

I-69 Angelina and Nacogdoches Counties Scoping Study

Executive Summary

November 2013





The Texas Department of Transportation (TxDOT) is working to find the most appropriate means to develop the Interstate 69 (I-69) system from Texarkana and the Louisiana state line to the Mexico border in the Lower Rio Grande Valley and Laredo. This effort includes evaluation and development of upgrades to existing highways and new location relief routes that would meet current Interstate design standards.

United States Highway 59 (US 59) through Angelina and Nacogdoches Counties does not meet current Interstate standards. As such, TxDOT has allocated funding to conduct environmental studies to advance the development of US 59 as I-69 from south of Diboll to north of Nacogdoches. Once a section of US 59 meets Interstate standards and is planned to connect to an existing Interstate segment by July 2037, that section of US 59 is legislatively authorized to become I-69.

A citizen committee was established to guide TxDOT in advancing I-69 in Angelina and Nacogdoches Counties. This committee, the I-69 Angelina and Nacogdoches Counties Committee, is composed of citizens from each county that are assisting TxDOT by providing recommendations on route locations, improvements, and upgrades to meet Interstate standards.

This Executive Summary highlights the results and findings of the scoping study that was conducted to assist the committee in guiding TxDOT.

I-69 Angelina and Nacogdoches Counties Scoping Study Purpose

The purpose of the I-69 Angelina and Nacogdoches Counties Scoping Study is to (1) provide information to the committee on the different options for developing I-69 from south of Diboll to north of Nacogdoches, and (2) support the committee's outreach efforts to inform local citizens of the options and to solicit comments and input.

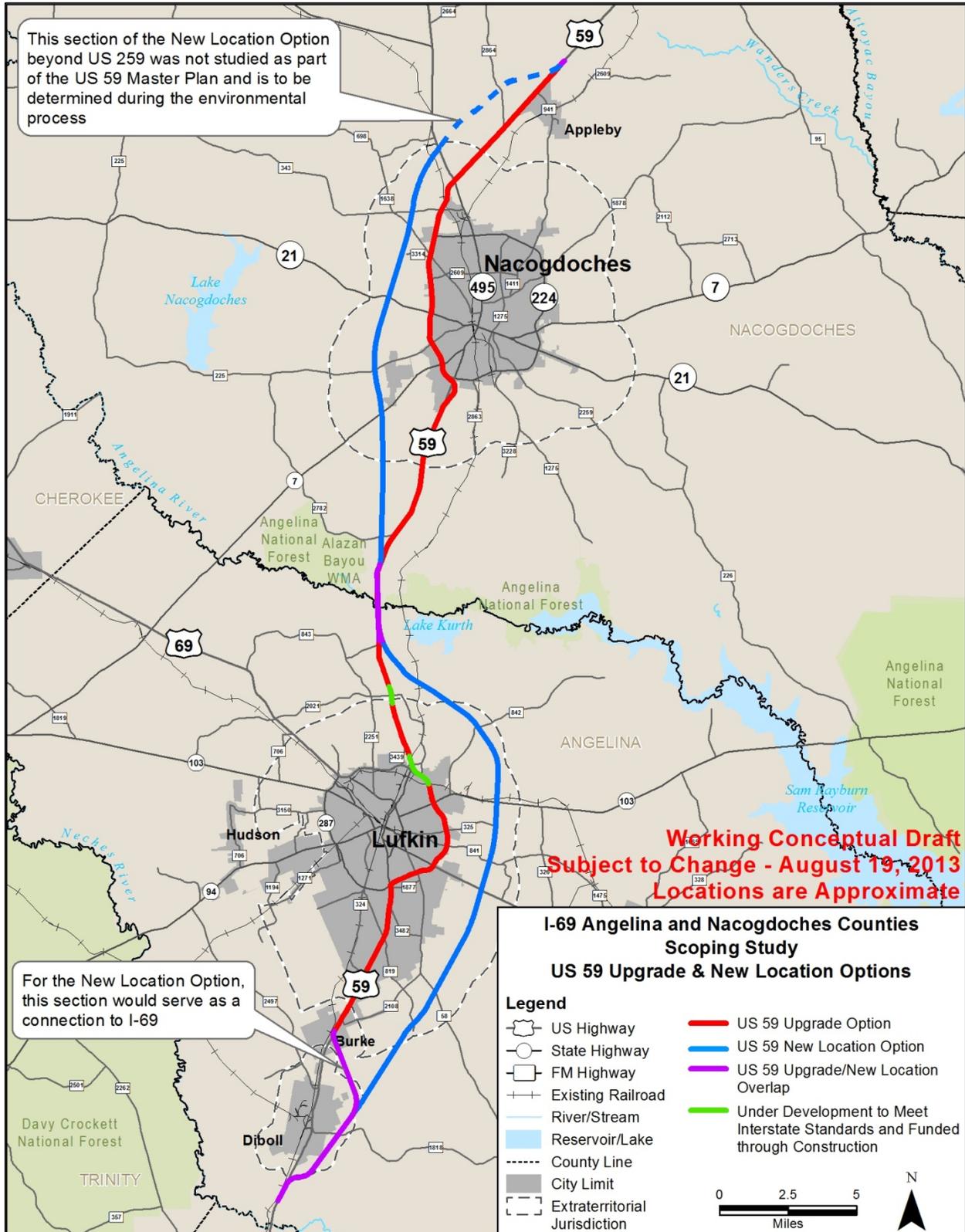
Two broad options for developing I-69 were originally considered. They include:

- US 59 Upgrade Option (shown in red on Figure ES1) – This option would upgrade existing US 59 to meet current Interstate standards.
- New Location Option (shown in blue on Figure ES1) – This option includes relief routes at Nacogdoches and Lufkin as well as upgrades at the Angelina River bridge that would meet current Interstate standards.

The New Location Option is based on the previously studied US 59 Master Plan.

Both options would include a relief route at Diboll (shown in purple on Figure ES1) which the TxDOT Lufkin District has also previously studied.

Figure ES1. US 59 Upgrade and New Location Options





I-69 in Texas is Needed

Federal legislation has authorized the development of the I-69 system in Texas along specified U.S. routes including US 59. The development of I-69 in Texas would relieve traffic congestion caused by a growing population, provide safer travel through the state, improve emergency evacuation routes, and support economic development.

Existing US 59 Will Be Insufficient to Handle Future Traffic Projections

Existing US 59 does not have the capacity to serve projected traffic volumes.

The measure used to evaluate the effectiveness of a roadway system to provide adequate traffic capacity is a rating criterion called level of service (LOS). LOS describes the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. LOS varies from “A” to “F”, with “A” being the best operating conditions and “F” representing the worst congested conditions.

The existing US 59 corridor from Diboll to north of Nacogdoches operated at a LOS C or better during the 2011 peak hour traffic. Between 2011 and 2047, traffic along the study corridor is expected to increase by 65%, on average, over the length of US 59, thus deteriorating the LOS.

The LOS for US 59 in 2047 would be E and F in the urban areas of Nacogdoches and Lufkin even if two projects currently being advanced by the TxDOT Lufkin District (FM 2021 Interchange and the US 59 North/Loop 287 Interchange Phase One), and the Diboll Relief Route were built.

Existing US 59 does not Meet Interstate Standards

US 59 does not meet current Interstate standards through Angelina and Nacogdoches Counties because the greater part of US 59 in these counties is not access controlled, which is a primary Interstate requirement. Additionally, other Interstate design standards are not met along the majority of those sections of US 59 which are access controlled.

The American Association of State Highway and Transportation Officials (AASHTO) establishes current Interstate design standards including the criteria to evaluate geometric features and conditions to determine if a highway meets the standards. According to the AASHTO Interstate design standards, the highway system must be access controlled. This is accomplished by allowing ingress and egress to the mainlanes only at selected locations via entrance and exit ramps.

US 59 from south of Diboll to north of Nacogdoches includes approximately 6.8 miles of roadway that are presently access controlled, approximately 2.1 miles of roadway that is funded to become access controlled, and approximately 37.4 miles of roadway are not access



controlled. As-built plans for existing access controlled sections and construction plans for sections funded to become access controlled were assessed using a 50 mph design speed in urban areas and 70 mph design speed in rural areas to determine if they meet current Interstate design standards.

- Existing US 59 access controlled sections: The majority of those sections of existing US 59 which are access controlled, do not meet current Interstate design standards. Deviations include insufficient shoulder and bridge widths, the presence of 6-inch curb, insufficient vertical clearances, and insufficient vertical grades and curvature, for example. Approximately 2 miles of access controlled areas could not be verified because some roadway and bridge information could not be determined from as-built plans.
- Existing US 59 sections funded to become access controlled: Review of the plans for areas that are currently funded to become access controlled indicate that once these improvements are constructed, US 59 will meet Interstate standards in these areas.
- Existing US 59 non-access controlled sections: These sections of existing US 59 allow access to the mainlanes via cross roads and driveways and thus, do not meet Interstate standards.

The US 59 Upgrade and New Location Options Have Distinct Differences

Both options can be designed and constructed to meet Interstate standards and future transportation needs. However, there are differences between the two options under consideration as shown below.

Environmental Factors

- Cultural Resources: The US 59 Upgrade Option is primarily located in developed areas and has a greater potential to affect historic resources than the New Location Option. The New Location Option is primarily located in undeveloped rural areas and has a greater potential to affect archeological resources than the US 59 Upgrade Option.
- Natural Resources: The US 59 Upgrade Option is primarily located in developed areas and it has less potential to affect natural resources such as potential wildlife habitat, floodplains, streams, wetlands, and prime farmlands than the New Location Option.
- Displacements and Community Effects: The US 59 Upgrade Option follows existing US 59, and as such has a greater potential to affect businesses, community facilities and a greater potential to disrupt traffic and travel patterns during construction. The New Location Option is primarily located in undeveloped rural areas and has a greater potential to affect residential and agricultural properties.



Traffic Operations

- Traffic Operations: Both the US 59 Upgrade and New Location Options provide acceptable near-term and long-term traffic operations as measured by LOS. Additionally, the New Location Option provides for more corridor capacity than the US 59 Upgrade Option.

Engineering Factors

- Access Roads: As of this time, it is assumed that the US 59 Upgrade Option would have continuous access roads and that the New Location Option would not have continuous access roads. The cost effectiveness of purchasing access rights versus constructing access roads would be studied during the environmental process.
- Right-of-Way (ROW): The US 59 Upgrade Option requires less ROW than the New Location Option, however, ROW costs for the US 59 Upgrade Option are estimated to be higher than the New Location Option. The US 59 Upgrade Option would involve more, but smaller, ROW parcels, whereas the New Location Option would involve fewer but larger ROW parcels.
- Cost: The US 59 Upgrade Option costs more than the New Location Option in present day dollars; however, cost depends on timing of individual projects because of inflation. If a project is constructed sooner, the impact of inflation on the present day dollar cost is less.
- Maintenance: The US 59 Upgrade Option would have only slightly less lane miles and therefore slightly less pavement to be maintained than the New Location Option. A total of 392 lane miles would need to be maintained for the US 59 Upgrade Option. A total of 465 lane miles (including new location lanes and existing US 59 lanes) would need to be maintained for the New Location Option.

The US 59 Upgrade Option would include maintenance of six mainlanes in the Lufkin area, four mainlanes everywhere else, and four lanes of continuous access roads.

The New Location Option would require the maintenance of four mainlanes and four lane access roads in a few select locations. Additionally, if the New Location Option was built, TxDOT would also be responsible for maintaining existing US 59 which includes four mainlanes throughout, six existing US 59 mainlanes in a few areas in Lufkin and four lanes of access roads at several locations along the Lufkin and Nacogdoches loops.

The US 59 Upgrade Option would require storm sewer maintenance, while the New Location Option would not.



Other Factors

- **Construction:** The US 59 Upgrade Option can be constructed as smaller stand-alone projects, whereas the New Location Option would need to be constructed in larger sections that connect to existing roadways in order for the project to be useful to the traveling public. The impact to the travelling public during construction would be greater with the US 59 Upgrade Option.
- **Traffic and Mobility:** The US 59 Upgrade Option can be developed as smaller stand-alone projects that upon completion would provide immediate safety and mobility benefits to drivers on US 59. The New Location Option would be developed and constructed as longer projects that connect to existing highways. Safety and mobility on US 59 would improve as New Location Option sections are connected to major roadways, but full benefits would likely not be realized until the entire relief route is completed (US 59 south to US 59 north in Lufkin and/or Nacogdoches). The New Location Option would also allow for hazardous waste vehicles to route outside an urban area and would serve as another route for hurricane evacuations.
- **Environmental Process:** Because it would be developed as smaller, stand-alone projects, environmental documents for the US 59 Upgrade Option may be simpler and completed sooner (e.g., 12–18 months). For the New Location Option, Environmental Assessment documents would be required for each relief route (Lufkin and Nacogdoches) and could take as long as 18 to 36 months to complete. Additionally, the Environmental Assessments for the Lufkin and Nacogdoches relief routes may be elevated to an Environmental Impact Statement, if either project is likely to result in significant impact to the natural, cultural or human environment or if there is substantial controversy on environmental grounds surrounding either project, which would extend the process an additional 1 to 2 years.
- **I-69 Designation:** Upon completion of a US 59 Upgrade section it could be signed as I-69. The New Location Option route could not be signed as I-69 until each end of the roadway is connected to US 59 (in Lufkin and/or Nacogdoches). Either option must be part of a plan that connects to an existing Interstate by June 30, 2037, as per federal law, before signing as I-69.

I-69 Angelina and Nacogdoches Counties Committee was a Robust Process

The I-69 Angelina and Nacogdoches Counties Committee participated in 6 meetings, all of which were advertised in local newspapers, were open to the public, and were attended by the public. At these meetings, committee members discussed the US 59 Upgrade and New Location options under consideration and brainstormed public outreach activities. Committee members participated in a robust public outreach process to inform local citizens of the two



options under consideration, and to solicit comments and input. Committee members' activities have included:

- Holding one-on-one meetings with local citizens;
- Providing PowerPoint presentations at regularly scheduled local civic group and government meetings;
- Distributing printed materials including maps, fact sheets, pocket cards, flyers, and comment forms;
- Notifying citizens of an online survey and encouraging participation;
- Notifying citizens of a webpage including committee information, study information, and comment tool; and
- Conducting Open Houses for the public in both Angelina and Nacogdoches Counties.

For both counties, almost 70 percent of the citizens that participated in the public outreach process supported the US 59 Upgrade Option over the New Location Option. This input was formally received by means of an online survey and written comments gathered from the Open House sessions, one-on-one meetings, and through email and mail.

I-69 Angelina and Nacogdoches Counties Committee Proposed Option Refinements

At the May 7, 2013 committee meeting, committee members gathered in groups by County and participated in a brainstorming session to consider:

- Potential refinements to the two options under consideration
- Rationale for potential refinements
- Prioritized areas of need

Additionally, the Angelina County Members met separately on May 21, 2013 to further discuss potential refinements, the rationale for the refinements, and to prioritize areas of need.

Results of the meeting exercises for both Angelina and Nacogdoches Counties are shown below:



Angelina County – Option Refinements Exercise:

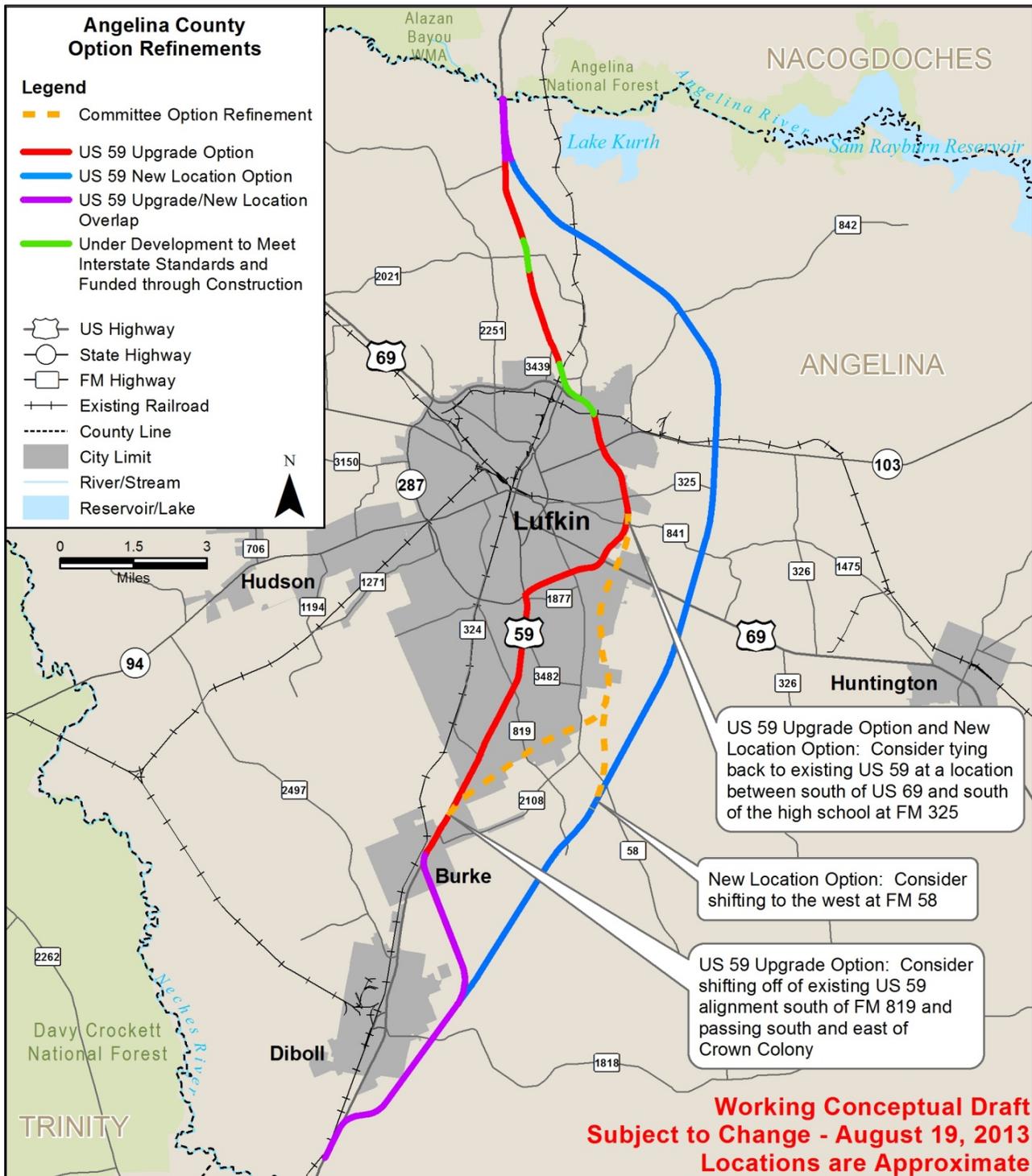
1. New Location Option
 - a. At FM 58 shift to the west and tie back to existing US 59/Loop 287 at a location between south of US 69 and south of the high school at FM 325.
 - i. Rationale:
 1. Reduces potential new location effects to greenfield areas.
 2. Lessens the extent of expansion of the utility service area required to accommodate future development.
 3. Allows for the use of the US 59 North/Loop 287 Interchange Phase One, which is currently under construction and will meet Interstate standards.
2. US 59 Upgrade Option
 - a. South of FM 819 shift off of existing US 59 alignment and go to the south and east of Crown Colony. Tie back to existing US 59/Loop 287 at a location between south of US 69 and south of the high school at FM 325.
 - i. Rationale
 1. Minimizes potential effects to businesses and apartments along the existing highway.
 2. Reduces potential relocations along the existing highway.
 3. Reduces potential ROW costs.
 4. Lessens the extent of expansion of the utility service area required to accommodate future development.
 5. Promotes economic development.

Angelina County committee members' option refinements are shown in Figure ES2.

Angelina County – Priority Areas:

1. Priority 1 – Diboll Relief Route
2. Priority 2 - US 69 to north of SH 103 (tie to the North Near Term ongoing project)
3. Priority 3 - US 59 (north of Diboll relief route tie) to US 69/LP 287 interchange
4. Priority 4 - North near term project to Angelina River

Figure ES2. Angelina County Committee Members' Option Refinements





Nacogdoches County - Option Refinements Exercise:

Preface: Nacogdoches County committee members participated in the Option refinement exercise and developed refinements for both the New Location Option and the US 59 Upgrade Option, individually. However, the suggested refinements to the New Location Option and US 59 Upgrade Option resulted in two identical options.

1. New Location Option and US 59 Upgrade Option Refinements
 - a. From the Angelina County line, upgrade the existing US 59 alignment to as far north as possible before moving onto new location, passing either east or west of the airport. Connect back to the existing US 59 alignment as soon as possible, south of US 259, while minimizing potential effects to businesses.
 - i. Rationale for refinements:
 1. Improvements along existing US 59 would provide immediate safety and mobility benefits and as such, may be more likely to be funded.
 2. Minimizes potential effects to wild turkey habitat and wildlife habitat.
 3. The location of I-69 close to the City of Nacogdoches may enhance economic development opportunities.
 4. Minimizes potential effects to the Central Heights area.
 5. Minimizes potential effects to businesses between the south US 59/Loop 224 interchange and the Nacogdoches County Expo Center.

Nacogdoches County committee members' option refinements are shown in Figure ES3.

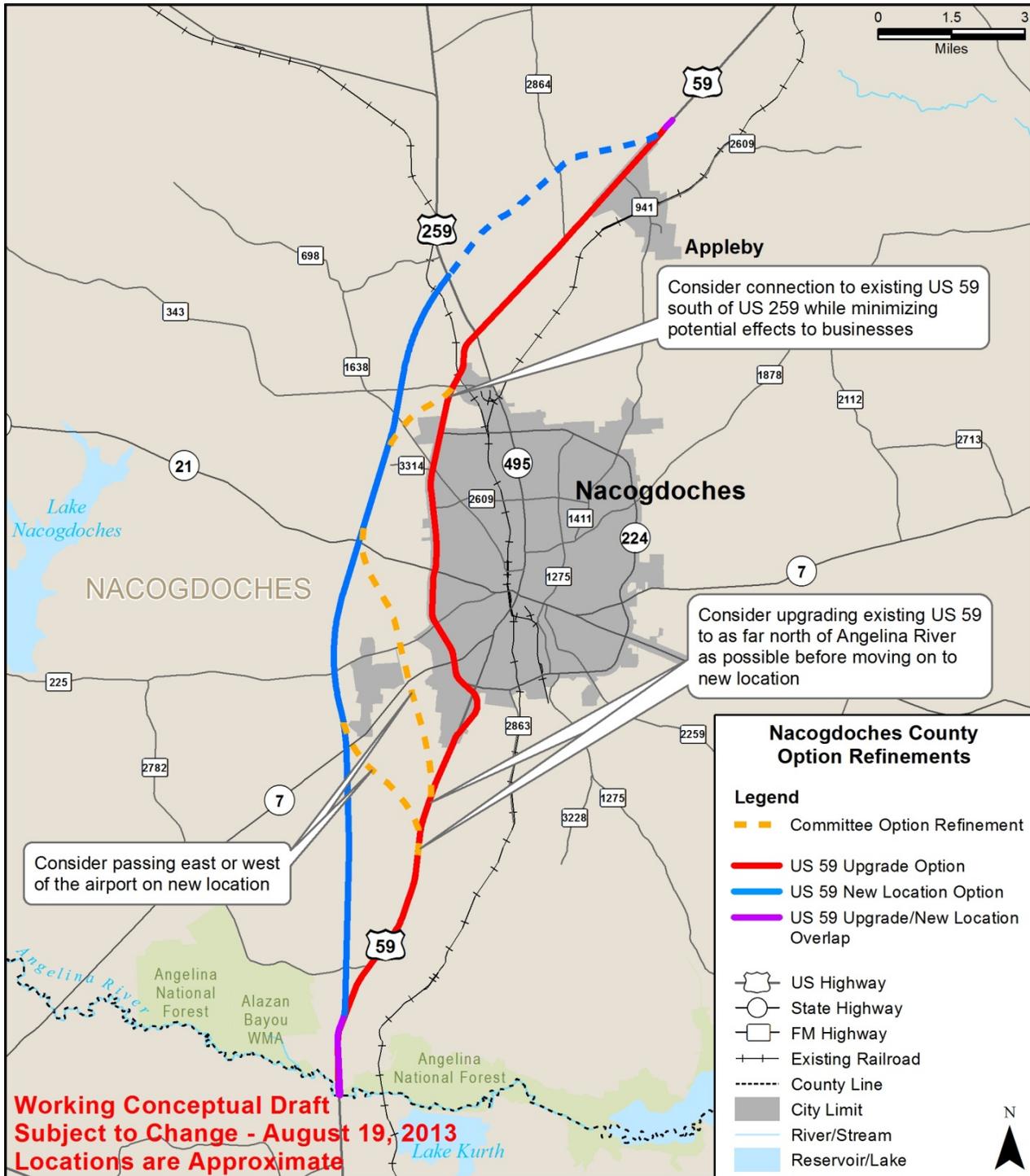
Nacogdoches County - Priority Areas:

1. Priority 1 - Improvements at the south interchange of US 59 and Loop 224 was identified as the top priority regardless of which option is carried forward in the environmental process.
2. New Location Option and US 59 Upgrade Option
 - a. Priority 2 – From SH 21 to just north of the US 259 interchange
 - b. Priority 3 – From the Angelina County line to SH 7
 - c. Priority 4 – From SH 7 to SH 21
 - d. Priority 5 – From north of US 259 to Appleby

Nacogdoches County – Other

1. The Nacogdoches County committee members recognized the importance of enhanced connectivity between SH 204 and the I-69 System.

Figure ES3. Nacogdoches County Committee Members' Option Refinements



**Working Conceptual Draft
Subject to Change - August 19, 2013
Locations are Approximate**



I-69 Angelina and Nacogdoches Counties Committee Provided Recommendations

The Angelina County committee members' recommendations and priorities were finalized at the August 19, 2013 meeting and are as follows:

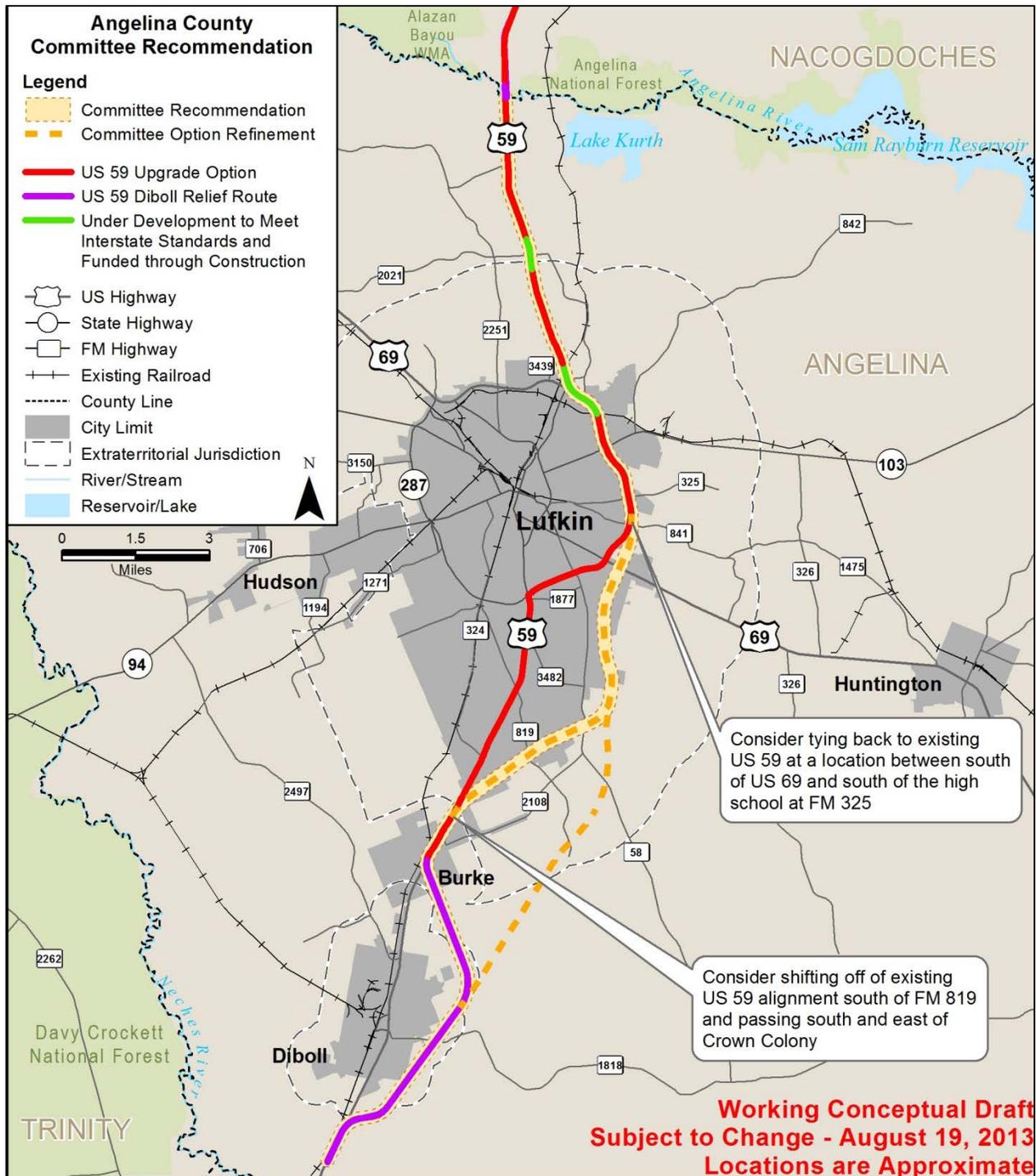
The Angelina County committee members confirmed the priorities as follows:

- Priority 1 – Diboll Relief Route
- Priority 2 - US 69 to north of SH 103 (tie to the North Near Term ongoing project)
- Priority 3 - US 59 (north of Diboll relief route tie) to US 69/LP 287 interchange
- Priority 4 - North near term project to Angelina River

The Angelina County committee members' recommendations (Figure ES4) are as follows:

- The Angelina County committee members recommended that the US 59 Upgrade Option, including the suggested refinements, be carried forward in the environmental process. The Angelina County committee members also noted that, if the recommendation cannot be carried forward through the environmental process because of development or sensitive environmental resources, the refinement to the New Location Option should serve as a secondary recommendation.

Figure ES4. Angelina County Committee Members' Recommendation



Executive Summary



The Nacogdoches County committee members' recommendations and priorities were finalized at the August 19, 2013 meeting and are as follows:

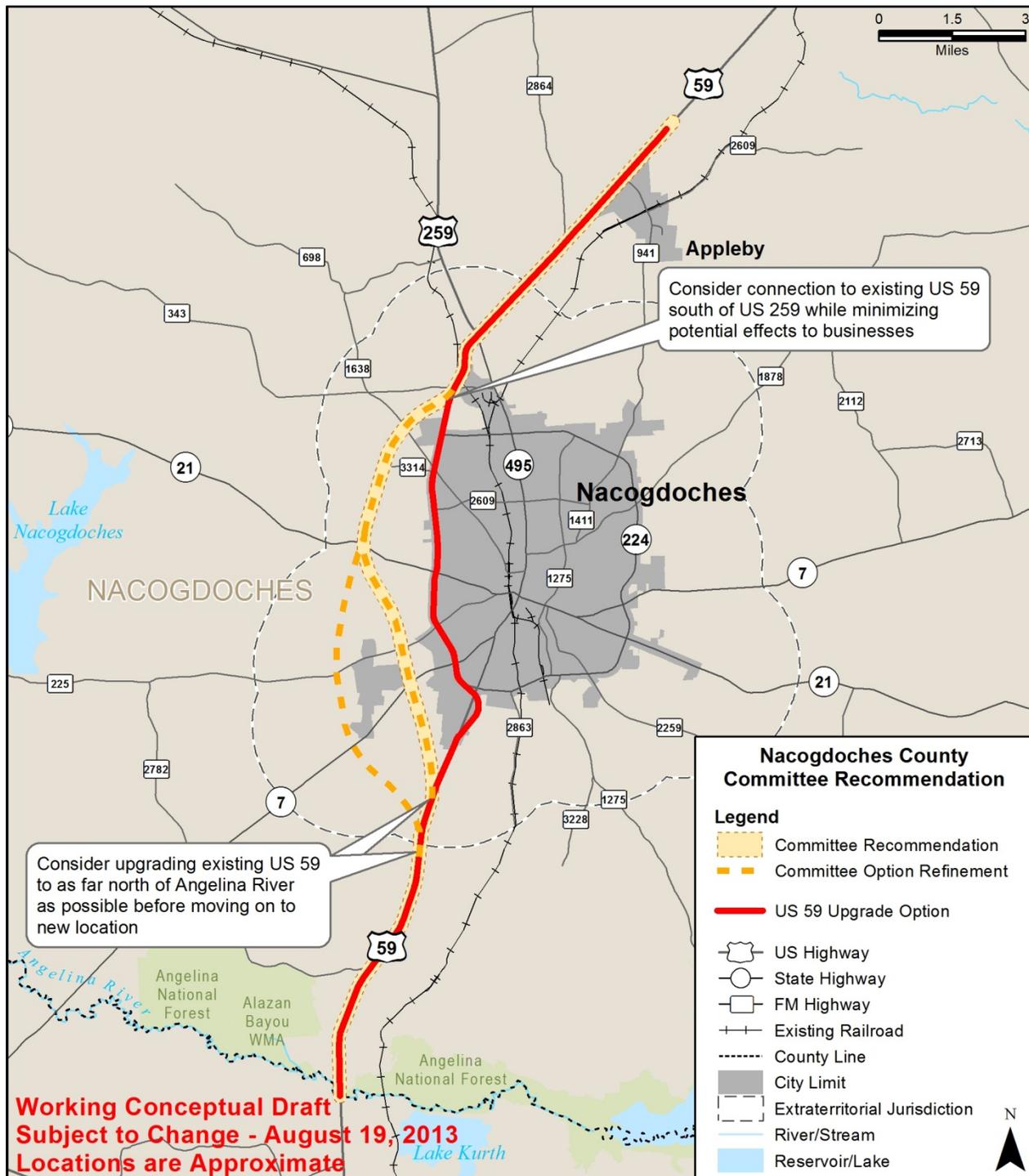
The Nacogdoches County committee members confirmed the priorities as follows:

- Priority 1 - Improvements at the south interchange of US 59 and Loop 224 was identified as the top priority regardless of which option is carried forward in the environmental process.
- Priority 2 – From SH 21 to just north of the US 259 interchange
- Priority 3 – From the Angelina County line to SH 7
- Priority 4 – From SH 7 to SH 21
- Priority 5 – From north of US 259 to Appleby

The Nacogdoches County committee members' recommendations (Figure ES5) are as follows:

- The Nacogdoches County committee members recommended that the US 59 Upgrade Option, including the suggested refinements (east of the A L Mangham Jr. Regional Airport), be carried forward in the environmental process. The Nacogdoches County committee members also noted that, if the recommendation cannot be carried forward through the environmental process because of development or sensitive environmental resources, the refinement west of the airport should serve as a secondary recommendation.

Figure ES5. Nacogdoches County Committee Members' Recommendation



The Next Steps

The I-69 Angelina and Nacogdoches Counties Committee has performed an important function by revisiting the merits of the US 59 Master Plan (as the New Location Option) and comparing them to the merits of an upgrade of existing US 59 (the US 59 Upgrade Option). The key next steps in advancing the upgrade of US 59 in Angelina and Nacogdoches Counties will be:

Complete the Environmental and Schematic Design Process:

TxDOT has allocated funding to complete the environmental and schematic design effort for US 59 in the two counties. The committee recommendations for both counties of a “US 59 Upgrade Option with refinements”, combined with public sentiment endorsing the US 59 Upgrade Option, are evidence that upgrades of existing US 59, to the greatest extent possible, should be studied. During this effort TxDOT will evaluate the need for shifts in the alignment to avoid potential impacts such as large development or other sensitive resources.

Complete the Diboll Relief Route:

The number one priority of Angelina County committee members is advancing the development of the Diboll Relief Route. TxDOT completed the environmental process and had approved schematic design plans in 1999 for this project, but because of the elapsed time, an environmental reevaluation will be required. TxDOT is proceeding forward with preparing a reevaluation of the Environmental Assessment and with ROW mapping updates.

Near Term Improvement Projects:

TxDOT will also investigate the possibility of advancing a near term project in Nacogdoches County including either: 1) the south US 59/Loop 224 interchange improvements (the number one priority of Nacogdoches County committee members); or 2) the US 59/US 259 interchange (falls within the number two priority section of Nacogdoches County committee members).

Design and construction funding has not been identified for any of the projects above. Additionally, TxDOT continues to have funding shortfalls in excess of \$4 billion per year which makes the financing and delivery of roadway projects challenging. TxDOT will work to develop a long term strategy to identify funding for advancing projects in Angelina and Nacogdoches counties. This may include federal, state and local resources as well as innovative financing tools such as tolls, establishment of a Transportation Reinvestment Zone (TRZ), local participation in ROW costs and ROW donations from local land owners.

Despite the funding shortfalls, TxDOT remains committed and understands the importance of advancing I-69 throughout Texas, including Angelina and Nacogdoches Counties.