



TECHNICAL MEMORANDUM:

# ROUTE ALIGNMENT ANALYSIS

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**Date: May 2016**

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## 1 INTRODUCTION

The purpose of this memo is to document the evaluation and selection process for the route alignment analysis completed for the TramLinkBR Project (Project).

The route for the streetcar corridor, or tram, was originally envisioned in FUTUREBR, the City-Parish's 2011 comprehensive plan for land use and development. In this plan, the tram alignment follows Nicholson Drive connecting downtown Baton Rouge to the LSU campus and beyond. The Project was further defined in the 2014 Nicholson Corridor Plan, which identified potential stop locations, mode alternatives, and an alignment that utilized Nicholson Drive south of I-10 and followed a loop configuration in the downtown area. These plans provided the basis for the preferred streetcar mode and the development of alignment options for the TramLinkBR Project.

Although the overall tram corridor was established as part of previous local planning efforts, alignment options within the corridor were evaluated to optimize transit operations, reduce cost and minimize potential impacts. Alignment options were developed and evaluated for the following:

- Downtown alignment options (South Boulevard to North Street)
- Nicholson Drive track placement options (South Boulevard to N. Stadium Drive)
- Southern terminus (N. Stadium Drive adjacent to LSU)

## 2 DOWNTOWN ALIGNMENT

The tram alignment in the downtown area extends from North Street just south of the State Capitol to South Boulevard near I-10. The sections below describe the downtown alignment options and the evaluation process.

### 2.1 Downtown Alignment Options

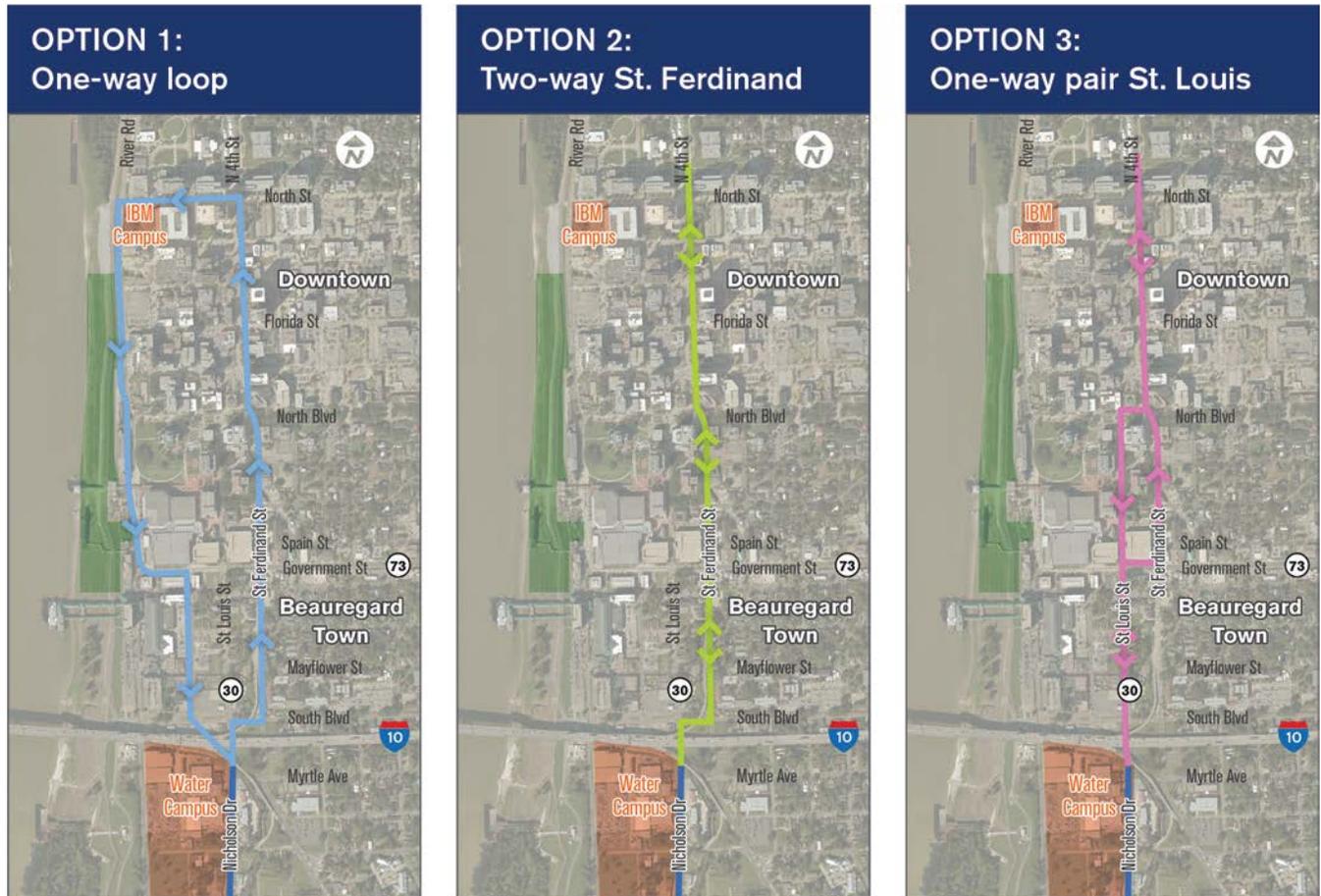
Three different alignment options were evaluated for the downtown area as shown in **Figure 1**.

Downtown alignment option 1, the downtown loop, is essentially the alignment proposed in the 2014 *Nicholson Corridor Plan*. This route travels in a one-way loop around downtown. From South Boulevard, Option 1 travels north on St. Ferdinand Street and Fourth Street and then turns left onto North Street. After travelling west on North Street for three blocks, Option 1 travels south on North River Road and St. Philip Street before realigning with Nicholson Drive near South Boulevard.

Downtown alignment Option 2, the two-way alignment, runs north and south on the same streets. The alignment transitions from Nicholson Drive along South Boulevard and then utilizes St. Ferdinand Street and N. Fourth Street with the northern terminus located just north of the intersection of N. Fourth Street and North Street. A turn-back track north of North Street at the end of the alignment allows the streetcar to reverse directions.

Downtown alignment option 3 is a two-way alignment along St. Louis Street and N. Fourth Street with a St. Louis/St. Ferdinand one-way pair segment between Government Street and North Boulevard. A turn-back track north of North Street at the end of the alignment allows the streetcar to reverse directions.

Figure 1: Downtown Alignment Options



## 2.2 Evaluation of Alignment Options

The downtown alignment options were evaluated using the criteria in **Table 1**. The criteria helped identify the advantages and disadvantages of the alignment options to aid the decision making process.

**Table 1: Downtown Alignment Evaluation Criteria**

Connectivity	Public feedback
Travel times	Engineering constraints
User experience	Cost considerations
Economic development potential	Environmental concerns

### 2.2.1 ALIGNMENT OPTION 1

Downtown alignment option 1 has the largest geographic coverage and spreads access around downtown. However, it is the least intuitive to transit users because of the three block spread between the northbound and southbound alignments. The loop configuration requires out of direction travel or a long walking distance to board and alight at the same location – both factors result in longer passenger travel time for some trips. The following subsections discuss the evaluation criteria for option 1 in greater detail.

#### CONNECTIVITY

The primary advantage of Option 1 is that it provides the largest geographic coverage and has the widest distribution in the downtown area. As a result, it provides front door service to more destinations within the downtown area including the new IBM office building and the recreational amenities along the Mississippi River. However, the current land uses along River Road, such as the casino, museum and the River Center, tend to be intermittent activity generators with activities occurring during evening or weekend hours. This could reduce the system’s sustained weekday ridership.

#### TRAVEL TIMES

Alignment Option 1 has a round trip travel time of 29 minutes, which is slightly shorter than the other alignment options. This is due to the higher speed limits, and less congestion on River Road in comparison to other downtown streets. However, the three-block wide loop requires out of direction travel or a long walking distance to board and alight at same location – both factors result in longer passenger travel time for some trips. For example, a passenger boarding near St. Ferdinand and Louisiana Street must first go north on the streetcar and ride around the loop before heading south. This results in a trip of almost eight additional minutes compared to boarding at the same location and immediately travelling south as in alignment Option 2. See **Table 2**.

Table 2: Travel time in minutes between St. Ferdinand &amp; Louisiana to Southern Terminus

<b>Alignment Option</b>	<b>Time (minutes) during AM Peak</b>	<b>Time (minutes) during PM Peak</b>
Option 1	18	18
Option 2	10	11
Option 3	10	10

#### USER EXPERIENCE

Option 1 is the least intuitive to transit users because service is spread over a large geographical area. Transit riders are generally accustomed to bi-directional routes which travel both directions utilizing the same street. Three blocks between the northbound and southbound alignment means riders will not be able to board and alight in the same location. This could be particularly confusing since River Road feels physically disconnected from the rest of downtown due to a substantial grade change.

#### ECONOMIC DEVELOPMENT POTENTIAL

Since all three alignments travel in relatively the same areas northbound, there is little differentiation between the routes' development potential, except with the southbound leg of Option 1. Option 1 provides additional development potential along River Road; however, that potential is limited due to the Mississippi River and levee, which precludes development on the western side of the alignment. On the eastern side of River Road, there is potential for redevelopment that could support transit ridership.

#### PUBLIC FEEDBACK

A public meeting was held on January 28, 2016 to get the public's input on route alignment options and other project elements. Although some participants at the meeting preferred the loop configuration in downtown, the majority of participants expressed a desire for a more direct alignment (Option 2).

#### ENGINEERING CONSTRAINTS

The primary advantage of Option 1 is that the single-track, one-way loop configuration provides flexibility in locating the tram track in the street to avoid major utility relocations. Some potential challenges would be the large number of traffic signal mast arms that may require modifications to avoid conflicts with the overhead contact system (OCS) and the challenging turn movements that could encroach the existing curb. The pedestrian bridge at the River Center, crossing over S. River Road, has a low vertical clearance of 17'-2", which would require approval from the City-Parish to allow automobile and truck traffic beneath the OCS wire.

## COST CONSIDERATIONS

Option 1 has the greatest number of track miles and the most stop platforms, which could increase project costs. However, since the alignment only has a single track, some savings may be realized from less utility relocation.

## ENVIRONMENTAL CONCERNS

All alignments are within the public right of way and within an urban environment resulting in few environmental impacts. The single-track alignment for Option 1 may be less intrusive within the right of way resulting in potentially fewer transportation and utility impacts. Also, the single-track along the northbound segment of St. Ferdinand Street would minimize the need to trim limbs on the live oak trees near the Court House between Louisiana Avenue and America Street to avoid conflicts with the OCS.

### 2.2.2 ALIGNMENT OPTION 2

Downtown alignment option 2 is the most direct route allowing the tram to operate in a linear corridor along nearly its entire alignment. This provides a user-friendly and easy-to understand tram route with optimal transit operations. The single corridor potentially provides the most economic development potential by concentrating development along the alignment. Its primary disadvantage is that placing two-way track within a single corridor can reduce flexibility to resolve engineering challenges and utility conflicts. Option 2 also has the greatest potential to impact the live oak trees near the Court House along St. Ferdinand Street between Louisiana Avenue and America Street. The following subsections discuss the evaluation criteria for option 1 in greater detail.

## CONNECTIVITY

Option 2 provides bidirectional service to most of the major activity areas in the downtown within a two to three block walk. Option 2 provides front door service to the state government buildings along North Street, the heart of the commercial business district, Town Square at North Boulevard, municipal uses along St. Ferdinand Street and the River Center east parking garage. Access to these and other activity generators is aided by the direct nature of the route alignment with both northbound and southbound access along the same corridor.

## TRAVEL TIMES

Option 2 has an estimated round trip travel time of 32 minutes. This is slightly longer than option 1 (29 minutes) and option 3 (31 minutes). Since the bi-directional alignment allows users to board and alight at the same location, no indirect travel is required, reducing travel times for user trips.

## USER EXPERIENCE

The bi-directional alignment of Option 2 provides an easy to understand user experience. This alignment allows riders to board the tram and depart the tram on the same street with northbound and southbound platforms easily visible. Additionally, a single corridor makes the tram and route very recognizable to new riders, encouraging more transit trips.

## ECONOMIC DEVELOPMENT POTENTIAL

Option 2 would present opportunities for infill development and redevelopment especially along the Fourth Street corridor. Since option 2 provides bi-directional travel, economic development would be more concentrated along the corridor in comparison to option 1 that would spread tram access.

One disadvantage of option 2 is the segment along St. Ferdinand Street from South Boulevard to Government Street may be less desirable for redevelopment due to the presence of freeway ramp infrastructure on the west side. However, this segment would provide convenient service to the Beauregard Town neighborhood.

## PUBLIC FEEDBACK

A public meeting was held on January 28, 2016 to get the public's input on route alignment options and other project elements. The majority of participants expressed a preference for option 2 because it provided the most direct alignment option.

## ENGINEERING CONSTRAINTS

The biggest engineering challenges for option 2 are associated with the transition between Nicholson Drive/St. Louis Street and St. Ferdinand Street along South Boulevard. For the northbound alignment, when the tram turns east on South Boulevard, the tram operations would be affected by the traffic backups that occur along St. Louis Street and Nicholson Drive during the afternoon peak period as a result of vehicles queuing on the westbound I-10 ramp that is located off St. Louis Street just south of Europe Street. For the southbound direction, vertical clearance constraints are present with the interstate structure that goes over South Boulevard. Due to the low clearance the tram would need to operate in a dedicated lane along South Boulevard, which would likely require some reconfiguration of the intersection. In addition, option 2 has a greater potential to conflict with utilities since the northbound and southbound tracks are within a single corridor.

## COST CONSIDERATIONS

The design complexity associated with South Boulevard engineering challenges has the potential to increase project costs. Also, increased costs could be incurred from public utility relocations.

## ENVIRONMENTAL CONCERNS

Option 2 is within the public right of way and within an urban environment resulting in few environmental impacts. Since Option 2 would have two tracks within the same street, it could require more modifications to the travel lanes and it would reduce flexibility with avoiding utility conflicts. For the same reason, option 2 would likely require more trimming of live oak trees located along St. Ferdinand Street between Louisiana Avenue and America Street to avoid conflicts with the OCS.

### 2.2.3 ALIGNMENT OPTION 3

Downtown alignment option 3 is a relatively direct and user-friendly route that is central to downtown activity generators. A portion of the alignment has a one-way pair, which can be less intuitive to users, but the one block spread between the northbound and southbound segments is more manageable than the three block spread for option 1. The purpose of the one-way pair is to minimize potential impacts to the tree canopy along St. Ferdinand Street.

#### CONNECTIVITY

Connectivity to option 3 would be similar to option 2, serving most of the major activity areas in the downtown within a two to three block walk. The primary advantage of Option 3 is that the alignment along St. Louis Street is more central to downtown activities on the southern portion of downtown and the Town Square area.

#### TRAVEL TIMES

Option 3 has an estimated round trip travel time of 31 minutes. This is slightly longer than option 1 (29 minutes) and slightly shorter than option 2 (32 minutes). Since the one-way pair is only one block apart, users could easily walk between the northbound and southbound stop locations without a substantial increase in indirect travel time.

#### USER EXPERIENCE

Overall option 3 would provide a relatively direct and user-friendly route. However, the St. Louis/St. Ferdinand one-way pair segment between Government Street and North Boulevard would be less intuitive to users and could create some confusion for riders who are not familiar with the system.

#### ECONOMIC DEVELOPMENT POTENTIAL

Option 2 would present opportunities for infill development and redevelopment along the Fourth Street corridor similar to the other alignment options. Also, the alignment segment on St. Louis Street between Government Street and Mayflower Street has vacant/underutilized parcels presenting opportunity for redevelopment.

#### PUBLIC FEEDBACK

A public meeting was held on January 28, 2016 to get the public's input on route alignment options and other project elements. Very few participants provided feedback on option 3.

#### ENGINEERING CONSTRAINTS

The primary engineering challenge for option 3 is the turning movements created by the St. Louis/St. Ferdinand one-way pair segment. The one-way pair creates three sharp turns that would encroach on existing curb returns and potentially impact existing right of way. These locations are at the northbound to eastbound right turn from St. Louis St. to Government Street, the southbound to westbound right turn from

N. Fourth Street to North Boulevard, and the westbound to southbound left turn from North Boulevard to St. Louis Street.

## COST CONSIDERATIONS

The challenging turn movements created by the St. Louis/St. Ferdinand one-way pair segment could increase project costs.

## ENVIRONMENTAL CONCERNS

Option 3 is within the public right of way and within an urban environment resulting in few environmental impacts. The St. Louis/St. Ferdinand one-way pair segment would minimize tree trimming impacts to the live oak trees along St. Ferdinand Street between Louisiana Avenue and American Street.

The sharp turns required for the one-way pair, presents potential Section 4(f) and Section 106 consultation concerns due to the fact that this alignment may impact the North Boulevard Town Square design features. Furthermore, placing a track in this intersection would impact the existing decorative pavement.

## 2.3 Conclusion/Recommendation

The evaluation factors were presented to the TramLinkBR Project Steering Committee at a meeting on February 11, 2016. The Project Steering Committee eliminated option 1, the downtown loop, because it is not intuitive for users. They also eliminated option 3, the one-way pair, because of the high pedestrian/traffic movements at North Boulevard and St. Louis Street and the potential for the tram to conflict with the Town Square improvements and plans.

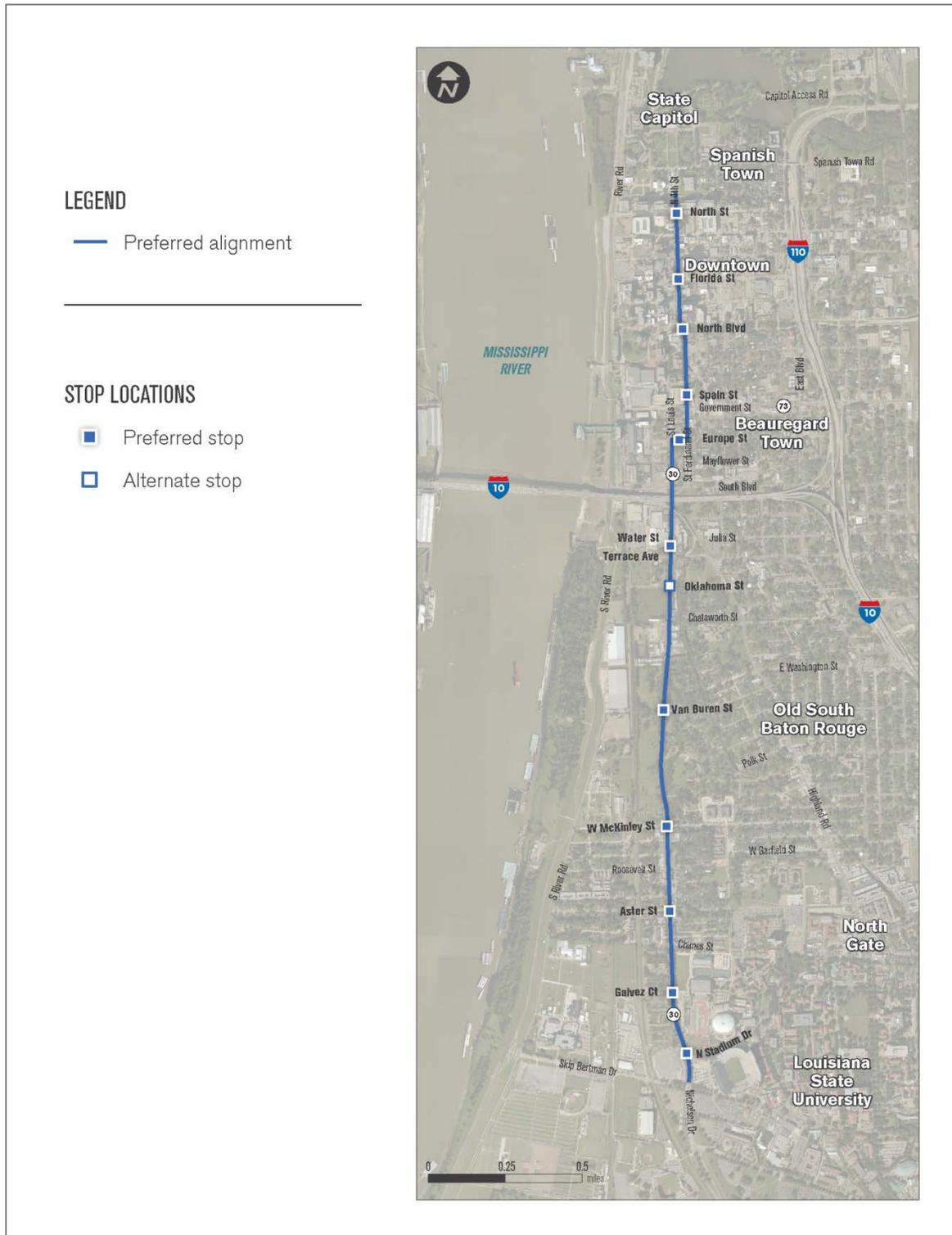
The Project Steering Committee agreed that option 2 should be the preferred option because it is the most direct and user-friendly alignment that provides optimal transit operations. The two-way segments along N. Fourth Street (North Street to North Boulevard) and St. Ferdinand Street (North Boulevard to Government) were confirmed at the February 11, 2016 meeting.

Due to the engineering constraints associated with South Boulevard for option 2, the Project Steering Committee directed the project team to continue to evaluate the southern end of the downtown alignment to determine the best option for transitioning between Nicholson Drive/St. Louis Street and St. Ferdinand Street. Three different sub-options were evaluated, which involved turning the tram at South Boulevard (as presented in the original option), Government Street and Europe Street.

As a result of this additional analysis, the project team recommended utilizing Europe Street for one block to make the transition from Nicholson Drive/St. Louis Street to St. Ferdinand Street. The recommendation was communicated to the Project Steering Committee via email in late February and all members of the Project Steering Committee agreed with the project team's recommendation. (See Section 2.3.1 for more information.)

Following the Project Steering Committee's recommendation for the downtown alignment, the City-Parish released a press release on March 3, 2016 announcing the Project's locally preferred alternative, which included the preferred route alignment, stop locations and operations and maintenance facility site options. The locally preferred alternative (LPA) alignment is shown in **Figure 2**

Figure 2: LPA Alignment and Stop Locations



### 2.3.1 OPTION 2 SUB-OPTIONS

As discussed above, sub-alignment options were evaluated for the transition from Nicholson Drive/St. Louis Street to St. Ferdinand Street for downtown alignment option 2. The following subsections describe the sub-alignments.

#### SOUTH BOULEVARD (ELIMINATED)

This sub-option would run along Nicholson Drive and utilize South Boulevard to connect to St. Ferdinand Street for both directions. Turning the tram at South Boulevard presents traffic and vertical clearance concerns that could affect the tram's operations and construction costs:

- **Eastbound Turn (traffic/operation concerns):** For the eastbound turn movement from St. Louis Street to South Boulevard, the tram's operations may be affected by traffic that backs up past South Boulevard along the northbound outside lane of St. Louis Street/Nicholson Drive (to access the I- 10 westbound on-ramp).
- **Westbound turn (vertical clearance conflicts):** For the westbound turn movement from St. Ferdinand Street to South Boulevard, the vertical clearance of the elevated freeway ramp is 15 feet 7 inches for the westbound travel lane of South Boulevard. This does not provide adequate vertical clearance between the roadway and the overhead contact system (OCS) to allow safe movement of autos and trucks below the OCS wire. As a result, the streetcar would need to be located in a dedicated lane within the median of South Boulevard. This would likely increase project costs and could interfere with the existing intersection geometry at South Boulevard and St. Ferdinand Street.

#### GOVERNMENT STREET (ELIMINATED)

This sub-option would run along Nicholson Drive to St. Louis Street and utilize Government Street to connect to St. Ferdinand Street for both directions. Due to the high volume of traffic, the tram may have a negative effect on traffic operations at the intersections of St. Louis and Government streets and St. Ferdinand and Government streets. A new transit signal phase would need to be provided at these intersections, which already have multiple traffic signal phases for auto traffic.

#### EUROPE STREET (RECOMMENDED)

This sub-option would run from the inside lane of Nicholson Drive along the inside lane of St. Louis Street and utilize Europe Street to connect with St. Ferdinand Street in both directions. Running in the inside lane, this option provides a smooth transition from Nicholson Drive to downtown and avoids the traffic, operational and vertical clearance challenges associated with the South Boulevard and the Government street options. A dedicated transit signal phase would be added at Europe Street's intersections with St. Louis and St. Ferdinand to allow the streetcar to make the turning movements.

## 3 NICHOLSON DRIVE ALIGNMENT

South of downtown the TramLinkBR alignment runs along Nicholson Drive between South Boulevard and N. Stadium Drive. The following sections describe the track-placement options considered for Nicholson Drive.

### 3.1 Nicholson Drive Track Placement Options

Along Nicholson Drive, two options for the placement of track are being evaluated. One option would place the track in the inside travel lane (inside-lane track option) and the other option would place the track in the outside travel lane (outside-lane track option). If the track is placed in the inside lane of Nicholson Drive, the stop platforms would be placed within the median. If the track is placed in the outside lane of Nicholson Drive, the stop platforms would be integrated with the sidewalk/terrace area. This section evaluates the advantages and disadvantages of each option by a range of factors.

#### 3.1.1 COST CONSIDERATIONS

The cost for the outside-lane track option is approximately \$4.4 million more for the overall project and \$2.7 million more for the construction of the system elements. The inside-lane track option has a slightly lower cost because the median stops serve both directions and require only one platform per stop location for a total of six platforms along Nicholson Drive. In comparison, the sidewalk stops under the outside-lane track option require a platform on each side of the roadway to serve each direction for a total of twelve platforms. Another cost differential is the overhead contact system (OCS). Fewer support poles are needed for the inside-lane track option because the poles are placed in the median and can serve both northbound and southbound alignments. Whereas the outside-lane track option would require nearly double the number of OCS poles to service both directions of travel.

#### 3.1.2 PLATFORM SPACE

The design space for platforms is feasible under both the inside-lane and outside-lane track options, but both options have considerations. For the inside-lane track option, the 14-foot median planned along Nicholson Drive as part of the LaDOTD rehabilitation project would provide the minimum amount of design space required for a platform to be feasible. For the outside-lane track option, the platforms would be integrated with the sidewalk/terrace area because Nicholson Drive does not have on-street parking and the current right of way is insufficient to separate the platforms from the sidewalks.

#### 3.1.3 TRAFFIC OPERATIONS

The inside-lane track option would remove some dedicated left-turn lanes and preclude the construction of some planned left-turn lanes. The removal of left-turn lanes may increase delay for some side streets and make it more challenging to access adjacent developments. The outside-lane track option would not affect

left-turn lanes, but would have some driveway impacts along Nicholson Drive. The traffic operation model developed for the project shows an adequate level of service can be maintained under both track-placement options.

### 3.1.4 PEDESTRIAN SAFETY

Both inside-lane and outside-lane track options require some passengers to cross the roadway. Median stops require all riders to cross a portion of the street; whereas, sidewalk stops compel some riders to cross the entire roadway and others to not cross at all. Both options require improved pedestrian crossing and signalization to provide the same level of safety for riders crossing the street.

Some concerns have been expressed about pedestrian safety for median stops under the inside-lane track option due to the fast moving traffic along Nicholson Drive. The implementation of the tram along with roadway improvements to Nicholson Drive being undertaken by the LaDOTD and LSU will change the character of the road and provide traffic calming. The posted speed limits on Nicholson Drive will be reduced to 35 miles per hour and sidewalks will be present along its entire length. Also, a continuous median along Nicholson Drive will limit cross traffic to signalized intersections and median openings.

The median stops under the inside-lane track option are not expected to present any substantial pedestrian safety concerns. Median stops are used safely throughout the U.S. on other streetcar, light rail and bus rapid transit systems. Also, the median platforms would be placed at intersections with traffic signals and integrated with crosswalks to give pedestrians safe access to adjacent land uses.

During special events such as on LSU football game days, there is potential for pedestrian overflow into the street at the southern end of the alignment for the median platforms. Since traffic is generally moving slowly and a large number of pedestrians are in the area, this is not likely to be a significant safety problem. Also, game day operations could be modified to serve the increased demand and passengers could be let off at platforms with less congestion.

### 3.1.5 UTILITY CONFLICTS

The outside-lane track option has the potential for greater utility conflicts because most utilities are located behind the outside curb, running parallel to Nicholson Drive. Also, Entergy has a metal gas main along the curb of Nicholson Drive and has expressed concerns about stray current corrosion with the outside-lane track option and the need for cathodic protection. Stray current occurs when current deviates from the running track and flows into the soil, where it may be picked up by the gas main. Also, the overhead contact system for the outside-lane track option may conflict with the overhead utilities currently present along Nicholson Drive.

The inside-lane track option is expected to have fewer utility conflicts, only conflicting with utilities that cross Nicholson Drive.

### 3.1.6 TREE IMPACTS

Tree trimming on Nicholson Drive is required under both the inside- and outside-lane track options since the tree canopy extends over both lanes of traffic in many locations. The amount of trimming may be more substantial under the outside-lane track option since it is closer to the tree and may require more trimming of larger branches. The outside-lane option may also require more tree root cutting and cause potential compaction of tree roots. These potential impacts would be minimized with specifying tree protection measures, such as limiting equipment operations and materials storage within the tree drip line. In addition, trimming will be undertaken with the supervision of an arborist.

### 3.1.7 CONSTRUCTION

The inside-lane track option may have a reduced construction timeline because it would have fewer platforms and fewer OCS poles to construct. Also, construction sequencing may be simplified because the middle section of the roadway could be closed off to construct the track, platforms and OCS in both directions at the same time. The outside-lane option would require two separate construction zones.

### 3.1.8 AESTHETICS

The median platforms for the inside-lane option may be more visible, but both track placement options present an opportunity to make a presence along the corridor and improve aesthetics.

### 3.1.9 USER EXPECTATIONS

The outside-lane track option may be more in line with public expectations because people are familiar with outside lane bus operations. Also, there is a perception that the sidewalk platforms for the outside-lane track option feel more connected to adjacent land uses.

## 3.2 Conclusion/Recommendation

**Table 3** summarizes the evaluation criteria for the track placement options. Both options have their advantages and disadvantages and both options are feasible.

The evaluation for the track placement options was shared with the Project Steering Committee on May 10, 2016. Since neither option is clearly stronger than the other option, it was decided that the Project Steering Committee would wait to obtain public feedback at the June 21, 2016 public meeting prior to making any decisions on the placement of track.

Table 3: Nicholson Drive – Evaluation Matrix for Track Placement Options

Evaluation Factors	Inside-Lane Option with Median Stops	Outside-Lane Option with Sidewalk Stops
Cost	+	-
Platform space	=	=
Traffic impacts	-	+
Pedestrian safety	-	+
Utility conflicts	+	-
Tree impacts	+	-
Construction	+	-
Aesthetics	=	=
User expectations	-	+

## 4 SOUTHERN TERMINUS

During the alignment planning process for the project, the project team worked with the Project Steering Committee to determine the southern terminus of the route. The following subsections discuss the options considered and recommendations.

### 4.1 Southern Terminus Options

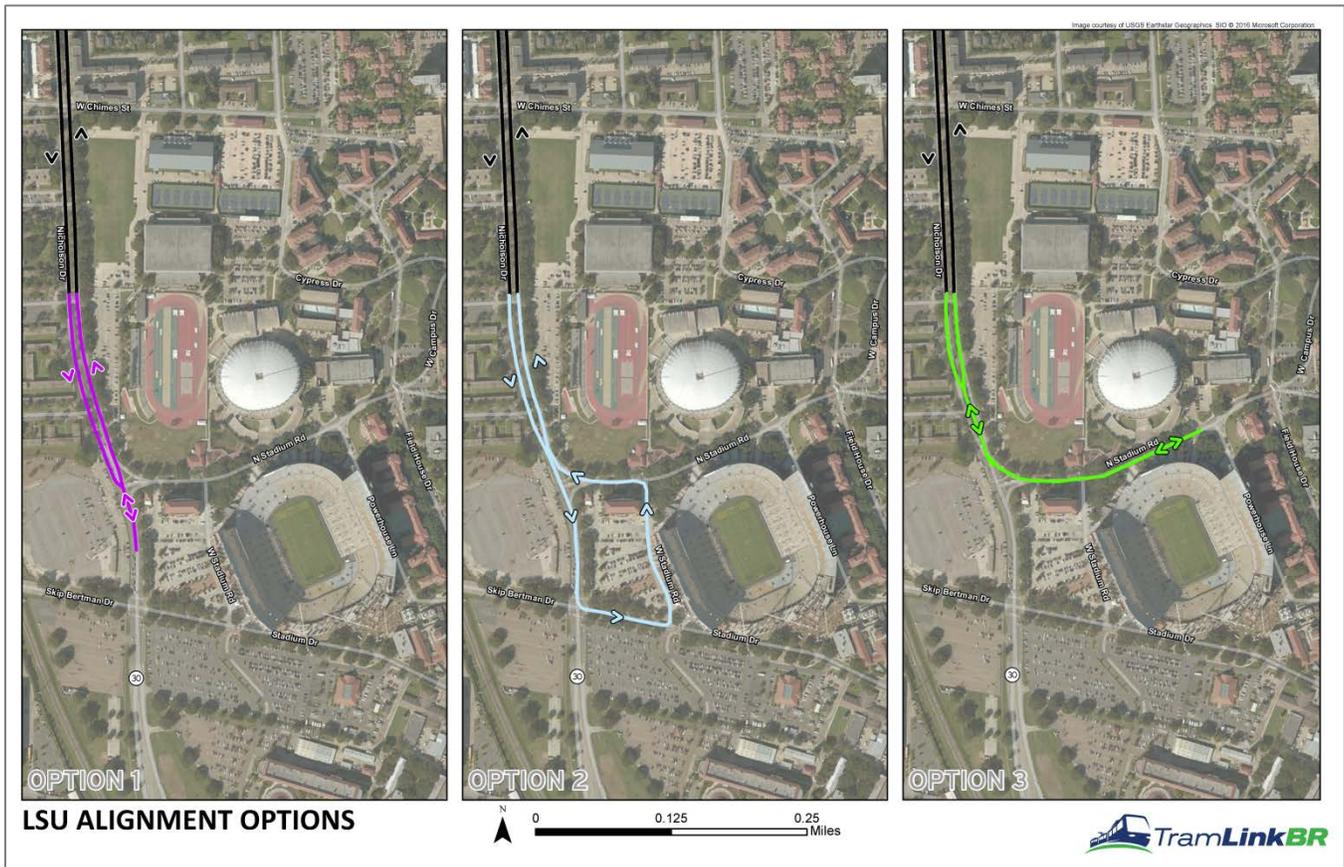
Three different options were considered for the southern terminus near LSU as shown in **Figure 3**

Option 1 terminates the alignment within Nicholson Drive and utilizes a turn back track just south of N. Stadium Drive to reverse directions. This option provides flexibility for the community to determine the projection of a future extension either to the south along Nicholson Drive or to the east within the LSU campus. This option would serve the LSU campus with two stop locations and would serve a substantial amount of campus activity especially with the development LSU is planning as part of the Nicholson Gateway project on the west side of Nicholson Drive. This option would not interfere with LSU campus plans. LSU recently initiated a campus master plan.

Option 2, Tiger Stadium Loop, would provide front door service to Tiger Stadium. This option would provide an opportunity for an enhanced stop platform that interfaces with the stadium. However, this option may make future extensions more challenging and would likely conflict with the new gates/promenade installed along W. Stadium Road. Also, the option may conflict with pedestrian traffic on game days. Furthermore, a transit signal phase would need to be added to the Nicholson Drive/Skip Bertman Drive intersection, which already experiences high traffic volumes and several signal phases.

Option 3, N. Stadium Drive Stub Track, would enter campus along N. Stadium Drive and provide a platform between Nicholson Drive and Field House Drive. This option would provide a platform closer to the center of campus and provide an opportunity to provide an enhanced platform that interfaces with a major LSU pedestrian corridor along N. Stadium Drive. However, this alternative would preclude some future extension options and increase tram travel times. Furthermore, the longer route would be more costly to construct and would not substantially increase ridership potential. Also, LSU expressed concerns that this option could interfere with campus planning efforts that are just being to take shape with the recently initiated campus master plan efforts.

Figure 3: Southern Terminus Options



## 4.2 Conclusion/Recommendation

At the December 10, 2015 Project Steering Committee, it was decided that the project team should move forward with option 1 for the southern terminus and keep the alignment within Nicholson Drive. The Project Steering Committee felt that this option would adequately serve the LSU campus; avoid unnecessary track construction and provide the greatest flexibility for the community to determine the location of a future extension either to the south along Nicholson Drive or to the east within the LSU campus.