North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application
Attachment 1 – Cover Page and Project Narrative

North Central Texas
Council of Governments

Basic Project Information:	
What is the Project Name? ……	North Texas Strategic NHS Bridge Program
Who is the Project Sponsor? ……	Texas Department of Transportation
Was an INFRA application for this project submitted previously? (If Yes, please include title).	No
Project Costs:	
INFRA Request Amount ……	$ 113,135,000
Estimated federal funding (excl. INFRA) ……	$69,851,000
Estimated non-federal funding ……	$45,747,000
Future Eligible Project Cost (Sum of previous three rows) ……	$228,733,000
Previously incurred project costs (if applicable) ……	$9,098,000
Total Project Cost (Sum of 'previous incurred' and 'future eligible') ……	$237,831,000
Are matching funds restricted to a specific project component? If so, which one?	No
Project Eligibility:	
Approximately how much of the estimated future eligible project costs will be spent on components of the project currently located on National Highway Freight Network (NHFN)?	$190,223,000
Approximately how much of the estimated future eligible project costs will be spent on components of the project currently located on the National Highway System (NHS)?	$228,733,000
Approximately how much of the estimated future eligible project costs will be spent on components constituting railway-highway grade crossing or grade separation projects?	$228,733,000
Approximately how much of the estimated future eligible project costs will be spent on components constituting intermodal or freight rail projects, or freight projects within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	$17,388,000
Project Location:	
State(s) in which project is located……	Texas
Small or large project……	Large
Urbanized Area in which project is located, if applicable……	Dallas-Fort Worth-Arlington
Population of Urbanized Area……	7,399,662 (2017)
Is the project currently programmed in the::……	
• *TIP.*	Mostly Yes (9 of 12 projects in TIP)
• *STIP.*	Mostly Yes (9 of 12 projects in STIP)
• *MPO Long Range Transportation Plan.*	Yes
• *State Long Range Transportation Plan.*	Yes
• *State Freight Plan?*	Yes

Notes:
1. Responses based on feedback from Paul Baumer (FWHA) summarized in email dated February 19, 2019.
2. All dollars are rounded to 1,000.
3. Dollar figures represent cumulative amounts for all bridges in the program. Itemized amounts are identified in Application Attachment 4.

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LIST OF ABBREVIATIONS

BCA	Benefit-Cost Analysis
BCR	Benefit-Cost Ratio
DFW	Dallas-Fort Worth
DOT	Department of Transportation
FHWA	Federal Highway Administration
FM	Farm to Market Road
HPC	High Performance Concrete
IH	Interstate Highway
INFRA	Infrastructure for Rebuilding America
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NCTCOG	North Central Texas Council of Governments
NEPA	National Environmental Policy Act
NHS	National Highway System
NTTA	North Texas Tollway Authority
RTC	Regional Transportation Council
RTR	Regional Toll Revenue
SH	State Highway
STIP	State Transportation Improvement Program
TIP	Transportation Improvement Program
TxDOT	Texas Department of Transportation
US	United States Highway

Executive Summary

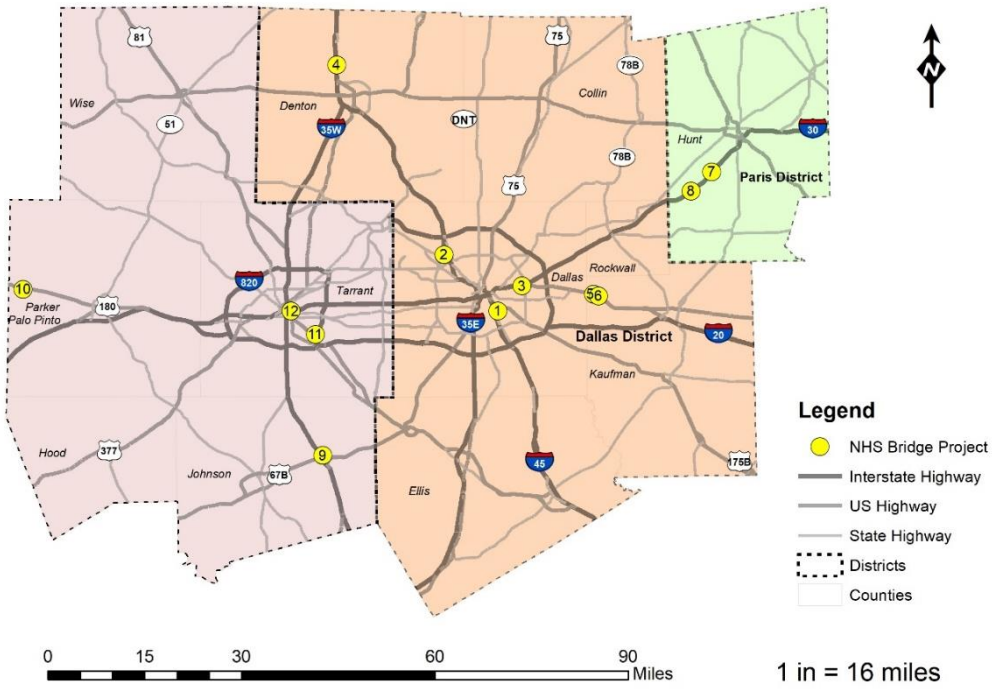
The North Central Texas Council of Governments (NCTCOG), in partnership with the Dallas, Fort Worth, and Paris Districts of the Texas Department of Transportation (TxDOT), is requesting funding assistance of **$113,135,000** through the Fiscal Year (FY) 2019 Infrastructure For Rebuilding America (INFRA) Grant Program for the **North Texas Strategic National Highway System (NHS) Bridge Program**. This program will involve the repair or replacement of 14 of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker, and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through a partnership with TxDOT. The bridge projects are listed in **Exhibit 1** and illustrated in **Exhibit 2**.

Exhibit 1: Program Overview Table

Bridge Project #	Facility Carried	Feature(s) Crossed	County	Year Constructed	Description	Project Cost
1	SH 310	S Lamar St, Budd St, & UPRR	Dallas	1953	Replacement	$17,388,000
2	Loop 12 NB to IH 35E NB	IH 35E SB	Dallas	1970	Replacement	$2,690,000
3	St. Francis Ave NB St Francis Ave SB	IH 30	Dallas	1959	Replacement	$71,760,000
4	FM 3163 (Milam Rd)	IH 35	Denton	1958	Reconstruction	$29,500,000
5	US 80 EB	East Fork Trinity River	Kaufman	1955	Reconstruction	$11,682,000
6	FM 460	US 80	Kaufman	1955	Reconstruction	$9,440,000
7	IH 30 WB IH 30 EB	FM 1903	Hunt	1958	Replacement	$33,455,000
8	IH 30	FM 1565	Hunt	1958	Replacement	$31,318,000
9	IH 35W NB	IH 35W SB Alvarado Exit	Johnson	1963	Removal	$8,400,000
10	US 180	Dry Creek	Parker	1937	Replacement	$2,700,000
11	US 287 NB	Carey Street	Tarrant	1965	Replacement	$5,200,000
12	US 287 SB	Lancaster Ave	Tarrant	1962	Reconstruction	$5,200,000
	TOTAL (12 Bridge Projects):					**$228,733,000**

Exhibit 2: Regional Location Map

North Texas Strategic NHS Bridge Program



In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders, and illumination; and the provision of bicycle and pedestrian accommodations.

The North Texas Strategic NHS Bridge Program meets the following key objectives of the INFRA Grant Program:

#1: Supporting Economic Vitality – This network program of NHS bridge projects will involve upgrades to bridge structures to current design standards and to provide safety enhancements. This program will not only restore the good condition of NHS bridge infrastructure but will also include capacity improvements (including the addition of general-purpose lanes and frontage roads) to relieve congestion on several designated critical freight corridors and will improve accessibility to key intermodal facilities and major downtown employers in Dallas and Fort Worth.

A Benefit-Cost Analysis (BCA) was prepared for this application to identify the anticipated benefits and the costs for this program. The BCA Document (**Application Attachment 2**) summarizes the net present value and the benefit-cost ratio (BCR) utilizing a 7 percent discount rate. Net benefits of

over **$10.85 billion** over the 20-year time horizon are attainable with a BCR of **8.98**. **Exhibit 3** outlines a summary of costs and benefits for this program of NHS bridge projects.

Exhibit 3: Benefit-Cost Analysis Summary Results

Benefit-Cost Summary Results			Average Annual	Total Over 20 Years
Life-Cycle Costs	$(250,407,368)	***ITEMIZED BENEFITS***		
Life-Cycle Benefits	$10,884,190,774	Travel Time Savings (mil. $)	$119.6	$2,392
Net Present Value	$2,248,449,920	Emissions Cost Savings (thou. $)	$108.7	$3,511
BENEFIT-COST RATIO	**8.98**	**TOTAL BENEFITS (mil. $)**	$544.2	**$10,884**
		Person Hours of Delay Saved	37,241,143	744,822,859

#2: Leveraging of Federal Funding – Funding for these NHS bridge projects is expected to come from the Texas Unified Transportation Program. Additionally, programmed state funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and state.

#3: Innovation – This network program of NHS bridge projects will utilize technology innovations (dynamic signalizing, signal prioritization, Intelligent Transportation Systems, High Performance Concrete) and project delivery innovations (A+B bidding, combined construction, and National Environmental Policy Act (NEPA) delegation authority).

#4: Performance and Accountability - The program will support TxDOT's efforts to meet federal requirements for NHS bridge performance targets and Transportation Asset Management Plan implementation. Several accountability measures are already in place to monitor implementation of this NHS bridge program and to measure state of good repair conditions and lifecycle costs.

Approval to submit this program for INFRA consideration was passed by the RTC and the NCTCOG Executive Board on February 14, 2019 and February 28, 2019, respectively. Letters of support for this program were received from the RTC, four US Representatives, three State Senators, six counties, and the cities of Dallas and Fort Worth. Copies of these letters are included in **Application Attachment 3**.

I. Project Background and Description

Project Background

Existing federal statutes and regulations now require that each state Department of Transportation (DOT) and each metropolitan planning organization (MPO) establish performance targets to assess and monitor the condition of pavements and bridges on the NHS. As with other performance measures rules, the MPO has the option to either adopt the same performance

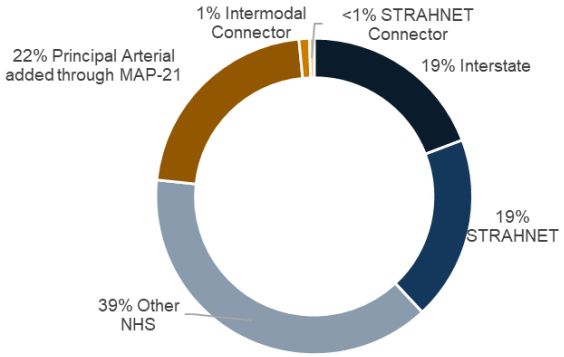
targets set by the state DOT or establish its own regional targets. (1) On November 8, 2018, the RTC adopted a resolution to support TxDOT's NHS bridge performance targets and to approve a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT's NHS bridge performance targets. This resolution is included in **Application Attachment 7**.

NHS in Texas is designated by the US Congress, through the Federal Highway Administration (FHWA), in concert with TxDOT and other local governmental agencies. NHS includes Interstate Highways (IH) and non-Interstate Highways (other principal arterials and intermodal connectors) that are important to the national economy, defense, and mobility. As illustrated in **Exhibit 4**, the state of Texas has the largest NHS network in the nation. The number of NHS bridges in Texas exceeds 17,000 with TxDOT maintaining and operating more than 16,400 NHS bridges (320 million square feet of bridge deck area) while other governmental agencies and private partnerships maintain and operate around 1,000 NHS bridges (about 19 million square feet). (2)

Exhibit 4: National Highway System in Texas

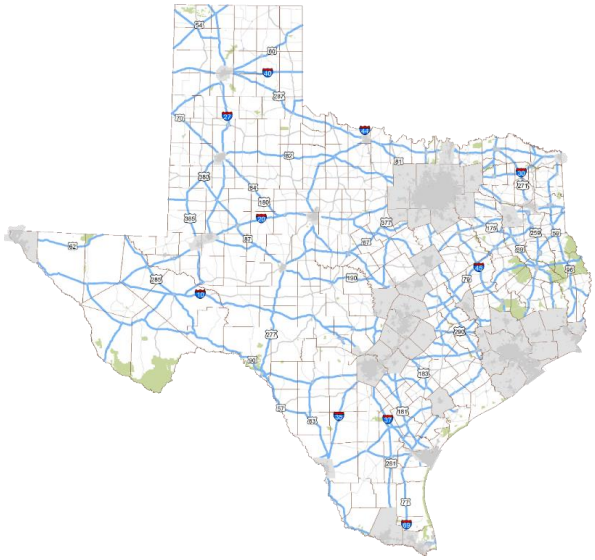
Texas NHS Facts

Over 18,000 centerline miles (6% of all roadway miles)
450 million vehicle-miles traveled (60% of all vehicle travel)
58 million truck-miles traveled (75% of all truck travel)



Current System Designation

Source: Texas HPMS 2017 Year-End Data Submission



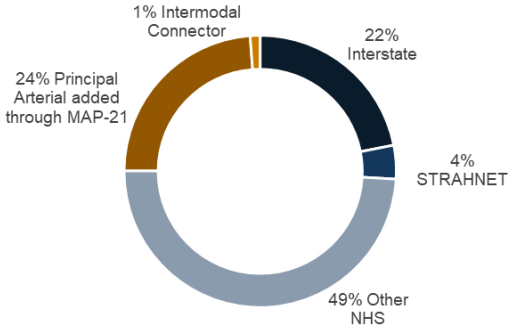
As illustrated in **Exhibit 5**, the NCTCOG/Dallas-Fort Worth (DFW) region has the largest NHS network among the 25 metropolitan areas in Texas. Based on year 2016 data provided by TxDOT, the NHS facilities in the region also include an estimated 3,279 bridges (about 87 percent managed by TxDOT and about 13 percent managed by other agencies). (3)

(1) – NCTCOG Mobility 2045 (2018)
(2) – TxDOT Initial Transportation Asset Management Plan (2018)
(3) – NCTCOG Mobility 2045 (2018)

Exhibit 5: National Highway System in NCTCOG Area

NCTCOG NHS Facts

2,411 centerline miles (6% of total miles)
118 million daily vehicle-miles traveled (64% of total travel)
11 million daily truck-miles traveled (80% of all truck travel)



Current System Designation

Source: Texas HPMS 2017 Year-End Data Submission

Project Description

The North Texas Strategic NHS Bridge Program will include 12 projects to replace, reconstruct, or remove bridges classified in "poor" or structurally deficient condition in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker, and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through a partnership with three TxDOT district offices (Dallas, Fort Worth, and Paris).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Bridges in Texas have typically been replaced after 50 to 70 years, and several of these bridges were originally constructed beyond this timeframe. A description of the 12 NHS bridge projects included in this network program are as follows:

1) SH 310 bridge at Lamar Street and Union Pacific Railroad (Dallas County) – Built in 1953, this bridge will be reconstructed, maintaining its current alignment and capacity – four general-purpose lanes. The inside and outside shoulder widths will be increased from 2 feet to 4 feet and 10 feet, respectively. In order to comply with current requirements for underpasses at railroad crossings, minimum vertical clearance will be 23 feet 6 inches and the existing rail will be upgraded to meet current design and safety standards.
2) Loop 12 NB to IH 35 NB at IH 35E SB (Dallas County) – Built in 1970, this structurally deficient bridge would be replaced to accommodate the ultimate configuration for IH 35E to help eliminate potential conflicts at this location, thus facilitating the widening and added capacity of IH 35E while also improving mobility through this corridor.

3) St. Francis Avenue NB and SB bridges at IH 30 (Dallas County) – Built in 1959, this bridge will be replaced with a new configuration from an underpass to an overpass (IH 30 over St. Francis Avenue) and also widened from four to six general-purpose lanes with continuous left-turn lanes. In addition, the proposed project will accommodate the additional capacity being added to the IH 30 corridor through a concurrent project.
4) FM 3163 (Milam) bridge at IH 35 (Denton County) – Built in 1958, this bridge is an underpass for three major crossings: IH 35 NB, IH 35 SB, and the IH 35 NB frontage road. In order to meet vertical clearance requirements for a freight network, the vertical clearance will be improved to 18 feet 6 inches. The reconstruction of this structure would also provide a more reliable crossing for truck traffic entering and exiting the truck stop on the southeast corner of FM 3163 at IH 35. Additionally, this reconstruction will align with the Denton County outer loop providing an interchange with direct connectors servicing the WB/EB outer loop to IH 35 NB/SB and vice versa.
5) US 80 EB at East Fork Trinity River (Kaufman County) – Built in 1955, this bridge spans a length of 1,415 feet over the East Fork Trinity River. The proposed project will accommodate the additional capacity being added to the US 80 corridor through a concurrent project.
6) FM 460 at US 80 (Kaufman County) – Built in 1955, this bridge is an underpass structure over US 80 consisting of one lane in each direction and spans a length of 192 feet over the US 80 WB and the US 80 EB mainlanes. The proposed project will reconstruct this interchange and add lane capacity to the FM 460 bridge, as well as accommodate the additional capacity being added to the US 80 corridor through a concurrent project. In order to comply with current requirements along the US 80 corridor project, the vertical clearance of this FM 460 structure shall be increased to 18 feet 6 inches which requires the structure to be reconstructed.
7) IH 30 at FM 1903 (Hunt County) – Built in 1958, the two bridges will be replaced with a single structure (one bridge for two), and the new bridge will be built to accommodate six mainlanes but will only carry four mainlanes until a larger roadway project is constructed.
8) IH 30 at FM 1565 (Hunt County) – Built in 1958, the two bridges will be replaced with a single structure (one bridge for two) and will be relocated to service offset alignment of FM 1565, and the new bridge will be built to accommodate six mainlanes but will only carry four mainlanes until a larger roadway project is constructed.
9) IH 35W NB at IH 35W SB Alvarado Exit (Johnson County) – Built in 1963, this bridge will be removed to eliminate the use of the left-hand exit and to allow the NB IH 35W mainlanes to be at-grade. The project also will consist of realigning NB IH 35W to improve the degree of curvature and allow for further expansion as necessary along the mainlanes of IH 35W. Operational improvements will include a frontage road section from US 67 for County Road 604. Also, the project will include ramp configuration changes to improve operational improvements and accessibility of the area.
10) US 180 WB at Dry Creek (Parker County) – Built in 1937, this bridge would be removed and replaced due to the concerns of the bridge deck and continual maintenance of the deck surface. Additional concerns within the area include erosion within the creek bed and slopes under the structure. The project will repair all existing erosion concerns and drainage around the structure. Elevation of the structure is to be raised to match the westbound structure. The

project will also include updated rail, desirable shoulder widths, armoring, High Performance Concrete, delineation, bridge end treatment, and approaches.

11) US 287 NB at Carey Street (Tarrant County) – Built in 1965, this bridge will be replaced as part of a larger project (Southeast Connector). The scope of this request is to replace the existing bridge with a three-lane structure. The reconstruction upgrades the bridge to current design standards and safety appurtenances. The increase in vertical clearance and increased horizontal spans will accommodate the industrial area with a reconstructed intersection at Carey Street.
12) US 287 SB at SH 180 (Tarrant County) – Built in 1965, this bridge will be reconstructed with a full deck replacement with a composite slab section and upgraded concrete rails. Other improvements will include the redirection of drainage and the repair to slopes under and around the structure, sealed expansion joints, and upgraded safety end treatments at bridge approaches. The project will also include the replacement of the original aluminum railing section with concrete railing, High Performance Concrete (dense concrete mix to minimize or slow chloride penetration) for increased service life, and Epoxy-coated reinforcement to minimize chloride damage due to winter weather treatments.

Additional information (including many photos) about the existing condition and the proposed improvements for each bridge project in this network program is included in **Application Attachment 4**.

II. Project Location

The network of 12 projects included in the North Texas Strategic NHS Bridge Program are located in the DFW Metropolitan Planning Area, which is also referred to as the DFW region or the Metroplex. As illustrated in **Exhibits 6**, **7**, and **8**, the 12 NHS bridge projects are located in seven counties within three TxDOT district areas.

Exhibit 6: Project Locations in TxDOT Dallas District

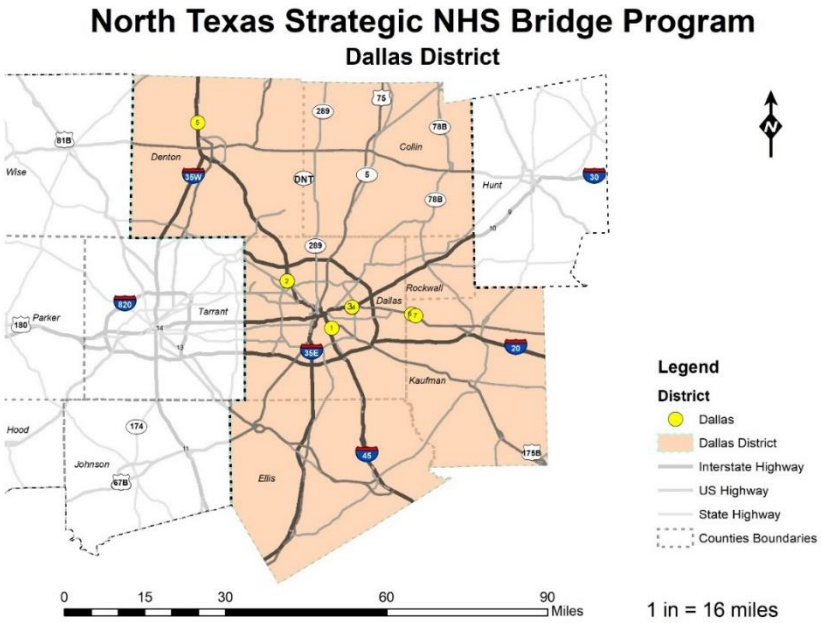


Exhibit 7: Project Locations in TxDOT Fort Worth District

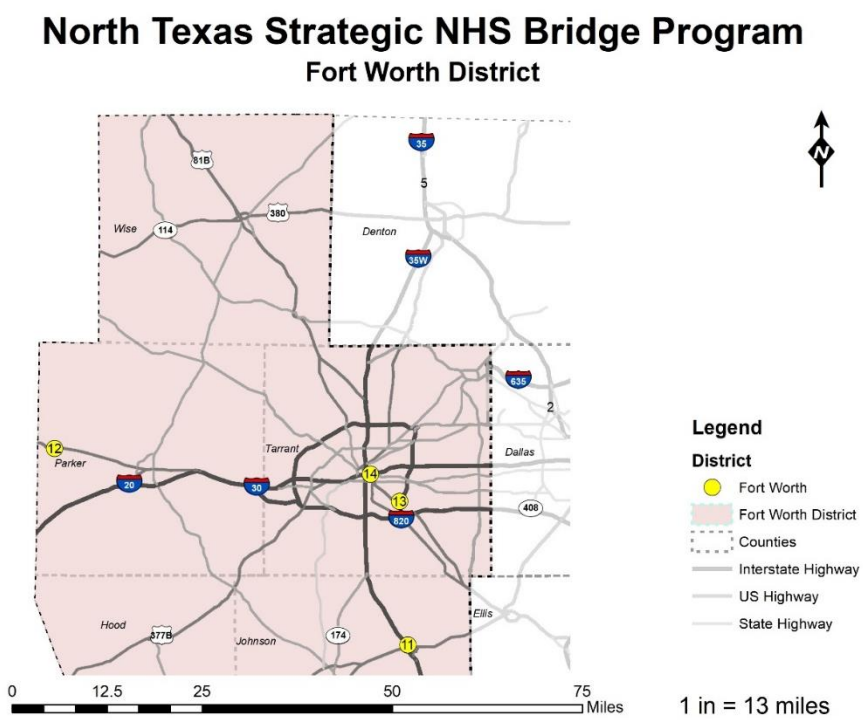
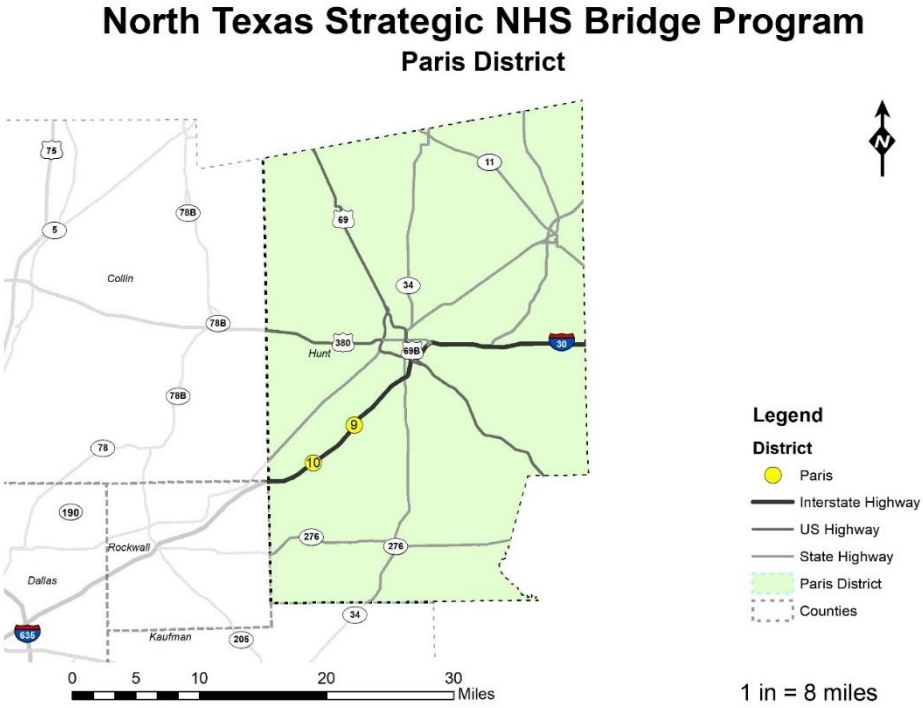


Exhibit 8: Project Locations in TxDOT Paris District



According to the 2017 US Census estimate, the DFW region is the most populated inland metropolitan area in the United States with a population of 7,399,662, which makes it the largest metropolitan area in Texas and the fourth-largest in the nation. **Exhibit 9** displays both past population growth trends and future forecasts for the DFW region and the seven counties where the network of NHS bridge projects are located. This growth highlights the strong need to maintain the region's NHS bridges in a state of good repair as quickly as possible.

Exhibit 9: Regional Population Trends and Forecasts

Location	1980 Census[1]	1990 Census[1]	2000 Census[1]	2010 Census[1]	2020 Forecast	2040 Forecast	Growth 2010-2040
Dallas County	1,556,390	1,852,810	2,218,899	2,368,139	2,587,960	3,180,529	34%
Denton County	143,126	273,525	432,976	662,614	891,063	1,329,551	101%
Hunt County	55,248	64,343	76,596	86,129	104,894	164,886	91%
Johnson County	67,649	97,165	126,811	150,934	173,835	228,160	51%
Kaufman County	39,015	52,220	71,313	103,350	146,389	242,354	134%
Parker County	44,609	64,785	88,495	116,927	201,491	276,979	137%
Tarrant County	860,880	1,170,103	1,446,219	1,809,034	2,004,609	2,580,325	43%
NCTCOG MPA	**3,030,053**	**4,013,418**	**5,197,317**	**6,417,724.00**	**7,612,993**	**10,183,523**	**59%**

Notes:
All historical data derived from the 2010 US Census: *https://www.census.gov/programs-surveys/decennial-census/decade.2010.html*
All future county data derived from: *https://data-nctcoggis.opendata.arcgis.com/datasets/2040-nctcog-demographic-forecast-tsz*

III. Project Parties

North Central Texas Council of Governments (Grant Applicant)

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 urban centers of Dallas and Fort Worth, and consists of 234 members, including 16 counties, 169 cities, 22 independent school districts, and 28 special districts. Since 1974, NCTCOG has served as the MPO for the DFW area. The NCTCOG Transportation Department is responsible for the regional planning process for all transportation modes, and also provides technical support and staff assistance to the RTC and its technical committees, which comprise the MPO policy-making structure. The department also provides technical aid to local governments and transportation providers in planning, coordinating, and implementing transportation decisions.

Texas Department of Transportation (Grant Recipient/Project Implementation)

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, TxDOT is made up of 25 district offices, 21 divisions, and 6 regional offices. The program of bridge projects will be located in three TxDOT districts (Dallas, Fort Worth, and Paris).

IV. Grant Funds, Sources, and Uses of Project Funds

Exhibit 10 identifies the funding sources and cost estimates for the overall bridge program. The amount of this FY 2019 INFRA Grant request is **$113,135,000** for use in the construction phases for the bridge projects. Non-federal funding sources will be utilized to cover 20 percent of the program costs. The federal share (including the INFRA grant) for this program will be 80 percent. All costs are in 2017 dollars. Funding for operations and maintenance costs of the completed bridge projects is expected to come primarily from the State Highway Fund.

Exhibit 10: Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	TxDOT Engineering Funding	$9,230,000	4%
State	Category 1 - Construction	$200,000	0%
State	Category 2 - Construction	$632,200	0%
State	Category 6 - Construction	$14,591,600	6%
State	Category 12 - Construction	$11,092,800	5%
Local	Regional Toll Revenue (RTR) - Construction	$10,000,000	4%
Total of Non-Federal Funding Sources		**$ 45,746,600**	**20%**
Federal	Category 1 - Construction	$800,000	0%
Federal	Category 2 - Construction	$2,528,800	1%
Federal	Category 6 - Construction	$58,366,400	26%
Federal	Category 12 - Construction	$8,156,200	4%
Federal	***INFRA Request - Construction***	***$113,135,000***	***49%***
Total of Federal Funding Sources		**$182,986,400**	**80%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$18,121,000	100%	0%
Right-of-Way	$20,430,000	20%	80%
Construction	$190,182,000	12%	88%
TOTAL PROJECT COST	**$228,733,000**	**20%**	**80%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

Additional information about the funding sources and costs for each bridge project in this program is included in **Application Attachment 5**.

V. Merit Criteria

Criterion #1: Support for National or Regional Economic Vitality

Safety Upgrades

This network program of NHS bridge projects will involve upgrades to the bridge structure to current design standards and to provide safety appurtenances. All bridge structures will be raised to provide 18 feet 6 inches of vertical clearance to make them compliant with FHWA's requirements for Freight Network corridors and to meet current vertical clearance criteria required for underpasses at railroad crossings. Bridge improvements will include increasing

shoulder widths (from as narrow as 2 feet to 10 feet) to enhance safety for both motorized traffic (autos and trucks) and nonmotorized travelers (pedestrians and bicyclists). Project improvement will also include the installation of cable barrier or other rigid center barriers to address potential cross-over incidents.

Concrete railing will replace the current aluminum railing section built within the original construction that has become harder to find for repairs. Other safety features will include rails, delineation, bridge end treatments, and rumble strips.

Commerce and Economic Growth

Texas has the second largest state economy in the nation. With a gross domestic product of $1.6 trillion, Texas has the 10th largest economy in the world. In 2016, Texas moved more than two billion tons of freight with more than half of this freight moved by trucks on the state's highways. Freight movement is expected to double by the year 2045. (4) Likewise in 2016, the DFW region became the fourth-largest metropolitan economy in the nation. In 2019, the DFW region boasts a gross domestic product of just over $613.4 billion. (5)

In addition to safety upgrades, this network program of bridge projects will not only restore the good condition of NHS bridge infrastructure but will include capacity improvements (including the addition of general-purpose lanes and frontage roads) to relieve congestion on several major freight corridors and to improve accessibility to intermodal facilities. As illustrated in **Exhibits 11 and 12,** several of the bridge projects in this network program are located on NCTCOG designated Critical Urban Freight Corridors and are identified as part of either the TxDOT Primary or Secondary Freight Network or as part of the FHWA Primary Highway Freight System.

The North Texas Strategic NHS Bridge Program will also improve state of good repair and capacity improvements (including the addition of general-purpose lanes and frontage roads) to relieve congestion and improve accessibility to a diverse combination of industrial, airport, and commercial uses throughout the DFW region as illustrated in **Exhibits 13, 14, and 15**.

(4) – TxDOT Initial Transportation Asset Management Plan (2018)
(5) – "Dallas-Fort Worth metroplex" page on Wikipedia website (2019)

Exhibit 11: Critical Urban Freight Corridors in NCTCOG Region

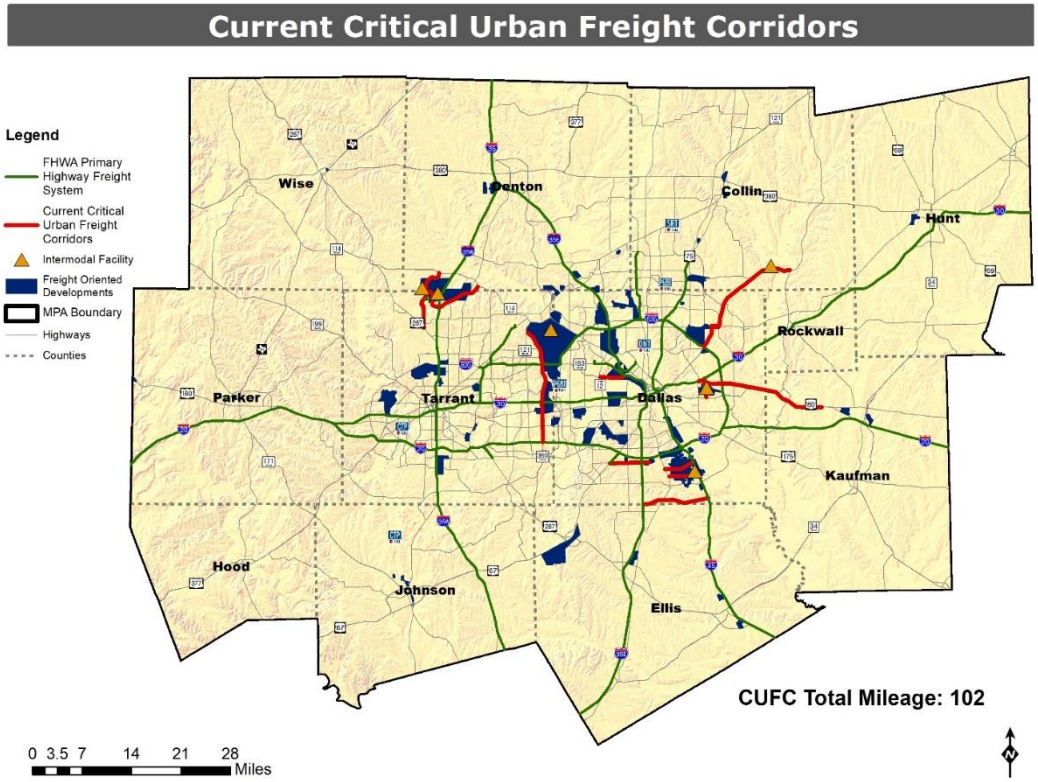


Exhibit 12: Critical Urban Freight Corridors in TxDOT Dallas District

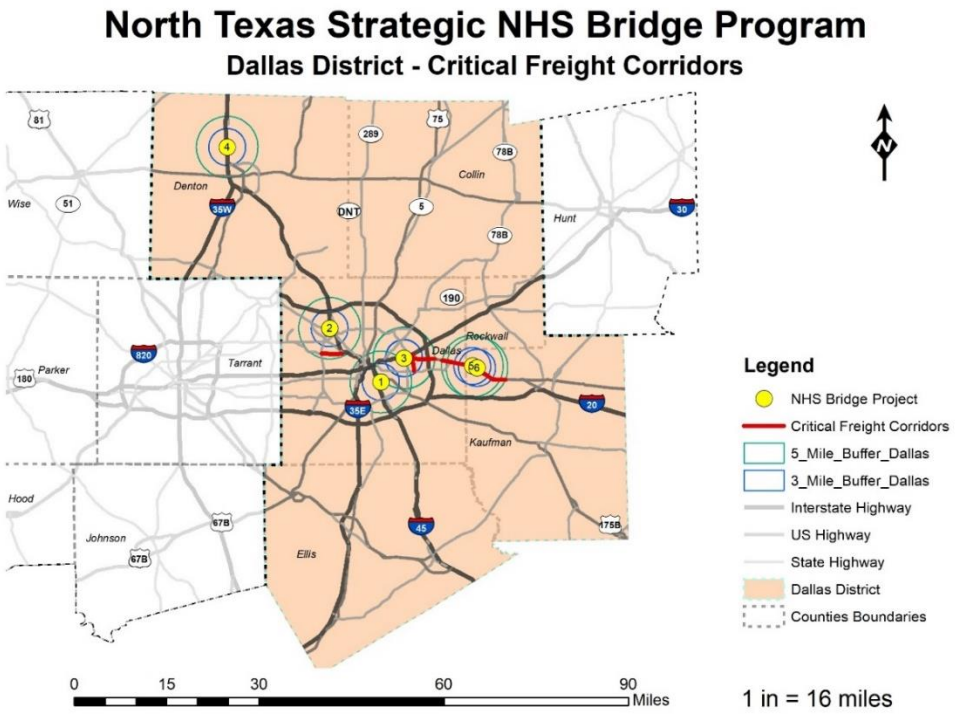


Exhibit 13: Land Uses in TxDOT Dallas District

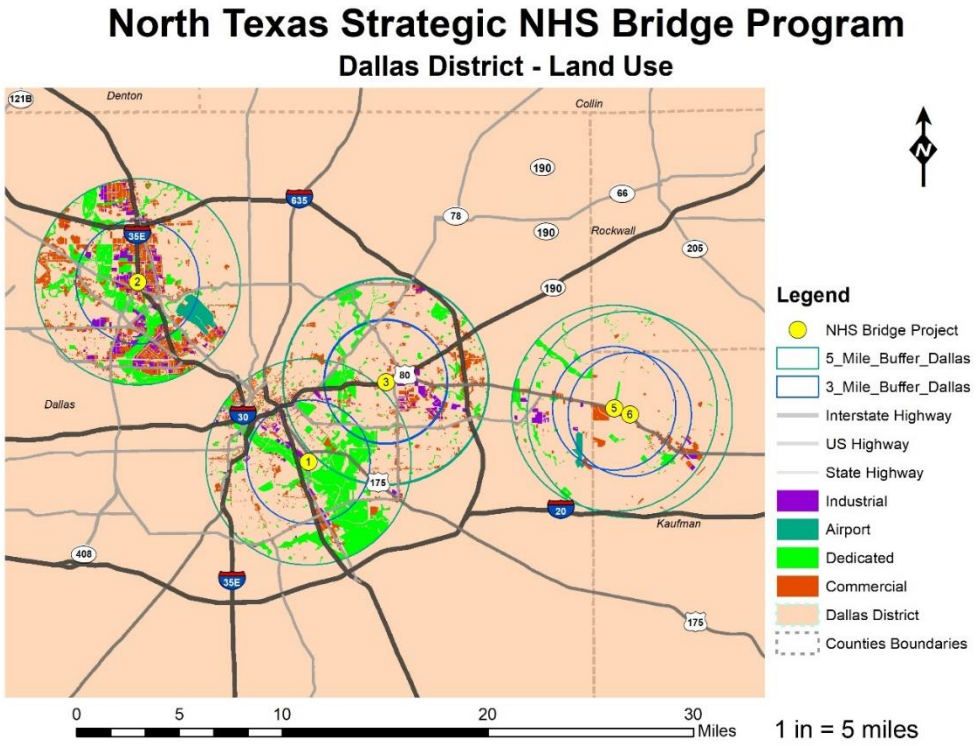


Exhibit 14: Land Uses in TxDOT Fort Worth District

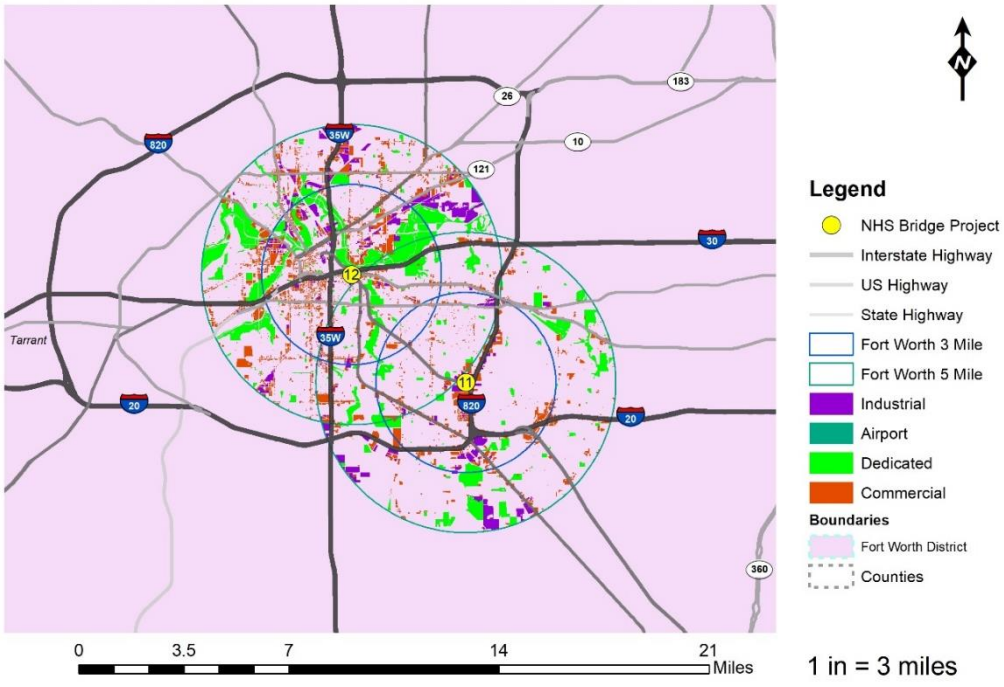
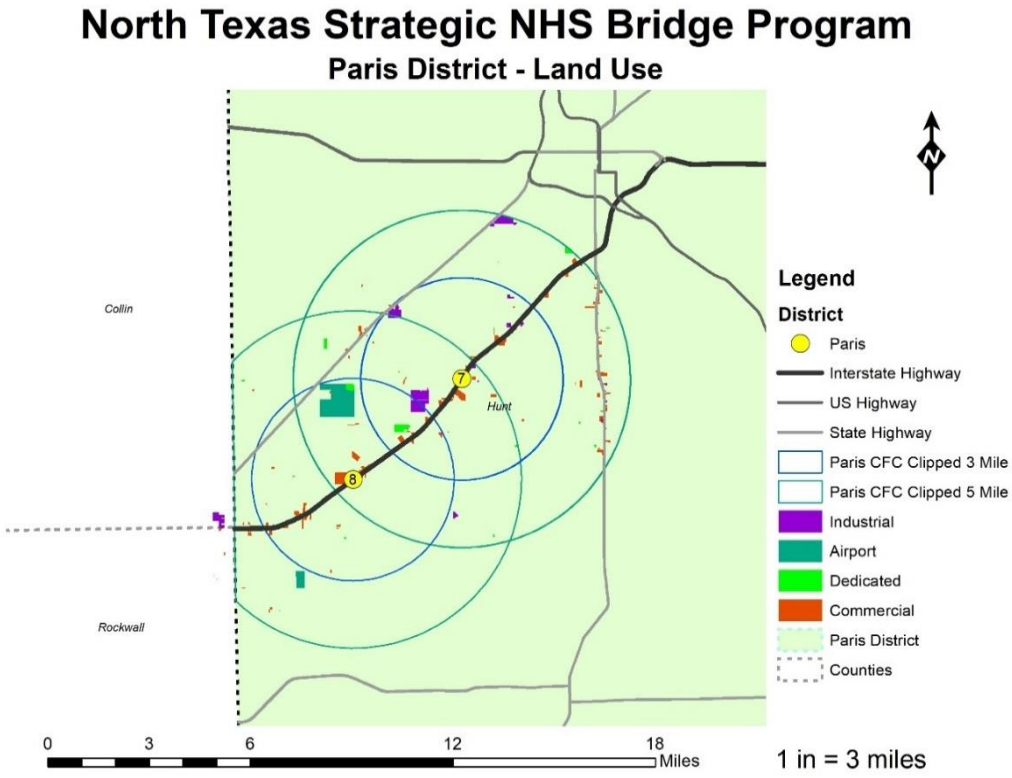


Exhibit 15: Land Uses in TxDOT Paris District



As illustrated in **Exhibits 16 and 17**, several of the projects in this network program are located on Interstates and freeways that serve as a direct connection to many major employers in the Dallas and Fort Worth downtown areas.

Replacing the existing structure will increase mobility by eliminating detour routes and facilitate efficient movement of people and goods and provide safety to the traveling public and protection to the structure.

Exhibit 16: Major Employers in TxDOT Dallas District

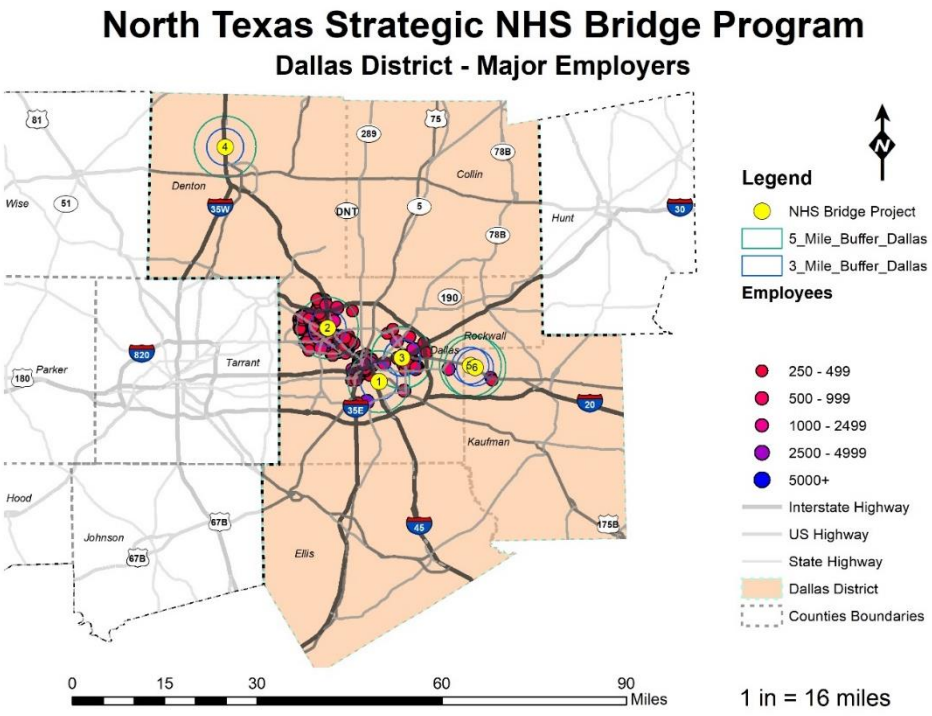
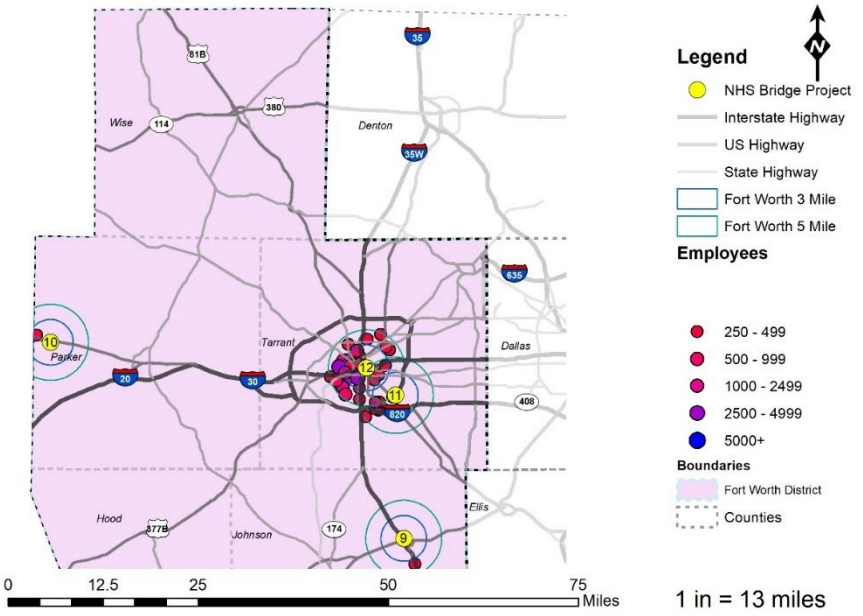


Exhibit 17: Major Employers in TxDOT Fort Worth District



In general, structurally deficient bridges incur higher costs for maintenance every year. Some of these structures have been subject to impact damage due to inadequate vertical underclearance, require continuous maintenance costs and therefore, by replacing structurally deficient bridges with new or reconstructed structures, annual maintenance costs will be reduced. Maintenance costs will be reduced since the two NHS bridge projects in the TxDOT Paris District will each involve the replacement of two deficient bridges with one new bridge. Further life-cycle maintenance savings will be realized by the removal of the IH 35W NB at Alvarado bridge in Johnson County since the left-turn exit will become at-grade.

As noted in the BCA Document (**Application Attachment 2A**), this network program of NHS bridge projects promotes the efficient movement of people and goods by eliminating the need for detour routes in the event of closures to any of these bridges and therefore contributes to significant travel times savings and costs to the motorists.

Results of the Benefit-Cost Analysis

A Benefit-Cost Analysis (BCA) for this project was prepared in accordance with the requirements and outcomes specified in the INFRA Notice of Funding Opportunity and the Benefit-Cost Analysis Guidance for Discretionary Grant Programs (December 2018). The anticipated benefits and costs for this project are monetized in the BCA Attachment. The project benefits are shown in **Exhibit 19**. The net present value for the overall bridge program is shown in **Exhibit 20**. Applied to a total project cost of **$250.4 million**, a net benefit is achieved assuming a discount rate of 7 percent. Based on a 20-year project life, the overall effect of this transportation investment will result in a positive net value of **$2.248 billion**, after netting out the cost of the project. Calculations used to determine this total are discussed in more detail in the BCA Document (**Application Attachment 2**).

Exhibit 19: Total Project Benefits

Benefit Category	Benefits
	7% Discount Rate
Operation & Maintenance Costs	$(7,101,000)
Time Savings	$2,392,565,000
Air Quality Emission Savings	$737,000

Exhibit 20: Net Project Benefits

Discount Rate	Net Present Value of Total Benefits	Rounded Net Present Value of Total Benefits	Return on Investment
7 Percent	$2,248,450,000	$2.248 Billion	**7977%**

The overall net value of this transportation investment will result in a positive return on investment of **7977 percent ($2.248 billion/$250.4 million)**.

This program of projects will increase the economic competitiveness and freight mobility capabilities of the Unites States over the medium- and, especially, the long-term by modernizing critical infrastructure assets of the NHS in the North Central Texas region. Users of the NHS in the region will directly benefit from long-term travel time savings (and associated air quality benefits) from the prevention of bridge reposting and closure as projects reach the end of their useful life. Potential closure of one or several of these bridges would result in costly detours and increased level of congestion across the region.

The travel time savings incurred by rehabilitating or replacing the entire program of bridges in 2045 conditions amounts to a present value of $1.5 billion. Assuming an increasing level of growth of congestion through progressive bridge closures, where 25 percent of 2045 congestion levels are realized in 2035, total present value of travel time savings benefits are over $11.1 billion.

Decreased travel times and congestion also generate significant reduction in air quality pollutants. Over the 20-year project life, over 138 tons of nitrogen oxides and 92 tons of volatile organic compounds will be saved, as well as over 1.1 million metric tons of carbon dioxide. This is valued at a present value of $737,000 in emissions and social costs over the life of the program.

Criterion #2: Leveraging of Federal Funding

To demonstrate its support for the NHS, the RTC adopted a resolution on November 8, 2018 to approve a policy statement to focus on funding and programming that can address “poor condition” NHS bridges in support of TxDOT’s federally required bridge performance targets. This resolution is included in **Application Attachment 7**.

State legislative action in the 2013 and 2015 sessions allowed for additional transportation revenue approved by voters as Proposition 1 and Proposition 7. Proposition 1 authorized a constitutional amendment allocating a portion of the Economic Stabilization Fund derived from oil and gas revenues to be deposited in the State Highway Fund for non-tolled projects: (http://www.txdot.gov/government/legislative/state-affairs/ballot-proposition.html). Proposition 7 enabled an additional constitutional amendment to dedicate portions of revenue from the state’s general sales and use tax, as well as from the motor vehicle sales and rental tax, to the State Highway Fund for non-tolled projects: (http://www.txdot.gov/government/legislative/state-affairs/ballot-proposition-7.html). TxDOT developed the estimate for the funding available to the region from these propositions, and Texas House Bill 20 (2015) provides the mechanism for establishing funding categories and developing performance metrics to support project selection through an annually-updated Unified Transportation Program, also known as the 10-Year Plan.

Another accomplishment by the 2015 Texas Legislative Session was to eliminate several ongoing diversions of state gas taxes to various agencies and initiatives unrelated to transportation. This resulted in a projected revenue increase of as much as $650 million per year for the state. Combined with the influx in additional revenue through Proposition 1 and 7 funds, Governor Greg Abbott directed the Texas Transportation Commission generate a focused congestion relief initiative to identify and address the most congested corridor bottlenecks in the largest urban areas and work with MPOs to expedite additional capacity construction.

At the local/regional level, should funds be needed for the proposed INFRA project as a result of potential cost overruns or shortage of federal/state funds, Regional Toll Revenue (RTR) funds can be utilized by the RTC. RTR funds comprise a unique funding source, created in 2007 after the North Texas Tollway Authority (NTTA) agreed to build the 28-mile-long SH 121 extension, or Sam Rayburn Tollway (SRT), through Collin, Dallas, and Denton counties. In addition to the expedited construction of a major roadway, the NTTA agreement also enabled delivery of a $3.2 billion upfront payment in exchange for appropriate SRT operations, maintenance, and upgrades for a minimum of 52 years, and the available revenue could be applied to projects of varying types throughout the North Central Texas region. Since inception, additional payments and toll revenues from the 10-mile-long President George Bush Turnpike (PGBT) Eastern Extension, which opened in 2011, and the 12-mile-long PGBT Western Extension (also known as SH 161) completed in 2012, have increased the total RTR funds over time. These funds have helped leverage additional resources from public/private partners for a comprehensive regional list of projects/programs with total user benefits and economic values that greatly exceed the overall funds received.

Criterion #3: Potential for Innovation

Technology Innovation

Several of the NHS bridge projects will include dynamic signalizing, signal prioritization, and other Intelligent Transportation Systems strategies to reduce congestion and back-up at bridge locations. FHWA safety countermeasures that will be included in the NHS bridges projects will include median barriers, safety edges (rumble strips), enhanced delineations (larger signs and pavement markings), and wider shoulders and walkways.

In addition, some of the NHS bridge projects will be replaced or reconstructed with High Performance Concrete (HPC), which is a higher-strength dense concrete mix with an increased service life. The permeability of HPC is significantly lower than that of ordinary concrete. Lower permeability concrete reduces the ability of chlorides to attack the reinforcing steel and cause corrosion. Also, epoxy-coated reinforcement will be used to minimize chloride damage due to winter weather treatments. Epoxy-coated reinforcement is a fusion-bonded coating on the reinforcing steel that provides protection from oxidation. Epoxy-coated reinforcement increases the time to initial corrosion as compared to uncoated reinforcement.

Project Delivery Innovation

The NHS bridge projects in the Fort Worth and Paris Districts will use A+B bidding to expedite delivery and to shorten construction time. A+B bidding, also known as cost-plus-time bidding, involves time (with an associated cost) in the low bid determination. Bids consist of two components: 1) The "A" component is the traditional bid for the contract items and is the dollar amount for all work to be performed under the contract; 2) The "B" component is a "bid" of the total number of calendar days required to complete the projects, as estimated by the bidder. The bid for award consideration is based on a combination of the bid for the contract items and the associated cost of the time according to the following formula: (A) + (B x Road User Cost per Day). A disincentive provision that assesses road user costs is incorporated into the contract to discourage the contractor from overrunning the time "bid" for the project. In addition, an incentive provision may also be included to reward the contractor if the work is completed earlier than the time "bid." A+B bidding is recommended for critical projects having high road user delay costs. (6)

Many of the NHS bridges will be constructed in conjunction with other larger projects. The US 287 NB at Carey Street bridge replacement is planned to replace part of a design-build contract for the Southeast Connector Project. The US 80 EB bridge project will be a part of the reconstruction of several East Fork Trinity River Creek bridges that will also construct new frontage road creek bridges to provide significant mobility and congestion relief in the region. Combining the bridge projects with other projects will allow TxDOT to better coordinate traffic control and one-way roadway closures, thereby reducing impacts associated with construction related traffic delays.

Many of the proposed NHS bridge projects involve the replacement or reconstruction of bridges to accommodate the ultimate configuration on these NHS routes for IH 35E and would help eliminate potential bottlenecks and other conflicts at these locations. This, in turn, will facilitate the widening and added capacity on these NHS routes in the future to further reduce congestion. By completing the ultimate design on the NHS, these projects will not result in any "throw-away" infrastructure that will need to be expanded or upgraded in the future.

To further expedite project delivery, it should also be noted that TxDOT has assumed NEPA responsibilities from FHWA for environmental review, consultation, and other actions required under federal environmental law that pertain to the review or approval of a specific highway, railroad, public transportation, and multimodal projects. The responsibilities were assigned under the Surface Transportation Project Delivery Program (assignment program) codified at 23 USC 327. The assigned responsibilities are subject to the same procedural and substantive requirements as previously applied to FHWA. The assignment program does not preempt or interfere with any power, jurisdiction, responsibility, or authority of an agency, excluding FWHA, under applicable law and regulations. When TxDOT became responsible for

(6) – TxDOT Glossary (2013)

the assigned responsibilities, the TxDOT Environmental Program was updated to address the assignment program requirements. The tools in the TxDOT Environmental Compliance Toolkits explain or satisfy the requirements of the TxDOT environmental review process, which includes the assignment program requirements.

Additional information about the innovations associated with each NHS bridge project in this program is included in **Application Attachment 4**.

Criterion #4: Performance and Accountability

In addition to supporting TxDOT's federally required NHS bridge performance targets, the North Texas Strategic NHS Bridge Program implements the FHWA performance requirements identified in TxDOT's Transportation Asset Management Plan (TAMP). Pursuant to federal regulations (23 CFR 515), each state DOT must prepare a TAMP that addresses all pavements and bridges on the NHS and meets the following minimum requirements: a) description of NHS pavement and bridge assets inventory; b) statement of the asset management objective and performance measures (PM); c) performance gap identification; d) life cycle planning; e) risk management analysis; f) financial plan for a minimum of 10 years; and g) investment strategies. FHWA requires that the TAMP discuss how the plan's investment strategies collectively would make or support progress toward: a) achieving and sustaining a desired state of good repair over the life cycle of assets; b) improving or preserving the condition of the assets and the performance of the NHS assets c) achieving the state DOT targets for asset condition and performance of the NHS; and 4) achieving the national goals identified in statute. (7)

The following accountability measures are already in place to monitor implementation of this NHS bridge program and to measure state of good repair conditions and lifecycle costs:

1) Once construction has been initiated, performance and accountability would be monitored in the existing TxDOT Project Tracker web page: https://www.txdot.gov/inside-txdot/projects/project-tracker.html
2) Routine Inspections are performed on all TxDOT bridges according to a regular schedule and typically occur on a 24-month inspection frequency. If awarded INFRA funding, TxDOT can increase the frequency of these inspections.
3) TxDOT annually reports statewide bridge inspection data (including NHS bridges) to FHWA in support of the National Bridge Inventory.
4) A summary of network-level bridge information (including NHS bridges) is published on TxDOT's website (www.txdot.gov/government/reports/texas-bridges.html). Each "Report on Texas Bridges" contains bridge conditions and funding information on a biennial basis.
5) TxDOT has developed a dashboard spreadsheet containing statewide bridge data relevant to PM2 bridge performance. The intent of this spreadsheet is to inform MPOs of current bridge

(7) – TxDOT Initial Transportation Asset Management Plan (2018)

conditions in their area and to help establish a historical baseline for MPOs to set their own bridge targets if they so choose. The source of these calculations are bridge-year records which can be searched, sorted, and filtered to produce tables of bridge-by-bridge data if needed.

6) NCTCOG must include system performance reports to demonstrate its progress in achieving NHS bridge performance targets as part of its updates to the Metropolitan Transportation Plan and Transportation Improvement Program (TIP), which are both updated every two years.
7) NCTCOG currently includes status updates on NHS bridges in poor condition as part of its "Federal Performance Measures" web page (www.nctcog.org/pm).
8) NCTCOG and TxDOT have already executed a "FAST Act Planning Memoranda of Understanding" to coordinate on the sharing of NHS inventory and condition data and on the establishment of NHS bridge performance targets.

As previously noted, TxDOT will investigate performance incentive clauses as part of the A+B bidding process for some of the NHS bridge construction contracts and could potentially include these in other NHS bridge contracts. NCTCOG can request regular project updates from TxDOT as part of future RTC meetings.

To demonstrate its support for the NHS, the Regional Transportation Council for NCTCOG adopted a resolution on November 8, 2018 to approve a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT's federally required bridge performance targets. This resolution is included in **Application Attachment 7**.

VI. Project Readiness

Exhibit 20 provides a schedule overview for the North Texas Strategic NHS Bridge Program. TxDOT anticipates that all pre-construction activities can be completed prior to the INFRA program deadline of September 30, 2022 for the obligation of construction funds and that project construction can begin on any of the bridge projects prior to March 30, 2024.

Exhibit 20: Overall Program Schedule

	2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering	■	■	■	■	■	■	■	■	■	■														
Environmental/ Permitting	■	■	■	■	■	■	■	■	■	■	■	■												
Final Design (PS&E)	■	■	■	■	■	■	■	■	■	■	■	■	■	■										
Right-of-Way Acquisition								■	■	■	■	■	■	■										
Construction						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Note: Some projects started prior to year 2019. Right-of-way acquisition is not required for all projects.

NCTCOG and TxDOT staffs have determined that the NHS bridges in this program are consistent with *Mobility 2045: The Metropolitan Transportation Plan for North Central Texas* and Texas Transportation Plan 2040, the state's long-range transportation plan. Nine of the 12 bridge projects are already included in NCTCOG's TIP and the State Transportation Improvement Program (STIP). If the program is successful in receiving INFRA funds, the NCTCOG RTC and Executive Board has already approved resolutions to support its inclusion in the TIP, and the STIP is amended on a quarterly basis. Most of the bridge construction will occur within the existing right-of-way. Since 7 of the 12 bridges will not require right-of-way acquisition while the other 5 bridges will require minimal right-of-way, TxDOT has determined that an Environmental Impact Statement will not be required for any of the NHS bridge projects and that they can be environmentally cleared with a Categorical Exclusion or a Finding of No Significant Impact. Bridge construction will be streamlined through the use of A+B bidding processes and the inclusion of some bridge projects as part of larger projects.

Additional information about the schedules for each bridge project in this program is included in **Application Attachment 6**.

VII. Large/Small Project Requirements

Large Project Determination

1. *Does the project generate national or regional economic, mobility, safety benefits?*
   Yes. As noted in Section V (Merit Criterion #1), this network program of NHS bridge projects will involve upgrades to bridge structures to current design standards and to provide safety enhancements. This program will not only restore the good condition of NHS bridge infrastructure but will also include capacity improvements (including the addition of general-purpose lanes and frontage roads) to relieve congestion on several designated critical freight corridors and will improve accessibility to key intermodal facilities and major downtown employers in Dallas and Fort Worth.
2. *Is the project cost effective?*
   Yes. As noted in Section V (Merit Criterion #1), the BCA indicates that the project will result in a positive return on investment of 898 percent ($2.248 billion/$228.7 million).
3. *Does the project contribute to one or more of the Goals listed under 23 U.S.C. Code 150?*
   Yes. The North Texas Strategic NHS Bridge Program is directly aimed at maintaining the highway infrastructure asset system in a state of good repair and will assist TxDOT in meeting its federally required performance targets for NHS bridges. As noted in Section V (Merit Criterion #1), this network program of NHS bridge projects will also contribute to National Goals related to safety, congestion reduction, and freight movement and economic vitality.
4. *Is the project based on the results of preliminary engineering?*
   Information about the preliminary engineering for each NHS bridge project in this program is included in **Application Attachment 4**.

5a. *With respect to non-Federal financial commitments, does the project have one or more stable and dependable funding or financing sources to construct, maintain, and operate the project?*

Yes. As noted in Section V (Merit Criterion #2), funding for the construction, maintenance, and operation of these NHS bridge projects is expected to come from the Texas 10-Year Unified Transportation Program (UTP), which includes revenues from both non-federal and federal sources. The UTP allocates about half of its revenues for pavements and bridges.

5b. Are contingency amounts available to cover unanticipated cost increases?

As noted in Section IV, a variety of non-federal funding sources and federal funding sources can be utilized to cover potential cost overruns.

6. *Is it the case that the project cannot be easily and efficiently completed without other Federal funding or financial assistance available to the project sponsor?*

The INFRA Grant is one of the funding sources available to expedite the entire network program of NHS bridge projects rather than building individual projects or delaying the program's primary benefit of maintaining the NHS in a state of good repair and facilitating freight movement and economic vitality.

7. *Is the project reasonably expected to begin construction not later than 18 months after the date of obligation of funds for the project?*

Yes. As noted in Section VI (Project Readiness), project construction can begin on any of the bridge projects prior to March 30, 2024. Information about the schedules for each bridge project in this program is included in **Application Attachment 6**.

North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application
Attachment 2A – Benefit-Cost Analysis Documentation

North Central Texas
Council of Governments

TABLE OF CONTENTS

I. Methodology

The following description provides the methodology for the Benefit Cost Analysis (BCA) conducted for the North Texas Strategic National Highway System (NHS) Bridge Program as part of the Fiscal Year 2019 Infrastructure For Rebuilding America (INFRA) Discretionary Grant Program. The BCA will include detailed calculations of the various benefits and costs of the proposed project for the years between 2018 and 2045 for each cost and benefit factor. Benefits are assumed to begin after project completion in 2025 for a 20-year life span of the projects to 2045.

Traffic forecasts were conducted for Build and No-Build conditions in 2045 using the North Central Texas Council of Governments (NCTCOG) DFX Regional Travel Demand Model. The Dallas-Fort Worth Regional Travel Demand Model for the Expanded Area (DFX) software application implements a trip-based four-step travel demand model on the TransCAD 5.0 platform. The DFX is NCTCOG's official travel demand model, and the software is developed and maintained by the Model Development Group in the Transportation Department at NCTCOG.

DFX accepts the following input files: demographic data, roadway network, including toll roads and high-occupancy vehicle; transit system network, including rail and park-and-ride; airport enplanements; and external stations forecasts. It produces traffic volumes and speeds on roadways and transit usage data on the transit system. In addition to flexible coding tools, a smooth menu system for performing model runs, and extensive reports, the software provides a comprehensive file management system for the organization of input and output data.

This version of the travel demand model and the No-Build transportation networks were used for *Mobility 2045: The Metropolitan Transportation Plan for North Central Texas*. All projects in the program are included in the Build network scenario for horizon year 2045. With no action taken, the NHS bridge projects will all be well beyond their design life. Establishing the baseline as a "do nothing" scenario, as recommended in the BCA Guidance document, these bridges can be assumed to be permanently closed by year 2045 in the absence of major rehabilitation or replacement. Thus, the No-Build scenario was programmed by removing mainlane links from the model network where NHS roadways crossed target bridges. The Build scenario for comparison purposes in the BCA was the official year 2045 model run for *Mobility 2045.*

Project Cost

Proposed construction and maintenance and operations (M&O) costs were obtained from the Dallas, Fort Worth, and Paris district offices of the Texas Department of Transportation. Initial construction costs for each project were calculated individually. M&O costs were taken from an estimated high annual cost of $400,000 per structure. This figure was averaged per square foot area of bridge deck of the largest bridge structure by area. This resultant average was multiplied by each bridge's deck area to estimate annual M&O costs in present value dollars. This gave a consistent M&O cost across all projects. The project schedule is displayed in **VI. Project Readiness** of the INFRA Grant Application narrative. Since the Strategic NHS Bridge Program is such a large program of projects, the construction, right-of-way, engineering, and contingency funds were

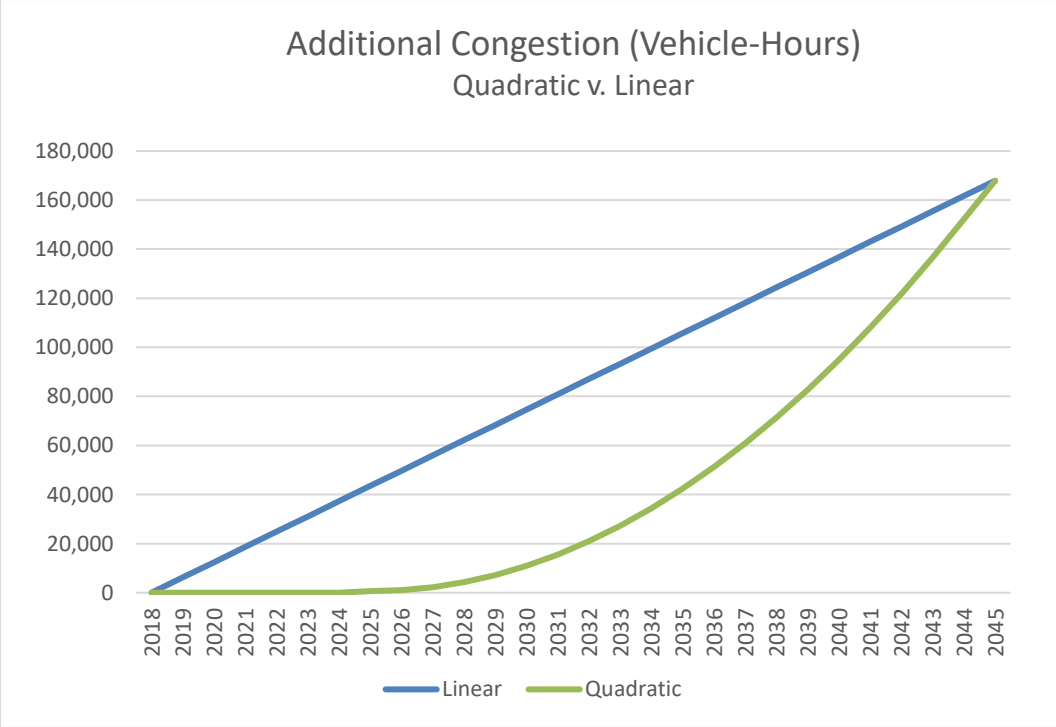
bundled together and assumed to be incurred at their completion date, with M&O costs beginning the following year. Since new Life Cycle Cost Analysis and bridge preservation methods are being implemented by state Departments of Transportation throughout the country, these historic bridge M&O estimates could be considered conservative, with decreased maintenance needs and fewer large capital expenditures required in the form of rehabilitation and replacement.

Travel Time (Mobility) Benefit

Travel time benefits were calculated based on travel demand modeling conducted for the project. Travel time benefits were calculated using the DFX travel demand model using the *Mobility 2045* roadway network for target year 2045. Performance reports of roadway alternative model runs performed on these networks using *Mobility 2045* demographics indicated a net reduction in Daily Vehicle Hours of Congestion Delay and Signal Control Delay across the region for the target year 2045.

Careful consideration was given to the amount of benefits to be realized over time, with the probability of all bridges failing by 2045 being very high, while the probability of several bridges closing or being reposted in the near future being relatively low. Thus, values for interim years between 2025 and 2045 were estimated using a quadratic equation assuming 100 percent of benefits realized in year 2035:

***Travel Time Reduction* = 1731988000 – 1710551x + 422.345x^2, *where x = Benefit Year*[1]**



[1] This function is only valid for values between 2025 and 2045

Sensitivity analysis can be conducted by adjusting the percentage of benefits realized in the attached Excel spreadsheet which shows all steps in the calculation of benefit and cost values, as well as major assumptions. This would allow for the testing of various scenarios, assuming differing outcomes of benefits realized during the program's design life.

Travel time savings reflect the reduced traffic congestion experienced by all users of transportation facilities in the region for both passenger and commercial motor vehicles, decreased hours spent behind the wheel, and an increase in mobility and quality of life. The number of commercial motor vehicles was calculated using estimates taken from the Texas Department of Transportation Statewide Planning Map: www.txdot.gov/apps/statewide_mapping/StatewidePlanningMap.html

Equation for Annual Travel Time Benefit:

$$\begin{aligned} &Annual\ Travel\ Time\ Benefit_{Auto} \\ &\quad = (\ Daily\ Vehicle\ Hours\ of\ Congestion\ Delay_{Build\ Network} \\ &\quad - Daily\ Vehicle\ Hours\ of\ Congestion\ Delay_{No-Build\ Network}) \times\ 365\ days \\ &\quad \times \frac{1.68\ Occupants}{AUTO} \times \frac{\$14.80}{hour} \end{aligned}$$

$$\begin{aligned} &Annual\ Travel\ Time\ Benefit_{Truck} \\ &\quad = (\ Daily\ Vehicle\ Hours\ of\ Congestion\ Delay_{Build\ Network} \\ &\quad - Daily\ Vehicle\ Hours\ of\ Congestion\ Delay_{No-Build\ Network}) \times\ 365\ days \\ &\quad \times \frac{\$28.60}{hour} \end{aligned}$$

Air Quality Benefits

Air quality benefits for this project are derived from reduced Vehicle Miles Traveled across the Dallas-Fort Worth region based on DFX modelling results; the emissions reduction is the difference in emissions between the Build and No-Build for the target year and each pollutant. The methodology used to calculate the total emissions for each scenario is consistent with NCTCOG's 2018 Transportation Conformity, Chapter 7 of the 2018 Transportation Conformity document: (https://www.nctcog.org/nctcg/media/Transportation/DocsMaps/Quality/Air/Chapter-7_Emission-Factors_MOVES-Model.pdf). Annual estimates were calculated for nitrogen oxides (NO_X), volatile organic compounds (VOCs), and carbon dioxide (CO_2). The emissions difference for years in between the current and horizon year were calculated in parallel with the decrease in travel times discussed in the Travel Time (Mobility) Benefit section. The annual regional reduction of emissions in short tons is multiplied by the value of that reduction in tons (short tons for NO_x and VOC, metric tons for CO_2) to yield the value of the benefit for each year.

Emission Calculations:

$$Emissions_{\text{No-Build}} = VMT_{\text{No-Build}} \times EmissionFactor_{vehicletype} \times VMTMix_{vehicletype}$$

$$Emissions_{\text{Build}} = VMT_{\text{Build}} \times EmissionFactor_{vehicletype} \times VMTMix_{vehicletype}$$

Emission Reduction Benefit 2045

$$Emissions_{\text{Build}} - Emissions_{\text{No-Build}}$$

To calculate reduction benefits in interim years, the amount of emissions reduced was assumed to grow at the same rate as the amount of travel time savings. This calculation was performed by finding the ratio of travel time savings for each year to the savings realized in 2045 and multiplying the resultant ratio for each year by the 2045 value.

Emission Reduction Benefit (Interim Years):

$$(Emissions_{\text{Build}} - Emissions_{\text{No-Build}}) \times \frac{Travel\ Time\ Savings_{InterimYear}}{Travel\ Time\ Savings_{2045}}$$

II. Analysis

The anticipated benefits and costs for this project were monetized in this BCA. The project benefits are shown in **Exhibit 1**. The net present value of the Strategic NHS Bridge Program is shown in **Exhibit 2**. Applied to a total project cost of $250.4 million, a benefit is achieved assuming a discount rate of 7 percent. Based on a 20-year project life, the overall effect of this transportation investment will result in a positive net value of $2.248 billion, after netting out the cost of the project.

Exhibit 1: Total Project Benefits

Benefit Category	Benefits
	7% Discount Rate
O&M Costs	($7,101,000)
Time Savings	$2,392,565,000
Air Quality Emission Savings	$737,000

Exhibit 2: Net Project Benefits

Discount Rate	Net Present Value of Total Benefits	Rounded Net Present Value of Total Benefits	Return on Investment
7%	$2,248,450,000	$2.248 Billion	**7977%**

The overall net value of this transportation investment will result in a return on investment of **7977 percent ($2.248 billion/$250.4 million)**.

This project will increase the economic competitiveness and overall mobility of both personal and commercial vehicles in the Dallas-Fort Worth region in the short-, medium-, and long-term by decreasing costly detours caused by reposted and closed bridges over time. Providing continued development potential, mobility, and connectivity to existing roadways throughout the region will result in direct freight and economic competitiveness benefits to all effected roadway users of the NHS, including reduced air quality emissions and auto and commercial vehicle travel time savings. Calculation of regional benefits from reduced congestion and travel times associated with the new roadways are also included in the BCA. The net present value of travel time savings to transportation system users is $2.393 billion.

III. Summary

The BCA summarizes net present value and the benefit-cost ratio (BCR) within a 7 percent discount rate scenario. Net benefits of over **$10.85 billion** over the 20-year time horizon are attainable with a BCR of **8.98. Exhibit 3** outlines a summary of costs and benefits for the North Texas Strategic NHS Bridge Program.

Exhibit 3: Benefit-Cost Analysis Summary Results

Benefit-Cost Summary Results			***Average Annual***	***Total Over 20 Years***
Life-Cycle Costs	$(250,407,368)	***ITEMIZED BENEFITS***		
Life-Cycle Benefits	$10,884,143,814	Travel Time Savings (mil. $)	$119.6	$2,392
Net Present Value	$2,248,442,363	Emissions Cost Savings (thou. $)	$108.7	$3,511
BENEFIT-COST RATIO	**8.98**	**TOTAL BENEFITS (mil. $)**	$544.2	**$10,884**
		Person Hours of Delay Saved	37,241,143	744,822,859

In accordance with the BCA Guidance, the attached unlocked Excel spreadsheet containing the BCA tables and formulas features the ability to select or remove bridge projects from the program individually. This enables reviewers to select from a menu of projects to see the approximate benefits and costs associated and the resulting BCR if certain projects are removed. This feature is located in the lower table of the "Program Costs by Project" tab in the column labelled "Project Included?" Clicking the checkbox in each row will add or remove projects from the program BCR calculation.

NOTE:
A copy of the Microsoft Excel file containing the BCA analysis tables and data is included in the North Texas Strategic National Highway System Bridge Program Grant Application submittal as part of the Fiscal Year 2019 Infrastructure for Rebuilding America Discretionary Grant Program.

North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application
Attachment 3 – Letters of Support

North Central Texas
Council of Governments

Regional Transportation Council

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

March 1, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

On behalf of the Regional Transportation Council (RTC), which serves as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth (DFW) area, I am pleased to support the United States Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the **North Texas Strategic National Highway System (NHS) Bridge Program**.

This program will involve 12 bridge projects that repair or replace several of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of some general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and state.

This program is consistent with the programs and policies in Mobility 2045: The Metropolitan Transportation Plan for North Central Texas. All federally funded surface transportation projects must also be included in the Transportation Improvement Program. If the program is successful

in receiving funds, the RTC will modify the projects as required and support their inclusion in the 2019-2022 Transportation Improvement Program for North Central Texas.

Again, the RTC fully supports the FY2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. Thank you for your time and consideration. If you have any questions, feel free to contact Michael Morris, P.E., Director of Transportation for NCTCOG at (817) 695-9241 or mmorris@nctcog.org.

Sincerely,

Gary Fickes, Chair
Regional Transportation Council
Commissioner, Tarrant County

KR:al

cc: Michael Morris, P.E., Director of Transportation, NCTCOG

MARC A. VEASEY
33RD DISTRICT, TEXAS

COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY
SUBCOMMITTEE ON DIGITAL COMMERCE AND CONSUMER PROTECTION
SUBCOMMITTEE ON ENERGY
COMMITTEE ON SMALL BUSINESS
SUBCOMMITTEE ON INNOVATION AND WORKFORCE DEVELOPMENT
SUBCOMMITTEE ON CONTRACTING AND INFRASTRUCTURE

Congress of the United States
House of Representatives
Washington, DC 20515–4333

February 19, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I am pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TxDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the

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WASHINGTON, DC 20515
(202) 225-9897

6707 BRENTWOOD STAIR ROAD, SUITE 200
FORT WORTH, TX 76112
(817) 920-9086

1881 SYLVAN AVENUE, SUITE 108
DALLAS, TX 75208
(214) 741-1387

proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, I fully support the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact Thaddeus Woody in my office (Thaddeus.woody@mail.house.gov).

Sincerely,

Marc A. Veasey
Member of Congress

SENIOR DEMOCRATIC WHIP
DEAN
TEXAS CONGRESSIONAL DELEGATION

CHAIRWOMAN
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
SUBCOMMITTEE ON WATER RESOURCES & ENVIRONMENT
SUBCOMMITTEE ON AVIATION
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS

CONGRESSIONAL BLACK CAUCUS
CHAIR, 107TH CONGRESS

Eddie Bernice Johnson
Congress of the United States
30th District, Texas

PLEASE RESPOND TO:

WASHINGTON OFFICE:
2306 RAYBURN BUILDING
WASHINGTON, DC 20515-4330
(202) 225-8885

DALLAS OFFICE:
1825 MARKET CENTER BOULEVARD
SUITE 440
DALLAS, TX 75207
(214) 922-8885

WWW.HOUSE.GOV/EBJOHNSON/
TWITTER.COM/REPEBJ
FACEBOOK.COM/CONGRESSWOMANEBJTX30
YOUTUBE.COM/REPEBJ
INSTAGRAM.COM/REPEBJ

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I am pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

The North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, I fully support the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact Jonathan Jackson in my Washington, D.C. office at 202-225-8885.

Sincerely,

Eddie Bernice Johnson

Eddie Bernice Johnson
Member of Congress

JOHN RATCLIFFE
Fourth District of Texas

PERMANENT SELECT COMMITTEE
ON INTELLIGENCE

COMMITTEE ON
HOMELAND SECURITY

COMMITTEE ON THE JUDICIARY
RANKING MEMBER
SUBCOMMITTEE ON CRIME, TERRORISM,
AND HOMELAND SECURITY

COMMITTEE ON ETHICS

Congress of the United States
House of Representatives
Washington, DC 20515

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

It was recently brought to my attention that the North Central Texas Council of Governments (NCTCOG) has applied for the US Department of Transportation's 2019 Infrastructure for Rebuilding America (INFRA) grant to support the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. These bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

It is my understanding that the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects.

223 Cannon House Office Building
Washington, DC 20515
(202) 225-6673

6531 Horizon Road, Suite A
Rockwall, TX 75032
(972) 771-0100

100 West Houston Street, 1st Floor
Sherman, TX 75090
(903) 813-5270

2600 North Robison Road, Suite 190
PO Box 5747
Texarkana, TX 75505
(903) 823-3173

For any further questions regarding NCTCOG's grant application, in accordance with existing agency rules, regulations, and ethical guidelines, please contact Kyle Roy, Communications Coordinator, at (817)-704-5610 or kroy@nctcog.org

Sincerely,

John Ratcliffe
Member of Congress

KAY GRANGER
UNITED STATES CONGRESS

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I am writing to offer my support for the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. These bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation.

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading obsolete or deficient bridges to meet current safety design standards. Other proposed improvements with this program include the addition of general-purpose lanes; improvements to bridge medians, railings, shoulders and illumination with provisions for bicycle and pedestrian accommodations.

This grant request deserves every consideration if doing so would be consistent with applicable law, rules, and regulations. If I may be of further assistance or answer any questions, please do not hesitate to contact my office.

Sincerely,

Kay Granger
Member of Congress

NATHAN JOHNSON
STATE SENATOR • DISTRICT 16

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I am pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program by supporting economic vitality, leveraging federal funding, encouraging innovation, and improving performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement endorsing funding and programming that can address "poor condition" NHS bridges, in support of TxDOT bridge

CAPITOL OFFICE
P.O. BOX 12068 • AUSTIN, TEXAS 78711-2068 • OFFICE: 512.463.0116 • FAX: 512.463.5555
nathan.johnson@senate.texas.gov

NATHAN JOHNSON
STATE SENATOR • DISTRICT 16

performance targets. TxDOT has expressed confidence that it can meet the INFRA obligations and construction deadlines for the proposed system of projects. Additionally, programmed state funds leveraged by potential INFRA grant funds would build momentum for addressing other deteriorating bridges across the region and state.

For these reasons, I fully support the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact If you have any questions, please contact me at 512-463-0116.

Sincerely,

State Senator Nathan Johnson, District 19

NMJ/ja

CAPITOL OFFICE
P.O. BOX 12068 • AUSTIN, TEXAS 78711-2068 • OFFICE: 512.463.0116 • FAX: 512.463.5555
nathan.johnson@senate.texas.gov

Committee on Administration, Vice Chair
Committee on Education
Committee on Intergovernmental Relations

Committee on State Affairs
Committee on Natural Resources
and Economic Development

Senator Pat Fallon

North Texas ★ District 30

February 27, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Our office is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, our office fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact our office at 512-463-0130.

For Texas and Liberty,

Pat Fallon, Member
State Senator - District 30

Capitol Office:
Room GE.7
P.O. Box 12068
Austin, Texas 78711
(512) 463-0130

Pat.Fallon@Senate.Texas.Gov

District Office:
3305 South Mayhill rd.
Suite 125
Denton, Texas 76208
(940) 320-6782

COMMITTEE ON EDUCATION
COMMITTEE ON HEALTH AND HUMAN SERVICES
COMMITTEE ON HIGHER EDUCATION
COMMITTEE ON NATURAL RESOURCES
& ECONOMIC DEVELOPMENT

SENATOR BEVERLY POWELL
DISTRICT 10

February 27, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao,

I am pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

The NHS Bridge Program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges, including in my home county of Tarrant. These bridge projects would be expedited through partnership with the Texas Department of Transportation (TXDOT).

The two bridge proposals for Tarrant County -- US 287 SB crossing Lancaster Ave. and US 287 NB crossing Carey Street -- are both in Senate District 10 and are key to necessary to meet our rapid growth.

The NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. These projects include general-purpose lanes to meet future traffic demand and safety features, such as medians, railings, shoulders, lighting and bicycle and pedestrian accommodations.

Again, I fully support the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact my office.

Sincerely,

Beverly Powell

Beverly Powell
Senator, District 10

CAPITOL OFFICE:
E1.712 • P.O. BOX 12068 • AUSTIN, TEXAS 78711
(512) 463-0110 • FAX: (512) 475-3745
beverly.powell@senate.texas.gov

COMMISSIONER DR. THERESA M. DANIEL
ROAD & BRIDGE DISTRICT 1

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Dallas County is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, Dallas County fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact me at 214-653-6668.

Sincerely,

Dr. Theresa M. Daniel
Dallas County Commissioner 1

411 Elm Street, Administration Building,
2nd Floor, Dallas, Texas 75202
(214) 653-6668

DALLAS COUNTY JUDGE CLAY LEWIS JENKINS

February 27, 2019

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Dallas County is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects.

Dallas County Administration Building
clay.jenkins@dallascounty.org
411 Elm Street Dallas, TX 75202 (214) 653-7949

Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, Dallas County fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact me at 214-653-7949.

Sincerely,

Clay Lewis Jenkins
Dallas County Judge

ROGER HARMON
JOHNSON COUNTY JUDGE

Carla Hester, Administrative Assistant
Rexann Knowles, Budget Coordinator

Abby Nino, Secretary
Amber Neathery, Receptionist

#2 Main St – Johnson County Courthouse, Cleburne, Texas 76033

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Johnson County is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

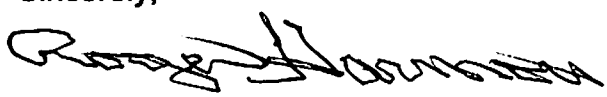
We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further

Phone 817-556-6360 Fax 817-556-6359
countyjudge@johnsoncountytx.org

demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, Johnson County fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact County Judge, Roger Harmon at 817-556-6360.

Sincerely,



Roger Harmon
County Judge

Hal Richards
COUNTY JUDGE

KAUFMAN COUNTY
KAUFMAN, TEXAS 75142

February 22, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Kaufman County is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a

policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, Kaufman County fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact me at 469-376-4137

Sincerely,

Hal Richards
Kaufman County Judge

February 25, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

PARKER COUNTY COMMISSIONERS COURT is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, Parker County Commissioners Court fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact Parker County Judge Pat Deen.

Sincerely,

Pat Deen
Parker County Judge

HUNTCOUNTY
* TEXAS *

BOBBY W. STOVALL
Hunt County Judge

Amanda L. Blankenship
Executive Assistant

903.408.4146
903.408.4299 Fax

Post Office Box 1097
Greenville, TX
75403-1097

February 28, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Hunt County is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT

bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Again, Hunt County fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact my office at 903-408-4146.

Sincerely,

Bobby W. Stovall
Hunt County

Andy Eads
Denton County Judge

February 28, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao,

Denton County is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

110 W. Hickory, Denton, Texas 76201 ▪ Second Floor, Courthouse-on-the-Square
940.349.2820 ▪ www.dentoncounty.com ▪ Andy.Eads@dentoncounty.com

Again, Denton County fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact my office.

Sincerely,

Andy Eads
Denton County Judge

FORT WORTH

February 26, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

The City of Fort Worth is pleased to support the US Department of Transportation 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All of these bridge projects will be located on or across roadways that are currently designated on the NHS, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new roadway capacity and/or multimodal accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

BETSY PRICE, MAYOR

CITY OF FORT WORTH * 200 TEXAS STREET * FORT WORTH, TEXAS 76102
(817) 392-6118 * FAX (817) 392-2409

Again, the City of Fort Worth fully supports the FY 2019 INFRA Grant application submitted by NCTCOG for the North Texas Strategic NHS Bridge Program. If you have any questions, please contact 817-392-6118.

Sincerely,

Betsy Price
Mayor

MICHAEL S. RAWLINGS
Mayor of Dallas

February 28, 2019

The Honorable Elaine L. Chao
U.S. Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I am pleased to support the U.S. DOT 2019 Infrastructure for Rebuilding America (INFRA) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the North Texas Strategic National Highway System (NHS) Bridge Program.

This program will involve the repair or replacement of fourteen of the North Texas region's most deficient bridges in the counties of Dallas, Denton, Hunt, Johnson, Kaufman, Parker and Tarrant. All projects will be located on or across current NHS roadways, and construction would be expedited through partnership with the Texas Department of Transportation (TXDOT).

In addition to meeting national performance goals to maintain highway infrastructure in a state of good repair and to ensure surface transportation system reliability, the North Texas Strategic NHS Bridge Program will enhance safety by upgrading these obsolete or deficient bridges to meet current safety design standards. Other proposed improvements associated with this program of bridge construction projects include the addition of general-purpose lanes to meet future traffic demand; improvements to vertical curvature and horizontal alignment; the installation of bridge medians, railings, shoulders and illumination; and the provision of bicycle and pedestrian accommodations. Any new capacity and/or accommodations would be consistent with recommendations from Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

We believe the North Texas Strategic NHS Bridge Program meets the key objectives of the INFRA Grant Program in supporting economic vitality, leveraging Federal funding, encouraging innovation, and ensuring performance and accountability. To further demonstrate its support for the NHS, the Regional Transportation Council (RTC) for the NCTCOG has recently adopted a policy statement to focus on funding and programming that can address "poor condition" NHS bridges in support of TxDOT bridge performance

targets. TxDOT has expressed confidence that it can meet the INFRA obligation and construction deadlines for the proposed system of projects. Additionally, programmed State funds leveraged by potential INFRA Grant funds would build momentum for addressing other deteriorating bridges across the region and State.

Thank you for your consideration of this application. If you have any questions, please contact Scott Goldstein, Chief of Policy and Communications, at 214.670.7977.

Best regards,

Michael S. Rawlings
Mayor

Lee M. Kleinman
Dallas City Council, District 11
Chair, Ad Hoc Legislative Committee

North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application Attachment 4 – Supplemental Project Descriptions

North Central Texas Council of Governments

BRIDGE #1: SH 310 AT SOUTH LAMAR, BUDD STREET, UPRR (NBI: 18-057-0-0092-01-048)

TxDOT District: Dallas
Point of Contact: Lacey Rodgers
Lacey.Rodgers@txdot.gov

Project Information:

PE Document: **PS&E**
NEPA Document: **CE**

Is the project currently programmed in or consistent with the:

- TIP: ***Yes***
- STIP: ***Yes***
- UTP: ***No***
- MPO Long Range Transportation Plan: ***Yes***
- State Freight Plan: ***Yes***

Is the project or a portion of the project current located on the National Highway Freight Network? ***No***

Is the project or a portion of the project currently located on the National Highway System? ***Yes***

- Does the project add capacity to the Interstate system? ***No***
- Is the project in a national scenic area? ***No***

Do the project components include a railway-highway grade crossing or grade separation project? ***Yes***

Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility? ***No***

Project Description:

Give a brief overview of the project including how the grant funding will be used. Please include a map or tabloid if you have one.

The SH 310 bridge at Lamar Street and Union Pacific Railroad will be reconstructed, maintaining its current alignment and capacity, 4 general purpose lanes. The inside and outside shoulder widths will be increased from 2 feet to 4 feet and 10 feet, respectively. The existing structure, built in 1953, is structurally deficient with a sufficiency rating of 37.80. The current vertical clearance is 22'-0". In order to comply with current requirements for underpasses at railroad crossings, minimum vertical clearance shall be

23'-6". The existing bridge is in poor condition and the existing rail does not meet current standards.

Project Highlights and Benefits:

- How will the project improve the movement of freight? If available, include truck counts.
  The scope of this project is to replace the bridge and approaches, and not add capacity. However, it will meet current vertical clearance criteria required for underpasses at railroad crossings upon its replacement. In addition, replacement of this structure will increase shoulder width, facilitating safe passage for traffic along this corridor. Currently the truck percentage is 4%.
- Will it improve freight congestion or bottlenecks?
  No, the scope of this project is to replace bridge and approaches, and not add capacity. However, increasing the shoulder widths will provide a safer passageway for traffic along this corridor in southeast Dallas.
- Will the project generate national or regional economic, mobility or safety benefits?
  Yes, replacing this structurally deficient bridge while increasing shoulder width will provide safety benefits.
- Will it be cost effective?
  Yes, rehabilitation of the existing bridge is not economically feasible. By replacing this structurally deficient structure, the maintenance costs will be reduced.
- Is it expected to begin construction within 18 months of funding obligation?
  Yes
- Does it utilize nontraditional financing, innovative design and construction techniques or innovative technologies?
  No
- Any public support from local groups or elected officials?
  Yes, the North Central Texas Council of Governments, and the city of Dallas support this project.
- Any additional information that would strengthen the application?
  Replacing this structurally deficient structure would provide adequate shoulder widths, as well as raise the bridge to comply with current requirements for underpasses at railroad crossings. This structure location is just outside of US 175 (S.M. Wright Project) where the reconstruction of SH 310 at South Lamar and UPRR was not included in order to reduce the cost of US 175 (S.M. Wright Project), a Dallas District Key Planning Project. In its current state, the SH 310 structure incurs high maintenance costs for rehabilitation every year. It is not feasible to continue rehabilitating this structure; therefore, replacing the structure is a more optimal solution.

Photo 1 - Roadway view looking north

Photo 10 - Typical curb spall with exposed reinforcing, looking northwest

Photo 14 - Asphalt over Bent 4, 5" W crack, looking east

Photo 15 - Asphalt over Bent 7, full width x up to 9" L x 3" D transverse crack with spalling, looking east

Photo 19 - South abutment, looking east, typical bearing with severe laminar corrosion

Photo 27 - Bent 15, east column, bottom 6' with 1" D spalling

BRIDGE #2: LOOP 12 NB TO IH 35 NB AT IH 35E SB (NBI: 18-057-0-0196-03-190)

TxDOT District: Dallas
Point of Contact: Lacey Rodgers
Lacey.Rodgers@txdot.gov

Project Information:

PE Document: **Schematic**
NEPA Document: **EA/FONSI**

Is the project currently programmed in or consistent with the:

- TIP: ***No***
- STIP: ***No***
- UTP: ***No***
- MPO Long Range Transportation Plan: ***Yes***
- State Freight Plan: ***Yes***

Is the project or a portion of the project current located on the National Highway Freight Network? ***Yes***

Is the project or a portion of the project currently located on the National Highway System? ***Yes***

- Does the project add capacity to the Interstate system? ***No***
- Is the project in a national scenic area? ***No***

Do the project components include a railway-highway grade crossing or grade separation project? ***Yes***

Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility? ***No***

Project Description:

Give a brief overview of the project including how the grant funding will be used. Please include a map or tabloid if you have one.

Loop 12 northbound to IH 35 northbound at IH 35E southbound currently consists of 3 general purpose lanes spanning over IH 35E southbound which also carries 3 general purpose lanes. Loop 12 northbound to IH 35 northbound also serves as a major connection onto IH 35E. The existing structure, built in 1970, is structurally deficient with a sufficiency rating of 65. The current vertical clearance is 16'-8". The superstructure is in poor condition where there is advanced deterioration in the steel members. This project area is surrounded by commercial development with heavy traffic that would benefit by

the added capacity of this project. Replacing this structurally deficient bridge and reconstructing it to accommodate the ultimate configuration for IH 35E would help eliminate potential conflicts at this location, thus facilitating the widening and added capacity of IH 35E, while also improving mobility through this corridor.

Project Highlights and Benefits:

- How will the project improve the movement of freight? If available, include truck counts.
  The project is located on the IH 35 corridor that acts as a major north-south freight corridor. Raising the structure to provide 18'-6" of vertical clearance will make it compliant with FHWA's requirements for Freight Network corridors. Currently, the truck percentage is 10%.
- Will it improve freight congestion or bottlenecks?
  Yes, the scope of this project is to replace the bridge and approaches while accommodating the added capacity along IH 35E which will improve congestion along this corridor.
- Will the project generate national or regional economic, mobility or safety benefits?
  Yes, replacing this structurally deficient bridge will provide safety to the traveling public, as well as add more mobility once the vertical clearance issues are addressed.
- Will it be cost effective?
  Yes, rehabilitation of the existing bridge is not economically feasible. By replacing this structurally deficient structure, the maintenance costs will be reduced. In addition, this project does not construct any "throw-away" infrastructure. The proposed project completes the ultimate design.
- Is it expected to begin construction within 18 months of funding obligation?
  Yes
- Does it utilize nontraditional financing, innovative design and construction techniques or innovative technologies?
  No
- Any public support from local groups or elected officials?
  Yes, our local MPO, the North Central Texas Council of Governments, and the city of Dallas support this project.
- Any additional information that would strengthen the application?
  The IH 35E Project (SH 183 to Loop 12), part of the Dallas District Key Planning Projects, increases capacity to accommodate growth along the corridor, reconstructing and widening IH 35E from 6 to 8 general purpose lanes. Replacing this structurally deficient bridge and reconstructing it to accommodate the ultimate configuration for IH 35E would help eliminate potential conflicts at this location. This will facilitate the widening and added capacity of IH 35E which will improve congestion along this corridor. More information about the IH 35E corridor project can be found under the following link:
  http://www.keepitmovingdallas.com/sites/default/files/docs/0703_011117_SH%20183%20to%20LP%2012_WINTER%202017%20white%20paper.pdf

ROADWAY VIEW

Looking North

CRACKED DECK

Looking West

NOTE: Extensive minor transverse cracking & minor spalling with some exposed steel on top of deck at north span near north interior bent, but most spalls are patched with asphalt.

MISSING POST

Looking Northeast

NOTE: One steel post is missing on east bridge rail at south span near south abutment.

SHIFTED PIN

Looking Southeast

NOTE: East cotter pin is missing & bearing pin has shifted up to ~2" on 3rd bearing from west over south abutment.

DEBRIS

Looking Northwest

NOTE: Moderate amount of dirt & gravel accumulated on top of north abutment cap around bearings.

BRIDGE #3: ST. FRANCIS AVENUE NB & SB AT IH 30 (NBI: 18-057-0-0009-11-196 & 372)

TxDOT District: Dallas
Point of Contact: Lacey Rodgers
Lacey.Rodgers@txdot.gov

Project Information:

PE Document: **Schematic**
NEPA Document: **EA/FONSI**

Is the project currently programmed in or consistent the:

- TIP: ***Yes***
- STIP: ***Yes***
- UTP: ***Yes***
- MPO Long Range Transportation Plan: ***Yes***
- State Freight Plan: ***Yes***

Is the project or a portion of the project current located on the National Highway Freight Network? ***Yes***

Is the project or a portion of the project currently located on the National Highway System? ***Yes***

- Does the project add capacity to the Interstate system? ***Yes***
- Is the project in a national scenic area? ***No***

Do the project components include a railway-highway grade crossing or grade separation project? ***No***

Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility? ***No***

Project Description:

Give a brief overview of the project including how the grant funding will be used. Please include a map or tabloid if you have one.

The St. Francis Avenue northbound and southbound bridges at IH 30 will be reconstructed from just south of East R.L. Thornton Freeway to Highland Road. From East R.L. Thornton Freeway to Highland Road, the project configuration will change from an underpass to an overpass (IH 30 over St Francis Road) and widen from 4 to 6 general purpose lanes with continuous left-turn lanes. The existing structure, built in 1959, is structurally deficient with a sufficiency rating of 42.80. The current vertical clearance is 14'-4" for northbound St. Francis and 15'-0" for southbound St. Francis. The bridge deck is in poor condition and

the steel I-beams have significant overheight impact damage due to inadequate vertical underclearance. The bridge is currently load posted at 28,000 lbs. and axle or tandem at 15,000 lbs. This project location is surrounded by commercial development with heavy traffic that would benefit by the added capacity of this bridge replacement. In addition, the proposed project will accommodate the additional capacity being added to the IH 30 corridor through a concurrent project.

Project Highlights and Benefits:

- How will the project improve the movement of freight? If available, include truck counts.
  The project is located on the IH 30 corridor that acts as a major east-west freight corridor. By flipping the vertical configuration, the need to provide a vertical clearance for the freight network would be eliminated. Currently, the truck percentage at IH 30 under St. Francis Avenue is 8%.
- Will it improve freight congestion or bottlenecks?
  Yes, the scope of this project is to replace the bridge and approaches while accommodating the added capacity along IH 30 which will improve congestion along this corridor, as well as reduce congestion to adjacent local businesses.
- Will the project generate national or regional economic, mobility or safety benefits?
  Yes, the area has recently experienced significant growth and, as a result, has experienced congestion in both the AM and PM peaks. The additional capacity and operations improvements will increase mobility through the corridor, as well as enhance safety.

- Will it be cost effective?
  Yes, the project does not construct any "throw-away" infrastructure. The proposed project completes the ultimate design. In addition, replacing the existing structures will facilitate efficient movement of people and goods and provide safety to the traveling public, reducing the high maintenance costs to rehabilitate this bridge.
- Is it expected to begin construction within 18 months of funding obligation?
  Yes
- Does it utilize nontraditional financing, innovative design and construction techniques or innovative technologies?
  Signals and ITS
- Any public support from local groups or elected officials?
  Yes, the North Central Texas Council of Governments and the city of Dallas support this project.
- Any additional information that would strengthen the application?
  Replacing these structurally deficient structures and reconstructing them would accommodate and facilitate the widening and added capacity of IH 30. IH 30 is one of the Dallas District's Key Planning Projects and provides added capacity from IH 45 to Bass Pro Drive. By reversing the vertical configuration of St. Francis northbound & southbound to become an overpass to IH 30 would eliminate the need of conforming to the current vertical clearance standards affecting IH 30. These structures, having

been subject to impact damage due to inadequate vertical underclearance, require continuous maintenance costs and therefore, it is not feasible to continue rehabilitating these structures. More information about the IH 30 corridor project can be found under the following link: http://www.keepitmovingdallas.com/sites/default/files/docs/0657_010517_IH%2030_US%2080_and%20The%20CanyonProjects.pdf

ROADWAY VIEW

Looking South

ROADWAY VIEW

Looking North

ROADWAY
UNDER BRIDGE

Looking West

NOTE: WBML

ROADWAY
UNDER BRIDGE

Looking East

NOTE: EBML

LOAD POSTING -
SOUTH APPROACH

Looking North

DECK CRACKING

Looking South

NOTE: Top of deck has extensive transverse cracking hairline to 1/16' wide & up to 1/4" wide at top surface.

DECK SPALLING
SPAN 2

Looking West

NOTE: Top of deck has 3' x 3' spalled area with exposed steel & spalled areas patched with asphalt.

SPALLED JOINT
HEADER SPAN 1

Looking East

NOTE: Joint header (top of backwall) at north bridge end has 2.5' long spalled area with exposed sreel.

OVERHEIGHT
IMPACT DAMAGE

Looking South

NOTE: Bottom flange of east interior beam in Span 2 (over WBML) has been bent approx. 2" laterally from impact.

OVERHEIGHT
IMPACT DAMAGE

Looking South

NOTE: Bottom flange of west beam in Span 3 (over EBML) has small side bends & scrape marks from previous impact.

BRIDGE #4: FM 3163 (MILAM) AT IH 35 (NBI: 18-061-0-0195-02-065)

TxDOT District: Dallas
Point of Contact: Lacey Rodgers
Lacey.Rodgers@txdot.gov

Project Information:

PE Document: **Schematic**
NEPA Document: **EA/FONSI**

Is the project currently programmed in or consistent with the:

- TIP: ***Yes***
- STIP: ***Yes***
- UTP: ***No***
- MPO Long Range Transportation Plan: ***Yes***
- State Freight Plan: ***Yes***

Is the project or a portion of the project current located on the National Highway Freight Network? ***Yes***

Is the project or a portion of the project currently located on the National Highway System? ***Yes***

- Does the project add capacity to the Interstate system? ***Yes***
- Is the project in a national scenic area? ***No***

Do the project components include a railway-highway grade crossing or grade separation project? ***No***

Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility? ***No***

Project Description:

Give a brief overview of the project including how the grant funding will be used. Please include a map or tabloid if you have one.

The FM 3163 (Milam) bridge at IH 35 consists of 2 general purpose lanes and is an underpass to 3 major crossings: IH 35 northbound, IH 35 southbound, and the IH 35 northbound frontage road. The existing structure, built in 1958, is structurally deficient with a sufficiency rating of 62.8. The current vertical clearance is 16'-6". In order to meet vertical clearance requirements for a freight network, the vertical clearance shall be 18'-6". The superstructure is in poor condition with extensive deterioration on the bridge deck with impact damage on the superstructure. The current roadway width is 26 feet with

inadequate shoulders for the functional classification of the road. The reconstruction of this structure would also provide a more reliable crossing for truck traffic entering and exiting the truck stop on the southeast corner of FM 3163 at IH 35. Additionally, this reconstruction will align with the Denton County outer loop providing an interchange with direct connectors servicing the westbound/eastbound outer loop to IH 35 northbound/southbound and vice versa.

Project Highlights and Benefits:

- How will the project improve the movement of freight? If available, include truck counts.
  The project is located on the IH 35 corridor that acts as a major north-south freight corridor. Raising the structure to provide 18'-6" of vertical clearance will make it compliant with FHWA's requirements for Freight Network corridors. Currently, the truck percentage is 26%.
- Will it improve freight congestion or bottlenecks?
  Yes, the scope of this project is to replace the bridge and approaches while accommodating the added capacity along IH 35 which will improve congestion along this corridor. Additionally, this project will align with the Denton County outer loop, providing an interchange with direct connectors improving mobility.
- Will the project generate national or regional economic, mobility or safety benefits?
  Yes, replacing this structurally deficient bridge will provide safety to the traveling public, as well as add more mobility once the vertical clearance issues are addressed. The existing structure is subject to impacts by heavy truck traffic due to current turn radii and inadequate shoulder widths.
- Will it be cost effective?
  Yes, replacing the existing structure will increase mobility by eliminating detour routes and facilitate efficient movement of people and goods and provide safety to the traveling public and protection to the structure.
- Is it expected to begin construction within 18 months of funding obligation?
  Yes
- Does it utilize nontraditional financing, innovative design and construction techniques or innovative technologies?
  Signals and ITS
- Any public support from local groups or elected officials?
  Yes, our local MPO, the NCTCOGs, and Denton County support this project.
- Any additional information that would strengthen the application?
  Due to the structural deficiency, this structure must be replaced. Replacement of this structure would also allow for the shoulder width to increase from 2 feet to 10 feet; therefore, minimizing impact to the rails as this area carries heavy truck traffic and services a nearby truck stop. Would accommodate the added capacity along IH 35 which will improve congestion along this corridor, as well as align with the Denton County outer loop, providing an interchange with direct connectors servicing WB/EB outer loop to IH 35 NB/SB and vice versa. Link about the IH 35 corridor project: http://www.keepitmovingdallas.com/sites/default/files/docs/IH35_SCHEMATIC_ROLLS.pdf

BRIDGE ROADWAY LOOKING WEST

IMPACT DAMAGE TO THE SOUTH BRIDGE RAIL IN SPAN 5 LOOKING EAST

IMPACT DAMAGE ON RECENTLY REPAIRED CONCRETE APPROACH RAIL AT NW CORNER LOOKING NORTHEAST

FIRE DAMAGE WITH SMOKE STAINS ON BEAMS AND DECK SOFFIT IN SPAN 4 LOOKING EAST

COLLISION PROTECTION SYSTEM OF NBFR AT SE CORNER HAS BEEN REPAIRED
LOOKING NORTH

BRIDGE #5: US 80 EB AT EAST FORK TRINITY RIVER (NBI: 18-130-0-0095-03-072)

TxDOT District: Dallas
Point of Contact: Lacey Rodgers
Lacey.Rodgers@txdot.gov

Project Information:

PE Document: **Schematic**
NEPA Document: **EA/FONSI**

Is the project currently programmed in or consistent with the:

- TIP: ***Yes***
- STIP: ***Yes***
- UTP: ***Yes***
- MPO Long Range Transportation Plan: ***Yes***
- State Freight Plan: ***Yes***

Is the project or a portion of the project current located on the National Highway Freight Network? ***No***

Is the project or a portion of the project currently located on the National Highway System? ***Yes***

- Does the project add capacity to the Interstate system? ***No***
- Is the project in a national scenic area? ***No***

Do the project components include a railway-highway grade crossing or grade separation project? ***No***

Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility? ***No***

Project Description:

Give a brief overview of the project including how the grant funding will be used. Please include a map or tabloid if you have one.

US 80 eastbound at the East Fork Trinity River bridge consists of 2 general purpose lanes. The existing structure, built in 1955, spans a length of 1,415 feet over the East Fork Trinity River, and is structurally deficient with a sufficiency rating of 55.20. The substructure is in poor condition with deterioration affecting the structural capacity. The proposed project will accommodate the additional capacity being added to the US 80 corridor through a concurrent project. The INFRA Grant funds will cover the reconstruction of this structure.

Project Highlights and Benefits:

- How will the project improve the movement of freight? If available, include truck counts.
  The scope of this project is to replace the bridge and approaches while accommodating the added capacity along US 80 which will improve the movement of freight. Currently the truck percentage is 24%.
- Will it improve freight congestion or bottlenecks?
  Yes, the scope of this project is to replace the bridge and approaches while accommodating the added capacity along US 80 which will improve congestion along this corridor.
- Will the project generate national or regional economic, mobility or safety benefits?
  Yes, replacing this structurally deficient structure will provide safety to the traveling public, as well as increase mobility for ultimate configuration.
- Will it be cost effective?
  Yes, replacing the existing structure will facilitate efficient movement of people and goods, and provide safety to the traveling public while reducing the high maintenance costs to rehabilitate the bridge.
- Is it expected to begin construction within 18 months of funding obligation?
  Yes
- Does it utilize nontraditional financing, innovative design and construction techniques or innovative technologies?
  ITS
- Any public support from local groups or elected officials?
  Yes, our local MPO, the North Central Texas Council of Governments, Kaufman County, and the city of Forney support this project.
- Any additional information that would strengthen the application?
  Replacing this structurally deficient structure and reconstructing it would accommodate and facilitate the widening and added capacity of US 80. This bridge can potentially be replaced without right-of-way acquisition. US 80 is one of the Dallas District's Key Planning Projects and provides continuous frontage roads and added capacity from IH 30 in Dallas County to FM 460 in Kaufman County. The District is committed to delivering this eastern most segment of this corridor from Lawson Road to FM 460 which includes the reconstruction of several East Fork Trinity River Creek bridges, and constructing new frontage road creek bridges to provide significant mobility and congestion relief in the region. More information about the aforementioned projects can be found under the following link: http://www.keepitmovingdallas.com/sites/default/files/docs/0657_010517_IH%2030_US%2080_and%20The%20CanyonProjects.pdf

DATE: 27 FEB 2018
COUNTY: 130
CONT-SEC: 0095-03
STR: 072

ROADWAY OVER BRIDGE

Looking East

DATE: 27 FEB 2018
COUNTY: 130
CONT-SEC: 0095-03
STR: 072

DECK SPALLS
Span 33

Looking Northwest

NOTE: 1. The edges of deck in Spans 33, 34. 35 & 41, 43 have severe spalls with exposed rebar and post connection members due to railing impacts. The impact spalls in these areas have left little embedment of the rail post connections affecting the effectiveness of the railing.

DECK SPALLS
Spans 34 & 35

Looking Northeast

DECK SPALLS
Span 43

Looking East

NOTE: 1. The spalling is so severe in Span 43 that one steel post is no longer connected with the deck.

DATE: 27 FEB 2018

COUNTY: 130

CONT-SEC: 0095-03

STR: 072

ASPHALT CRACKING
East Abutment

Looking North

NOTE: 1. Asphalt over the East abutment has moderate cracking on the North side and a failing asphalt patch on the South side. The joint has vegetation growing where the asphalt has failed.

ASPHALT CRACKING
West Abutment

Looking North

NOTE: 1. The asphalt over the West abutment has moderate cracking in the shoulder areas and recent asphalt patches in center of roadway.

BRIDGE #6: FM 460 AT US 80 (NBI: 18-130-0-0095-03-074)

TxDOT District: Dallas
Point of Contact: Lacey Rodgers
Lacey.Rodgers@txdot.gov

Project Information:

PE Document: **Schematic**
NEPA Document: **EA/FONSI**

Is the project currently programmed in or consistent with the:

- TIP: ***Yes***
- STIP: ***Yes***
- UTP: ***Yes***
- MPO Long Range Transportation Plan: ***Yes***
- State Freight Plan: ***Yes***

Is the project or a portion of the project current located on the National Highway Freight Network? ***No***

Is the project or a portion of the project currently located on the National Highway System? ***Yes***

- Does the project add capacity to the Interstate system? ***No***
- Is the project in a national scenic area? ***No***

Do the project components include a railway-highway grade crossing or grade separation project? ***No***

Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility? ***No***

Project Description:

Give a brief overview of the project including how the grant funding will be used. Please include a map or tabloid if you have one.

FM 460 at the US 80 bridge is an underpass structure over US 80 consisting of 1 lane in each direction. The existing structure, built in 1955, spans a length of 192 feet over the US 80 westbound and US 80 eastbound mainlanes and is functionally obsolete with a sufficiency rating of 58. The structure has a vertical clearance of 16'-1". The proposed project will reconstruct this interchange and add lane capacity to the FM 460 bridge, as well as accommodate the additional capacity being added to the US 80 corridor through a concurrent project. In order to comply with current requirements along the US 80 corridor

project, the vertical clearance of this FM 460 structure shall be increased to 18'-6" which requires the structure to be reconstructed. The INFRA Grant funds will cover the reconstruction costs of this structure.

Project Highlights and Benefits:

- How will the project improve the movement of freight? If available, include truck counts.
  The scope of this project is to replace the bridge and approaches while accommodating the added capacity along US 80 which will improve the movement of freight. Additionally, the current vertical clearance on this structure will be reconstructed from the current 16'-1", which does not meet current design criteria, to 18'-6", improving the movement of freight. Currently the truck percentage is 24%.
- Will it improve freight congestion or bottlenecks?
  Yes, the scope of this project is to replace the bridge and approaches while accommodating the added capacity along US 80 which will improve congestion along this corridor. Additionally, the scope of this project will add Texas U-turn lanes that would improve mobility.
- Will the project generate national or regional economic, mobility or safety benefits?
  Yes, replacing this functionally obsolete low rating structure, which crosses a heavily traveled US highway across the state of Texas, would provide safety to the traveling public, as well as increase mobility for ultimate configuration.
- Will it be cost effective?
  Yes, replacing the existing structure will facilitate efficient movement of people and goods and provide safety to the traveling public, reducing the high maintenance costs to rehabilitate this bridge.
- Is it expected to begin construction within 18 months of funding obligation?
  Yes
- Does it utilize nontraditional financing, innovative design and construction techniques or innovative technologies?
  Signals and ITS
- Any public support from local groups or elected officials?
  Yes, our local MPO, the North Central Texas Council of Governments, Kaufman County, and the city of Forney support this project.
- Any additional information that would strengthen the application?
  Replacing this functionally obsolete structure and reconstructing it would accommodate and facilitate the widening and added capacity of US 80. US 80 is one of the Dallas District's Key Planning Projects and provides continuous frontage roads and added capacity from IH 30 in Dallas County to FM 460 in Kaufman County. The District is committed to delivering this eastern most segment of this corridor from Lawson Road to FM 460, which includes the reconstruction of several East Fork Trinity River Creek bridges, and constructing new frontage road creek bridges to provide significant mobility and congestion relief in the region. The FM 460 underpass is the eastern most interchange in this breakout project and is critical to

continuing the mobility and congestion relief through this corridor. More information about the aforementioned projects can be found under the following link:
http://www.keepitmovingdallas.com/sites/default/files/docs/0657_010517_IH%2030_US%2080_and%20The%20CanyonProjects.pdf

-

DATE: 26 FEB 2018
COUNTY: 130
CONT-SEC: 0095-03
STR: 074

ROADWAY OVER BRIDGE

Looking Southwest

DATE: 26 FEB 2018
COUNTY: 130
CONT-SEC: 0095-03
STR: 074

CRACKING/SPALLING
SW Abutment3

Looking Southeast

NOTE: 1. Asphalt has minor to moderate cracking (some of the cracking has been sealed). Asphalt has more advanced deterioration at the abutments. Asphalt is breaking apart and exposing the joint.

EXPOSED REBAR
NW Corner

Looking Southwest

NOTE: 1. The NW curb at the NE end of the bridge has moderate spalling with exposed rusted rebar (~5 LF).

DATE: 26 FEB 2018

COUNTY: 130

CONT-SEC: 0095-03

STR: 074

EXPOSED REBAR
Span 1

Looking Southeast

NOTE: 1. Soffit of deck and overhangs also has minor to moderate spalls with exposed rebar (some severely corroded rebar).

EXPOSED RUSTED REBAR
Span 1

Looking Southwest

NOTE: 1. Soffit of deck overhangs have moderate scaling and spalling with exposed corroded rebar (mostly at the construction joints). Some of the spalling has exposed the rail post connections.

BRIDGE #7: IH 30 at FM 1903 (NBI: 01-117-0009-13-173)

TxDOT District: Paris
Point of Contact: Dan Perry
Dan.Perry@txdot.gov

Project Information:

PE Document: EA/FONSI
NEPA Document: EA/FONSI

Current Bridge Description:

01-117-0-0009-13-163 = IH 30 at FM 1903 WB – Built 1958
01-117-0-0009-13-164 = IH 30 at FM 1903 EB – Built 1958

Project Description:

- Will be a replacement (1 bridge for 2)
- Will be built to accommodate 6 main-lanes (adding 2), but will only carry 4 until larger roadway project is constructed

Project Schedule:

- TIP year 2026; Is in the 2/19 STIP revision (not yet approved).
- Pushing to let this project in 2022/2023
- Will likely be let with FM 1570 bridge replacement for traffic control and one-way FR conversion purposes

BRIDGE #8: IH 30 at FM 1565 (NBI: 01-117-0009-13-169)

TxDOT District: Paris
Point of Contact: Dan Perry
Dan.Perry@txdot.gov

Project Information:

PE Document: EA/FONSI
NEPA Document: EA/FONSI

Current Bridge Description:

01-117-0-0009-13-159 = IH 30 at FM 1565 N WB – Built 1958
01-117-0-0009-13-160 = IH 30 at FM 1565 N EB – Built 1958

Project Description:

- The 2 FM 1565 bridges will be replaced with a single structure that will service both FM 1565 North and FM 1565 South (offset)
- Will be a replacement (1 bridge for 2) and will be relocated to correct offset alignment of FM 1565
- Will be built to accommodate 6 main-lanes (adding 2) but will only carry 4 until larger roadway project is constructed

Project Schedule:

- TIP year 2022; added to STIP in July 2018
- Will likely be let with other bridge replacements (probably FM 36 & CR 2509) for traffic control and one-way FR conversion purposes

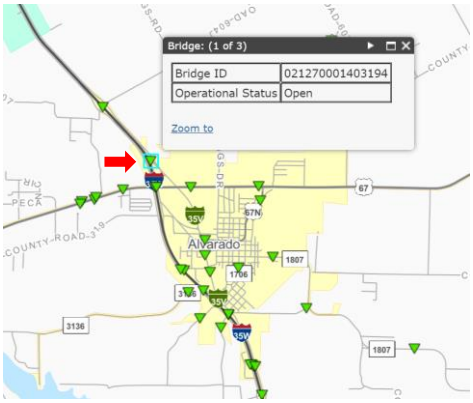
BRIDGE #9: IH 35W NB AT IH 35W SB ALVARADO EXIT (NBI: 02-127-0014-03-194)

TxDOT District: Fort Worth
Point of Contact: Ricardo Gonzalez
Ricardo.Gonzalez@txdot.gov

Project Information:

PE Document: CE
NEPA Document: CE

Project Location:



Current Bridge Description/Condition:

- Built in 1963
- Design load – HS20
- Steel beam superstructure
- The deck has been repaired 3 times and there are several other areas that are being monitored by Johnson County and Bridge

Project Description: ***Removal***

Current left-hand exit from southbound IH 35W to BU 35W has been closed and redirected to the US 67 exit. The operational improvements for this area will eliminate the use of the left-hand exit, and the removal of the bridge will allow the northbound IH 35W mainlanes to be at-grade. This will remove any life-cycle maintenance for future structure. The project will also consist of realigning northbound IH 35W to improve the degree of curvature and will allow for further expansion as necessary along the mainlanes of IH 35W. Other operational improvements will provide a frontage road section from US 67 for County Road 604. Also, ramp configuration changes will improve operational improvements and accessibility of the area.

Schematic Dimensions:

- Roadway width: 40 feet (minimum)
- Increased design speed for northbound IH 35W
- Install cable barrier or rigid barrier to address potential cross over incidents
- Eliminate future bridge maintenance
- Operational ramp improvements
- Addition of frontage road (accessibility)
- TIP/STIP: Yes

Maintenance/Operation:

- M&O cost within last 10 years: $4.36M ($8,500 – annually; $4.3M – bridge replacement)
- Expected M&O Cost: $0

Note: The maintenance and operational costs associated to M&O cost above the standard routine maintenance operations.

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ROADWAY VIEW

Looking North

SIDE VIEW

Looking South

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SUPERSTRUCTURE VIEW

Looking Northwest

ROADWAY UNDER BRIDGE

Looking West

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COUNTY: 127

CONT-SEC: 0014-03

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BOTTON OF CONCRETE DECK

Looking North

NOTE: Repairs preformed since 2014 inspection in north span at north abutment and bent 2 from north, span 2 from north, at bent 3 from north.

WEST OVERHANG AND TOP OF BEAM 6

Looking East

NOTE: The bottom of west overhang and the top of beam 6 from north have minor spalls with exposed steel.

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BEAMS 6 IN SPAN 2

Looking East

NOTE: Beams 3-6 from west in span 2 from north have multiple overheight impact scrapes, and west beam of span 2 from north is bent up to 1" out of alignment.

BEAMS HAVE RUST AND PITTING

Looking Southwest

NOTE: Moderate flaking with rust and moderate pitting along the top flanges of multiple beams.

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TOP FLANGE OF DIAPHRAGMS

Looking Southwest

NOTE: Severe section loss to knife edge from 5/8" original thickness of the top flange of diaphragms due to transverse construction joint leakage.

ASPHALT SURFACE AT CONSTRUCTION JOINT

Looking East

NOTE: Minor spalls on asphalt surface at construction joints.

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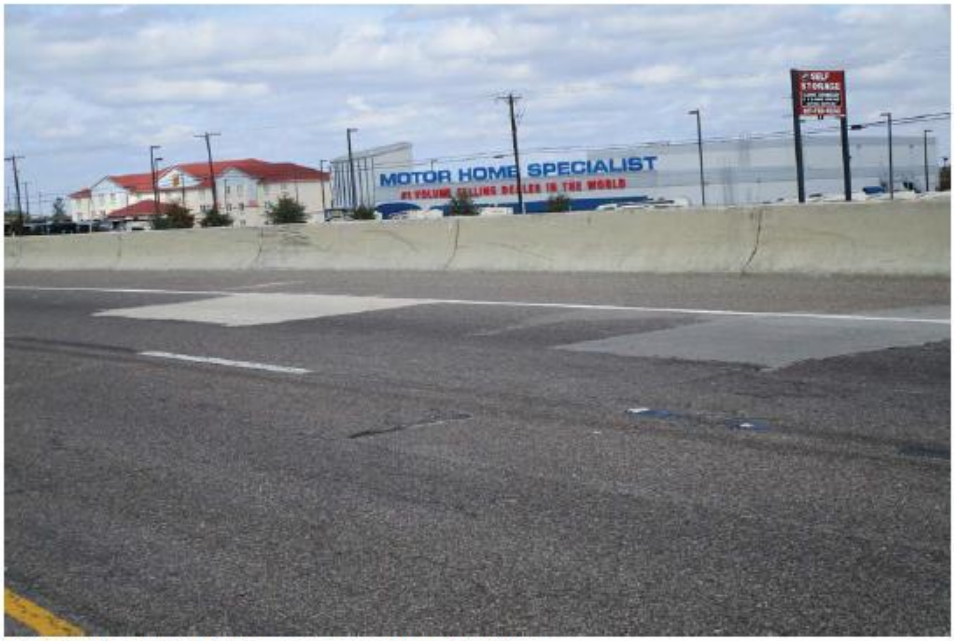
ASPHALT SURFACE AT NORTH ABUTMENT JOIN

Looking Southeast

NOTE: Minor spalls on asphalt surface at north abutment joint.



ASPHALT SURFACE

Looking Northeast

NOTE: The asphalt surface has several repair patches.

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RIPRAP AT SW CORNER

Looking South

NOTE: A section (20' x 8') of riprap has cracked and settled 8" at SW corner, the riprap is undermined up to 2' in that area.

APPROACH ASPHALT NEAR JOINTS

Looking Southeast

NOTE: Minor spalling on approach asphalt near relief joints with minor debris in the joints.

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NW GUARDFENCE POST & END OF WINGWALL

Looking East

NOTE: Moderate erosion due to roadway runoff has undermined end of wingwall and has exposed base of guardfence post at NW corner.

RIPRAP SHIFTED AWAY FROM ABUTMENT CAP

Looking North

NOTE: A section (20' x 8') of concrete riprap has broken off and has shifted 8" away from abutment cap and riprap.

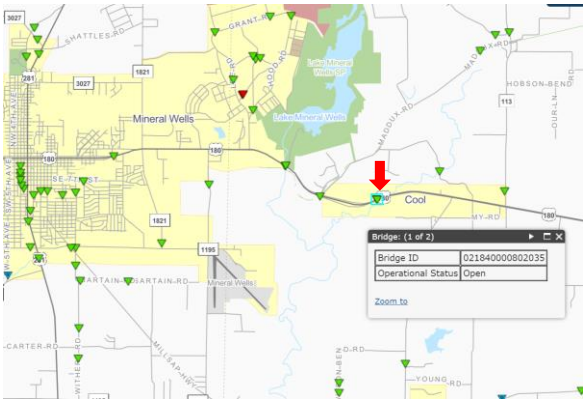
BRIDGE #10: US 180 WB AT DRY CREEK (NBI: 02-184-0008-02-035)

TxDOT District: Fort Worth
Point of Contact: Ricardo Gonzalez
Ricardo.Gonzalez@txdot.gov

Project Information:

PE Document: CE
NEPA Document: CE

Project Location:



Current Bridge Description/Condition:

- Built in 1937
- Original design load – 2-15 ton trucks
- Widened in 1958
- Concrete T-beam superstructure
- Parker/Palo Pinto County Maintenance is actively monitoring the deck and repairing potholes

Project Description: ***Replacement***

Remove and replace bridge structure for eastbound US 180, due to the concerns of the bridge deck and continual maintenance of the deck surface. Additional concerns within the area include erosion within the creek bed and slopes under the structure. The project will also repair all existing erosion concerns and drainage around the structure. In addition, armoring of the creek bed with rock riprap to eliminate/minimize scour and erosion concerns due to high velocities within the creek. Elevation of the structure to be raised to match the westbound structure. Updated rail, shoulder widths to desirable, armoring, high performance concrete, delineation, bridge end treatment to MASH compliance, and approaches.

Schematic Dimensions:

- Roadway: 44 feet
- Increase shoulder width to match roadway section
- Update approaches: safety features, rails, delineation, bridge end treatments, etc.
- Channel armoring to address scour and slope erosion due to channel velocity
- Rumble strips, center barrier (cable/rigid)
- TIP/STIP: No

Maintenance/Operation:

- M&O cost within last 10 years: $1.06M ($6,000 – annually; $1M – slab replacement cost)
- Expected M&O Cost: $0

Note: The maintenance and operational costs associated to M&O cost above the standard routine maintenance operations.

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ROADWAY VIEW

Looking Southwest

SIDE VIEW

Looking East

NOTE: Vehicle impact damage to bridge railing & approach guardfence transition section at NW bridge corner has bent first two rail posts of north bridge railing at this location outward up to 1'. Temporary traffic cones have been placed along this damaged section of rail.

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SUPERSTRUCTURE VIEW

Looking Northeast

STREAM UNDER BRIDGE

Looking Southeast

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UPSTREAM CHANNEL

Looking North

DOWNSTREAM CHANNEL

Looking South

DATE: 23 SEP 2018

COUNTY: 184

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STR: 035

ASPHALT OVERLAY - SPAN 2

Looking Northwest

NOTE: Top of deck is not visible due to asphalt overlay. Asphalt overlay has widespread severe to moderate rutting and transverse, longitudinal & alligator-block cracking, primarily in the wheel paths of both lanes.

ASPHALT OVERLAY - OVER BENT 3

Looking North

NOTE: Condition is worse in Spans 2 & 3 (from west).

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ASPHALT OVERLAY - SPAN 3

Looking Northwest

NOTE: Multiple patches have been placed through damaged sections of overlay, with these patches beginning to show signs of wear, cracking & spalling.

FAILED ASPHALT OVERLAY PATCH

Looking North

NOTE: 10" dia. spalled patch reveals a deck section that has signs of concrete deterioration. Damage noted throughout asphalt overlay of bridge deck can be assumed as reflective damage to the top of deck, but will need further testing to determine extent & severity.

MJB Engineering (F-10578)

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BOTTOM OF DECK - SPAN 1

Looking East

NOTE: Bottom of deck has several minor areas of discoloration & minor surface scaling, as well as widespread longitudinal hairline cracking with white efflor.

BOTTOM OF DECK - SPAN 2

Looking Northwest

NOTE: Bottom of deck has several minor areas of discoloration & minor surface scaling, as well as widespread longitudinal hairline cracking with white efflor.

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BOTTOM OF DECK - SPAN 3

Looking Northeast

NOTE: Bottom of deck has several minor areas of discoloration & minor surface scaling, as well as widespread longitudinal hairline cracking with white efflor.

BOTTOM OF DECK - SPAN 3, NORTH BAY

Looking West

NOTE: Efflor. is worse in north bay of Span 3 (from west) where white 3" (max.) stalactites have formed. Damage on bottom of deck may be due to chloride contamination.

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OFF-SET DECK UNITS

Looking Southwest

NOTE: Skewed T-beam deck units have off-set laterally 1.5" along joints areas over supports - no change since previous inspection.

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NORTH CURB NEAR WEST BRIDGE END

Looking Southwest

NOTE: Two 1'L x ~1" deep spalls with exposed steel on north curb of Span 1 (from west) along rail post connections.

SOUTH CURB NEAR
EAST BRIDGE END

Looking East

NOTE: 6" dia. x 2" deep spall near east end of south curb in Span 3 (from west) at connection to Rail Post 1 (from east). Spall has caused one anchor bolt to be break, partially detaching rail post from curb at this location.

MJB Engineering (F-10578)

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BEARING AREA
OF BENT CAP 2

Looking West

NOTE: 2'L x 1'H delamination along top edge (bearing area) of east face of Bent Cap 2 (from west) under Beam 4.

SOUTH END OF
BENT CAP 2

Looking Southwest

NOTE: Moderate to minor delamination & spalling (up to 3' dia.) with exposed steel near south end of Bent Cap 2 on east face.

MJB Engineering (F-10578)

DATE: 23 SEP 2018

COUNTY: 184

CONT-SEC: 0008-02

STR: 035

NORTH COLUMN AT
BENT 2

Looking West

NOTE: Moderate spall (5' dia.) with exposed steel on north column at Bent 2 (from west).

SOUTH COLUMN AT
BENT 3

Looking West

NOTE: Moderate delamination cracking on south column at Bent 3.

MJB Engineering (F-10578)

DATE: 23 SEP 2018

COUNTY: 184

CONT-SEC: 0008-02

STR: 035

GUARDFENCE REPAIR
AT NW BRIDGE CORNER

Looking North

NOTE: Previously reported damage to guardfence at NW bridge corner has been repaired - repairs are in good condition.

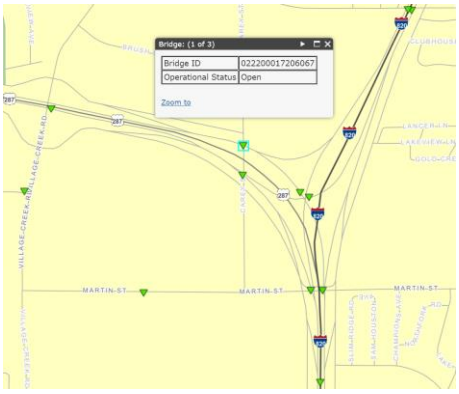
BRIDGE #11: US 287 NB AT CAREY STREET (NBI: 02-220-0172-06-067)

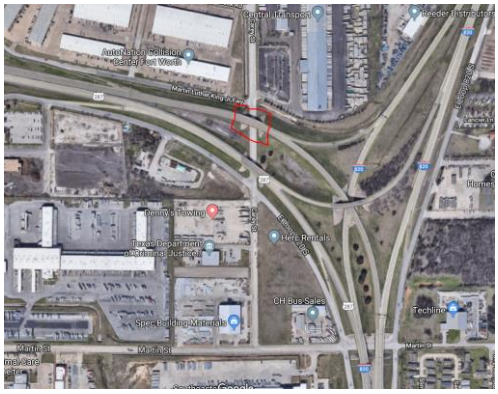
TxDOT District: Fort Worth
Point of Contact: Ricardo Gonzalez
Ricardo.Gonzalez@txdot.gov

Project Information:

PE Document: EA/FONSI
NEPA Document: EA/FONSI

Project Location:





Current Bridge Description/Condition:

- Built in 1965
- Height: 13 feet to 10 feet
- Design load – HS20
- Steel beam superstructure
- This structure has been hit 4 times in the last 3 years

Project Description: ***Replacement***

This bridge replacement is part of larger project (Southeast Connector). The scope of this request is to replace the existing bridge with a 3-lane structure. Connectivity and merging geometric upgrades provided with the reconstruction of the IH 820/US 287 interchange. The reconstruction upgrades the bridge to current design standards and safety appurtenances. The increase in vertical clearance and increased horizontal spans will accommodate the industrial area with a reconstructed intersection at Carey Street.

Schematic Dimensions:

- Length: 250 LF (approximately)
- Width: 60 LF (approximately)
- Height: 16.5 feet (minimum)
- Approximately 2 feet, 8-inch height increase
- Design load: HL93
- 1 additional general-purpose lane
- TIP/STIP: Yes (larger project: Southeast Connector)

Note: This bridge replacement is part of a larger project – Southeast Connector

Maintenance/Operation:

- M&O cost within last 10 years: $0.46M to $1.26M ($2500 – annually; $0.4M – beam repair cost)
- M&O cost dependent on total number of hits on steel beam
- Expected M&O Cost: $0

Note: The maintenance and operational costs associated to M&O cost above the standard routine maintenance operations.

Structure: 02-220-0172-06-067

Facility: US 287 NB

Date: 06/27/2017

Feature Crossed: CAREY STREET

1 - Roadway looking North

2 - Elevation looking East

Structure: 02-220-0172-06-067

Facility: US 287 NB

Date: 06/27/2017

Feature Crossed: CAREY STREET

3 - Under looking South

4 - Roadway Under looking West

Structure: 02-220-0172-06-067

Facility: US 287 NB

Date: 06/27/2017

Feature Crossed: CAREY STREET

5 - Spall at base of west exterior column in bent 2

6 - Impact damage to west beams of span 2. Diaphragms hanging. Spalls in deck between beams

Structure: 02-220-0172-06-067

Facility: US 287 NB

Date: 06/27/2017

Feature Crossed: CAREY STREET

7 - Missing cotter pins at Northwest abutment

8 - Spall in east concrete bridge rail

Structure: 02-220-0172-06-067

Facility: US 287 NB

Date: 06/27/2017

Feature Crossed: CAREY STREET

9 - Pothole in deck at span 2

10 - Handrail post damaged in two locations on east bridge rail

Structure: 02-220-0172-06-067

Facility: US 287 NB

Date: 06/27/2017

Feature Crossed: CAREY STREET

11 - Erosion at Northwest corner embankment

12 - Southwest corner concrete bridge rail has cracks and a spall

BRIDGE #12: US 287 SB AT LANCASTER AVENUE (NBI: 02-220-0172-06-269)

TxDOT District: Fort Worth
Point of Contact: Ricardo Gonzalez
Ricardo.Gonzalez@txdot.gov

Project Information:

PE Document: CE
NEPA Document: CE

Project Location:

Current Bridge Description/Condition:

- Built in 1962
- Design load – HS20
- Steel beam superstructure
- When we repaired the deck on 12/22/2018, we noted 6 other areas that needed repair (around 40 sq. ft. each)

Project Description: *Repair*

- Full deck replacement with composite slab section with upgraded concrete rails
- Rehabilitate and repair to slopes under/around structure
- seal expansion joints, resurface approaches
- Upgrade safety end treatments at bridge approaches
- Clean, abate (as necessary), repaint steel beams
  - Concrete Rail – current combination rail consists of an aluminum railing section built within the original construction. The aluminum rail section has become harder to find for repairs.

- High Performance Concrete – dense concrete mix to minimize or slow chloride penetration. Higher strength concrete which has increased service life. Epoxy coated reinforcement to minimize chloride damage due to winter weather treatments.
- Sealed Expansion Joints – eliminate debris build up on bearing seats, redirect drainage away from slope areas under structure.

Schematic Dimensions:

- Length: 460 LF
- Width: 80LF (approximately)
- No additional capacity
- TIP/STIP: no

Maintenance/Operation:

- M&O cost within last 10 years: $2.36M ($15,000 – annually; $2.3M – slab replacement cost)
- Expected M&O Cost: $0

Note: The maintenance and operational costs associated to M&O cost above the standard routine maintenance operations.

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

1 - Roadway looking South

2 - Elevation looking Southwest

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

3 - Under looking South

4 - Roadway Under looking East (Lancaster EB)

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

5 - Roadway Under looking East (Lancaster EB Ramp)

6 - Roadway Under looking West (Lancaster WB)

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

7 - Missing 20 ft tube section on East bridge rail

8 - Pothole of 1 sq ft on deck pavement

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

9 - Spall on East parapet

10 - Broken rail posts on West bridge rail

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

11 - Distressed area on asphalt pavement

12 - Missing 20 ft tube section on West bridge rail

Structure: 02-220-0172-06-269

Facility: US 287 SB

Date: 05/19/2017

Feature Crossed: SH 180

13 - Missing posts on West bridge rail

14 - Northeast riprap heaving

North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application Attachment 5 – Supplemental Project Funding and Costs Tables

North Central Texas Council of Governments

BRIDGE #1: SH 310 AT SOUTH LAMAR, BUDD STREET, UPRR (NBI: 18-057-0-0092-01-048)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**State Funded Design**	**$ 1,288,000**	**7%**
State	**Category 6 - Construction**	**$ 3,059,000**	**18%**
Total of Non-Federal Funding Sources		**$ 4,347,000**	**25%**
Federal	***INFRA Request - Construction***	***$ 805,000***	***5%***
Federal	**Category 6 - Construction**	**$ 12,236,000**	**70%**
Total of Federal Funding Sources		**$ 13,041,000**	**75%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 1,288,000	100%	0%
Right-of-Way	$ -	0%	0%
Construction	$ 16,100,000	20%	80%
TOTAL PROJECT COST	**$ 17,388,000**	**25%**	**75%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #2: LOOP 12 NB TO IH 35 NB AT IH 35E SB (NBI: 18-057-0-0196-03-190)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**State Funded Design**	**$ 350,000**	**13%**
State	**Category 6 - Construction**	**$ 142,000**	**5%**
State	**Regional Toll Revenue (RTR)**	**$ 15,000**	**1%**
Total of Non-Federal Funding Sources		**$ 507,000**	**19%**
Federal	***INFRA Request - Construction***	***$ 1,615,000***	***60%***
Federal	**Category 6 - Construction**	**$ 568,000**	**21%**
Total of Federal Funding Sources		**$ 2,183,000**	**81%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 350,000	100%	0%
Right-of-Way	$ 540,000	30%	70%
Construction	$ 1,800,000	6%	94%
TOTAL PROJECT COST	**$ 2,690,000**	**19%**	**81%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #3: ST. FRANCIS AVENUE NB & SB AT IH 30 (NBI: 18-057-0-0009-11-196 & 372)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**State Funded Design**	**$ 4,160,000**	**6%**
State	**Category 12 - Construction**	**$ 11,092,800**	**15%**
State	**Regional Toll Revenue (RTR)**	**$ 5,351,000**	**7%**
Total of Non-Federal Funding Sources		**$ 20,603,800**	**29%**
Federal	***INFRA Request - Construction***	***$ 43,000,000***	***60%***
Federal	**Category 12 - Construction**	**$ 8,156,200**	**11%**
Total of Federal Funding Sources		**$ 51,156,200**	**71%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 4,160,000	100%	0%
Right-of-Way	$ 15,600,000	75%	25%
Construction	$ 52,000,000	0%	100%
TOTAL PROJECT COST	**$ 71,760,000**	**29%**	**71%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #4: FM 3163 (MILAM) AT IH 35 (NBI: 18-061-0-0195-02-065)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**State Funded Design**	**$ 2,000,000**	**7%**
State	**Category 6 - Construction**	**$ 1,596,000**	**5%**
State	**Regional Toll Revenue (RTR)**	**$ 3,320,000**	**11%**
Total of Non-Federal Funding Sources		**$ 6,916,000**	**23%**
Federal	***INFRA Request - Construction***	***$ 16,200,000***	***55%***
Federal	**Category 6 - Construction**	**$ 6,384,000**	**22%**
Total of Federal Funding Sources		**$ 22,584,000**	**77%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 2,000,000	100%	0%
Right-of-Way	$ 2,500,000	36%	64%
Construction	$ 25,000,000	0%	100%
TOTAL PROJECT COST	**$ 29,500,000**	**23%**	**77%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #5: US 80 EB AT EAST FORK TRINITY RIVER (NBI: 18-130-0-0095-03-072)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**State Funded Design**	**$ 792,000**	**7%**
State	**Category 2 - Construction**	**$ 632,200**	**5%**
State	**Regional Toll Revenue (RTR)**	**$ 1,314,000**	**11%**
Total of Non-Federal Funding Sources		**$ 2,738,200**	**23%**
Federal	***INFRA Request - Construction***	***$ 6,415,000***	***55%***
Federal	**Category 2 - Construction**	**$ 2,528,800**	**22%**
Total of Federal Funding Sources		**$ 8,943,800**	**77%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 792,000	100%	0%
Right-of-Way	$ 990,000	20%	80%
Construction	$ 9,900,000	0%	100%
TOTAL PROJECT COST	**$ 11,682,000**	**23%**	**77%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #6: FM 460 AT US 80 CSJ: 0095-03-085 (NBI: 18-130-0-0095-03-074)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**State Funded Design**	**$ 640,000**	**7%**
State	**Category 6 - Construction**	**$ 1,540,600**	**16%**
Total of Non-Federal Funding Sources		**$ 2,180,600**	**23%**
Federal	***INFRA Request - Construction***	***$ 1,097,000***	***12%***
Federal	**Category 6 - Construction**	**$ 6,162,400**	**65%**
Total of Federal Funding Sources		**$ 7,259,400**	**77%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 640,000	100%	0%
Right-of-Way	$ 800,000	0%	100%
Construction	$ 8,000,000	18%	82%
TOTAL PROJECT COST	**$ 9,440,000**	**23%**	**77%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #7: IH 30 @ FM 1903 (NBI: 01-117-0009-13-173)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**Category 6 - Construction**	**$ 2,691,000**	**8%**
Total of Non-Federal Funding Sources		**$ 2,691,000**	**8%**
Federal	***INFRA Request - Construction***	***$ 20,000,000***	***60%***
Federal	**Category 6 - Construction**	**$ 10,764,000**	**32%**
Total of Federal Funding Sources		**$ 30,764,000**	***92%***

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 4,600,000	100%	0%
Right-of-Way	$ -	0%	0%
Construction	$ 28,855,000	8%	92%
TOTAL PROJECT COST	**$ 33,455,000**	**8%**	**92%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #8: IH 30 @ FM 1565 (NBI: 01-117-0009-13-169)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**Category 6 - Construction**	**$ 3,698,000**	**12%**
Total of Non-Federal Funding Sources		**$ 3,698,000**	**12%**
Federal	***INFRA Request - Construction***	***$ 12,828,000***	***41%***
Federal	**Category 6 - Construction**	**$ 14,792,000**	**47%**
Total of Federal Funding Sources		**$ 27,620,000**	**88%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 2,741,000	100%	0%
Right-of-Way	$ -	0%	0%
Construction	$ 28,577,000	18%	82%
TOTAL PROJECT COST	**$ 31,318,000**	**12%**	**88%**

Note:

1. This project is associated with a larger corridor project being developed.
2. Right-of-way is needed to deliver the larger corridor improvement of IH 30.
No right-of-way will be required for the deliver of this segment of the project.
3. Contingency is shown but is a part of larger project.

BRIDGE #9: IH 35W NB AT IH 35W SB ALVARADO EXIT (NBI: 02-127-0014-03-194)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**Category 6 - Construction**	**$ 960,000**	**11%**
Total of Non-Federal Funding Sources		**$ 960,000**	**11%**
Federal	***INFRA Request - Construction***	***$ 3,600,000***	***43%***
Federal	**Category 6 - Construction**	**$ 3,840,000**	**46%**
Total of Federal Funding Sources		**$ 7,440,000**	**89%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 600,000	100%	0%
Right-of-Way	$ -	0%	0%
Construction	$ 7,800,000	5%	95%
TOTAL PROJECT COST	**$ 8,400,000**	**11%**	**89%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #10: US 180 WB AT DRY CREEK (NBI: 02-184-0008-02-035)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**Category 6 - Construction**	**$ 70,000**	**3%**
State	**Category 1 - Construction**	**$ 200,000**	**7%**
Total of Non-Federal Funding Sources		**$ 270,000**	**10%**
Federal	***INFRA Request - Construction***	***$ 1,350,000***	***50%***
Federal	**Category 6 - Construction**	**$ 280,000**	**10%**
Federal	**Category 1 - Construction**	**$ 800,000**	**30%**
Total of Federal Funding Sources		**$ 2,430,000**	**90%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 350,000	77%	23%
Right-of-Way	$ -	0%	0%
Construction	$ 2,350,000	0%	100%
TOTAL PROJECT COST	**$ 2,700,000**	**10%**	**90%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

BRIDGE #11: US 287 NB AT CAREY STREET (NBI: 02-220-0172-06-067)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**Category 6 - Construction**	**$ 415,000**	**8%**
Total of Non-Federal Funding Sources		**$ 415,000**	**8%**
Federal	***INFRA Request - Construction***	***$ 3,125,000***	***60%***
Federal	**Category 6 - Construction**	**$ 1,660,000**	**32%**
Total of Federal Funding Sources		**$ 4,785,000**	**92%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 300,000	20%	80%
Right-of-Way	$ -	0%	0%
Construction	$ 4,900,000	0%	100%
TOTAL PROJECT COST	**$ 5,200,000**	**8%**	**92%**

Note:

1. This project is associated with a larger corridor project being developed.
2. Right-of-way is needed to deliver the larger corridor improvement of IH 820, IH 20, and US 287. No right-of-way will be required for the deliver of this segment of the project.
3. Contingency is not shown due to being a part of larger project.

BRIDGE #12: US 287 SB AT LANCASTER AVENUE (NBI: 02-220-0172-06-269)

Funding Sources and Cost Estimates

Funding Source	Type	Funding Amount	Percent
State	**Category 6 - Construction**	**$ 420,000**	**8%**
Total of Non-Federal Funding Sources		**$ 420,000**	**8%**
Federal	***INFRA Request - Construction***	***$ 3,100,000***	***60%***
Federal	**Category 6 - Construction**	**$ 1,680,000**	**32%**
Total of Federal Funding Sources		**$ 4,780,000**	**92%**

Cost Category	Total Cost	Funding Source	
		Non-Federal (Percent)	Federal (Percent)
Engineering	$ 300,000	20%	80%
Right-of-Way	$ -	0%	0%
Construction	$ 4,900,000	0%	100%
TOTAL PROJECT COST	**$ 5,200,000**	**8%**	**92%**

Note: All percentages are rounded to whole numbers and may not sum to 100%

North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application Attachment
6 – Supplemental Project Schedules

North Central Texas
Council of Governments

BRIDGE #1: SH 310 AT SOUTH LAMAR, BUDD STREET, UPRR (NBI: 18-057-0-0092-01-048)

	2017				2018				2019				2020				2021				2022			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																								
Environmental/Permitting																								
Final Design (PS&E)																								
Construction																								

Note: No right-of-way acquisition will be required for this project.

BRIDGE #2: LOOP 12 NB TO IH 35 NB AT IH 35E SB (NBI: 18-057-0-0196-03-190)

	2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																								
Environmental/Permitting																								
Final Design (PS&E)																								
Right-of-Way Acquisition																								
Construction																								

BRIDGE #3: ST. FRANCIS AVENUE NB & SB AT IH 30 (NBI: 18-057-0-0009-11-196 & 372)

	2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																								
Environmental/Permitting																								
Final Design (PS&E)																								
Right-of-Way Acquisition																								
Construction																								

BRIDGE #4: FM 3163 (MILAM) AT IH 35 (NBI: 18-061-0-0195-02-065)

	2017				2018				2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering			■	■	■	■	■	■	■	■																						
Environmental/Permitting						■	■	■	■	■																						
Final Design (PS&E)										■	■	■	■	■	■	■	■	■	■													
Right-of-Way Acquisition											■	■	■	■	■																	
Construction																						■	■	■	■	■	■	■	■	■	■	■

BRIDGE #5: US 80 EB AT EAST FORK TRINITY RIVER (NBI: 18-130-0-0095-03-072)

	2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																								
Environmental/Permitting																								
Final Design (PS&E)																								
Right-of-Way Acquisition																								
Construction																								

BRIDGE #6: FM 460 AT US 80 (NBI: 18-130-0-0095-03-074)

	2017				2018				2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																																
Environmental/Permitting																																
Final Design (PS&E)																																
Right-of-Way Acquisition																																
Construction																																

BRIDGE #7: IH 30 at FM 1903 (NBI: 01-117-0009-13-173)

	2019				2020				2021				2022				2023			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering	■	■	■	■	■	■														
Environmental/Permitting							■	■	■	■	■	■								
Final Design (PS&E)									■	■	■	■	■							
Construction															■	■	■	■	■	■

Note: No right-of-way acquisition will be required for this project.

BRIDGE #8: IH 30 at FM 1565 (NBI: 01-117-0009-13-169)

	2019				2020				2021				2022				2023				2024			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																								
Environmental/Permitting																								
Final Design (PS&E)																								
Construction																								

Note: No right-of-way acquisition will be required for this project.

BRIDGE #9: IH 35W NB AT IH 35W SB ALVARADO EXIT (NBI: 02-127-0014-03-194)

	2019				2020				2021				2022			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering	■	■	■													
Environmental/Permitting	■	■	■	■	■											
Final Design (PS&E)		■	■	■	■	■										
Construction								■	■	■	■	■	■			

Note: No right-of-way acquisition will be required for this project.

BRIDGE #10: US 180 WB AT DRY CREEK (NBI: 02-184-0008-02-035)

	2019				2020				2021				2022			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering	■	■	■													
Environmental/Permitting		■	■	■												
Final Design (PS&E)		■	■	■	■											
Construction							■	■	■	■						

Note: No right-of-way acquisition will be required for this project.

BRIDGE #11: US 287 NB AT CAREY STREET (NBI: 02-220-0172-06-067)

	2019				2020				2021				2022				2023			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering	■	■	■	■	■															
Environmental/Permitting	■	■	■	■	■	■														
Final Design (PS&E)			■	■	■	■	■	■	■											
Construction												■	■	■	■	■	■			

Note: No right-of-way acquisition will be required for this project.

BRIDGE #12: US 287 SB AT LANCASTER AVENUE (NBI: 02-220-0172-06-269)

	2019				2020				2021				2022			
Project Phases	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Engineering																
Environmental/Permitting																
Final Design (PS&E)																
Construction																

Note: No right-of-way acquisition will be required for this project.

North Texas Strategic National Highway System (NHS) Bridge Program

FY 2019 INFRA Grant Application Attachment
7 – NCTCOG Resolution on NHS Bridges

North Central Texas
Council of Governments

RESOLUTION APPROVING REGIONAL TARGETS FOR PAVEMENT AND BRIDGE CONDITION AND SYSTEM PERFORMANCE MEASURES
(R18-04)

WHEREAS, the North Central Texas Council of Governments (NCTCOG) is designated as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth Metropolitan Area by the Governor of Texas in accordance with federal law; and,

WHEREAS, the Regional Transportation Council (RTC), comprised primarily of local elected officials, is the regional transportation policy body associated with the North Central Texas Council of Governments, and has been and continues to be the regional forum for cooperative decisions on transportation; and,

WHEREAS, under Title 23 Code of Federal Regulations (CFR) Part 490, States and MPOs must coordinate to develop targets for federally required performance measures; and,

WHEREAS, on June 21, 2018, the Texas Department of Transportation (TxDOT) established targets for pavement and bridge condition (i.e., PM2) and system performance measures (i.e., PM3) and provided notice to MPOs across the State, which triggered a 180-day deadline for MPOs to establish their own targets or support TxDOT targets; and,

WHEREAS, the RTC has considered the establishment of targets for pavement and bridge condition and system performance measures for the North Central Texas region.

NOW, THEREFORE, BE IT HEREBY RESOLVED THAT:

Section 1. The Regional Transportation Council adopts performance targets for the federally required PM2 (pavement and bridge) and PM3 (system reliability, excessive delay, and air quality) performance measures as reflected in Attachment 1, including the policy statements regarding the pavement and bridges in poor condition.

Section 2. The Regional Transportation Council directs staff to transmit the approved targets in a format requested by the Texas Department of Transportation as reflected in Attachment 2.

Section 3. This resolution shall be in effect immediately upon its adoption.

Gary Fickes, Chair
Regional Transportation Council
Commissioner, Tarrant County

I hereby certify that this resolution was adopted by the Regional Transportation Council of the North Central Texas Council of Governments for the Dallas-Fort Worth Metropolitan Area on November 8, 2018.

Roger Harmon, Secretary
Regional Transportation Council
County Judge, Johnson County

RTC Position on Pavement Condition Targets

Good

NCTCOG Supports TxDOT Statewide 2022 “Good Pavement Condition” Targets for National Highway System Facilities

Poor

NCTCOG Supports TxDOT Statewide 2022 “Poor Pavement Condition” Targets for National Highway System Facilities

Collaboration with TxDOT to Plan and Program Projects Contributing Toward Accomplishment of Pavement Goals will also Include the Following Action: NCTCOG will Work with Local Governments to Focus on Improvement of National Highway System Off-System Arterials in Poor Condition

Roadway Pavement Condition Targets

Roadway Categories	Total Network	2018 Baseline	2022 Target
STATE of TEXAS			
Good Pavement Condition			
Interstate National Highway System (NHS)	19.19%	66.80%	66.40%
Non-Interstate National Highway System (NHS)	80.81%	54.40%	52.30%
Poor Pavement Condition			
Interstate National Highway System (NHS)	19.19%	0.30%	0.30%
Non-Interstate National Highway System (NHS)	80.81%	13.80%	14.30%
North Central Texas Region			
Interstates (on-system)[1]	25.90%[2]	5.81%[3]	7.99%[3]
Non-Interstate Freeway (on-system)[1]	13.40%[2]	6.76%[3]	8.93%[3]
Toll Roads (off-system)	6.70%[2]	8.43%[3]	9.32%[3]
Arterials (on-system)[1]	30.30%[2]	18.52%[3]	18.39%[3]
Arterials (off-system)	23.80%[2]	73.66%[3]	69.82%[3]

[1] On-system refers to the TxDOT System
[2] Mobility 2045 Plan – 2018 Baseline Network Lane-Miles
[3] Based on 5-year moving average

RTC Bridge Condition Targets

NCTCOG Supports TxDOT Statewide 2022 “Good/Poor Condition” Targets for National Highway System Bridges

Collaboration with TxDOT to Plan and Program Projects Contributing Toward Accomplishment of Bridge Goals will also Include the Following Action: NCTCOG will Focus on Expedited Programming to Improve National Highway System Bridges in Poor Condition

State of Texas		
Bridges*	2018 Baseline	2022 Target
Good Bridge Condition		
All National Highway System Facilities	**50.63%**	**50.42%**
Poor Bridge Condition		
All National Highway System Facilities	**0.88%**	**0.80%**

*Based on total deck area

RTC System Performance Targets

Performance Measure		Historical Trend	Baseline (2016/2017)	2020 Target	2022 Target	Target Strategy
Interstate Reliability (% Person Miles Travelled)		Improving	77.3%	78.6%	79.5%	Targets Set to Improve Over Trend
Non-Interstate NHS Reliability (% Person Miles Travelled)		Worsening	71.1%	N/A	71.1%	
Truck Travel Time Reliability Index		Improving	1.74	1.71	1.66	
Peak Hour Excessive Delay (Hours per Capita)*		Worsening	15.5	N/A	15.0	
Percent Non-SOV Mode Share (% Commuter Trips)*		Improving	19.5%	19.9%	20.2%	
On-Road Mobile Source Emissions Reductions (Cumulative)	NOx (kg/day)	Improving	2,410.80	2,892.96	5,062.68	
	VOC (kg/day)	Improving	499.72	599.67	1,079.40	

*Regional Transportation Council and TxDOT must agree on a single regional target concurrence from TxDOT agreeing to NCTCOG proposed targets has been received

ATTACHMENT 2

TxDOT Established (PM2) Pavement and Bridge Performance Measure Targets

Federal Performance Measure	Baseline	2020 Target	2022 Target
Pavement on IH			
% in "good" condition	66.80%	N/A	66.4%
% in "poor" condition	0.30%	N/A	0.30%
Pavement on non-IH NHS			
% in "good" condition	54.40%	N/A	52.30%
% in "poor" condition	13.8%	N/A	14.3%
NHS Bridge Deck Condition			
% in "good" condition	50.63%	N/A	50.42%
% in "poor" condition	0.88%	N/A	0.80%

DFW MPO Established (PM3) System Performance Measure Targets

Federal Performance Measure	Baseline	2020 Target	2022 Target
NHS Travel Time Reliability			
IH Level of Travel Time Reliability	77.3%	78.6%	79.5%
Non-IH Level of Travel Time Reliability	71.1%	N/A	71.1%
Truck Travel Time Reliability	1.74	1.71	1.66
Annual Hours of Peak Hour Excessive Delay per capita			
Dallas-Fort Worth*	15.5	N/A	15.0
% Non-SOV Travel			
Dallas-Fort Worth*	19.5%	19.9%	20.2%
Total Emission Reduction			
NOX	2,410.80	2,892.96	6,509.16
VOC	499.72	599.67	1,399.23

*Regional Transportation Council (MPO) and TxDOT agreed upon regional target