3.0 TRAFFIC

Chapter 3 contains a summary of the *Traffic Study* describing existing (Base) Year 2002 traffic and the projected conditions for No-Build Year 2030 and Build Year 2030. These traffic conditions are the basis for the line and grade study, which generated the Selected Alternative included in this FEIS. The complete *Traffic Study* is a supporting document of this FEIS. Its purpose is to document existing traffic conditions and to assess future transportation impacts associated with upgrading US 90 to an interstate facility. The study also provided information utilized in the assessment of noise impacts and the assessment of air quality benefits associated with this project.

The findings presented in this chapter include:

- Ramp Junction/Weaving Capacity Analysis in Link 6 as illustrated in **Exhibit 3-1** on page 3-5;
- The existing Average Daily Traffic (ADT) for US 90 and for the Build and No-Build projections for the US 90, US 90 Business, and I-49 as summarized in **Table 3-1** on page 3-7;
- Roadway capacity analyses as presented in **Table 3-2** on page 3-7; and
- Intersection/interchange analyses as summarized in **Tables 3-3A and 3-3B** on pages 3-27 and 3-28.

All results of analyses are based on the afternoon (PM) peak hour. The PM peak was chosen because it was determined that the PM peak hour had the highest volume throughout the corridor. This determination was based on AM and PM peak hour traffic volumes collected in the field in 2002. To the extent possible, all data are presented by the Links defined in Section 2.5.5.

3.1 Average Daily Traffic (ADT)

Existing Year 2002 traffic volume data for each intersection and roadway segment were collected. Twenty-four hour forecast volumes were developed using the New Orleans Metropolitan Area Travel Demand Model maintained by the New Orleans Regional Planning Commission (RPC). These forecasts were made for Year 2010, the assumed date for completion of construction, and for Year 2030, the design year. The design year for a project is generally defined as 20 years from the date of construction completion.

3.1.1 Year 2002 Existing Conditions

The existing route of US 90 in the study area is approximately 40 miles in length. It is a four-lane roadway with 11- to 12-foot lanes and 6- to 10-foot paved shoulders from LA 1 to Segnette Boulevard. It is a six-lane divided roadway from Segnette Boulevard to the existing elevated portion of the Westbank Expressway. Existing roadway geometry consists of divided sections, undivided sections, and sections with a two-way center left turn lane.

US 90 is classified as a rural principal arterial between LA 1 and LA 306, which is the portion included in Links 1 and 2 and the area of the LA 635 interchange in Link 3. It is classified as an urban principal arterial in the remainder of the study area.

- In the rural area, US 90 ADT in Year 2002 ranges from 23,400 in Lafourche Parish to 28,000 in Des Allemands in St. Charles Parish, and classification counts indicate that ADT is composed of approximately 9% heavy trucks.
- In the urban area, US 90 ADT in St. Charles Parish in Year 2002 ranges from 36,000 near I-310, to 29,200 near Willowdale Boulevard, to 46,500 near Segnette Boulevard, to 65,500 near Westwood Drive. Volume drops east of I-310 because vehicles are attracted to the I-310 crossing of the Mississippi River. Classification counts indicate that ADT is approximately 9% heavy trucks in rural areas and 5% to 7.5% heavy trucks in urban areas.

Varying speeds are posted throughout the corridor. Within the rural area, the posted speed limit on US 90 varies from 55 miles per hour (mph) to 65 mph. Within the urban area, the speed limit varies from 35 mph to 55 mph.

Field observations and discussions with local representatives provided insight about the unique travel characteristics within the study area; the more noteworthy are:

- Existing US 90 and US 90 Business serve as local travel corridors and have direct connections to the local roadway network. Residents, businesses, schools, and public services rely on these roadways for local access.
- The US 90 corridor serves as a hurricane evacuation route for residents of Jefferson, Lafourche, and St. Charles Parishes, as well as for offshore workers.

3.1.2 Year 2030 ADT

As presented in **Table 3-1**, 2030 No-Build ADT in the rural area of the corridor ranges from 34,638 to 36,449 while Build ranges from 35,384 to 36,776.

In the urban area of the corridor, in St. Charles Parish, the ADT counts drop from Mosella to Boutte. No-Build ranges from 43,620 to 36, 520 while Build ranges from 37,974 to 27,736. I-310 ADT drops from 45,293 for No-Build to 43,414 for Build. The vacant area between Davis Pond and Avondale in Jefferson Parish has 27,168 ADT for No-Build and 39,905 ADT for Build. Less than 500 of these trips would use the frontage road between Davis Pond and Avondale. In Avondale, No-Build is 43,448 ADT and Build is 51,059 ADT. Along the Westbank Expressway, the No-Build ADT ranges from 52,714 near Segnette Boulevard to 81,180 in Marrero while Build ranges from 88,554 near Segnette Boulevard to 88,751 in Westwego with Marrero slightly less at 83,242.

3.2 Roadway Capacity Analysis

Roadway and freeway segment analyses were conducted to evaluate existing conditions, identify operational deficiencies, and to define future facility requirements. This analysis included the identification of peak hour traffic volumes, capacity, and Level of Service (LOS) as described in Section 3.2.1. Various roadway segments along US 90 and the service roads were evaluated with respect to base year and design year conditions.

The roadway analyses conducted in fulfillment of this study included the following subtasks:

- Field observations;
- Compilation of peak hour volumes; and

- Roadway/freeway capacity analyses.

Field observations were conducted in order to collect data relevant to existing roadway, traffic, and intersection control parameters. Roadway information gathered included, but was not limited to the following: lane widths, lane assignments, and posted speed limits. Volume data, vehicle composition, and directional distribution were several traffic variables analyzed. Coordination with concurrently developed build alternatives was essential in order to define design year conditions. All roadway segments between major interchange locations associated with the Build alternative were analyzed.

Traffic data within the US 90 corridor study area were collected. These counts were obtained to identify actual travel demand and travel patterns within the corridor. From this data, AM and PM peak hour traffic volumes were derived for the base year conditions. These counts were collected during the months of April and May of 2002 and, therefore, reflect school season driving conditions.

3.2.1 Level of Service (LOS)

As described in the *2000 Highway Capacity Manual*, "vehicle capacity represents the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic and control conditions," for a given facility. Levels of service identify ranges of operation conditions. The concept of levels of service is defined "as qualitative measures that operational conditions include such factors as travel time, freedom to maneuver, traffic interruption, comfort and convenience, and safety."

"Six levels of service are defined for each type of facility. They are given letter designations, from A to F, with level-of-service A (LOS A) representing the best operating conditions and level-of-service F (LOS F) the worst." Utilizing the *Signal2002*, Version 6.00.08, computer program, capacity and levels of service analyses were performed at each US 90 (proposed I-49 South) interchange.

Design year roadway peak hour volumes were estimated by assuming forty percent of the Year 2030 three hour PM peak roadway volumes from the TRANPLAN model.

The task performed involved capacity and LOS analyses. The analyses of roadway and freeway segments were performed using the *Highway Capacity Software (HCS), Version 3.2*. This computer program models the methodologies adapted by the *2000 Highway Capacity Manual Special Report*. These analyses were performed for both existing and design year conditions. The most noticeable changes in traffic that would take place in the US 90 corridor are on US 90 Westbound (WB) in Link 4 and on the frontage roads on the Westbank Expressway in Westwego. The LOS currently is F in both locations. Construction of I-49 would divert sufficient traffic that both locations would improve to LOS A.

3.2.2 Base Year (2002) Roadway Analyses

The base year roadway analyses were performed for only the mainline of US 90 from east of LA 1/LA 308 to east of Willowdale Boulevard. The geometrics (number of lanes) were based on existing conditions.

The analyses indicate that the existing PM peak hour volumes range from approximately 2,225 vehicles per hour (vph) near LA 182 to approximately 2,774 vph between LA 306 and I-310. In addition, the analyses indicate the LOS ranges from LOS B near LA 182 to LOS F east of Paul Maillard Road/Magnolia Ridge Road in Boutte. This LOS F is caused by multiple commercial driveways and signalized intersections on this section of US 90 coupled with a large demand for right turns at LA 52.

Base year roadway analyses were performed for only the mainline of US 90 from east of LA 306 to Westwood Drive. The number of lanes (geometry) was based on existing conditions.

Traffic counts indicate that the existing PM peak hour volumes range from 1,922 vehicles per hour (vph) near South Kenner Avenue and 5,335 vph near Westwood Drive. The analyses also indicate that the level of service ranges from LOS C near LA 306, Live Oak Boulevard, and Segnette Boulevard to LOS F near Westwood Drive. The analyses indicate the critical LOS in Link 3 is an LOS C near LA 306. Link 4 is an LOS F east of Paul Maillard (LA 52)/Magnolia Ridge (LA 633), Link 5 is an LOS C near Live Oak Boulevard and Segnette Boulevard, and Link 6 is an LOS F near Westwood Drive. This LOS F is created by multiple drives and signalized intersections on this stretch of US 90.

3.2.3 Design Year (2030) Freeway Analyses

The design year roadway and freeway analyses were performed for both the mainline of proposed I-49 South and US 90 from east of LA 1/LA 308 to east of Willowdale Boulevard. These analyses were based on the design peak hour volumes developed from the TRANPLAN model. The analyses were based on a design speed of 70 mph for proposed I-49 South. The findings of the analyses are summarized in **Table 3-2.**

The analyses indicate that, in Year 2030 PM peak hour, the mainline of proposed I-49 South throughout Links 1, 2, 3 and 4, will perform at LOS B. There are segments along I-49 in Links 5 and 6, however, that will perform at LOS D. While a LOS D is considered adequate during peak hours, local traffic may still utilize the Frontage Roads should delays occur on I-49. The Frontage Roads have ample capacity to handle the additional traffic.

Throughout the length of US 90, the entire route will perform at LOS A or B.

The recommended four-lane freeway would require improvements at several US 90 intersections as required by freeway overpasses and to address safety or capacity. In addition, it is anticipated that, once the proposed I-49 South is constructed, the following intersections of US 90 will no longer require signalization:

- LA 306,
- Live Oak Boulevard, and
- Capitol Drive.

Exhibit 3-1 Weaving and Ramp Analysis

Exhibit 3-2 Data Locations

Tables 3-1 & 3-2

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3.3 Ramp Junction/Weaving Capacity Analysis in Link 6

3.3.1 Methodology

Ramp junction and weaving segment analyses were evaluated to define future facility requirements and locations of proposed ramp junctions in Link 6. These analyses included the identification of peak hour traffic volumes, capacity, and level of service for the design year (2030) build condition in Link 6.

The 2030 design year roadway PM peak hour volumes were estimated by assuming forty percent of the 2030 three hour PM peak roadway volumes from the TRANPLAN model.

The task performed as part of the ramp junction and weaving segment analyses involved capacity and level of service analyses. The analyses of roadway and freeway segments were performed using the *Highway Capacity Software (HCS), Version 4.1*. This computer program models the methodologies adapted by the *2000 Highway Capacity Manual Special Report*.

3.3.2 Design Year (2030) Ramp Junction/Weaving Capacity Analysis

The design year ramp junction and weaving analyses were performed for the mainline of I-49 from Segnette Boulevard to Ames Boulevard. These analyses were based on the design peak hour volumes established from the TRANPLAN model. The geometrics (number of lanes) were based on the alternative alignments as described in the *Line and Grade Study*. The alternative alignments include a six-lane mainline freeway section that extends the length of Link 6. The analyses were based on a design speed of 70 mph for the mainline and a speed of 50 mph for the ramps. In addition, the weaving segments were analyzed as 'Type A' weaving areas.

Throughout the length of Link 6, the ramps will perform at an acceptable LOS from a LOS B to a LOS D (eastbound off ramp from US 90 to Segnette). In addition, the two weaving segments in Link 6 between Victory Drive and Westwood Drive will operate at a LOS C. The detailed findings of the analyses are summarized in **Exhibit 3-1**.

3.4 Interchange/Intersection Analyses

Detailed intersection analyses were performed at each critical intersection and interchange. These analyses studied the intersections of the frontage roads or off ramps at the key side streets. The analyses included review of existing traffic circulation patterns, peak hour volumes, and traffic control measures, and evaluated existing conditions, identified operational deficiencies, and defined future facility requirements. Each is discussed in Sections 3.4.1 through 3.4.23.

The results include the identification of PM peak hour traffic volumes, capacity, delay, and intersection LOS. Key intersections along US 90 were evaluated with respect to base year 2002 and design year 2030 No-Build and Build conditions. Based on these criteria, the LOS was determined at each location.

The intersection analyses conducted in fulfillment of this study included the following subtasks:

- Field observations;
- Review of on-going planning in the US 90 corridor;
- Compilation of AM and PM peak hour turning movement counts; and
- Intersection capacity analyses.

The analyses of signalized intersections were performed utilizing the *Signal2002, Version 6.00.08*, highway capacity software program. The analyses of unsignalized intersections were performed utilizing the *Highway Capacity Software (HCS), Version 4.1e*. Both of these computer programs model the methodologies described in the *2000 Highway Capacity Manual*. These analyses were performed for both existing conditions and Year 2030 No-Build and Build conditions. The *Traffic Study* contains a detailed discussion of methodology.

3.4.1 US 90 at LA 1

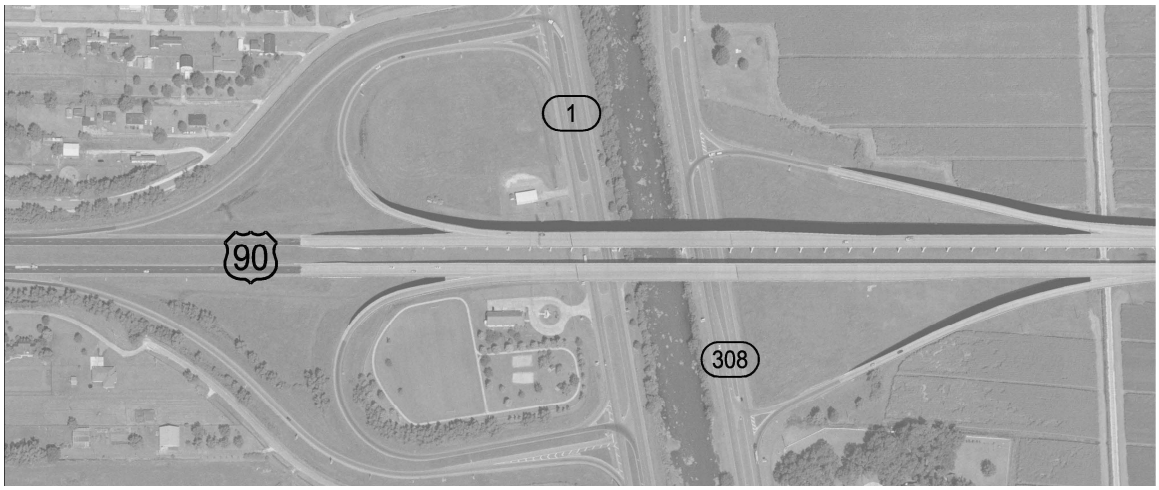
The existing interchange of US 90 at LA 1 is a full directional interchange as shown on **Exhibit 3-3**. All off ramps are controlled by stop sign control. Exclusive left turn lanes are provided on LA 1 for both on ramps with the right turn movement being channelized. Exclusive right turn lanes are provided on both off ramps.

In Year 2002, a LOS D is anticipated for the critical movement during the PM peak period based on traffic volume data and the existing geometry.

In Year 2030, under the No-Build condition, a LOS F is anticipated for the critical movement during the PM peak based on traffic volume projections and the existing geometry.

In Year 2030 under the Build condition, it was assumed that the intersections of both ramp locations with LA 1 would be signalized with a cycle length of 70 seconds. Peak period traffic volumes with these signals and the existing geometry indicate that the north side of the interchange will operate at a LOS B+ and the south side of the interchange will operate at a LOS B+.

Exhibit 3-3
Existing Intersections of LA 1 and LA 308
with Entrance and Exit Ramps to US 90



3.4.2 US 90 at LA 308

The existing interchange of US 90 at LA 308 consists of a half diamond interchange, as shown on **Exhibit 3-3**, that provides access to US 90 to the east (north) and access to LA 308 from the east (north). The existing off ramp is controlled by stop sign control. An exclusive left turn lane and a channelized right turn movement are provided on LA 308 for access to the on ramp.

In Year 2002, a LOS C is anticipated for the critical movement during the PM peak period based on traffic volume data and the existing geometry.

For purposes of computing 2030 LOS in Year 2030 under the Build condition, it was assumed that the intersections of both ramp locations with LA 308 would remain unsignalized. Peak period traffic volumes with the existing geometry indicate that the west side of the interchange will operate at a critical LOS D and the east side of the interchange will operate at a critical LOS A.

3.4.3 US 90 (Proposed I-49 South) at LA 182 (LA 3199)

The existing alignment of US 90 and LA 182 (also known as LA 3199) is a T-intersection with the major street, US 90, aligned in the east-west direction and LA 182 intersecting from the north. This intersection is controlled by side street stop sign control. The posted speed limit is 65 mph on US 90. Exclusive right and left turn lanes are provided on US 90. The north approach on LA 182 consists of a left turn lane and a channelized right turn lane.

In Year 2002, a LOS E is anticipated during the PM peak period based on traffic volume data and the existing geometry.

In Year 2030, under the No-Build condition, a LOS F is anticipated based on PM peak period traffic volume data and the existing geometry.

Exhibit 3-4
Existing and Proposed Intersections of US 90 (Proposed I-49) with LA 182

For purposes of computing LOS in Year 2030 under the Build condition, it is assumed that the intersection LA 182 at the west and east ramps would be unsignalized. The new LA 182 intersection is shown on **Exhibit 3-4**. Peak period traffic volumes indicate that the west side of the interchange will have a critical movement LOS A and the east side of the interchange will have a critical movement LOS B.

The intersection of re-aligned LA 182 with US 90 would have a critical LOS A during the Year 2030 PM peak period.

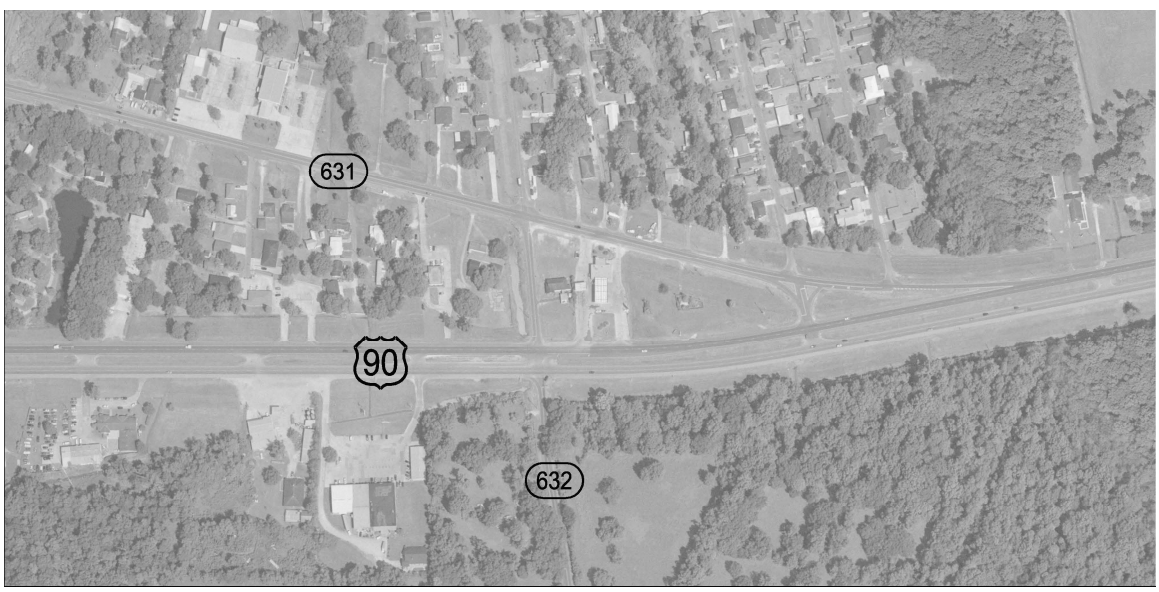
3.4.4 US 90 at LA 632

The existing alignment of US 90 and LA 632 is a four-way intersection as shown on **Exhibit 3-5**. The major street, US 90, is aligned in the east-west direction, and LA 632 intersects from the north and south. This intersection is controlled by side street stop sign control. The posted speed limit is 45 mph on US 90. Exclusive left turn lanes are provided on US 90. The north and south approaches on LA 632 consist of a single lane approach.

In Year 2002, a critical LOS E is anticipated during the PM peak period based on traffic volume data and the existing geometry.

In Year 2030, a LOS F is anticipated for the critical movement under the No-Build condition during the PM peak period based on traffic volume data and the existing geometry.

Exhibit 3-5
Existing Intersection of US 90 with LA 632



I-49 will traverse south of US 90 in Link 2; this intersection and proposed I-49 South will not have an interchange with LA 632. Year 2030 design year analysis was performed to determine the LOS of this intersection as a result of the reduction of through traffic on US 90 due to proposed I-49 South. The analyses indicate that the

intersection will operate at a LOS B during the Year 2030 PM peak period under the Build condition.

3.4.5 US 90 at LA 635

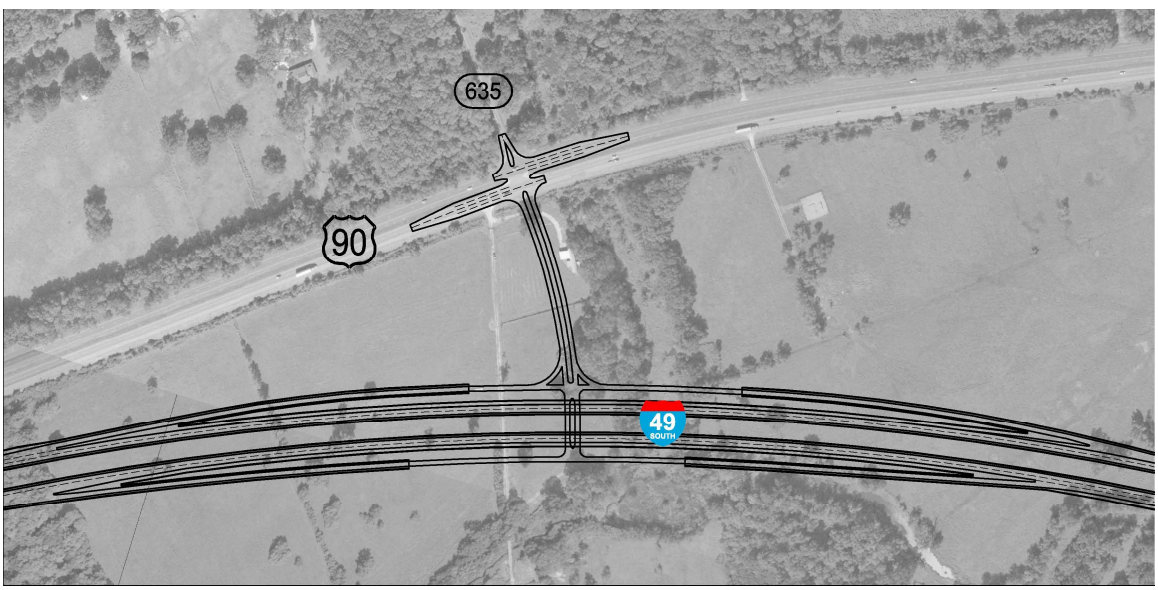
The existing alignment of US 90 and LA 635, shown on **Exhibit 3-6**, is a T-intersection with the major street, US 90, aligned in the north-south direction and LA 635 intersecting from the west. This intersection is controlled by side street stop sign control. The posted speed limit is 45 mph on US 90. The west approach on LA 635 consists of a single lane approach.

In the Year 2002, an intersection LOS C is anticipated during the base year PM peak period based on the peak traffic volume data and the existing geometry.

In Year 2030, a LOS D is anticipated for the No-Build PM peak period based on traffic volume data and the existing geometry.

The proposed alignments for I-49 will traverse east of US 90 and this intersection. Also, I-49 will have an interchange with LA 635. For purposes of computing design year LOS, it was assumed that the intersection LA 635 at US 90 would be unsignalized and that LA 635 at the I-49 ramps would be unsignalized. The analyses indicate that the west side of the interchange will have a critical LOS A and the east side of the interchange will have a critical LOS A during the 2030 PM peak period.

Exhibit 3-6
Existing and Proposed Intersections of US 90 (Proposed I-49) with LA 635



3.4.6 US 90 at LA 306

The existing alignment of US 90 and Bayou Gauche Road (LA 306) is a four-way intersection as shown on **Exhibit 3-7**. The major street, US 90, is aligned in the east-west direction, and LA 306 intersects from the north and south. This intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. Exclusive left turn lanes are provided on US 90. The north approach

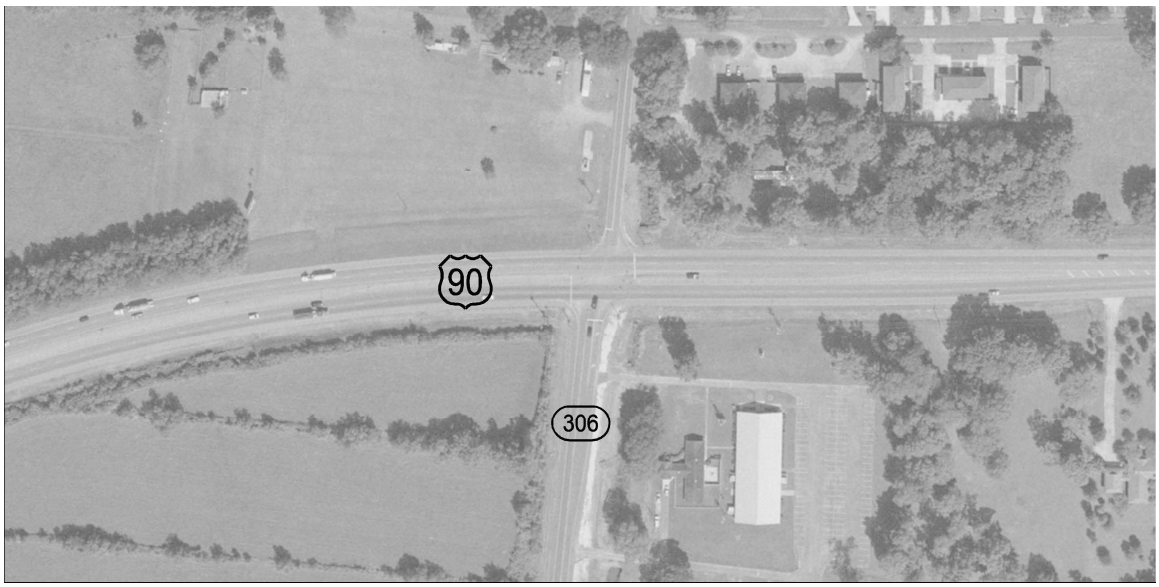
on LA 306 consists of a single lane approach. The south approach on LA 306 consists of an exclusive left turn lane and a shared through/right turn lane.

In Year 2002, an intersection LOS B+ is anticipated during the PM peak period based on the peak traffic volume data and the existing geometry.

In Year 2030, a LOS C is anticipated for the No-Build PM peak period based on traffic volume data and the existing geometry.

I-49 will traverse south of US 90 in Link 3. This intersection and I-49 will not have an interchange with LA 306. The Year 2030 design year analysis was performed to determine the LOS of this intersection as a result of the reduction of through traffic on US 90 due to proposed I-49 South. The reduction in traffic on US 90 in Year 2030 design year analyses were based on this intersection operating as an unsignalized intersection. The analyses indicate that the intersection will have a critical LOS C during the Year 2030 PM peak period under the Build condition.

Exhibit 3-7
Existing Intersection of US 90 with LA 306



3.4.7 US 90 at I-310/LA 3127 Off Ramp

The existing alignment of US 90 and the I-310 off ramp is a T-intersection with the major street, US 90, aligned in the east-west direction and the I-310 off ramp intersecting from the north as shown on **Exhibit 3-8**. This intersection is controlled by an isolated fully actuated volume density traffic signal. The posted speed limit is 45 mph on US 90. The I-310 off ramp consists of dual left turn lanes. Right turn movements are accommodated by a separate directional exit ramp.

In Year 2002, an intersection LOS B+ is anticipated in the PM peak period based on the traffic volume data and the existing geometry.

In Year 2030, a LOS D+ is anticipated for No-Build during the PM peak period based on traffic volume data and the existing geometry.

3.4.8 US 90 at I-310/LA 3127On Ramp

The existing alignment of US 90 and I-310 on ramp, also on **Exhibit 3-8**, is a three-way intersection with the major street, US 90, aligned in the east-west direction and the I-310 on ramp intersecting from the north. This intersection is controlled by an isolated fully actuated volume density traffic signal. The posted speed limit is 45 mph on US 90.

In Year 2002, an intersection LOS B+ is anticipated in the PM peak period based on the traffic volume data and the existing conditions.

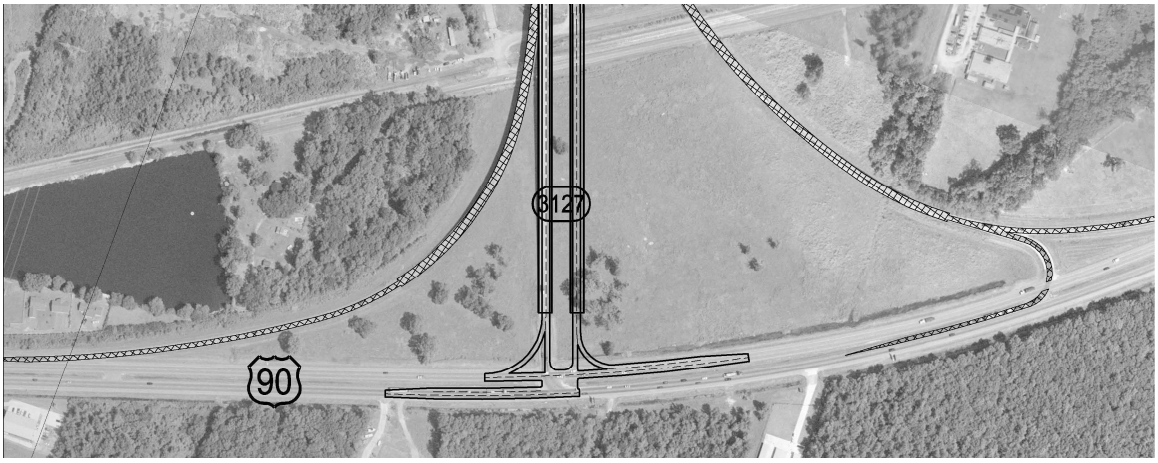
In Year 2030, a LOS D+ is anticipated for No-Build during the PM peak period based on traffic volume data and the existing geometry.

Exhibit 3-8
Existing Intersection of LA 3127 with US 90

3.4.9 I-49 South at LA 3127 and LA 3127 at US 90

The Build condition would create an interchange with proposed I-49 South and LA 3127 as shown on **Exhibit 3-9**. In addition, an intersection with US 90 and LA 3127 would continue to exist. It was assumed that these intersections would be signalized with a cycle length of 80 seconds.

Exhibit 3-9
Proposed Intersection of LA 3127 with US 90



The analyses indicate that the proposed I-49 South Ramps at LA 3127 and the intersection of LA 3127 at US 90 would operate at a LOS B in 2030.

3.4.10 US 90 at Paul Maillard Road (LA 52)/Magnolia Ridge Road (LA 633)

The existing alignment of US 90 and Paul Maillard Road/Magnolia Ridge Road is a four-way intersection as shown on **Exhibit 3-10**. The major street, US 90, is aligned in the east-west direction, Paul Maillard Road intersects from the north, and Magnolia Ridge

Road intersects from the south. The intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. Exclusive left turn lanes are provided on US 90, and an exclusive right turn lane is provided on the east approach. The north approach on Paul Maillard Road consists of a single lane with a channelized right turn movement. The south approach on Magnolia Ridge Road consists of a single lane.

Exhibit 3-10
Existing Intersection of US 90 with LA 52 and LA 633

In Year 2002, an intersection LOS D is anticipated in the PM peak period based on the traffic volume data and the existing geometry.

In Year 2030, a LOS F is anticipated for the No-Build PM peak period based on traffic volume data and the existing geometry.

I-49 South would not have an interchange with Paul Maillard Road/Magnolia Ridge Road. Year 2030 design year analysis was performed to determine the LOS of this intersection as a result of the reduction of through traffic on US 90 due to proposed I-49 South. The analysis indicates that the intersection will operate at a LOS B during the Year 2030 PM peak period under the Build condition.

3.4.11 US 90 (Proposed I-49 South) at Willowdale Boulevard

The existing alignment of US 90 and Willowdale Boulevard is a T- intersection as shown on **Exhibit 3-11**. The major street, US 90, is aligned in the east-west direction, and Willowdale Boulevard intersects from the south. This intersection is

controlled by an isolated fully actuated traffic signal. The posted speed limit is 55 mph on US 90. The east approach on US 90 provides an exclusive left turn lane, and the west approach provides an exclusive right turn lane. The south approach on Willowdale Boulevard consists of a single lane approach with a channelized right turn movement.

In Year 2002, a LOS A is anticipated in the PM peak period based on the traffic volume data and the existing geometry.

In Year 2030, a LOS A is anticipated in the No-Build PM peak period based on traffic volume data and existing geometry. For purposes of computing design year LOS, it was assumed that the interchange of Willowdale Boulevard will be signalized with a cycle length of 80 seconds.

Exhibit 3-11
Existing Intersection of US 90 with Willowdale Boulevard

The analyses indicate that the interchange will operate at a LOS B during the Year 2030 PM peak period for the Build condition. These analyses do not include a project planned by St. Charles Parish involving relocating LA 3060, now routed on Barton Avenue, to connect US 90 with River Road (LA 18).

3.4.12 US 90 at Live Oak Boulevard

The existing alignment of US 90 and Live Oak Boulevard is a T-intersection as shown on **Exhibit 3-12**. The major street, US 90, is aligned in the east-west direction and Live Oak Boulevard intersects from the north. This intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. The east approach on US 90 provides an exclusive right-turn lane and the west approach provides an exclusive left-turn lane. The north approach on Live Oak Boulevard consists of a single lane.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS B+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict LOS B.

Exhibit 3-12
Existing Intersections of US 90 with Live Oak Boulevard and with Capitol Drive

For computing design year LOS, it was assumed that this intersection would operate as an unsignalized intersection. The analyses indicate that the intersection will have a critical LOS B during the 2030 PM peak period.

3.4.13 US 90 at Capitol Drive

The existing alignment of US 90 and Capitol Drive is a T-intersection as shown on **Exhibit 3-12**. The major street, US 90, is aligned in the east-west direction and Capitol Drive intersects from the north. This intersection is controlled by a semi-actuated interconnected traffic signal. The posted speed limit is 45 mph on US 90. The east approach on US 90 has an exclusive right-turn lane and the west approach has an exclusive left-turn lane. The north approach on Capitol Drive has exclusive right- and left-turn lanes.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS A.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS A.

For computing 2030 LOS it was assumed that this intersection would operate as an unsignalized intersection due to minor 2030 volumes. The analyses indicate that the intersection will have a critical LOS B during the 2030 PM peak period.

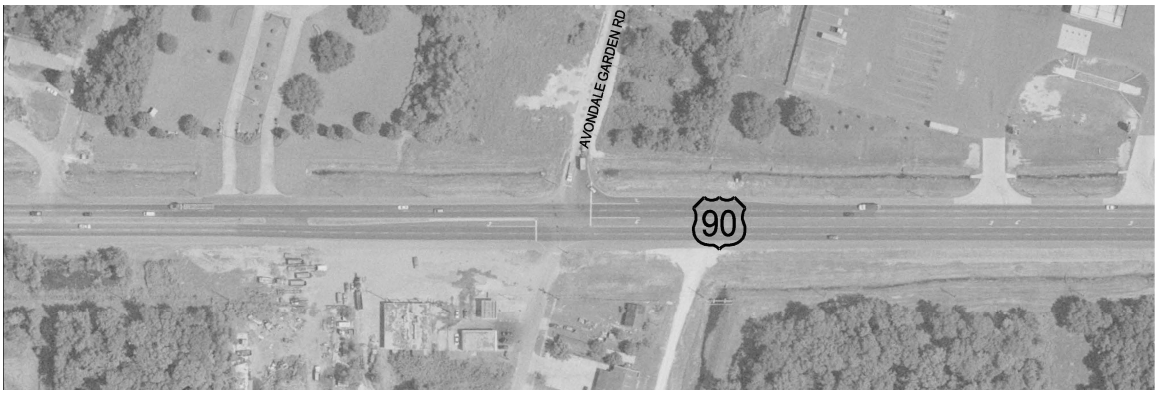
3.4.14 US 90 at Avondale Garden Road

The existing alignment of US 90 and Avondale Garden Road is a four-way intersection as shown on **Exhibit 3-13**. The major street, US 90, is aligned in the east-west direction and Avondale Garden Road intersects from the north and south. This intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. The east approach on US 90 has exclusive right- and left-turn lanes and the west approach has an exclusive left-turn lane. The north and south approaches on Avondale Garden Road are single lanes.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS B+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS C.

Exhibit 3-13
Existing Intersection of US 90 with Avondale Garden Road

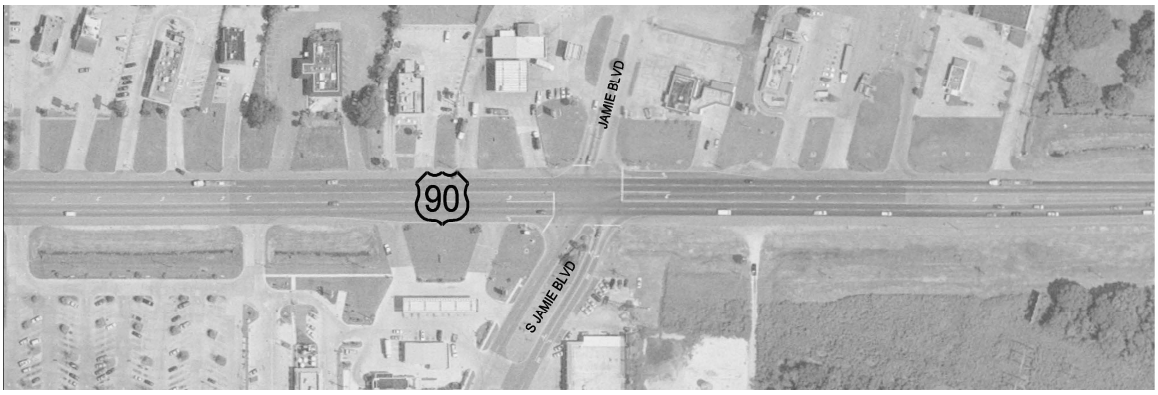


For computing 2030 LOS it was assumed that this intersection would remain signalized with a cycle length of 60 seconds. The analyses indicate that the north side of the intersection will operate at an LOS C+ and the south side will operate at an LOS B during the 2030 PM peak period.

3.4.15 US 90 at Jamie Boulevard

The existing alignment of US 90 and Jamie Boulevard is a four-way intersection as shown on **Exhibit 3-14**. The major street, US 90, is aligned in the east-west direction and Jamie Boulevard intersects from the north and south. This intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. The east and west approaches on US 90 have exclusive right- and left-turn lanes. The north approach consists of an exclusive left-turn lane and a shared through/right lane. The south approach consists of an exclusive right-turn lane and a shared through/left lane.

Exhibit 3-14
Existing Intersection of US 90 with Jamie Boulevard



For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS D+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS F.

For computing 2030 LOS it was assumed that this intersection would remain signalized with a cycle length of 80 seconds. The analyses indicate that the north and south sides of the intersection will operate at an LOS B for during the 2030 PM peak period.

3.4.16 US 90 at Lapalco Boulevard

The existing alignment of US 90 and Lapalco Boulevard is a T-intersection as shown on **Exhibit 3-15**. The major street, US 90, is aligned in the east-west direction and Lapalco Boulevard intersects from the south. This intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. The east approach on US 90 has an exclusive left-turn lane. The west approach on US 90 has an exclusive channelized right-turn lane. The south approach consists of double left-turn lanes and an exclusive channelized right-turn lane.

Exhibit 3-15
Existing Intersection of US 90 with Lapalco Boulevard

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS B+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS C.

For computing 2030 LOS, it was assumed that this intersection would remain signalized with a cycle length of 80 seconds. The analyses indicate that the north side of the intersection will operate at an LOS B and the south side will operate at and LOS B+ during the 2030 PM peak period.

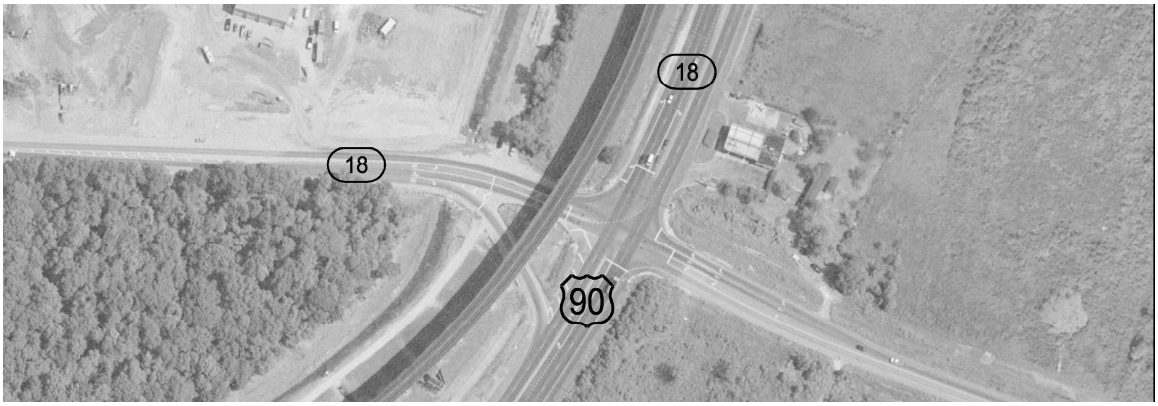
3.4.17 US 90 at LA 18

The existing alignment of US 90 and LA 18 is a four-way intersection as shown on **Exhibit 3-16**. The major street, US 90, is aligned in the north-south direction and LA 18 intersects from the east-west. This intersection is controlled by an isolated fully actuated traffic signal. The posted speed limit is 45 mph on US 90. The north approach on US 90 has exclusive left- and right-turn lanes. The south approach on US 90 has an exclusive left-turn lane. The west approach has an exclusive left-turn lane, a shared through/left lane, and a channelized right-turn movement. The east approach has exclusive left and right-turn lanes.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS E+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS F.

Exhibit 3-16
Existing Intersection of US 90 with LA 18



For computing design year LOS it was assumed that LA 18 would be realigned and two signalized intersections would be created with cycle lengths of 100 seconds. The analyses indicate that the west intersection will operate at an LOS C during the 2030 PM peak period.

3.4.18 US 90 Business at Segnette Boulevard

The existing alignment of the Westbank Expressway (US 90 Business) and Segnette Boulevard is a T-intersection as shown on **Exhibit 3-17**. The major street, US 90 Business, is aligned in the east-west direction and Segnette Boulevard intersects from the south. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90 Business. The west approach on US 90 Business has an exclusive right-turn lane. The east approach has an exclusive left-turn lane.

Exhibit 3-17
Existing Intersection of US 90 Business with Segnette Boulevard

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS B+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS D+.

For computing 2030 LOS it was assumed that the intersection of Segnette Boulevard will be signalized with a cycle length of 80 seconds. The analyses indicate that the north and south sides of the intersection will operate at an LOS B+ during the 2030 PM peak period.

3.4.19 US 90 Business at Drake Avenue

The existing alignment of US 90 Business and Drake Avenue is a four-way intersection as shown on **Exhibit 3-18**. The major street, US 90 Business, is aligned in the east-west direction and Drake Avenue intersects from the north and south. US 90 Business is a divided highway creating two separate intersections with Drake Avenue. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90 Business. The east and west approaches on US 90 Business have a shared through/left lane and a shared through/right lane.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS A.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS A.

For computing design year LOS it was assumed that the intersection of Drake Avenue will be signalized with a cycle length of 50 seconds. The analyses indicate that both sides of the intersection will operate at an LOS A during the 2030 PM peak period.

Exhibit 3-18
Existing Intersections of US 90 Business with Drake Avenue and with Louisiana Street

3.4.20 US 90 Business at Louisiana Street

The existing alignment of US 90 Business and Louisiana Street is a four-way intersection as shown on **Exhibit 3-18**. The major street, US 90 Business, is aligned in the east-west direction and Louisiana Street intersects from the north and south. US 90 Business is a divided highway creating two separate intersections with Louisiana

Street. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90 Business. The east and west approaches on US 90 Business have a shared through/left lane and a shared through/right lane.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS D.

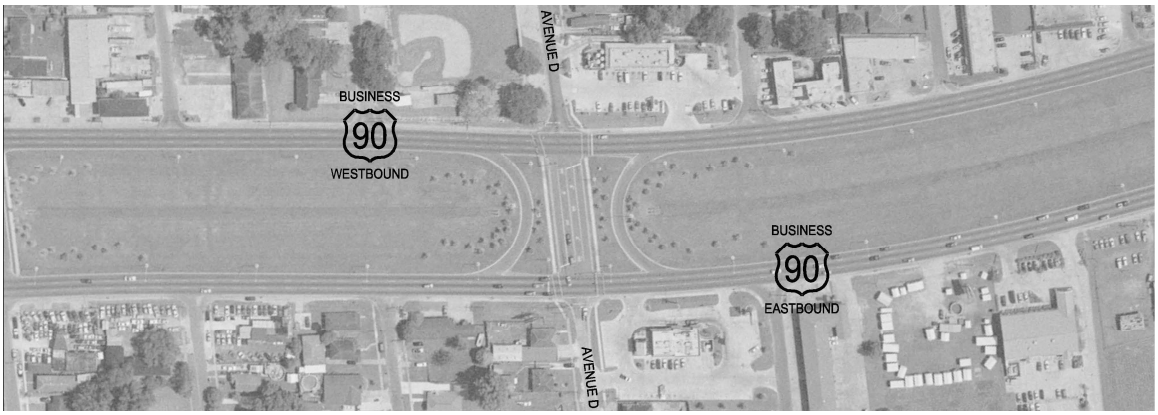
For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS E+.

For computing 2030 LOS it was assumed that the intersection of Louisiana Street will be signalized with a cycle length of 60 seconds. The analyses indicate that the intersection will operate at an LOS B during the 2030 PM peak period.

3.4.21 US 90 Business at Avenue D

The existing alignment of US 90 Business and Avenue D is shown in **Exhibit 3-19**. The major street, US 90 Business, is aligned in the east-west direction and Avenue D intersecting from the north and south. US 90 Business is a divided highway creating two separate intersections with Avenue D. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90 Business. The east and west approaches on US 90 Business provide a shared through/left lane and a shared through/right lane.

Exhibit 3-19
Existing Intersection of US 90 Business with Avenue D



For year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS B+. For year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS B.

For computing 2030 LOS it was assumed that the intersection of Avenue D will remain signalized with a cycle length of 60 seconds. The analyses indicate that the intersection will operate at an LOS A during the 2030 PM peak period.

3.4.22 US 90 Business at Avenue H

The existing alignment of US 90 Business and Avenue H is a four-way intersection as shown on **Exhibit 3-20**. The major street, US 90, is aligned in the east-west direction and Avenue H intersects from the north and south. US 90 Business is a divided

highway creating two separate intersections with Avenue H. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90 Business. The east and west approaches on US 90 have a shared through/left lane and a shared through/right lane.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS C+.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS E.

For computing 2030 LOS it was assumed that the intersection of Avenue H will be signalized with a cycle length of 60 seconds. The analyses indicate that the north and south sides of the intersection will operate at an LOS C+ during the 2030 PM peak period.

3.4.23 US 90 Business at Tanglewood/Spartans

The existing alignment of US 90 Business and Tanglewood/Spartans is shown in **Exhibit 3-20**. The major street, US 90 Business, is aligned in the east-west direction and Spartans intersecting from the north and Tanglewood from the south. US 90 Business is a divided highway creating two separate intersections with Tanglewood/Spartans. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45

Exhibit 3-20
Existing Intersections of US 90 Business with Avenue H and with Tanglewood/Spartans

mph on US 90 Business. The east and west approaches on US 90 Business provide a shared through/left lane and a shared through/right lane.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS C.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS D+.

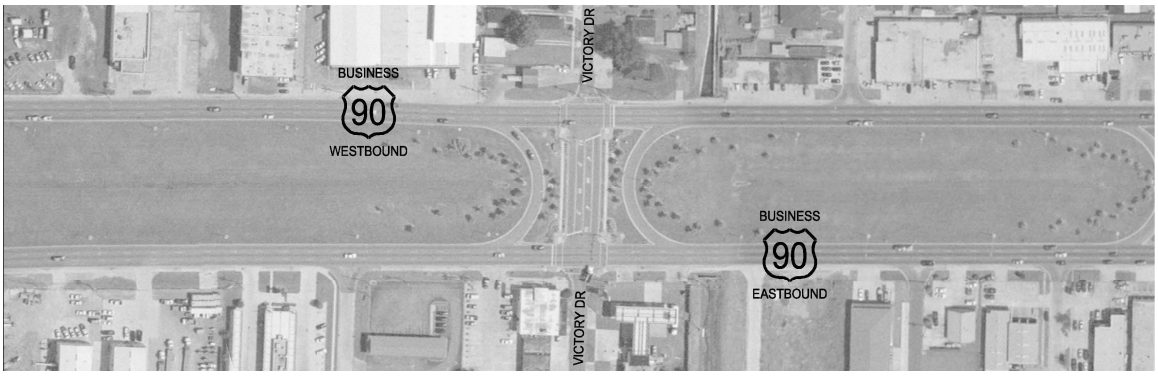
For computing 2030 LOS it was assumed that the intersection of Avenue H will be signalized with a cycle length of 60 seconds. The analyses indicate that the north and south sides of the intersection will operate at an LOS B during the 2030 PM peak period.

3.3.24 US 90 Business at Victory Drive

The existing alignment of US 90 Business and Victory Drive is a four-way intersection as shown in **Exhibit 3-21**. The major street, US 90 Business, is aligned in the east-west direction and Victory Drive intersects from the north and south. US 90 Business is a divided highway creating two separate intersections with Victory Drive. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90. The east and west approaches on US 90 Business have a shared through/left lane and a shared through/right lane. For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS F.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS F. For computing design year LOS, it was assumed that the intersection of Victory Drive will be signalized with a cycle length of 60 seconds. The analyses indicate that the north and south sides of the intersection will operate at an LOS B during the 2030 PM peak period.

Exhibit 3-21
Existing Intersection of US 90 Business with Victory Drive



3.4.25 US 90 Business at Westwood Drive

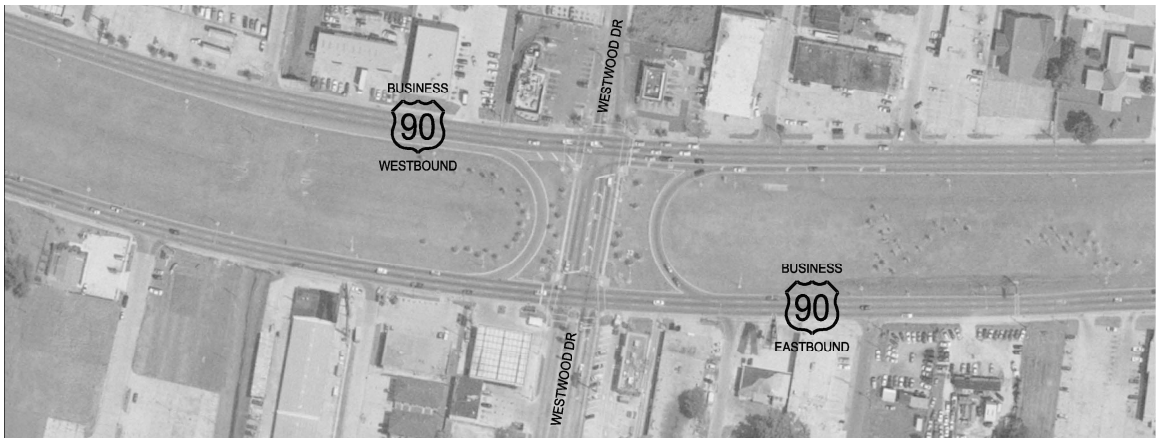
The existing alignment of US 90 Business and Westwood Drive is a four-way intersection as shown in **Exhibit 3-22**. The major street, US 90 Business, is aligned in the east-west direction and Westwood Drive intersects from the north and south. US 90 is a divided highway creating two separate intersections with Westwood Drive. This intersection is controlled by a fixed time interconnected traffic signal. The posted speed limit is 45 mph on US 90. The east approach on US 90 Business has an exclusive left-turn lane and a shared through/right lane and the west approach has a shared through/right lane and a shared through/left lane.

For Year 2002, PM peak traffic volume data combined with the existing conditions as described above calculate an intersection LOS F.

For Year 2030, No-Build PM peak traffic volumes with existing geometry predict an LOS F.

For computing 2030 LOS it was assumed that the intersection of Westwood Drive will be signalized with a cycle length of 60 seconds. The analyses indicate that the north and south sides of the intersection will operate at an LOS C+ during the 2030 PM peak period.

Exhibit 3-22
Existing Intersection of US 90 Business with Westwood Drive



3.5 Other Findings

Other findings that deserve notice include the following:

- At the intersection of I-49 and LA 308, under the 2030 Build condition, the intersection is projected to operate at LOS D. Based on future traffic volumes, this intersection is assumed to operate as an unsignalized intersection, but traffic signal warrants are recommended to improve the level of service.
- Signalization may be required at the on/off ramps at LA 1, LA 3127 and Willowdale Boulevard. Many of the remaining interchange ramps will operate satisfactorily as unsignalized intersections.
- It is anticipated that the intersections of US 90 with LA 306, Live Oak Boulevard, and Capitol Drive will no longer require signalization after construction of I-49.
- At the intersection of the realigned LA 18, the I-49 southbound ramps will operate at a LOS D during the design (PM) peak period. However, the overall level of service will operate at a LOS C.
- In accordance with the *Highway Capacity Manual*, it is not possible to directly compare an unsignalized LOS with a signalized intersection LOS in terms of delay. This is noted because some intersections were analyzed as unsignalized intersections in the base year and signalized intersections in the design year.
- Intersections throughout the US 90 corridor perform at an improved LOS compared to the No-Build 2030 condition. This is a substantial performance upgrade that will improve travel times, reduce fuel consumption and benefit air quality throughout the planning corridor.

Table 3-3 A
Intersection Design Year PM Peak Hour Level of Service (Links 1-3)

Intersection		Base Year – 2002		Design Year No-Build 2030		Design Year Build 2030	
Location	**Control**	**LOS**	**Critical Movement**	**LOS**	**Critical Movement**	**LOS**	**Critical Movement**
US 90 (I-49) at LA 1	Unsignalized (E) Signalized (B)	D	NB Left	***F***	NB Left	B+	Overall
US 90 (I-49) at LA 308	Unsignalized	C	SB Left	D	SB Left	D	SB Left
US 90 (I-49) at LA 3199	Unsignalized	***E***	EB Left	***F***	EB Left	B	NB Left
US 90 at Routed LA 3199	Unsignalized	N/A	N/A	N/A	N/A	A	EB
US 90 at LA 632	Unsignalized	***E***	WB	***F***	EB/WB	B	EB
US 90 at LA 635	Unsignalized	C	EB	D	EB	A	EB/WB
I-49 Ramps at LA 635	Unsignalized	N/A	N/A	N/A	N/A	A	Ramps
US 90 at LA 306	Signalized (E) Unsignalized (B)	B+	Overall	C	Overall	C	EB Left
US 90 at I-310 Off	Signalized	B+	Overall	D+	Overall	N/A	N/A
US 90 at I-310 On	Signalized	B+	Overall	D+	Overall	N/A	N/A
I-49 EB Ramps at LA 3127 (Alt. 3A)	Signalized	N/A	N/A	N/A	N/A	B	Overall
I-49 WB Ramps at LA 3127 (Alt. 3 A)	Signalized	N/A	N/A	N/A	N/A	B+	Overall
US 90 (I-49) at LA 3127 (Alt. 3A)	Signalized	N/A	N/A	N/A	N/A	B	Overall
US 90 at Paul Maillard/ Magnolia Ridge	Signalized	D	Overall	***F***	Overall	B	Overall

N/A – Not Applicable
Overall – indicates the level of service for the entire intersection
(E) – Existing, (B) – Build
NB – northbound, SB – southbound, EB – eastbound, WB – westbound
Bold/italic/underline – Indicates LOS of E or F

Source: Neel-Schaffer, Inc.

Table 3-3 B
Intersection Design Year PM Peak Hour Level of Service (Links 4-6)

Intersection		Base Year - 2002		Design Year No-Build 2030		Design Year 2030 Build	
Location	**Control**	**LOS**	**Critical Movement**	**LOS**	**Critical Movement**	**LOS**	**Critical Movement**
US 90 (I-49 at Willowdale Blvd.	Signalized	A	Overall	A	Overall	B	Overall
US 90 (I-49) at Live Oak Blvd.	Signalized (E) Unsignalized (B)	B+	Overall	B	Overall	B	SB
US 90 (I-49) at Capitol Drive	Signalized (E) Unsignalized (B)	A	Overall	A	Overall	B	SB
US 90 (I-49) at Avondale Garden	Signalized	B+	Overall	C	Overall	C+ (NS) B (SS)	Overall
US 90 (I-49) at Jamie Blvd.	Signalized	D+	Overall	***F***	Overall	B (NS) B (SS)	Overall
US 90 (I-49) at Lapalco Blvd.	Signalized	B+	Overall	C	Overall	B (NS) B+ (SS)	Overall
US 90 at LA 18	Signalized	***E+***	Overall	***F***	Overall	C	Overall
US 90 Bus. (I-49) at Segnette Blvd	Signalized	B+	Overall	D+	Overall	B+ (NS) B+ (SS)	Overall
US 90 Bus. (I-49) at Drake Ave.	Signalized	A (NS) A (SS)	Overall	A (NS) A (SS)	Overall	A (NS) A (SS)	Overall
US 90 Bus. (I-49) at Louisiana St	Signalized	D (NS) C (SS)	Overall Overall	***E+ (NS)*** ***E+ (SS)***	Overall Overall	B+ (NS) B+ (SS)	Overall Overall
US 90 Bus. (I-49) at Avenue D	Signalized	A (NS) B+ (SS)	Overall Overall	B (NS) B (SS)	Overall Overall	A (NS) A (SS)	Overall Overall
US 90 Bus. (I-49) at Avenue H	Signalized	C+ (NS) B (SS)	Overall Overall	***E (NS)*** D+ (SS)	Overall Overall	B (NS) C+ (SS)	Overall Overall
US 90 Bus. (I-49) at Tanglewood / Spartans	Signalized Signalized	C (NS) C+ (SS)	Overall Overall	C (NS) D+ (SS)	Overall Overall	B+ (NS) B (SS)	Overall Overall
US 90 Bus. (I-49) at Victory Dr	Signalized	***F (NS)*** D+ (SS)	Overall Overall	***F (NS)*** ***F (SS)***	Overall Overall	B (NS) B (SS)	Overall Overall
US 90 Bus. (I-49) at Westwood Dr	Signalized	***F (NS)*** C+ (SS)	Overall Overall	***F (NS)*** D+ (SS)	Overall Overall	C+ (NS) B (SS)	Overall Overall

N/A – Not Applicable
Source: Neel-Schaffer, Inc.
Overall – indicates the level of service for the entire intersection
(E) – Existing, (B) – Build
(NS) – North Side, (SS) – South Side
NB – northbound, SB – southbound, EB – eastbound, WB – westbound
Bold/italic/underline – Indicates LOS of E or F