. **Exhibit 2** shows the project area and highlights how the IH 30, IH 35W, US 287 and SH 121 freeways all intersect each other in close proximity around the southern and eastern edges of downtown Fort Worth.



Exhibit 2: Project Area

Despite the high-speed design of ramp movements through the relatively new IH 30/IH 35W interchange, the eastbound IH 30 to northbound IH 35W movement, in particular, experiences severe congestion throughout the day because the direct connector ramp ties into an unimproved section of IH 35W heading north. The two-lane direct connector ramp merges into a single auxiliary lane on IH 35W. The auxiliary lane, approximately one-third mile long, becomes an exit only loop ramp onto Spur 280 heading into the CBD. Approximately 700 feet to the north, another short weaving section occurs on the general purpose lanes between the incoming northbound US 287/westbound IH 30 direct connector ramp and the outgoing SH 121 direct connector ramp. The congestion in this area is further exacerbated by the fact that the number of through lanes for IH 35W reduces from four to three north of the SH 121 interchange. As a result of this



bottleneck, traffic queues often extend back up the full length of the eastbound IH 30 to northbound IH 35W direct connector ramp, and occasionally onto IH 30 itself for some considerable distance to the west. With the scheduled May 2014 opening of the Chisholm Trail Parkway and its tolled connections to/from IH 30 approximately one mile to the west of IH 35W, it is expected that future traffic demands through the Fort Worth Mixmaster will increase considerably, and conditions on the eastbound IH 30 to northbound IH 35W direct connector ramp will likely worsen.

The IH 30/IH 35W Managed Lane Access Ramp project will build a connection from the eastbound IH 30 to northbound IH 35W direct connector ramp into the proposed IH 35W managed lane facility soon to be constructed for the NTE 3A project. The NTE 3A project is a public-private partnership developed to reconstruct IH 35W from its antiquated late 1950s configuration into a modern freeway facility from north of IH 30 to IH 820. Environmentally cleared by FHWA in August 2012, IH 35W will ultimately contain up to eight general purpose lanes (four in each direction) and four managed lanes (two in each direction). However, due to financial constraints, NTE 3A will be built in an initial phase consisting of the same general purpose lane capacity (2/3 lanes in each direction) that exists today, but with modern design standards, revised ramping, new frontage road segments, and the full length of managed lanes to provide corridor-wide mobility, reliability, and safety benefits long desired for this portion of the regional freeway system. Scheduled for completion by fall 2018, the managed lanes will provide a revenue stream that could leverage the eventual construction of the overall freeway facility in additional stages prior to the year 2035.

The IH 30/IH 35W Managed Lane Access Ramp project would provide enhanced benefits to the interim NTE 3A project, enabling travelers a choice to better utilize a greater distance of the proposed IH 35W managed lanes, and opportunities to reduce some of the congestion and weaving conditions for the IH 35W general purpose lanes within the Fort Worth Mixmaster north of IH 30. **Exhibit 3** illustrates the preliminary schematic for the project. The project is expected to cost approximately \$25 million, of which \$12.5 million is requested in TIGER VI Discretionary Grant assistance with this application. The remaining \$12.5 million will be allocated to the project through state and local match funds to be detailed further below.



Exhibit 3: IH 30/IH 35W Managed Lane Access Ramp – Schematic Drawing





a. Socio-Economic Context

IH 30 and IH 35W serve local, urban, and suburban travelers and each facility is an integral component of the regional transportation network. As Interstate Highways, both facilities also carry substantial amounts of intrastate, interstate, and international passenger and freight traffic on a daily basis, and IH 35W (in association with IH 35 in general) is designated as the primary North American Free Trade Agreement (NAFTA) corridor through the central United States. Additionally, the Fort Worth Transportation Authority ("the T" or FWTA) utilizes IH 30 and IH 35W for express bus



IH 30/IH 35W Managed Lane Access Ramp

routes between the CBD and various suburban areas. TxDOT average daily traffic counts in 2010 for IH 30 west of IH 35W and for IH 35W north of IH 30 were calculated at 128,000 and 212,000 vehicles, respectively. Projected 2035 traffic volumes on the two facilities at the same locations are expected to increase to approximately 225,000 for IH 30 and 400,000 vehicles for IH 35W.

The high traffic volumes on the two freeway facilities are key indicators of the strong level of population growth and economic activity that is both occurring and expected to continue for the city of Fort Worth and across the Dallas-Fort Worth region. **Exhibit 4** highlights the past trends and future forecasts for population growth within the city of Fort Worth, Tarrant County, and the 12-county North Central Texas Council of Governments (NCTCOG) Metropolitan Planning Area (MPA). For each geographic zone, the forecasted growth between 2010 and 2040 exceeds 60 percent. The increasing population of the city, county, and region translates into large numbers of additional vehicles utilizing area roadways.

Location	1970 Census¹	1980 Census¹	1990 Census¹	2000 Census ¹	2010 Census ¹	2030 ² /2035 ³ Forecast	2040 Forecast	Growth 2010-2040
City of Fort Worth	393,476	385,164	447,619	534,694	741,206	1 ,009,371 ²	1,236,870 ²	67%
Tarrant County	716,317	860,880	1,170,103	1,446,219	1,809,034	2,823,535 ³	3,046,531 ³	68%
12-County NCTCOG MPA	2,425,927	3,030,053	4,013,418	5,197,317	6,417,724	9,833,378 ³	10,543,336 ³	64%

Exhibit 4: Population Trends and Forecasts for Project-Related Locations

Sources:

1. U.S. Census 2010 PL94-171, NCTCOG (February 2011).

2. Texas Water Development Board, 2011 Regional Water Plan Population Projections for 2000-2060 for Cities, Utilities, and County-Other by Region by County, Region C (July 2010).

 NCTCOG 2040 Demographic Forecast, <u>http://www.nctcog.org/ris/demographics/forecast.asp</u> (February 2011), available at county level only.

Population density is also a critical value in determining appropriate transportation needs. **Exhibit 5** displays the current population densities for census tracts located at a two-mile and five-mile radii from the proposed project location. Existing population densities are highest in neighborhoods just outside the Fort Worth CBD, but evolving social and economic trends nationwide suggest that densities will likely increase both within and immediately adjacent to the CBD in the future. Regional data from *Mobility 2035: The Metropolitan Transportation Plan for North Central Texas – 2013 Update* correlates this projected activity. In fact, Tarrant County, as a whole, is anticipated to see the greatest increases in population density in relation to the 12-county MPA, approximately 1,050 additional persons per square mile from 2013 to a total of 3,143 persons per square mile in 2035. This will result in greater clusters of population within close proximity and access to/from the proposed project, and a wide variety of trip purposes that can be accommodated by the managed lanes and their numerous destinations.





Exhibit 5: Population Density near the Project Location

Map Date: April 2014 Source: US Census Bureau (American Community Survey 2008-2012 5-Year Data by Census Tract)

Projected increases in traffic volumes for IH 30 and IH 35W may also be attributed to greater economic activity resulting from enhanced job growth. The Metropolitan Transportation Plan (MTP) indicates that employment within the 12-county MPA is projected to grow from 4,292,516 jobs in 2013 to 6,177,016 jobs by 2035, resulting in an average employment density that will rise from 455 to 654 jobs per square mile across the region. Tarrant County is estimated to experience growth from 1,121,541 jobs in 2013 to 1,644,463 jobs in 2035, the second highest numerical increase by county in the region. A large portion of this job growth is expected within the city of Fort Worth, where the CBD and surrounding neighborhoods are experiencing a renaissance of redevelopment activities that is translating to new employment in multiple sectors. However, the Dallas-Fort Worth region is a complex metropolitan area with multiple large employment clusters that are all experiencing strong growth rates. Developing managed lane facilities is a key objective to meet the regional MTP goal of improving availability of transportation options for people and goods, as well as supporting system enhancements targeted at congestion reduction and management, and the facilities are strategically designed for express interconnections between multiple areas of large economic activity generators. The IH 30/IH 35W Managed Lane Access Ramp project is a means of enhancing regional progress with that objective by extending access opportunities to/from the proposed IH 35W managed lanes.

Exhibit 6 identifies the sites and sizes of major city of Fort Worth employers within a two-mile and five-mile radii of the project location. The IH 30/IH 35W Managed Lane



Access Ramp is in close proximity to numerous clusters of jobs on the western and southern peripheries of the Fort Worth CBD that have easy access to IH 30 west of IH 35W. Afternoon peak period trips from these locations would be able to utilize a greater distance of managed lanes and bypass congested general purpose lanes as a result of the project. In addition, extra morning peak period trips could be accommodated in the managed lanes for access to other major employment areas in Tarrant County, including the 1,500-acre Mercantile Business Park which is the job cluster located near the northern end of the map along IH 35W. That area is adjacent to the first northbound exit ramp from the IH 35W managed lanes. Other large employment and special generator destinations in Tarrant County such as Alliance Airport, Northeast Mall, Dallas/Fort Worth International Airport, and the Centreport Business Center are also more accessible via managed lane extensions or connections planned to be opened upon completion of the proposed project.





b. Targeted Transportation Challenges

A TxDOT report identifying the state's top 100 congested roadway segments for the year 2013 ranked IH 35W in 4th place between IH 30 and SH 183 (Northeast 28th Street) and in 14th place between SH 183 and US 81/287 (north of IH 820). Much of the corridor has operated with its original physical assets, configuration, and capacity for greater than 50 years, and this has directly contributed to the facility being consistently regarded as one of the most delay prone and dangerous in the North Central Texas region. Construction of the NTE 3A project will provide significant mobility, reliability, and safety benefits to the IH 35W corridor by upgrading the facility



to modern design standards and extending managed lanes to/from the Fort Worth CBD. The need for the project, the expected benefits, and the unique public-private partnership developed to deliver the project seamlessly with construction of nearby connecting facilities in Tarrant County was recognized by the United States Department of Transportation through the awarding of a \$531 million Transportation Infrastructure Finance and Innovation Act (TIFIA) loan in April 2012. This infusion of funds, in addition to other federal, state, local, and private equity resources, has enabled a \$1.4 billion initial phase of construction to be expedited starting in fall 2014 and concluding in fall 2018.

While the construction of the initial NTE 3A project will certainly provide major improvements to the IH 35W corridor, it is only a fraction of the ultimate project that was environmentally cleared by FHWA. Substantial elements remain unfunded at the present time, including up to two additional general purpose lanes in each direction at some locations, a fully reconstructed IH 35W/SH 121 interchange with new bridges for ramps and frontage roads across the nearby West Fork Trinity River, and a proposed IH 35W collector-distributor facility in both directions to improve access and weaving for movements to/from IH 30, Spur 280/US 287, and SH 121. Within the IH 35W portion of the Fort Worth Mixmaster, the most prominent improvement will be the addition of the managed lanes, allowing travelers to bypass most of the congested general purpose lane weaving sections that will remain for some time following the initial NTE 3A construction. However, the proposed termination point of the managed lanes is just south of the beginning/end points of the direct connector ramps to/from IH 30. This causes a major source of traffic, and an alternate route to/from the CBD and adjacent areas to the south and west, to be removed from the full benefit and length of the managed lanes. With the combined effects of high traffic levels on the existing general purpose lane sections, persistent regional demographic growth, and the projected increase in local and through movements associated with the opening of the nearby Chisholm Trail Parkway, implications for safety will endure as a primary concern.

Accident data within the project limits from 2012 and 2013 lists 264 total crashes, one that involved a fatality. Data also shows that 155 of the 264 crashes (58 percent) occurred in the area of the auxiliary lane where the eastbound IH 30 to northbound IH 35W direct connector ramp merges into the IH 35W mainlanes. The crashes that result from traffic from the existing ramp weaving into IH 35W mainlane traffic could be substantively reduced by this project. The most severe accidents near or upstream of the direct connector ramp were attributed to driver inattention, failure to control speed, failure to drive in a single lane, and faulty evasive actions.

c. Challenges Addressed

By providing direct access into the managed lanes from the eastbound IH 30 to northbound IH 35W direct connector ramp, drivers will be able to utilize the full length of the managed lanes up through IH 820, a distance of approximately six miles. Without the project, the next IH 35W managed lane access point north of IH 30 is a



IH 30/IH 35W Managed Lane Access Ramp

slip ramp just south of SH 183 (Northeast 28th Street), requiring travelers to use congested general purpose lanes for nearly two-and-a-half miles. Enabling the choice for drivers to use the IH 30/IH 35W Managed Lane Access Ramp will help redistribute traffic patterns for northbound IH 35W, creating considerable mobility, safety, and reliability benefits for all users.

d. Alternatives Considered

The constrained right-of-way, numerous interchanges and associated ramps in close proximity, and the ultimate environmentally-cleared improvements for the NTE 3A severely limit the ability to develop additional viable alternatives. The operational characteristics of the proposed IH 30/IH 35W Managed Lanes Access Ramp enable it to be incorporated within the initial NTE 3A construction phase.

II. Project Parties

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

NCTCOG is a voluntary association of cities, counties, school districts, and special districts established in January 1966 to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. NCTCOG serves a 16-county metropolitan region comprised 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, greater than that of 35 states.

Since 1974, NCTCOG has served as the Metropolitan Planning Organization (MPO) 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 and its technical committees, which compose the MPO policy-making structure. The department also provides technical assistance to the local governments and transportation providers of North Central Texas in planning, coordinating, and implementing transportation decisions.

b. Texas Department of Transportation (Implementing Agency)

The Texas Legislature originally established TxDOT in 1917 as the Texas Highway Department. TxDOT's workforce of more than 12,000 employees is made up of engineers, administrators, designers, architects, sign makers, accountants, purchasers, maintenance workers, travel counselors, and many other professionals. Headquartered in Austin, Texas, TxDOT is made up of 21 divisions and 6 offices. This project is located in the TxDOT Fort Worth District which plans, designs, builds, operates, and maintains the state transportation system in the following counties: Erath, Hood, Jack, Johnson, Palo Pinto, Parker, Somervell, Tarrant, and Wise.

III. Grant Funds and Sources/Uses of Project Funds

Exhibit 7 details the funding sources of the project. **Exhibit 8** details the estimated costs of the project that would be funded through this TIGER Discretionary Grant. All costs are in 2014 dollars. As noted earlier, this project is expected to be incorporated into the construction of the initial NTE 3A project, improving overall accessibility into the proposed IH 35W managed lanes. The estimated cost of this new access ramp is \$25 million, of which \$12.5 million is requested through the FY2014 TIGER Discretionary Grant call for projects.

Exhibit 7: IH 30/IH 35W Managed Lane Access Ramp – Funding Sou	rces
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Funding Source	Funding Amount	Percent
State Funds	\$3,125,000	12.5%
Leveraged STP-MM (State Match)	\$1,875,000	7.5%
Total of Non-Federal Fu	20.0%	
Leveraged STP-MM (Federal)	\$7,500,000	30.0%
TIGER VI Discretionary Grant	\$12,500,000	50.0%
Total of Federal Func	ling Sources	80.0%
TOTAL PROJECT COST	\$25,000,000	100.0%

Exhibit 8: IH 30/IH 35W Managed Lane Access Ramp – Cost Estimate

Cost Catagory	Total Cost	Funding Source									
Cost Category	Total Cost	Non-Federal (Percent)	Federal (Percent)								
Preliminary Design/Engineering	\$2,113,126	\$2,113,126 (100%)									
Utilities	\$915,475	\$915,475 (100%)									
Construction – Roadway	\$2,683,319	\$240,763 (9.0%)	\$2,442,556 (91.0%)								
Construction – Structures	\$16,692,480	\$1,497,744 (9.0%)	\$15,194,736 (91.0%)								
Construction – Drainage	\$1,382,400	\$124,037 (9.0%)	\$1,258,363 (91.0%)								
Construction – Miscellaneous	\$1,213,200	\$108,855 (9.0%)	\$1,104,345 (91.0%)								
TOTAL PROJECT COST	\$25,000,000	\$5,000,000 (20.0%)	\$20,000,000 (80.0%)								

a. Technical Feasibility

This project will construct a single-lane elevated ramp to directly tie the eastbound IH 30 to northbound IH 35W direct connector ramp to the IH 35W managed lanes that will be built with the initial construction phase of the NTE 3A project. The new ramp will diverge from the existing direct connector ramp, bridge over the northbound IH 35W general purpose lanes, and come down to grade in the median where it will merge with a northbound slip ramp to begin the IH 35W managed lane facility. Bridging over the general purpose lanes at the proposed location will require the removal of the existing low-volume Luella Street bridge, one of several existing



facilities that connects a multi-family housing neighborhood on the east side of IH 35W to various subareas surrounding the Fort Worth CBD.

The design for the proposed ramp is technical feasible, conforms to FHWA and TxDOT design standards, and does not include any unusual construction elements. The design is not expected to alter the physical location, configuration, and operation of existing adjacent general purpose lanes or the proposed managed lanes. The ramp is intended to be absorbed into the overall plans for construction of the initial NTE 3A project so that it will be open for operation at the same time as the remainder of the proposed IH 35W managed lanes. In addition to standard construction techniques used for the project, innovative clean construction techniques and green concrete would also be used (see Section IV.b.i. – Innovation). The innovative elements do not pose any technical challenges.

b. Financial Feasibility

Funding agreements to fully implement the initial construction phase of the NTE 3A project were finalized when TxDOT and the private developer, NTE Mobility Partners Segment 3 LLC, reached financial close in March 2013. Afterward, additional input from TxDOT and local government partners identified the need to gain extra benefits for travelers through the northern end of the Fort Worth Mixmaster, a location where the most prominent improvement would be the opening of new managed lanes. With the impending 2014 opening of the Chisholm Trail Parkway connection to IH 30, NTE 3A stakeholders recognized that the primary chokepoint through the Mixmaster would become the IH 30 direct connector ramps to/from IH 35W. Since IH 35W general purpose lane improvements matching the ultimate NTE 3A environmentally-cleared configuration could not be built during the initial phase without significant extra cost, stakeholders identified that an access ramp between the eastbound IH 30 to northbound IH 35W direct connector and the proposed managed lanes would provide the greatest overall benefit for the lowest potential cost. The estimated cost of that ramp is \$25 million, of which \$12.5 million is requested in FY 2014 TIGER Discretionary Grant assistance. The receipt of TIGER funds would complete a larger, committed funding package to build the proposed ramp in conjunction with the initial NTE 3A project, and provide enhanced overall mobility, safety, and reliability benefits.

NCTCOG currently manages federal, as well as state-administered, grants that are in various stages of development, implementation, and closeout. In fiscal year 2013, NCTCOG facilitated expenditures of \$24.1 million from various multi-year federal grants including awards from the Department of Energy, Environmental Protection Agency, Federal Transit Administration, Federal Aviation Administration, U.S. Department of Housing and Urban Development, Department of Labor, and the Department of Defense. Also in fiscal year 2013, NCTCOG facilitated expenditures of \$128.2 million from various state-administered grants including awards from the Texas Commission on Environmental Quality, Texas Department of Health, Texas State Energy Conservation Office, and TxDOT. The NCTCOG Transportation



Department employs 19 fiscal and grant professionals who provide financial, legal, and compliance support for projects funded from various grants.

No adverse audit findings from standards used by states, local governments, and nonprofit organizations expending federal awards (Circular A-133) have been determined at this time. NCTCOG has not been required to comply with special "high risk" terms and conditions under agency regulations in the implementation of consistency and uniformity in the management of grants and cooperative agreements with state, local, and federally-recognized Indian tribal governments (OMB Circular A-102).



c. Project Schedule

Exhibit 9: IH 30/IH 35W Managed Lanes Access Ramp Project Schedule

IH 30/IH 35W Managed Lanes Access Ramp Project Implementation Phases	Q1	201 Q2	2 Q3 Q	.4	20 Q1 Q2	13 Q3	Q4	Q1	20 Q2	014 Q3	Q4	Q1	20 Q2	15 Q3	Q4	Me Sta Re b	ets F ate, a equire y 09- 20 Q2	-eder & Loc emer -30-1 16 Q3	ral, cal nts 6 Q4	Q1	201 Q2	7 Q3	Q4	Q1	20 Q2	18 Q3	Q4	Q1	20 Q2	19 Q3	Q4
Activities	C	Comme	ents:																												
Pre-Construction Activities																															
Environmental Clearance – NEPA	FON	ISI on A	August	24,	2012																										
MTP Listing																															
TIP/STIP Listing																															
UTP Listing																															
Design																															
PS & E	\$2.1	M, STF	P-MM																												
Construction																															
Construction Schedule																		Let													
Utility Relocation	\$0.9	M, STF	P-MM		None exp	ected																									
Demolition & Grading	фо с		N 4N 4																												
Structures	\$9.5 \$12	1VI STP 5M TIC	-IVIIVI SER																												
Paving	ψ12.																														
Construction Jobs																		25	156	208 2	208	208	208	208	156						

Exhibit 10: North Tarrant Express Segment 3A Project Schedule

Milestone		2013				2014				20	15			20)16			20)17					
Wilestone		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Execution of FA (NTP 1)		-																						
Financial Close (NTP 2)				-																				
ROW Acquisition																								
Utility Relocation																								
Design																								
Construction Segment 3B																								
Construction North Segment 3A																								
Construction South Segment 3A																								
Substantial Completion																							\checkmark	
Final Acceptance																								\checkmark



d. Assessment of Project Risks and Mitigation Strategies

Exhibit 11: Project Risks and Mitigation Strategies								
IH 30/IH 35W Managed Lane Access Ramp Milestones	Achieved or Pending – Clarification	Financial Commitment	Evidence that Milestone will be completed by Obligation Deadline of September 30, 2016	Risk	Risk Mitigation			
Pre-Construction Activities								
MTP Listing	Pending – expected 2 nd Quarter 2015		NCTCOG, as the Dallas-Fort Worth MPO, is responsible for preparing and obtaining approval for planning documents.	Known /potential obstacles: The next MTP update is tentatively scheduled for early 2015. Timing of the MTP update and air quality conformity determination may shift.	NCTCOG, as the Dallas-Fort Worth MPO, can expedite the process to include this project in planning documents.			
TIP/STIP Listing	Pending – expected 2nd Quarter 2015		NCTCOG, as the Dallas-Fort Worth MPO, is responsible for preparing and obtaining approval for planning documents.	Known /potential obstacles: The project cannot be included in the TIP/STIP until it is included in the MTP.	NCTCOG, as the Dallas-Fort Worth MPO, can expedite the process to include this project in planning documents.			
Environmental Clearance, Final Environmental Assessment, and Receipt of FONSI	Achieved for NTE 3A Initial Phase and Ultimate Configuration		Link to NTE project website: http://www.txdot.gov/business/partnerships/cu rrent-cda/north-tarrant-express.html	Known /potential obstacles: The project is expected to be incorporated into the overall NTE Segment 3A project through a change order. It is possible the change may require additional environmental documentation.	TxDOT needs to go through the Re-Evaluation Clearance Checklist to determine if a re- evaluation of the NTE EA document is required for this design modification. TxDOT and NTE can expedite the environmental documentation process for a re-evaluation if necessary.			
Design	Pending – 100% expected by 2 nd Quarter 2016		Preliminary schematics already developed by TxDOT and NTE.	Known /potential obstacles: Public involvement process not yet initiated for design modification. Status of Luella Bridge and pedestrian crossing unknown.	Early public engagement and coordination with public and private stakeholders.			
Right of Way Acquisition	Achieved	All right-of-way needed for the project is already owned by TxDOT		Known /potential obstacles: None identified				
Construction Activities								
Project Funding	Achieved, except \$15M shortfall requested in FY2014 TIGER funding	Current Phase 1 Funding Shares: Federal: 80% - \$20.0M State / Local: 20% - \$5.0M		Known /potential obstacles: None identified				
Utility Relocations	Pending – expected by 2 nd Quarter 2016			Known /potential obstacles: None identified				
General Construction	Pending – expected by 3 rd Quarter 2016			Known /potential obstacles: None identified				



e. Performance Monitoring

Based on the primary and secondary criteria presented in this application, **Exhibit 12** lists performance measures for evaluating the success of this project.

	Short-Term (2 to 5 years) Performance Measure	Long-Term (5 to 40 years) Performance Measure						
Primary Selection Criteria								
State of Good Repair	PMIS rating above 70Lower maintenance costs	PMIS rating above 70Lower maintenance costs						
Economic Competitiveness	 Decrease in unemployment in the region and project area during construction Reduced travel times Reduced congestion levels 	 Within the project area: Increased median income compared to 2010 census data Decreased poverty rate Lower unemployment rate compared to 2009 Reduced travel times Reduced congestion levels 						
Quality of Life	 Stabilization of the community conditions and character Increased reliability of transportation system Transit vehicle access to managed lane system 	 Increased community retail and commercial development Increased reliability of transportation system Transit vehicle access to managed lane system 						
Environmental Sustainability	 Decreased traffic delay, fuel consumption, CO₂ emissions Increased travel speeds 	 Decreased traffic delay, fuel consumption, CO₂ emissions Increased travel speeds 						
Safety	 Decrease in the number and severity of accidents Decrease in the number of fatalities 	 Decrease in the number and severity of accidents Decrease in the number of fatalities 						
Secondary Selection Criteria								
Innovation	 Use of Clean Construction Techniques during construction Use of Green Concrete in structures 	 Implementation of the master plan for North Tarrant Express Segment 3A 						
Partnership	 Elimination of a major barrier that divides a community Continued partnership in the redevelopment of the area 	 Continued partnership in the redevelopment of the area 						

Exhibit 12: Performance Monitoring



IH 30/IH 35W Managed Lane Access Ramp

IV. Selection Criteria

The following sections illustrate that the project aligns with each of the primary and secondary selection criteria. All costs and benefits are reported in constant 2014 dollars.

a. Primary Selection Criteria

A key component of the project benefit-cost analysis (BCA) was an early identification of a wide range of potential direct and indirect benefits associated with this project, whether those benefits are subjective or objective in their nature. The following table, **Exhibit 13**, provides a snapshot of these project benefits and how they each relate to the five long-term outcomes as requested by the U.S. Department of Transportation. The primary quantifiable benefits of this project are in the areas of economic competitiveness and safety.

Primary Selection Category	Projected Benefit		
	Lowers maintenance costs		
State of Good Repair	Reduces frequency of construction and repair		
ropan	Extends pavement life		
	Increases reliability of system		
	Promotes travel time savings		
	Reduces roadway and freight operating costs		
Economic	Reduces freight shipping costs		
Competitiveness	Creates economic development opportunities		
	Fuel savings for roadway users, including freight		
	Creates construction jobs due to project (short term)		
	Supports long-term job creation		
	Promotes alternate modes of travel		
Quality of Life	Impacts land use changes		
	Increases local accessibility and creates alternate routes		
	Reduces congestion on the roadway system		
Environmental Sustainability	Reduces both recurring and nonrecurring congestion		
Safety Reduces costs from crashes, including injuries and fat			

Exhibit 13: Identification of Project Benefits

NOTE: The BCA quantifies the benefits for the items listed in **bold**.



i. State of Good Repair

The current condition of the IH 35W corridor is not conducive to economic growth or revitalization. The NTE 3A project, in conjunction with other projects proposed by the city of Fort Worth and neighborhoods surrounding the central business district such as land use redevelopment and Trinity River flood control improvements, is intended to spur economic growth in areas adjacent to the IH 35W corridor. Without the project, economic growth would be less likely to occur because developers have little incentive to develop along the community's deteriorating infrastructure and add additional trips to one of the state's most congested roadways. Improved infrastructure can spur development and therefore lessen infrastructure maintenance (lifecycle) costs.

The IH 35W corridor north of the IH 30 interchange was originally built in the late 1950s, and the pavement and structures are reaching the end of their design life. The initial construction phase of the NTE 3A project is intended to replace outdated interchanges, upgrade the IH 35W facility to meet current design and safety standards, and add managed lanes to provide reliable extra capacity for travelers who choose to pay tolls for their use. In general, the facility is to be built in such a way that additional general purpose lanes can be added to the corridor without substantial extra right-of-way or significant physical and/or configuration changes to the pavement and structures initially built. As a result, the updated corridor will require minimum maintenance expense for decades after the new infrastructure is constructed. The new roadway would be compatible with current maintenance practices, affording safe and efficient maintenance operations as required by law for the use of federal highway funds, thus reducing lifecycle costs.

It is important to note that the initial construction phase of the NTE 3A project will not replace the current US 287/Spur 280 and SH 121 interchanges along IH 35W, as well as upgrade the current general purpose lanes through the northern end of the Fort Worth Mixmaster, due to funding constraints. This is primary justification for implementing the IH 30/IH 35W Managed Lane Access Ramp project. Though the additional features of the NTE 3A project will be constructed in various stages prior to the MTP horizon year of 2035, the IH 30/IH 35W Managed Lane Access Ramp will provide opportunities for travelers to bypass congested general purpose lanes near the CBD and offer more reliable travel conditions to IH 820 and connecting freeways/managed lanes to the north and east. This alternate route through the Fort Worth Mixmaster will ultimately serve to redistribute traffic across the IH 35W facilities both before and after all the NTE 3A construction phases are complete, and this should provide an additional reduction to corridor-wide lifecycle costs.

ii. Economic Competitiveness

This project will increase economic competitiveness of the United States over the medium and long-term by increasing accessibility to jobs and other activities



in the Fort Worth CBD. There are direct economic competitiveness benefits to those who use the new IH 30/IH 35W Managed Lane Access Ramp including reduced operating costs, travel time savings, and fuel savings. By shifting some traffic from general purpose mainlanes to the managed lanes system, the project also benefits all transportation system users. These indirect benefits include reduced freight shipping costs, new economic development opportunities, increased system reliability, reduced roadway and freight operating costs, fuel savings, and improved job opportunities.

Managed lane system users pay a direct cost for using the service, but the benefits to each user in travel time savings outweigh the cost of using the managed lane system. The annual estimate of direct cost paid by managed lane users is between \$0.6 and \$1.3 million. The calculations of the cost to managed lane users associated with the new access ramp are included in the BCA. The net present value of the anticipated user cost is \$8.3 million assuming a discount rate of seven percent and \$13.0 million assuming a discount rate of three percent.

The travel time savings due to reduced congestion on the non-tolled mainlanes and more reliable service in the managed lanes ranges from \$1.6 million to \$4.0 million. The calculations of the regional benefits from reduced congestion and the reduced travel times associated with the new access ramp are included in the BCA. The net present value of the travel time savings to transportation system users is \$25.9 million assuming a discount rate of seven percent and \$41.2 million assuming a discount rate of three percent.

As with all infrastructure improvements, this project would create construction jobs in the short term. TxDOT and NTE Mobility Partners Segment 3 LLC have determined that construction of the initial NTE 3A project will result in an employment increase of approximately 2,000 jobs in Tarrant County. Incorporation of the proposed IH 30/IH 35W Managed Lane Access Ramp into the NTE 3A project will generate an additional increment of new jobs as well. Based on the Council of Economic Advisers' September 2011 determination that a job-year is created by every \$76,900 in transportation infrastructure spending, this \$25 million dollar project (including the requested \$12.5 million TIGER Grant funds) would generate approximately 390 job-years. This number is inclusive of onsite jobs and additional employment in other industries due to the multiplier effect. Benefits from short-term job creation were not included in the BCA because some or all of these benefits would have to be considered transfer benefits.

The IH 30/IH 35W Managed Lane Access Ramp project enhances access to and from the Fort Worth CBD. The project is located only one mile east of the Fort Worth CBD and will improve connections to major employment centers such as the CBD and the Near Southside Medical District from various residential locations north and east of downtown Fort Worth. In addition, the



IH 30/IH 35W Managed Lane Access Ramp

improved access to the managed lane system from downtown Fort Worth and residential areas to the south and west will improve connectivity to the Dallas/Fort Worth International Airport and employment centers in north Fort Worth and other parts of the region.

iii. Quality of Life

This project promotes the quality of life in the region by encouraging alternate modes of travel, impacting land use changes, increasing local accessibility, creating alternate routes, and reducing congestion on the roadway system. Many of these benefits are qualitative, so they are not included in the overall calculation of benefits from the project.

Based on travel modeling, the proposed project reduces vehicle hours of congestion delay which directly relates to quality of life. Reductions in congestion delay reduce the stress associated with transportation inefficiencies. The monetized value of the congestion delay reduction benefit was already included in the BCA as discussed in the Economic Competitiveness section.

The new design will also provide a safer, more reliable route for express buses operated by the Fort Worth Transportation Authority. The regional managed lane system provides enhanced service for transit bus operations along managed lane corridors. By improving access to the managed lanes system for transit vehicles, this project enhances the attractiveness of the primary local alternative to automobile transportation. This improves the quality of life for both personal automobile and transit service users.

As described earlier, the IH 30/IH 35W Managed Lane Access Ramp project creates a more efficient way for motorists traveling to and from the Fort Worth CBD to access the managed lane system. The managed lane system is designed to provide very reliable operations. This improves the quality of life for managed lane system users (including transit bus passengers) by reducing travel time uncertainties for trips served by the managed lane system.

Enhancing access to the regional managed lane system also has long term land use impacts. Residential and commercial development is expected to cluster in areas with better access to the regional managed lanes system, leading to denser, more walkable communities. The precise value of these benefits is difficult to quantify given the available data.

iv. Environmental Sustainability

The environmental sustainability benefits include increasing reliability and efficiency of the transportation system, reducing both recurring and nonrecurring congestion. The project is likely to improve energy efficiency, lessen dependence on oil, and reduce greenhouse gas emissions. Air quality benefits from reduced congestion are expected to be offset by air quality dis-benefits for



increased vehicle miles traveled. The other environmental sustainability benefits are generally qualitative or not specifically computable at this time (see anticipated benefits for the Clean Construction Specification and Green Cement concepts identified in Section IV.b.i. – Innovation) and could not be included in the calculation of benefits based on the data currently available.

v. Safety

Safety is a principal concern on this heavily traveled roadway. This project will reduce traffic merging onto northbound IH 35W general purpose lanes from westbound IH 30. Travel on the managed lane system reduces the number of conflict points by bypassing the frequent ramps needed for local access. In addition, traffic that transitions to the managed lanes frees up capacity on the general purpose lanes. This additional capacity allows some traffic from local thoroughfares to transition to limited access facilities. This redistribution of traffic helps to improve regional transportation safety because limited access facilities are relatively safer than local thoroughfares.

The annualized direct safety benefit to managed lane users ranges from \$2,000 to \$40,000 for avoiding the weaving sections between the IH 30 to IH 35W direct connection ramp and the SH 121 exit ramp. The calculations of the direct safety benefits associated with the new access ramp are included in the BCA. The net present value of crash reduction benefit to managed lane users in avoiding the weaving segments is \$227,000 assuming a discount rate of seven percent and \$329,000 assuming a discount rate of three percent.

The additional regional safety benefit from transitioning users from lower functional classification roadways to higher functional classification roadways is approximately \$4.1 million when the project opens. When the second phase of the North Tarrant Express Segment 3A project opens (by approximately 2028), the net regional impact of the IH 30/IH 35W Managed Lane Access Ramp would be reduced. The calculations of the regional safety benefits associated with the new access ramp are included in the BCA. The net present value of the safety improvements due to the shift towards higher functional classification roadways is \$17.5 million assuming a discount rate of seven percent and \$22.4 million assuming a discount rate of three percent.

b. Secondary Selection Criteria

i. Innovation

The proposed project would include two innovative elements to pursue the longterm outcomes outlined in the selection criteria. The IH 30/IH 35W Managed Lane Access Ramp project would be implemented using clean construction techniques and will utilize green concrete to increase environmental sustainability.



Clean Construction Techniques

As the MPO of an ozone nonattainment area, the NCTCOG Transportation Department works to develop air quality control strategies that reduce emissions of criteria pollutants associated with ozone formation, specifically nitrogen oxides (NO_X). Through recent years, NCTCOG staff has been investigating potential strategies to address emissions from construction equipment, which contributes approximately seven percent of ozone-forming NO_X emissions in the 2012 emissions inventory for North Central Texas, according to preliminary modeling conducted by the Texas Commission on Environmental Quality. Staff has determined that contract specifications which include emissions related requirements on public works or other construction projects may be a promising strategies to reduce emissions.

Negative impacts associated with diesel pollution from construction equipment utilized in roadway projects were recognized at the federal level through introduction of the Clean Construction Act of 2011 and discussion of the prioritization of diesel retrofit projects in the interim Congestion Mitigation Air Quality guidance published in November 2013. The NCTCOG Clean Construction Specification targets reductions of NOx, which is the primary determinant of ozone formation in the Dallas-Fort Worth ozone nonattainment area, rather than particulate matter (PM). To set a regional example, take a leadership role, and increase sustainability benefits of this project, NCTCOG proposes to incorporate a Clean Construction Specification on this project. The Clean Construction Specification will help mitigate emissions associated with construction equipment utilized during the construction phase of this project. The specification will require use of construction equipment which meets Tier 3 or better emissions standards, with certain exemptions for situations where such equipment is not practicable (e.g. equipment which is seldom used or is brought on site in an emergency situation). Operational requirements, such as idling limitations, will also be in place. Up to one percent of the total project cost may be utilized to help offset additional project expenses associated with contractors' compliance with this requirement.

The incorporation of the Clean Construction Specification leads to increased sustainability benefits for the project, including reductions in air pollutants and petroleum consumption. Investment in newer construction equipment and/or diesel retrofit technologies will result in the use of cleaner burning engines in place of higher polluting equipment. This will minimize criteria emissions, including ozone-forming NO_X, from construction equipment, which is critical for further progress in working toward attainment of the federal ozone standard. Additional reductions are anticipated in PM and diesel exhaust. Reductions in air pollutant emissions also positively affect human health, which is negatively impacted by exposure to ozone, fine PM, and diesel exhaust. Furthermore, newer equipment often has a better fuel economy than older engines and incorporates technologies that allow for minimized idling and other efficiencies.



IH 30/IH 35W Managed Lane Access Ramp

These advances facilitate reductions in petroleum consumption, which support national energy policy efforts. These benefits begin immediately upon project implementation and are long lasting through the entire useful life of the cleaner equipment and technologies which will be put into service on this project.

Green Concrete

In October 2006, The North Texas Clean Air Steering Committee (NTCASC), a committee of the NCTCOG Executive Board, passed a resolution requesting that local governments in the nonattainment area give special consideration to purchasing cement sourced from cement kilns which meet lowest emissions levels. This measure was passed as another strategy to work toward reducing ozone-forming emissions, specifically NOx. During construction of this project, NCTCOG will also include a requirement that all cement used in the project be sourced from a kiln which meets an emission rate of 1.7 pounds of NOx per ton of clinker or less. This requirement will ensure that cement is sourced from a kiln which susing a lower-emitting production process compared to industry counterparts. This is another strategy to reduce ozone precursors in the Dallas-Fort Worth nonattainment area.

To be conservative, it is assumed that the requirement to use "green" cement will not result in additional air quality benefits, as it is speculated that cement from lower-emitting kilns is widely used in construction projects under normal circumstances. However, inclusion of this requirement will eliminate the possibility of cement being sourced from a kiln with higher emissions and therefore helps ensure maximum sustainability benefits may be achieved.

ii. Partnership

This project is proposed to be incorporated into the initial construction phase of the NTE 3A project, a component of the multi-facility North Tarrant Express project. Developed in 2009, the North Texas Express project is a public-private partnership (PPP) functioning through a concession agreement with TxDOT to design, construct, maintain, and operate up to 30 miles of managed lanes within the fully redeveloped corridors of IH 35W, IH 820, SH 121, and SH 183 in northeastern Tarrant County. The PPP features a unique consortium of private civil engineering firms, service providers, and investors whose broad resources, expertise, and innovative business practices are able to leverage a wide-ranging system of projects costing more than four times the amount of available public funds. It also provides a delivery method that offers substantial cost and time savings during design and construction since it enables direct contract/designer interaction to find the best solutions for construction staging, traffic managements, and other efficiency generators. Furthermore, the North Tarrant Express project is provided in such a way that risks such as cost overruns and traffic and revenue shortfalls are borne by the private partners rather than the state or other public entities.



a) Jurisdictional and Stakeholder Collaboration

The August 2012 federal approval of the IH 35W Segment 3A environmental assessment and schematic concluded a nine year formal environmental study that included significant MPO, local government, general public, and business stakeholder involvement throughout. This interaction has carried over into the PPP concession agreement implementation for the North Tarrant Express project and the preparation of an overall Master Development Plan that guides the delivery process, aesthetics, operating characteristics, revenue distribution, management responsibilities, and other important project considerations. In addition to TxDOT and the companies comprising NTE Mobility Partners Segments 3 LLC, project partners and stakeholders cover a broad spectrum of entities and organizations as indicated below:

- Federal Highway Administration
- NCTCOG Regional Transportation Council
- Tarrant County
- Tarrant Regional Transportation Coalition
- IH 35W Coalition
- North Texas Tollway Authority
- Cities of Bedford, Euless, Fort Worth, Haltom City, Hurst, and North Richland Hills

Continued collaboration between project partners identified that the IH 30/IH 35W Managed Lane Access Ramp would be a vital enhancement to mobility, safety, and reliability expected to occur with implementation of the initial NTE 3A Project.

b) Disciplinary Integration

With the IH 30/IH 35W Managed Lane Access Ramp planned to be incorporated into the initial NTE 3A project, additional opportunities for job creation and community involvement will be realized through the continuing collaborative efforts between TxDOT and NTE Mobility Partners Segments 3 LLC. To date, the North Tarrant Express project has employed more than 2,000 people, comprising 156 separate companies and 191 Disadvantage Business Enterprise entities during the five-year reconstruction of IH 820 and SH 121/183 (known as Segments 1 and 2A). This track record is geared to continue with the redevelopment of the IH 35W corridor. Plus, the various partner organizations have established a long and consistent history of volunteerism and other contributions that support local communities, businesses, and various important enterprises.



c. Results of Benefit-Cost Analysis

The benefits described in previous sections were monetized in the BCA Appendix. The benefits of the project documented in the BCA are shown in **Exhibit 14**. The net present value of the IH 30/IH 35W Managed Lane Access Ramp project is shown in **Exhibit 15**. Applied to a total project cost of \$25 million, a substantial net benefit is achieved for both discounting scenarios. Based on a project life of 20 years, the overall effect of this transportation investment will result in a positive **lifetime net benefit** of **\$28.9 million** at three percent and **\$16.0 million** at seven percent, after netting out the cost of the project and direct costs to users of the managed lane system. The calculations used to determine these totals are discussed in more detail in the BCA.

Exhibit 14: Total Project Benefits

Popolit Cotogory	Benefits	Benefits	
Benefit Category	7% Discount Rate	3% Discount Rate	
Direct User Fees	\$(8,263,572)	\$(13,006,183)	
Time Savings	\$25,934,870	\$41,226,653	
Crash Reduction (Geometric)	\$226,991	\$329,369	
Crash Reduction (Regional)	\$17,487,784	\$22,440,637	

Exhibit 15: Net Project Benefits

Discount Rate	Net Present Value of Total Benefits	Rounded Net Present Value of Total Benefits	Return on Investment
7 Percent	\$16,026,748	\$16.0 million	64 percent
3 Percent	\$28,873,572	\$28.9 million	115 percent

The overall net effect of this transportation investment will result in a positive lifetime **return on investment** of **115 percent** (\$28.9 million/\$25 million) and **64 percent** (\$16.0 million/\$25 million), after discounting at three percent and seven percent, respectively. The results of this BCA clearly indicate that this project will provide a lifetime of benefits to the region and will substantially improve the quality of life for its residents.

The benefit-cost analysis used conservative estimates of the benefits of the project to avoid double counting. The documented benefits do not include many benefits to the community and to the nation stemming from the project due to the difficulty of developing specific quantitative methods to estimate them. In addition to the benefits documented in the BCA, the project would provide benefits that can only be estimated qualitatively.



V. Planning Approvals, NEPA, and other Environmental Reviews/Approvals

a. NEPA Status

A Finding of No Significant Impact (FONSI) was issued for the environmental assessment for the North Tarrant Express Segment 3A from IH 820 to IH 30 on August 24, 2012. TxDOT staff plan to incorporate this project into the overall improvements included in phase 1 of Segment 3A through an administrative process which will not require additional environmental assessment. TxDOT will follow their standard Re-Evaluation Clearance Checklist process to ensure that the proper environmental documentation is in place for the project.

Additional information can be found at project website: http://www.txdot.gov/business/partnerships/current-cda/north-tarrant-express.html

Description of Needed Federal Actions

No additional federal actions are needed to ready this project for construction.

The project is not expected to require any of the following permits or approvals: an Interstate Access Justification Report; a Section 404 permit; a U.S. Army Corps of Engineers (USACE) Nationwide Permit #14 (Linear Transportation Projects); a Section 401 from the Texas Commission of Environmental Quality; a U.S. Coast Guard Section 9 Permit; a USACE Section 10 Permit; or a Section 4(f) permit.

If it is determined that any of these permits and certifications are required for this project, TxDOT is well experienced in securing them and no difficulties are foreseen in obtaining them.

b. Legislative Approvals

Legislative approvals are not required for this project.

c. State and Local Planning

Local Planning

This project is the result of a planning effort by TxDOT and the NTE Mobility Partners Segment 3 LLC. The improved access to the managed lane system is consistent with the goals of the city of Fort Worth and NCTCOG.

<u>Transportation Improvement Program/Statewide Transportation Improvement</u> <u>Program (TIP/STIP) Status</u>

The IH 30/IH 35W Managed Lane Access Ramp project is not included in the current TIP/STIP. The project would be added to the TIP/STIP during the first modification cycle after FY2014 TIGER Discretionary Grants are awarded. As the MPO for the Dallas-Fort Worth region, NCTCOG would be able to include the project in the appropriate regional and statewide transportation plans well before the project readiness deadline.



Metropolitan Transportation Plan

The IH 30/IH 35W Managed Lane Access Ramp project is not included in the current MTP. The project would be added to the MTP during the first modification cycle after FY2014 TIGER Discretionary Grants are awarded. As the MPO for the Dallas-Fort Worth region, NCTCOG would be able to include the project in the appropriate regional and statewide transportation plans well before the project readiness deadline.

Statewide Transportation Plan

The IH 30/IH 35W Managed Lane Access Ramp project is not included in the 2012 *Unified Transportation Plan* or the *Statewide Long-Range Transportation Plan* 2035. This project would be included by reference in these documents as soon as the project is listed in the TIP and MTP. This project supports the major goals of both statewide planning documents, including congestion relief, improved safety, air quality, and quality of life, enhanced economic opportunities, and streamlined project delivery.

VI. Federal Wage Rate Certification

NCTCOG supports 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, NCTCOG complies with Title VII of the Civil Rights Act of 1964 and the Americans with Disabilities Act. 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 certifies compliance with federal wage rate requirements as indicated on the next page.

Federal Wage Rate Requirement

The North Central Texas Council of Governments (NCTCOG), as an applicant for Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant funds, certifies that for TIGER funds awarded to NCTCOG it will comply with the requirements of Subchapter IV of Chapter 31 of Title 40 (40 U.S.C. 3141, *et. seq.*) (federal wage rate requirements) as required by the Fiscal Year 2014 Continuing 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.

Veros

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

16/14