



I-20 East Texas Corridor Study Executive Summary

From I-635 to Louisiana State Border

TxDOT, Transportation Planning and Programming Division

January 2015

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Letter from the Chair



Honorable Mr. Chairman and Commissioners:

The I-20 East Texas Corridor Advisory Committee would like to thank the citizens of Northeast Texas for participating in the planning for the future of I-20 in East Texas.

Over the past 47 years, I-20 has become the backbone of the regional and national transportation system. To ensure this continued service over the next 50 years, improvements will be needed to enhance safety and mobility. With future transportation needs in mind, the Advisory Committee has worked hard to serve public interests and needs in an environmentally responsible manner.

One of the goals of this Committee was to encourage public participation throughout the process in order to identify regional needs that could serve a higher purpose for the State and Nation as well as improve the quality of life for citizens within the corridor. We accomplished this public involvement and feedback through local outreaches.

Members of the Advisory Committee were appointed as representatives by the Texas Transportation Commission. During the last 18-months, our objective was to provide the Texas Department of Transportation team with our conclusions on how I-20 could be improved.

It has been a pleasure working with the staff of TxDOT and their consultants. Their expertise made our job much easier. I would also like to thank those who contributed their time and talents to this process by joining me in serving the I-20 East Texas Corridor Advisory Committee. We believe, in the following pages, a master plan has been created for the I-20 East Texas Corridor that will reduce crashes and enhance mobility for residents and visitors in the great State of Texas.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Stoudt", written over a light blue horizontal line.

Bill Stoudt

Gregg County Judge

Committee Chair, I-20 East Texas Corridor Advisory Committee



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Executive Summary

Interstate 20 (I-20) East Texas Corridor runs 155-miles from its interchange with I-635 in Dallas to the Texas/Louisiana State Border. The broader corridor serves as an integral east-west connection for both passenger travel and freight movement. Additionally, within East Texas, I-20 serves as the backbone of the transportation network for many smaller communities.

The East Texas portion of I-20 was opened to traffic in 1967. This segment has had routine maintenance and modest repairs or minor expansions over its first 50 years. But as the interstate system ages and trade increases, its mission becomes more critical. In particular, major portions will require expansion to serve anticipated growth in traffic. Ramps and interchanges require reconstruction to improve safety, and some bridges require reconstruction to address deficiencies and improve vertical clearances so they can better serve freight movements. Finally, the existing pavement will need to be reconstructed at some point in order to serve the heavy freight traffic demand it experiences.



The I-20 corridor faces challenges in terms of safety, capacity and major maintenance needs.

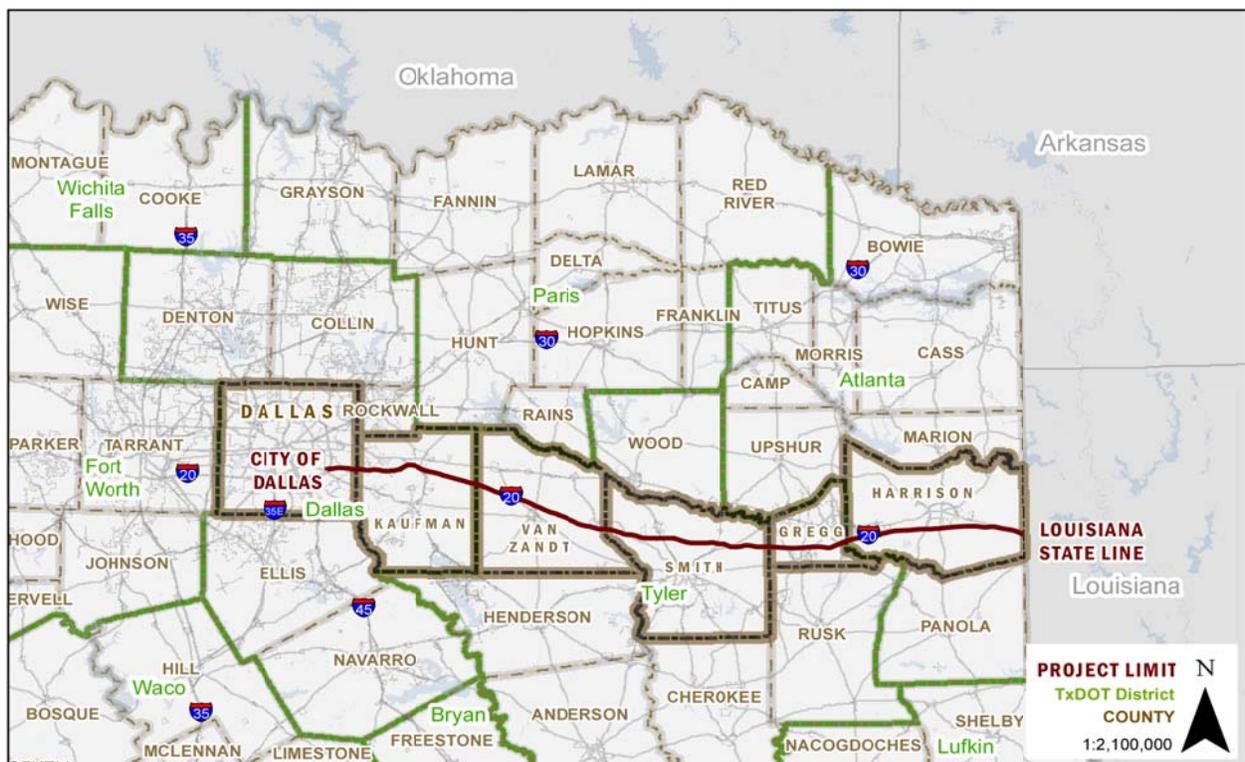


Figure ES.1.1 Study Area Location

In recognition of those needs, the Texas Department of Transportation (TxDOT) conducted this study to make a comprehensive assessment of need, and to identify a master plan that can be used to implement improvements in the most timely and efficient manner.

TxDOT worked closely with the public to identify opportunities for improvement. In keeping with that goal, the I-20 East Texas Corridor Advisory Committee was created by the Texas Transportation Commission. The Advisory Committee included 21 members representing local communities, the six counties in the study area, and regional transportation agencies. Members of the Advisory Committee were tasked with providing insight into their communities' needs as well as becoming spokespeople for the study's objective and results. **Table ES.1** below includes the list of Advisory Committee members and their affiliation.

ES.1 Public Outreach

The public input covered a range of issues, but there were a number of recurring concerns expressed by the corridor users. People living within the study's counties expressed the need for a third lane in each direction of travel; raised issues with inconsistent speed limits as well as need for better enforcement; and identified inadequate access ramps as well as hazardous conditions on wet roads. **Figure ES.2** summarizes the breakdown of key concerns by county.

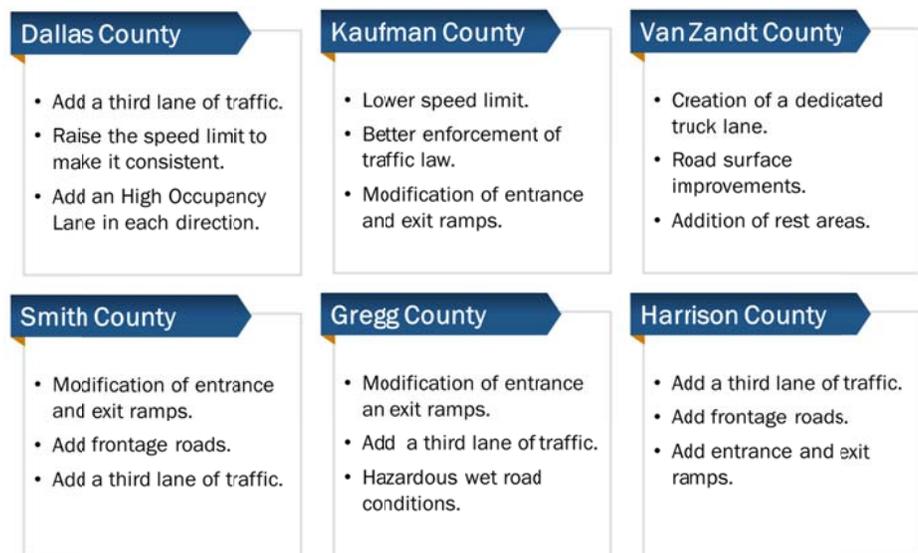


Figure ES.2: Major Concerns by County

Table ES.1: Advisory Committee Members

	Organization	Member
Countries	Dallas County	Judge Clay Jenkins
	Gregg County	Judge Bill Stoudt (Committee Chair)
	Harrison County	Judge Hugh Taylor
	Kaufman County	Judge Bruce Wood
	Smith County	Judge Joel Baker
	Van Zandt County	Judge Rhita Koches / Commissioner Virgil Melton Jr.
Cities	City of Balch Springs	Honorable Mayor Dr. Carrie Gordon
	City of Canton	Honorable Mayor Richard W. Lawrence
	City of Forney	Honorable Mayor Darren Rozell
	City of Lindale	Honorable Mayor Robert Nelson
	City of Longview	Honorable Mayor Jay Dean
	City of Marshall	Honorable Mayor Ed Smith
	City of Mesquite	Honorable Mayor John Monaco
	City of Seagoville	Honorable Mayor Harold Magill
	City of Terrell	Honorable Mayor Hal Richards
	City of Tyler	Honorable Mayor Martin Heines / Mark McDaniel
Others	Dallas Area Rapid Transit (DART)	Gary C. Thomas
	North Central Texas Council of Governments (NCTCOG)	Michael Morris
	North East Texas Regional Mobility Authority (NETRMA)	Linda Ryan Thomas / Celia Boswell
	Longview MPO	Karen Owen
	Tyler Metropolitan Organization (MPO)	Heather Nick

ES.2 Safety Needs

Safety is among the main concerns of I-20 users. To ensure safety is addressed at appropriate locations and in an adequate manner, a crash analysis were conducted. The objective of the crash analysis was to identify factors resulting in concentrations of crashes, and use this information to define the most effective ways to reduce future crash potentials by eliminating hazards or improving facility design.

During the years of 2008 to 2012, the State of Texas experienced an average crash rate of 43.9 crashes per hundred million vehicle miles travelled (VMT) for rural interstates. In comparison, this portion of I-20 experienced an average crash rate of 55.61 crashes per hundred million vehicle miles; which is 18 percent higher than the statewide average. This suggests that the corridor has the potential to operate in a safer manner if improvements can be implemented. If all of the necessary improvements were to be implemented immediately, safety could be enhanced by averting about 180 crashes per year - with a reduction in economic costs of more than \$ 60 million. Over the next 25 years, the safety benefit could approach 4,500 crashes averted. Each crash has an impact on the quality of human life, and on the economy. Using standard valuations, the savings to the economy would be more than \$ 1.5 Billion.

ES.3 Capacity Needs

By the Year 2040, the corridor is projected to have increased traffic demand throughout its entire 155 miles. Segments including I-20 from the Dallas County Line to FM 1641, I-20 from SH 34 to FM 3202 and the 2-mile segment from SH 134 to the Texas/Louisiana Border are projected to experience severe congestion, since more than 45,000 vehicles a day will use those sections. Thus, 35 miles of the 155-mile corridor can be expected to operate under heavy congestion by that time. This equates to more than 20 percent of the corridor's length. Because the most congested segments will be spread throughout the entire corridor, there could be some "spill back" into less congested segments, creating more miles of congested travel. This does not imply that I-20 will be unable to accommodate the increased level of traffic, but the drop in Level of Service could have safety implications for the corridor especially with high freight traffic demands such as I-20 experiences.

ES.3.1 Rail

The I-20 East Texas Corridor serves as a major connection between Texas and its neighbors to the East. Both freight and passenger rail services are currently provided along portions of the existing Union Pacific Railroad line located north of the I-20 corridor. This rail facility is a major freight line connecting Dallas through Marshall with Memphis and St. Louis. The Texas Eagle (Amtrak) also uses this line, turning north at Marshall to reach Chicago. As such rail provides a big part of the corridor's mobility for freight and to a lesser degree passenger

service. Members of the Advisory Committee and the general public expressed their interest in furthering the development of rail along the corridor.

As with all passenger services operating on private freight railroad lines, lower priorities are assigned to passenger operations, and there can be schedule conflicts with freight trains. This limits the speed and frequency of passenger services offered. The Rail Division at TxDOT supervised a study to determine the viability of an improved passenger rail option along the corridor. Findings from this study were presented to members of the Advisory Committee. Rail options along the corridor were deemed impractical in the near future without a significant funding source which remains to be identified. Consideration was given to installing rail/freight passenger services in the median of I-20. However, a number of issues were identified as follows:

1. If rail services used the median, the rail line would have to exit the median in order to connect with adjacent land uses and stations. From an engineering perspective, this would create complex curves and grades that would drive up the cost and/or reduce operating speed at such locations.
2. Locating passenger rail services in the median would require reconstruction of 78 overpasses to provide vertical clearances of as much as 23 feet. Thus, installation of high speed rail services in the median would require significant additional investment to highway/interchange improvements (in addition to the cost of constructing the rail line).
3. At a number of locations throughout the corridor, the full median will be required to add an additional lane of traffic in both directions. In that instance, unless a commitment is made to acquire additional right-of-way, the choice must be between expanding the highway or reserving the median for future rail passenger services.

It should be noted that the Advisory Committee recommendation on this issue is to have a minimum of 18-foot clearance under the emerging TxDOT policy but pursue 23-foot vertical clearance where feasible. This would accommodate oversized freight movements and preserve the possibility of future passenger rail services.

In the meantime, to enhance passenger service in the corridor, this study explored ways to make intercity bus service more competitive with the private automobile. Recommendations were developed to create express bus service that could be connected to individual communities in a cost effective manner.

ES.4 Maintenance Needs

Most of the pavement of I-20 is approaching 50 years of service which is almost twice its originally intended life. At the same time, it is carrying many more trucks than it was originally designed for, and those trucks are much heavier. During the last decade, because

of tight fiscal resources, TxDOT has only been able to spend limited monies on this highway's upkeep. Such spending can keep the surface smooth, but fails to address underlying problems that will eventually lead to major repair efforts.

Major repair efforts on I-20 could pose substantial inconveniences to the motoring public, as the lanes must be closed and traffic diverted for extended periods while the pavement is repaired or replaced. For this reason, it is critical that maintenance actions be coordinated closely with the construction of safety and capacity improvements.

ES.5 Frontage Road Improvements

Frontage roads are currently located along portions of the corridor to serve existing or anticipated land developments. Most of these facilities serve traffic traveling in both the east and west-bound direction of travel, regardless of which side of I-20 they are located on. This can create safety issues for motorists entering or exiting the freeway. The implementation plan anticipates improving these facilities to provide one-way operations on both sides of the Interstate, as well as expanding the system as desired by local jurisdictions.

ES.6 Implementation Program Development

The purpose for this study is to develop an improvement program that TxDOT and local governments can use in the Long Term maintenance and development of the corridor within their fiscal constraints and project development schedules. This program has been developed to avoid unnecessary short term investments that would have to be torn out at some future date to accommodate longer term improvements.

ES.6.1 Project Identification

A list of proposed projects along the corridor aimed at improving specific areas (capacity expansion, safety, pavement rehabilitation, vertical clearances, and improved access to adjacent lands) was prepared based on the technical analysis. These projects and concepts were verified and amplified through feedback gathered during Advisory Committee Meetings and public comments submitted during the public outreach efforts.

ES.6.2 Proposed Projects

The preliminary project list for the I-20 East Texas Corridor included 131 projects. Once a comprehensive but preliminary list was developed, projects were classified into categories depending on their scope and impact.

ES.7 Project Prioritization

Limited resources and programming needs made prioritization of projects a necessity. Advisory Committee Members identified their preferred projects based on results of the technical evaluation and their knowledge of the study corridor.

Tables ES.2, ES.3 and ES.4 summarize priority projects by county and summarizes priority projects based on evaluation results (technical score) along with Advisory Committee preferences. Projects with low initial score were highlighted with purple in the following list after being mentioned by the public as presenting safety issues during the Public Outreach phase of this study. The public comments enhanced the selection process for the final series of projects in the implementation plan.

Project ID Key

First Letter = Source	+	Second Letter = Type	-	Project Number
A= Advisory Committee		A= Interchange Improvements: 3 or more ramps		
T= Technical Analysis		B= Interchange Improvements: 2 or less ramps		
		C= Added Capacity		
		D= Interchange Improvements: One ramp		
		F= New Frontage Road		
		G= Frontage Road Reconstruction		
		I = Ramp Improvement : Hook ramp elimination		
		J= Bridge Modifications: Replacement or Vertical Clearance Adjustment		

High Score (55<)		High Public Comment Preference
Technical Score Mid Score (50-54)		High Advisory Committee Preference based on 06/11/2014 Committee meeting.
Low Score (50>)		

Note: The content of the following tables is not listed in order of priority.

Table ES.2: West Section Prioritization

	Project Type	Project ID	County	Road	Limit from	Limit to	Advisory Committee Preferences	Technical Score
DALLAS	New Frontage Road	AF-1	Dallas	I-20	Lawson Rd	FM 740	4	55
	Median Barrier Addition	AE-1	Dallas	I-20	Loop 635	Dallas County Line	4	58
	Added Capacity	TC-1	Dallas	I-20	I-635	Lawson Rd	2	58
		TC-2	Dallas	I-20	Lawson Rd	Dallas County Line	0	50
	Frontage Road Reconstruction	TG-1	Dallas	I-20	Seagonville Road	Lawson Road	2	50
Ramp Improvement	TI-1	Dallas	Lawson Rd	-	-	0	40	
KAUFMAN	Interchange Improvements	AB-1	Kaufman	SH 34	-	-	2	68
		AD-1	Kaufman	FM 429	-	-	0	45
		AD-3	Kaufman	Wilson Road	-	-	0	20
		AD-4	Kaufman	FM 429	-	-	0	45
	Added Capacity	AC-1	Kaufman	I-20	SH 557	Wilson Rd	1	58
	New Frontage Road	AF-2	Kaufman	I-20	FM 740	FM 741	0	35
		AF-3	Kaufman	I-20	SH 557	FM 138	3	53
		AF-13	Kaufman	FM 741	SH 557	Kaufman	3	45
	Interchange Improvements	TB-2	Kaufman	FM 2965	-	-	0	63
		TD-1	Kaufman	CR 310 (Hiram Rd)	-	-	0	43
	Added Capacity	TC-3	Kaufman	I-20	Dallas County Line	FM 741	0	35
		TC-4	Kaufman	I-20	FM 741	SH 557	0	53
		TC-5	Kaufman	I-20	Wilson Rd	FM 310	0	50
		TC-6	Kaufman	I-20	FM 310	Kaufman County Line	0	50
	Ramp Improvement	TI-2	Kaufman	FM 740	-	-	0	35
		TI-3	Kaufman	FM 741	-	-	0	35
		TI-4	Kaufman	FM 2932	-	-	0	35
		TI-5	Kaufman	FM 1641	-	-	0	50
		TI-6	Kaufman	FM 148	-	-	0	55
		TI-7	Kaufman	SH 557	-	-	0	45
Bridge Modifications	TI-8	Kaufman	CR 304	-	-	0	38	
	TJ-8	Kaufman	SH 34	-	-	2	68	
	TJ-10	Kaufman	SH 34	-	-	2	68	

Table ES.3: Central Section Prioritization

Project Type	Project ID	County	Road	Limit from	Limit to	Advisory Committee Preferences	Technical Score		
VAN ZANDT	Interchange Improvements	AA-3	Van Zandt	FM 859	-	-	0	53	
	New Frontage Road	AF-4	Van Zandt	I-20	FM 47	SH 64	1	50	
		AF-5	Van Zandt	I-20	SH 19	FM 17	0	40	
	Interchange Improvements	TA-1	Van Zandt	SH 19	-	-	1	53	
		TB-3	Van Zandt	FM 47	-	-	1	60	
		TB-4	Van Zandt	CR 3412	-	-	1	53	
		TB-5	Van Zandt	SH 64	-	-	1	60	
		TB-6	Van Zandt	FM 1255	-	-	0	55	
		TB-7	Van Zandt	CR 1311	-	-	0	48	
		TD-2	Van Zandt	FM 3439 / CR 3442	-	-	0	48	
		TD-3	Van Zandt	FM 17	-	-	1	55	
		TD-4	Van Zandt	CR 1308	-	-	0	40	
		TD-5	Van Zandt	FM 773 / FM 16	-	-	0	63	
		TB-1	Van Zandt	FM 314	-	-	0	58	
	Added Capacity	TC-7	Van Zandt	I-20	Kaufman County Line	FM 47	0	55	
		TC-8	Van Zandt	I-20	FM 47	SH 64	1	50	
		TC-9	Van Zandt	I-20	SH 64	SH 19	0	50	
		TC-10	Van Zandt	I-20	SH 19	FM 1255	0	50	
		TC-11	Van Zandt	I-20	FM 1255	CR 1308	0	40	
		TC-12	Van Zandt	I-20	CR 1308	FM 773	0	38	
		TC-13	Van Zandt	I-20	FM 773	FM 314	0	48	
		TC-14	Van Zandt	I-20	FM 314	Van Zandt County Line	0	45	
	Frontage Road Reconstruction	TG-2	Van Zandt	I-20	County Line	FM 47	1	55	
		TG-3	Van Zandt	I-20	US 64	SH 19	0	50	
		TG-4	Van Zandt	I-20	FM 17	CR 1311	0	48	
		TG-5	Van Zandt	I-20	CR 1311	FM 314	0	48	
		TJ-9	Van Zandt	FM 859	-	-	0	55	
	Bridge Modifications	TJ-11	Van Zandt	FM 47	-	-	1	65	
		TJ-12	Van Zandt	FM 17	-	-	1	58	
		TJ-13	Van Zandt	FM 1255	-	-	0	55	
		TJ-14	Van Zandt	FM 773	-	-	0	68	
		New Frontage Road	AF-6	Van Zandt, Smith	I-20	FM 314	SH 110	0	50
	SMITH	New Frontage Road	AF-7	Smith	I-20	Toll 49	US 271	8	53
		Interchange Improvements	TA-2	Smith	US 69	-	-	7	40
			TB-8	Smith	CR 35 (Lavender Rd)	-	-	2	48
			TB-9	Smith	FM 2015	-	-	0	45
			TD-6	Smith	CR 426	-	-	0	45
			TD-7	Smith	CR 431	-	-	0	40
			TD-8	Smith	SH 155 (Lawton Ave)	-	-	0	53
			TD-9	Smith	FM 757	-	-	0	35
			TD-10	Smith	CR 3101	-	-	2	50
			TD-11	Smith	CR 3111	-	-	0	40
TD-12			Smith	FM 14	-	-	0	45	
Added Capacity			TC-15	Smith	I-20	Van Zandt County Line	CR 110	0	40
		TC-16	Smith	I-20	CR 110	US 69	7	50	
		TC-17	Smith	I-20	US 69	FM 14	0	48	
		TC-18	Smith	I-20	FM 14	SH 155	0	45	
		TC-19	Smith	I-20	SH 155	US 271	0	40	
		TC-20	Smith	I-20	US 271	Smith County Line	1	50	
Bridge Modifications		TJ-5	Smith	SH 110	-	-	0	50	
		TJ-6	Smith	FM 849	-	-	0	50	
Frontage Road Reconstruction		TG-6	Smith	I-20	SH 110	FM 849	0	50	
		TG-7	Smith	I-20	US 271	Gregg County Line	1	50	
		TG-8	Smith	I-20	Gregg County Line	SH 42	0	45	
Ramp Improvement	TI-9	Smith	CR 110	-	-	0	55		
	TI-10	Smith	FM 849	-	-	0	50		
	TI-11	Smith	US 271	-	-	0	45		

Table ES.4: East Section Prioritization

Project Type	Project ID	County	Road	Limit from	Limit to	Advisory Committee Preferences	Technical Score	
GREGG	Interchange Improvements	AD-2	Gregg	SH 31	-	-	2	45
	Bridge Modifications	TJ-1	Gregg	Fritz Swanson RD	-	-	0	40
		TJ-2	Gregg	MLK Blvd	-	-	0	53
		TJ-3	Gregg	FM 2087	-	-	0	58
	Frontage Road Reconstruction	TJ-15	Gregg	MLK Blvd	-	-	0	48
		TG-9	Gregg	I-20	SH 42	FM 2087	3	55
		TG-10	Gregg	I-20	FM 2087	Loop 281 W	1	60
		TG-11	Gregg	I-20	Loop 281 W	County Line	0	60
	Ramp Improvement	TI-12	Gregg	FM 3053	-	-	0	45
		TI-13	Gregg	SH 42	-	-	1	50
		TI-14	Gregg	FM 2087	-	-	0	58
		TI-15	Gregg	Loop 281 W / US 259	-	-	1	45
	Added Capacity	TC-21	Gregg	I-20	Smith County Line	SH 135	0	45
		TC-22	Gregg	I-20	SH 135	SH 42	2	58
		TC-23	Gregg	I-20	SH 42	FM 2087	1	55
		TC-24	Gregg	I-20	FM 2087	Gregg County Line	1	60
HARRISON	New Frontage Road	AF-8	Gregg, Harrison	I-20	US 259	Loop 281	3	50
		AF-9	Harrison	I-20	FM 968	SH 43	0	45
		AF-10	Harrison	I-20	SH 43	FM 31	4	50
		AF-11	Harrison	I-20	FM 31	Buck Sherrod Rd	2	45
		AF-12	Harrison	I-20	US 80	FM 2199	0	45
	Added Capacity	TC-25	Harrison	I-20	Gregg County Line	Loop 281	1	45
		TC-26	Harrison	I-20	Loop 281	FM 450	1	55
		TC-27	Harrison	I-20	FM 450	FM 3251	0	55
		TC-28	Harrison	I-20	FM 3251	SH 43	0	50
		TC-29	Harrison	I-20	SH 43	US 59	0	43
		TC-30	Harrison	I-20	US 59	FM 31	1	45
		TC-31	Harrison	I-20	FM 31	FM 2199	0	35
TC-32		Harrison	I-20	FM 2199	US 80	0	45	
TC-33		Harrison	I-20	US 80	FM 134	0	45	
TC-34	Harrison	I-20	FM 134	Texas State Line	0	45		
Bridge Modifications	TJ-4	Harrison	FM 450	-	-	0	53	
	TJ-7	Harrison	Lansing Switch Road	-	-	0	50	
	TJ-16	Harrison	FM 450	-	-	0	58	
	TJ-17	Harrison	US 59	-	-	0	53	
Frontage Road Reconstruction	TJ-7	Harrison	Lansing Switch Road	-	-	0	54	
	TG-12	Harrison	I-20	County Line	Loop 281 E	0	45	
	TG-13	Harrison	I-20	Loop 281 E	FM 450	0	58	
	TG-14	Harrison	I-20	FM 450	FM 3251	0	60	
	TG-15	Harrison	I-20	US 80	Texas State Line	0	53	
Ramp Improvements	TI-16	Harrison	Loop 281 E	-	-	0	43	
	TI-17	Harrison	FM 3251	-	-	0	35	
	TI-18	Harrison	FM 31	-	-	0	45	
	TI-19	Harrison	FM 2199	-	-	0	45	

ES.6.1 Improvement Recommendations

Major improvements are needed on I-20 to improve safety, to protect the investment made in the existing facility, as well as to maintain or enhance the ability to move traffic. Actions necessary to ensure the facility has the capacity to meet future transportation needs, are included as programmatic recommendations to be applied to the corridor as a whole.

These recommendations are as follows:

- Construct median barriers in locations that they are warranted but not yet installed.
- Upgrade/ replace bridges that have low sufficiency ratings or whose vertical clearances are less than current TxDOT standards. In consideration of evolving needs of the increased size of freight movements and the Long Term potential for passenger rail services in the services in the corridor, each of these bridges should be reconstructed with a minimum vertical clearance of 18-foot, and an ultimate desirable 23-foot clearance.
- Modernize ramp designs to serve increasing traffic demands and improve safety.
- Reconstruct interchanges which have operational or safety concerns.

- When needed, perform major rehabilitation of existing highway, including possible full-depth reconstruction of pavements.
- Construct additional lanes along I-20 for three main reasons:
 - I. Permit the maintenance of traffic during other major improvements.
 - II. Reduce crash frequencies caused by elevated levels of freight
 - III. Alleviate future congestion.
- Construct new, one-way frontage roads or reconstruct/convert existing two-way frontage roads to safer one-way operations in areas identified by local officials. Promote local initiatives to foster more frequent/efficient intercity bus service.

ES.7 Implementation Plan

Based on previously described feedback from the Advisory Committee, public input provided through comments, and results from the analyses performed by staff an implementation plan was compiled for the I-20 Corridor.

The plan provides programmatic recommendations for the corridor as a whole, as well as project level recommendations broken down by logical timeframe. Projects classified as Near Term are recommended to be completed between 2015 and 2020. Projects in the Mid Term category are recommended to be completed between 2021 and 2030. Finally, Long Term projects are considered in the 2031 to 2040 interval.

ES.7.1 Programmatic Structure

The short, medium, and long range nature of this program is intended to recognize funding availability, project development considerations, and the timing of needs. All projects that are immediately implementable because they are already part of an approved transportation plan (including environmental approval and funding availability) have been included in the Near Term plan since they are essentially “shovel ready”.

In some instances, one type of improvement is advisable during the Near Term, with related improvements in the same general location being required at a later date. Rather than work on a particular portion of I-20 multiple times (at much higher cost and greater inconvenience to the motoring public), efforts have been made to coordinate improvements to minimize cost and disruption. In some instances this means accelerating longer term improvements so they occur at the same time as more immediate needs are addressed.

The programmatic recommendations include pursuing a minimum vertical clearance of 18-foot, up to an ultimately desired 23-foot clearance to support future potential passenger rail/freight movement, for underpasses along I-20 when making other required improvements. In addition, pursuing full depth pavement reconstruction as necessary (based on TTI-style analyses to be performed in the near future), and encouraging local

initiatives to foster more frequent/efficient intercity bus service is included in the implementation plan.

ES.7.2 Project Level Recommendations

Project level recommendations were created from the previously mentioned proposed project lists within each region of the corridor. The prioritization process was used to define specific sections of the project area needing action. Technical staff used these local preferences and combined it with overall goals to identify projects and assign them to a logical construction timeframe based on “shovel readiness”, cost, and ability to be constructed independently or as part of a larger project.

Table ES-5 includes a total count of projects by type and desired timeframe in addition to preliminary cost estimates for each phase. The overall cost in 2014 dollars is summarized by type of improvement in **Figure ES-3**.

Table ES-5: Implementation Plan Summary

Recommended Improvements	Near Term (2015-2020)	Mid Term (2021-2030)	Long Term (2031-2040)	Total
Miles of Added Median Barrier	6	-	-	6
# of Bridge Modifications	14	-	-	14
# of Ramp/Interchange Improvements	5	21	9	35
Miles of Frontage Road Improvements	12	49	38	99
Miles of Additional Capacity	-	65	25	90
Preliminary Cost Estimate (2014\$ Millions)	\$230	\$800	\$400	\$1,430
Pavement Reconstruction (2014\$ Millions)		Up to \$1,470		\$1,470
Potential Funding Needs (2014\$ Millions)				\$2,900

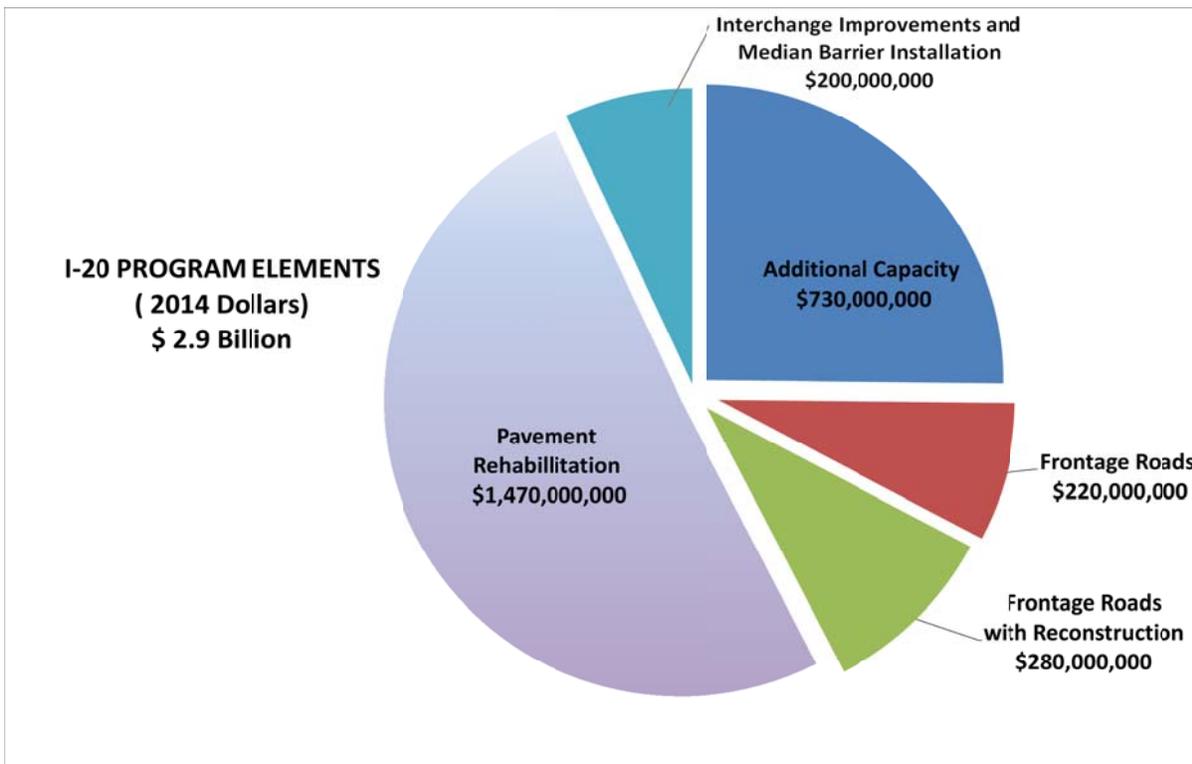


Figure ES.3: Implementation Plan Summary

Map ES.1: Implementation Plan Dallas & Kaufman, Map ES.2: Implementation Plan Van Zandt, Map ES.3 Implementation Plan Smith, Map ES.4 Implementation Plan Gregg, Map ES.5 Implementation Plan Harrison depict all projects considered in this implementation plan along with their locations within said counties.

ES.7.3 Funding

The cost of identified improvements along I-20 could be as much as \$2.9 billion in today's dollars (2014\$). In essence, this amounts to over \$100 million a year in need (2014\$). The total program cost will be higher, based on when each project is implemented over the next 25 years, coupled with the amount of inflation experienced in the intervening time.

The estimated funding available from existing sources, allocated to this portion of I-20 on a Vehicle Miles Travelled (VMT) basis, could be about \$1.6 billion (in real dollars) without the recently passed Proposition 1; and about \$1.8 billion with Proposition 1. On an average basis, this suggests that approximately \$60 to 70 million could be available annually to support this program. Thus, in today's dollars the program could require \$30 to 40 million more in funding each year than is currently available. Sources for funds have not been

identified at this time. Obviously, there could be a funding shortfall and additional funding must be developed to implement the program. This could mean enhancing current sources or identifying innovative funding strategies including the use of Transportation Reinvestment Zones (TRZ), developing partnerships throughout the corridor, and effectively leveraging available funds.

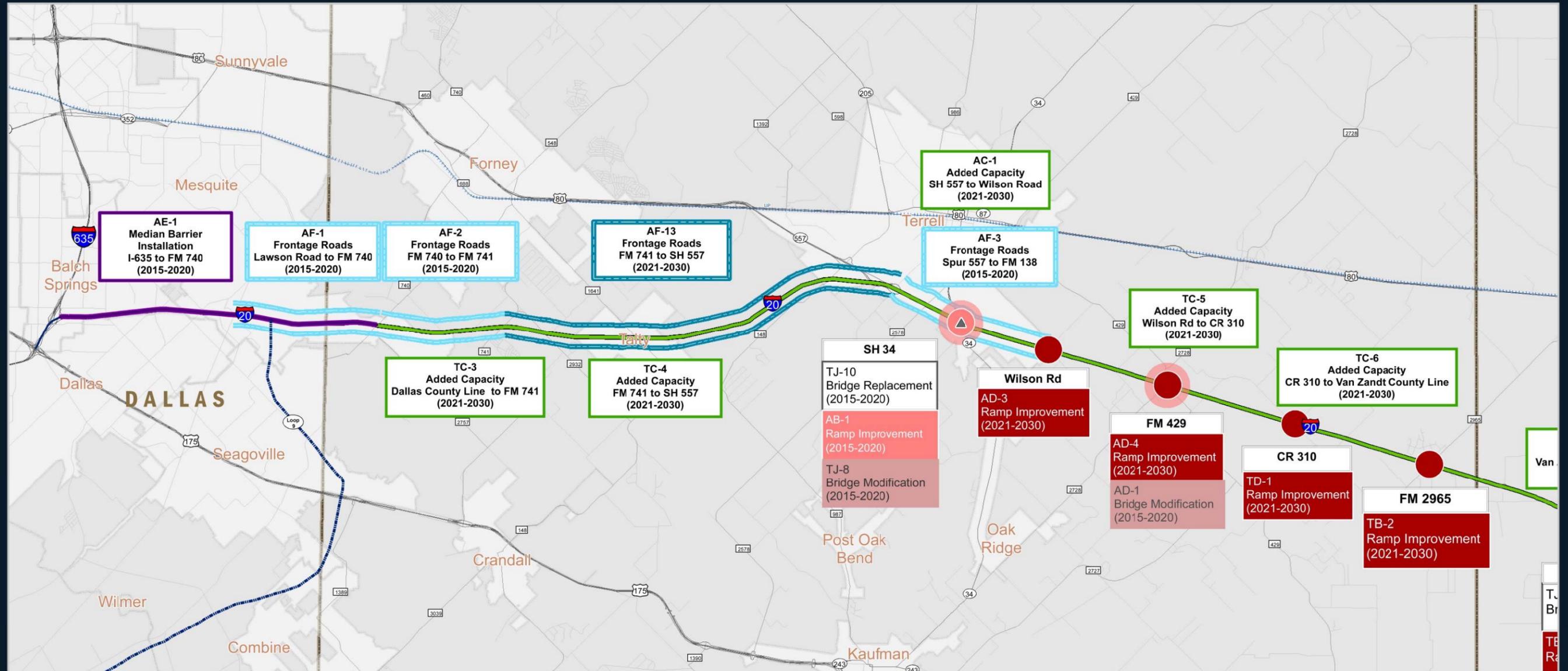
The I-20 plan includes approximately \$ 500 million of frontage road additions and improvements, but because of limited resources and in consideration that such improvements generally benefit local governments, TxDOT's usual practice is that any new frontage roads desired by local entities be implemented using local funds. Approximately half of the costs will be associated exclusively with new frontage roads that serve local development. The other half will combine improved access to land parcels with improvements to safety and mobility.

ES.7.4 Next Steps

The results of the I-20 East Texas Implementation Plan were presented to the Texas Transportation Commission on December 18, 2014. Speakers stressed that the study findings and conclusions were needed to improve safety, avert long term congestion, preserve the existing investment in the facility, and foster economic development throughout the corridor. The Commission enthusiastically received the study findings, thanking all participants for the comprehensiveness of the plan, and promising to begin implementation as funds become available in future years.

The first step in implementing the plan is to program the projects in the appropriate planning and programming documents. The focus will be on including the Near Term and Mid Term projects and determining funding sources for those projects. The Transportation Planning and Programming (TP&P) Division of TxDOT will work with each of the three Districts to accomplish this step. The next steps will be to advance these projects through the development process of design, environmental clearance, and, ultimately, construction. TxDOT will work closely with the communities along the I-20 East Texas Corridor each step of the way to achieve a safer, less congested, and more connected I-20.

Implementation Plan: Dallas and Kaufman Counties



- ▲ Near Term Bridge Replacement
- Near Term Ramp Improvement
- Mid Term Ramp Improvement
- Long Term Ramp Improvement
- Near Term Vertical Clearance Adjustment

- Near Term Proposed Frontage Roads
- Mid Term Proposed Frontage Roads
- Long Term Proposed Frontage Roads
- Mid Term Addition of Capacity
- Long Term Addition of Capacity
- Near Term Median Barrier Installation
- Railroads
- I-20 Study Area Counties
- City

Potential Interstate and State Highway route option locations is based on a high level planning study and is for illustrative purposes only. Exact location and configuration will be determined during the environmental process.

I-69 System (I-369) Harrison County/Marshall Working Group Interstate Route Option Preliminary Recommendation (August 2014)
 Loop 9 Southeast Corridor Preliminary Route Option Recommendation (March 2014)

- US 69 → Interchange
- TA-2 Ramp Improvement (2015-2020) → Project Code
- Project Type
- Timeframe
- AF-4 Frontage Roads FM 47 to US 64 (2015-2020) → Project Code
- Project Type
- Limits
- Timeframe

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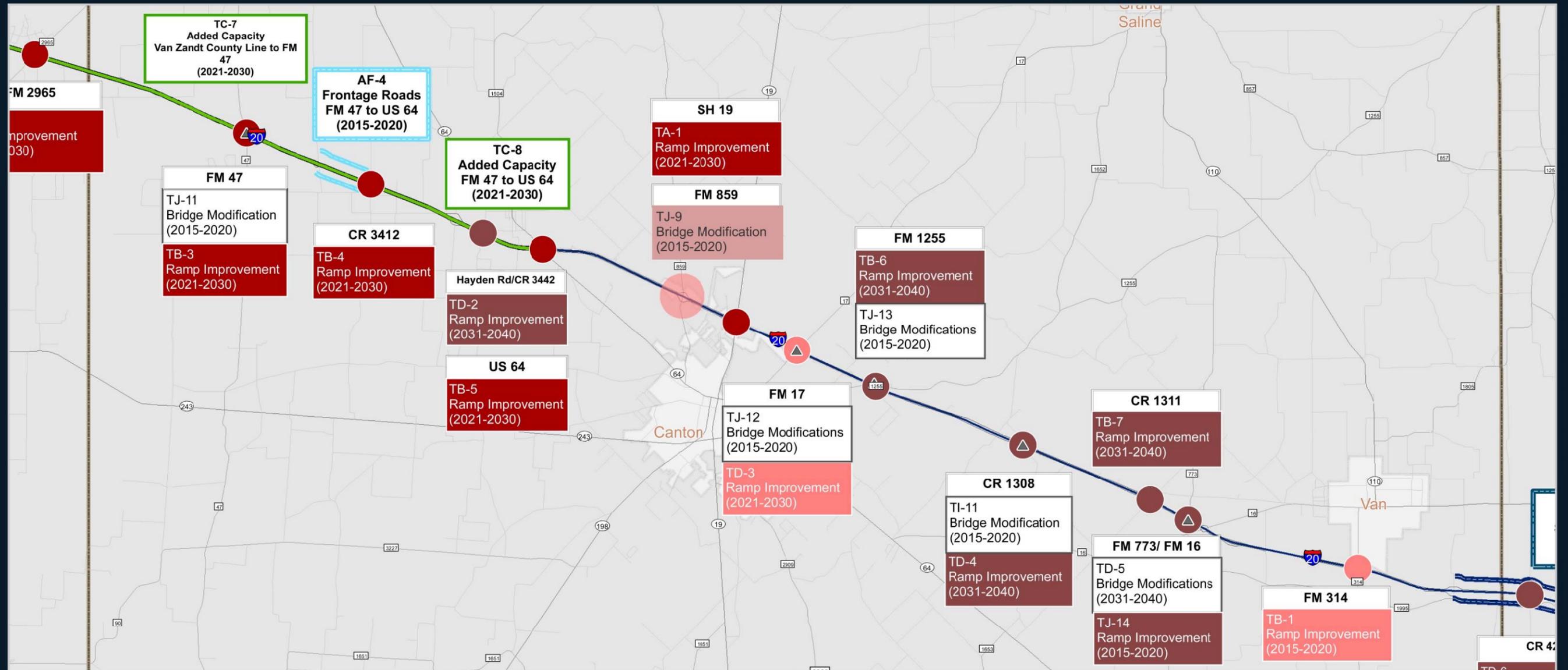
Date: 1/5/2015



LOCATION MAP

I-20 East Texas Corridor Study

Implementation Plan: Van Zandt County



▲ Near Term Bridge Replacement	Light Blue Line Near Term Proposed Frontage Roads	<p>Potential Interstate and State Highway route option locations is based on a high level planning study and is for illustrative purposes only. Exact location and configuration will be determined during the environmental process.</p> <p> I-69 System (I-369) Harrison County/Marshall Working Group Interstate Route Option Preliminary Recommendation (August 2014)</p> <p> Loop 9 Southeast Corridor Preliminary Route Option Recommendation (March 2014)</p>	<p>US 69</p> <p>TA-2 Ramp Improvement (2015-2020)</p> <p>→ Interchange</p> <p>→ Project Code</p> <p>→ Project Type</p> <p>→ Timeframe</p>
● Near Term Ramp Improvement	Medium Blue Line Mid Term Proposed Frontage Roads		<p>AF-4</p> <p>Frontage Roads FM 47 to US 64 (2015-2020)</p> <p>→ Project Code</p> <p>→ Project Type</p> <p>→ Limits</p> <p>→ Timeframe</p>
● Mid Term Ramp Improvement	Dark Blue Line Long Term Proposed Frontage Roads		
● Long Term Ramp Improvement	Green Line Mid Term Addition of Capacity		
● Near Term Vertical Clearance Adjustment	Dark Green Line Long Term Addition of Capacity		
	Red Line Near Term Median Barrier Installation		
	Blue Dashed Line Railroads		
	White Box I-20 Study Area Counties		
	Black Box City		

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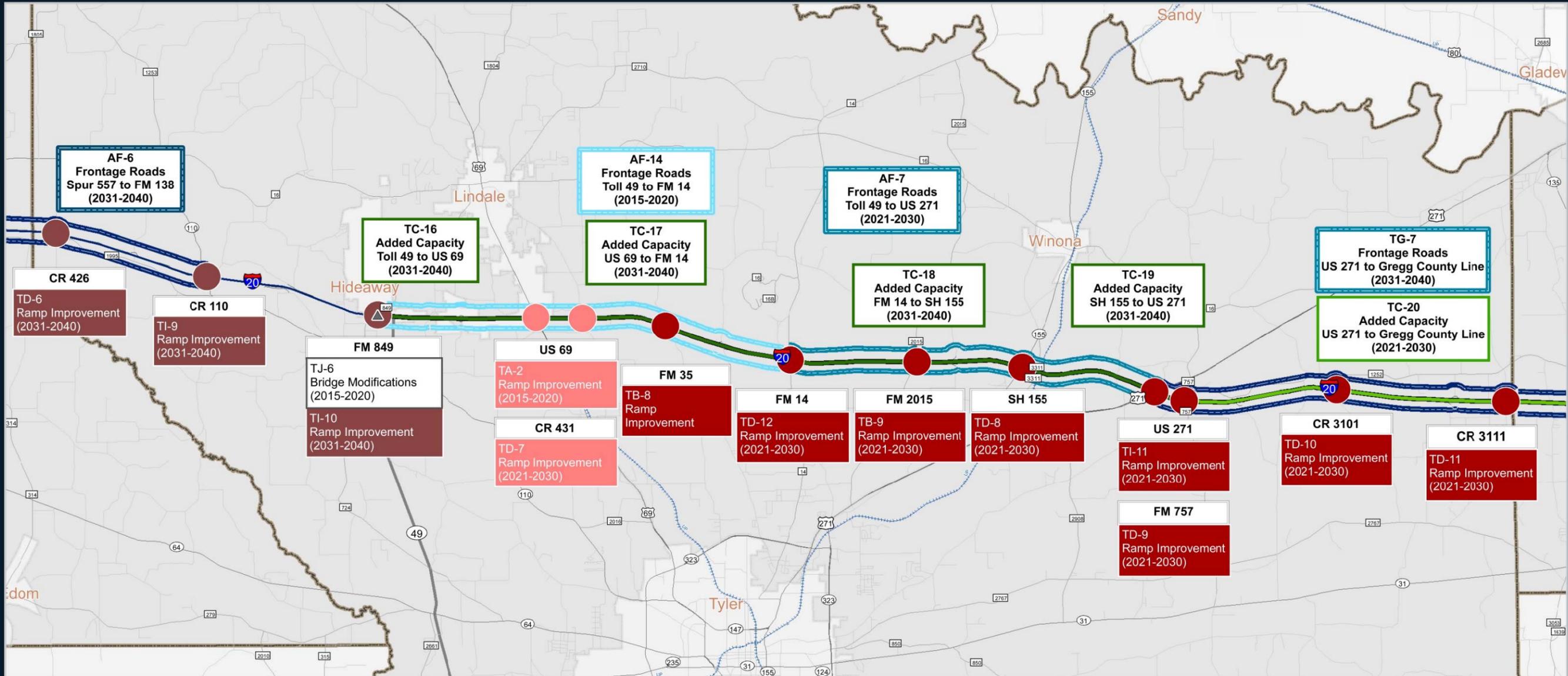
0 1 2 4 6 8 Miles

LOCATION MAP

I-20 East Texas Corridor Study

Date: 1/5/2015

Implementation Plan: Smith County



▲ Near Term Bridge Replacement	Light Blue Line Near Term Proposed Frontage Roads	<p>Potential Interstate and State Highway route option locations is based on a high level planning study and is for illustrative purposes only. Exact location and configuration will be determined during the environmental process.</p> <p>I-69 System (I-369) Harrison County/Marshall Working Group Interstate Route Option Preliminary Recommendation (August 2014)</p> <p>Loop 9 Southeast Corridor Preliminary Route Option Recommendation (March 2014)</p>	→ Interchange
● Near Term Ramp Improvement	Medium Blue Line Mid Term Proposed Frontage Roads		→ Project Code
● Mid Term Ramp Improvement	Dark Blue Line Long Term Proposed Frontage Roads	→ Project Type	→ Timeframe
● Long Term Ramp Improvement	Green Line Mid Term Addition of Capacity	→ Project Code	→ Limits
● Near Term Vertical Clearance Adjustment	Dark Green Line Long Term Addition of Capacity	→ Project Type	→ Timeframe
	Purple Line Near Term Median Barrier Installation		
	Blue Dashed Line Railroads		
	Orange Line I-20 Study Area Counties		
	White Box City		

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Scale: 0 1.25 2.5 5 7.5 10 Miles

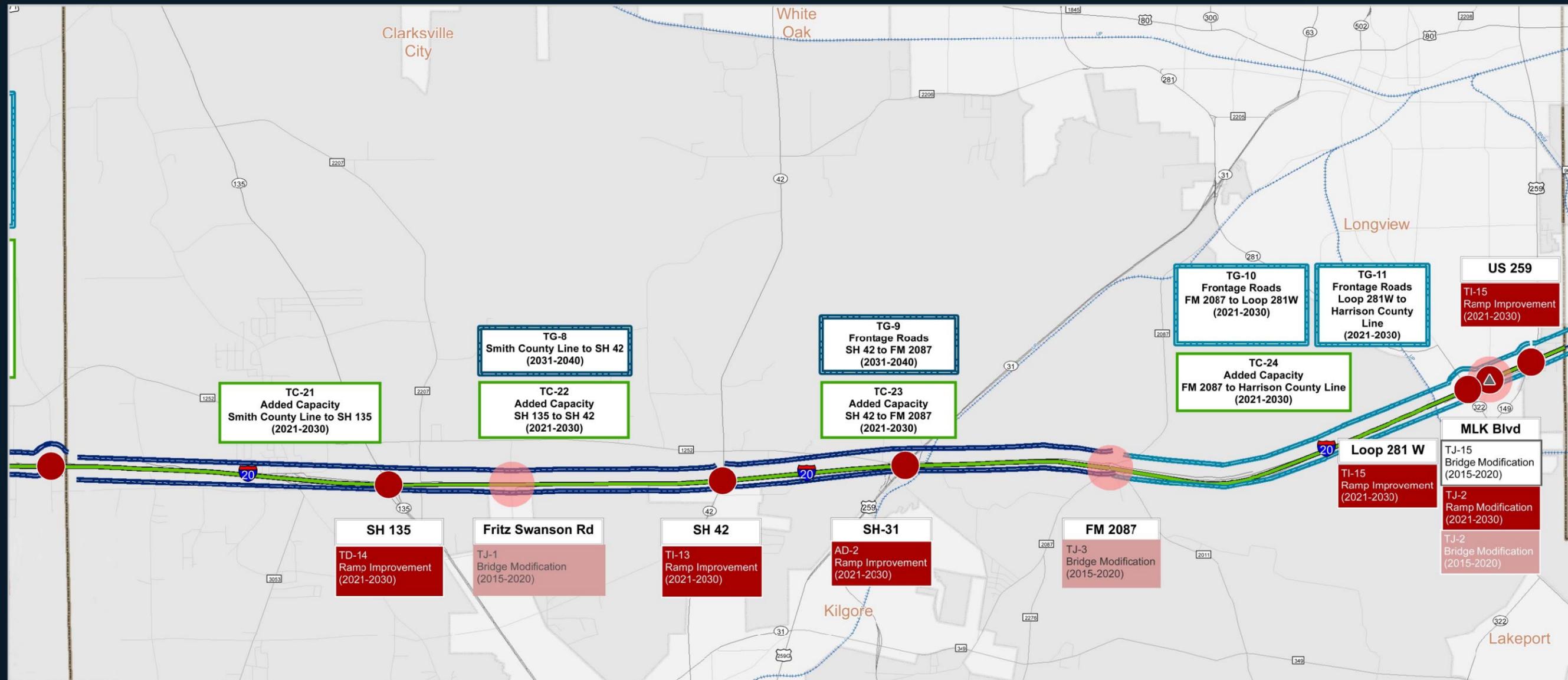
Date: 1/5/2015

LOCATION MAP

I-20 East Texas Corridor Study

Texas Department of Transportation

Implementation Plan: Gregg County



- ▲ Near Term Bridge Replacement
- Near Term Ramp Improvement
- Mid Term Ramp Improvement
- Long Term Ramp Improvement
- Near Term Vertical Clearance Adjustment
- Near Term Proposed Frontage Roads
- Mid Term Proposed Frontage Roads
- Long Term Proposed Frontage Roads
- Mid Term Addition of Capacity
- Long Term Addition of Capacity
- Near Term Median Barrier Installation
- Railroads
- I-20 Study Area Counties
- City

- ▲ I-69 System (I-369) Harrison County/Marshall Working Group Interstate Route Option Preliminary Recommendation (August 2014)
- ▲ Loop 9 Southeast Corridor Preliminary Route Option Recommendation (March 2014)

Potential Interstate and State Highway route option locations is based on a high level planning study and is for illustrative purposes only. Exact location and configuration will be determined during the environmental process.

US 69	Interchange
TA-2	Project Code
Ramp Improvement (2015-2020)	Project Type
	Timeframe
AF-4	Project Code
Frontage Roads	Project Type
FM 47 to US 64 (2015-2020)	Limits
	Timeframe



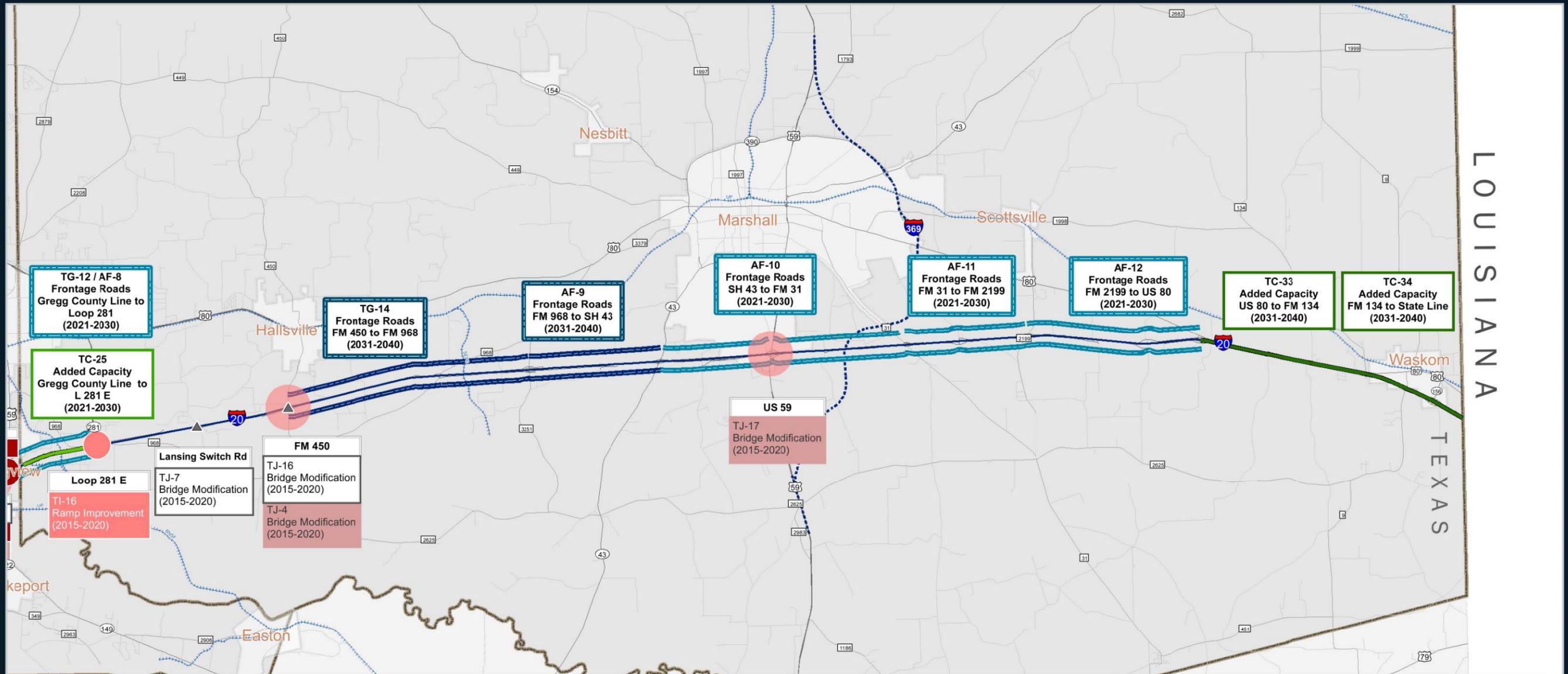
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I-20 East Texas Corridor Study

Date: 1/5/2015

Implementation Plan: Harrison County



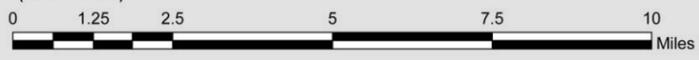
▲ Near Term Bridge Replacement	— Near Term Proposed Frontage Roads	<p>Potential Interstate and State Highway route option locations is based on a high level planning study and is for illustrative purposes only. Exact location and configuration will be determined during the environmental process.</p> <p>— I-69 System (I-369) Harrison County/Marshall Working Group Interstate Route Option Preliminary Recommendation (August 2014)</p> <p>— Loop 9 Loop 9 Southeast Corridor Preliminary Route Option Recommendation (March 2014)</p>	→ Interchange
● Near Term Ramp Improvement	— Mid Term Proposed Frontage Roads		→ Project Code
● Mid Term Ramp Improvement	— Long Term Proposed Frontage Roads	→ Project Type	→ Timeframe
● Long Term Ramp Improvement	— Mid Term Addition of Capacity	→ Project Code	→ Limits
● Near Term Vertical Clearance Adjustment	— Long Term Addition of Capacity	→ Project Type	→ Timeframe
	— Near Term Median Barrier Installation		
	— Railroads		
	— I-20 Study Area Counties		
	— City		

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LOCATION MAP

I-20 East Texas Corridor Study

Date: 1/5/2015



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