

**MARCONI DRIVE STAGE 0 STUDY**  
**(ROBERT E. LEE TO ZACHARY TAYLOR)**  
**ORLEANS PARISH**  
**(RPC PROJECT NO. A-2.18; FY-18 UPWP)**

Prepared for

**REGIONAL PLANNING COMMISSION**  
**FOR JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES,**  
**ST. JOHN THE BAPTIST, ST. TAMMANY AND TANGIPAHOA PARISHES**

New Orleans, Louisiana



**FINAL REPORT**

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# **1. INTRODUCTION**

## **1.1 PURPOSE**

In December 2017, the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa Parishes (RPC) authorized Mathes Brierre Architects (MBA) and Urban Systems Inc. (USI) to perform a Stage 0 Feasibility Study of Marconi Drive in order to develop design alternatives for the Marconi Drive corridor that would increase safety for pedestrians, bicyclists, and drivers and would provide connections between the existing pedestrian and bicycle facilities along Marconi and adjacent corridors, as well as projects currently in design.

## **1.2 OBJECTIVE**

The objective of the study was to determine the feasibility of adjusting the profile of Marconi Drive to include bike lanes and/or turning lanes to improve safety for all users. Meetings with public agencies and stakeholders were held to determine the status of other improvements being developed in the area, and to assess priorities for safety improvements. Design alternatives were developed, and further meetings were held to receive feedback and build consensus on the design options.

Other objectives for this study include identification of preliminary environmental considerations (Stage 0 Environmental Checklist) and preliminary estimates of the probable construction costs. Based on the combination of these factors, and the design process, a preferred alternative design was identified for the entire corridor.

### 1.3 STUDY AREA



*Photo 1: Marconi Drive between Zachary Taylor and Harrison Avenue*

The project study area is a 1.66 mile segment of Marconi Drive in the City Park Neighborhood of New Orleans, Louisiana in Orleans Parish. The project is bounded by Robert E. Lee Boulevard on the north end and Zachary Taylor Drive on the southern end. See *Figure 1* for project location.





Figure 1 – Vicinity Map, Greater New Orleans

#### 1.4 CURRENT PROJECTS IN THE COORIDOR

This project is just one piece of a larger system and other ongoing projects in the area. Current projects in the corridor at the time of the writing of this report are as follows:

- Marconi Rehabilitation Project – This project is a re-alignment and re-striping plan that spans from City Park Avenue to Zachary Taylor Drive on Marconi Drive. The project reduces the drive lanes down to two vehicular lanes, parking lanes in

some areas, and bike lanes. There are two way bicycle lanes on Marconi in the northbound direction. There is only one lane bicycle southbound.

- LADOTD Safe Routes to Public Spaces – This project is on Marconi Drive from Zachary Taylor to Harrison Avenue. The design implements a new recreational path that runs parallel to Marconi Drive out of the street right of way and beneath the Live Oak trees. It is a continuation of the path that existing north of Harrison Avenue.
- Recreation/Bike Path from Harrison Avenue to Robert E. Lee Boulevard – This is an existing pathway for recreational use along Marconi Drive. It is used by cyclists, pedestrians and other transport types, such as skateboarders.

## **2. EXISTING CONDITIONS AND ANALYSIS**

### **2.1 EXISTING CONDITIONS**

Marconi Drive is a heavily used corridor on the western edge of New Orleans City Park. It is currently a four-lane road that serves as a major connection between the residential portions of the neighborhoods Lakeview and Lake Vista, to the Mid-City area and downtown New Orleans. There are many schools and businesses nearby that are

destination points for locals and visitors. While there are no commercial or residential structures on the corridor, there are multiple recreational facilities.

For the purpose of this report, based on surrounding land use, roadway characteristics, and major intersecting roads, the roadway was divided into three (3) design segments; the northern segment, the middle segment, and the southern segment. These sections are bound by the intersecting streets that cross Marconi Drive. See Figure 2 for the Marconi Drive segment divisions.



Figure 2 – Marconi Drive segment divisions

The study corridor is intersected by:

- Robert E. Lee Boulevard
- Filmore Avenue
- Harrison Avenue
- Zachary Taylor Drive

The northern section is defined by the area between Robert E. Lee Boulevard and Filmore Avenue. The western side is mostly grass and trees bound by the levee/floodwall of the Orleans Canal. The eastern side is also grass and trees, and has a shared-use path for pedestrians and bicyclists. Just beyond the path is the Marconi Lagoon and City Park Equest Farm stables.



Figure 3 – Marconi Drive northern segment – Robert E. Lee Boulevard to Filmore Avenue

The middle section is defined by the area between Filmore Avenue and Harrison Avenue. The western side is grass and trees bound by the levee/floodwall of the Orleans Canal. The Gernon Brown Recreational Center, operated by the New Orleans Recreation and Development Commission (NORDC), is located at the northwest corner of Marconi Drive and Harrison Avenue. There are daily events in this building that cater to youth, teens, adults and seniors. There are currently no sidewalks on either side of the road, but the shared use path on the eastern side of Marconi between the road and the lagoon continues in this segment from Robert E. Lee Boulevard and terminates at Harrison Avenue. There are current plans to extend this path on through to Zachary Taylor Drive. There is a small fishing pier and associated parking lot directly adjacent to the pier between Harrison Avenue and Filmore Avenue.



Figure 4 – Marconi Drive middle segment – Filmore Avenue to Harrison Avenue

The southern section is defined by the area between Harrison Avenue and Zachary Taylor Drive and is characterized by many mature live oak trees in close proximity to the roadway. This section is surrounded on both sides with multiple recreation destinations, including soccer fields, rugby fields, and the City Park/Pepsi Tennis Center. Many of the adjacent destinations are used most times of the year. Three unimproved or gravel parking areas and two pull-off parking areas are directly adjacent to the street. The Matt Savoie Soccer Complex includes a parking area that can be used for concessions and houses restrooms. Wood bollards lining some portions of the road deter parking underneath the oak trees. Parking is also available along Magnolia Drive on the east side of the soccer fields. Another destination near the corridor is Popp Fountain and Arbor Room, event space commonly used for wedding receptions. The southwestern end of this section between the road and the levee/floodwall of Orleans Canal has a grove of mature live oak trees that has not been disturbed.

No survey was provided to identify property lines throughout the corridor. The assumed right of way available for re-design was road edge to road edge.



Figure 5 – Marconi Drive southern segment – Harrison Avenue to Zachary Taylor Drive

Photos 1 to 7 on the following pages present the condition along Marconi Drive at the time of this report.



Photo 2: Recreation path along northern segment of Marconi Drive.



Photo 3: Recreational bike and pedestrian path east of Marconi Drive.



Photo 4: Fishing pier off of Marconi Drive.



Photo 5: Wood bollards at edge of road to deter parking under trees.





Photo 6: Soccer field in use on a Saturday morning.



Photo 7: Matt Savoie Soccer Complex with restrooms and unimproved parking area.



Photo 8: Unimproved parking area off of Magnolia Drive.

## 2.2 DEFICIENCY ANALYSIS

Deficiencies were documented relating to parking, pedestrian safety, cyclist safety, and vehicular operations. These deficiencies include the following:

- **Lack of sidewalks:** There are no sidewalks along most the project scope. The only sidewalks are at the terminus of the project at Robert E. Lee Boulevard and Marconi Drive in the west/east directions. No crosswalks are available at the intersections to cross Marconi Drive. Pedestrians often have difficulty crossing the street during soccer games and practices.
- **Lack of adequate parking available:** The unimproved parking areas are not striped. Because of this, motorists do not use the space effectively, and park far apart, reducing the number of vehicles the areas can accommodate.
- **Difficult connection of unimproved parking areas to Marconi Drive:** The unimproved lots are not at the same level as the road, which results in an abrupt height change in the pavement where the two meet. Motorists often have to accelerate to traverse this lip into oncoming traffic.

- **No dedicated bike lane:** Currently there is a shared bike lane the length of Marconi Drive within the study area, and a separate bike/pedestrian path from Harrison Avenue to Robert E. Lee Boulevard.
- **No left turn out of the parking lots along the southern segment:** Signs prohibiting left turns from the parking lots onto Marconi Drive force motorists who desire to drive north to take a route far out of their intended direction.
- **Drainage problems:** After a heavy rain downfall, the fields in the southern segment are completely flooded and unusable until the water drains by filtering into the ground or until it dries.
- **Lighting:** The live oak trees in the southern segment of Marconi Drive block out the street lights making the space very dark at night and unsafe for all users.
- **Traffic signaling:** The intersections of Robert E. Lee Boulevard and Harrison Avenue at Marconi Drive are both signalized intersections. Both intersections operate with fixed timing parameters with set time-of-day plans for the AM and PM peaks.
- **Crash Review:** Crashes reviewed on Marconi Dr between Zachary Taylor Dr and Robert E Lee Blvd indicated a high amount of left turn crashes.
- **Pull off parking is a safety hazard:** In the southern segment of Marconi Drive, the pull-off parking requires exiting vehicles to back out into traffic, which is a safety concern. Suggestions have been made to re-design the parking to function more efficiently allowing for pull out instead of back out.

The following photos, 9-13, illustrate the above listed conditions.



*Photo 9: Lack of sidewalk along Marconi Drive has led to pedestrians wearing a path.*



*Photo 10: Parking area connection to Marconi Drive abrupt height change.*



Photo 11: No dedicated bike lanes for cyclists.



Photo 12: Right turn only signs at the exits of the parking areas, restricting motorists.



*Photo 13: Lack of adequate drainage leads to flooded fields, restricting player use.*



*Photo 14: Parking spaces directly off of Marconi Drive cause safety hazards when drivers back out into the busy street.*

## 2.3 TRAFFIC DATA COLLECTION

Data was collected while local schools were in session during February 2018. Turning movement counts were collected at nine (9) locations on a Wednesday during the AM, Mid-Day, and PM peak period as well as on a Saturday from 10:00 AM to 2:00 PM. Twenty-four (24) hour roadway counts were collected on the same Wednesday as the turning movement counts. These locations are listed below:

### Turning Movement Count locations:

- Zachary Taylor Drive at Marconi Drive
- Harrison Avenue at Marconi Drive
- Filmore Avenue at Marconi Drive
- Robert E. Lee Boulevard at Marconi Drive
- Magnolia Drive at Harrison Avenue
- Magnolia Drive at Marconi Drive
- Three (3) soccer field driveways along Marconi Drive between Harrison Avenue and Zachary Taylor Drive

### Roadway Volume Count locations:

- Marconi Dr between Zachary Taylor Drive and Harrison Avenue
- Marconi Dr between Harrison Avenue and Filmore Avenue
- Marconi Dr between Filmore Avenue and Robert E. Lee Boulevard

The traffic peak hours were identified as 7:15-8:15 AM for the AM peak, 2:45-3:45 PM for the Mid-day peak, 5:15-6:15 PM for the PM peak, and 12:45-1:45 PM for the Saturday peak. The AM and PM peak were identified as the critical peaks for analysis. Figure x presents the existing vehicular traffic volumes. Figure x presents the existing bike and pedestrian volumes.

### Magnolia Drive One-way

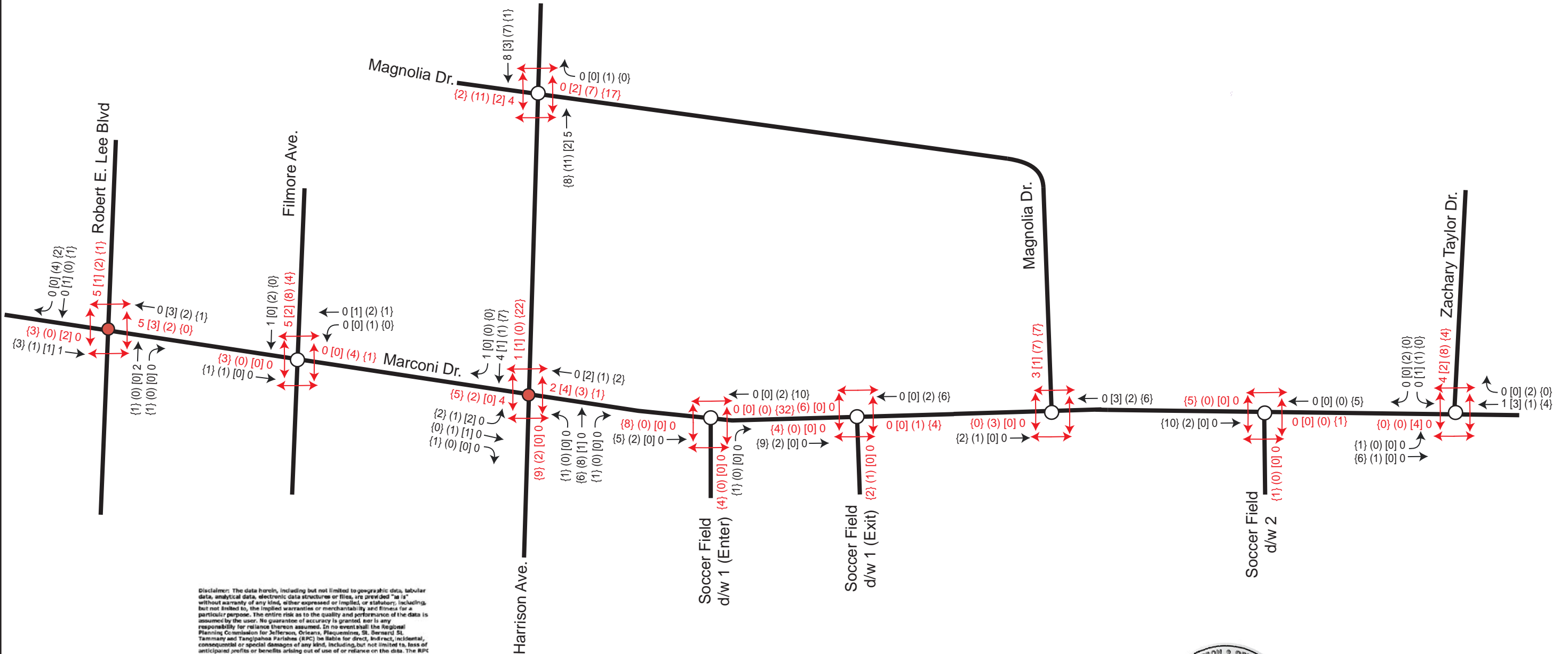
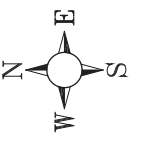
As a part of this project, Magnolia Drive was reviewed for a potential change to operate as a one-way street. Currently Magnolia Drive is a two-lane street that connects Marconi Drive to Harrison Avenue and provides access to the adjacent sports fields.

Parking along Magnolia Drive is not regulated, and the available space is not utilized efficiently. By changing Magnolia Drive from a two-way road to a one-way road, signage can be installed to limit parking to one side, which would be more organized and allow more vehicles to park. The existing traffic volumes were reviewed, and the traffic volumes were predominately lakebound, therefore the lakebound direction is the optimal direction for the one-way operation. Figure x presents the existing volumes with vehicles rerouted to use Magnolia Drive as a one-way, lakebound road.



**LEGEND:**

- X AM Peak Hour 7:15-8:15AM
- [X] MID Peak Hour 2:45-3:45PM
- (X) PM Peak Hour 5:15-6:15PM
- {X} SAT Peak Hour 12:45-1:45PM
- Signalized Intersection
- Unsignalized Intersection
- ← Bicycle Volumes
- ↔ Pedestrian Volumes



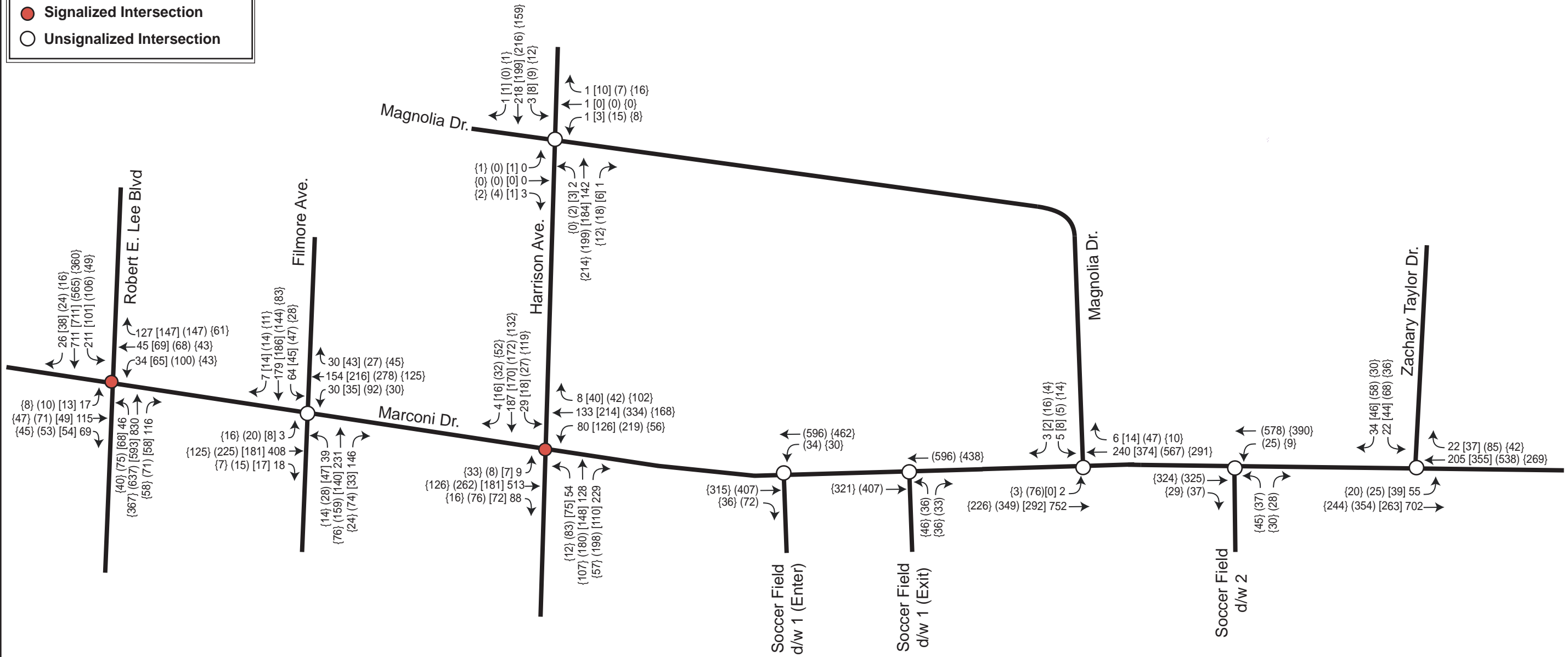
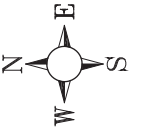
Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structures or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties or merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the data is assumed by the user. No guarantee of accuracy is granted, nor is any responsibility for reliance thereon assumed. In no event shall the Regional Planning Commission for Jefferson, Orleans, Plaquemine, St. Bernard, St. Tammany and Tangipahoa Parishes (RPC) be liable for direct, indirect, incidental, consequential or special damages of any kind, including, but not limited to, loss of anticipated profits or benefits arising out of use of or reliance on the data. The RPC does not accept liability for any damages or misrepresentation caused by inaccuracies in the data or as a result of changes to the data caused by system transfers or other transformations or conversions, nor is there responsibility assumed to maintain the data in any manner or form. These data have been developed from the best available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the appropriate use of the information with respect to possible errors, scale, resolution, rectification, positional accuracy, development methodology, time period, environmental and climatic conditions and other circumstances specific to these data. The user is responsible for understanding the accuracy limitations of the data provided herein. The burden for determining fitness for use lies entirely with the user. The user should refer to the accompanying metadata notes for a description of the data and data development procedures, if they exist. Although these data have been processed successfully on computers at the RPC, no guarantee, expressed or implied, is made by RPC regarding the use of these data on any other system, nor does the act of distribution constitute or imply any such warranty. Distribution of these data is intended for informational purposes and should not be considered authoritative for navigational, engineering, legal and other site-specific uses.



Figure 7: Existing Conditions Bike and Pedestrian Volumes

2018 Existing Conditions  
Bike and Pedestrian Volumes  
**Marconi Drive Feasibility & Safety Study**  
New Orleans, LA  
NOT TO SCALE  
FOR PLANNING PURPOSES ONLY

- LEGEND:**
- X AM Peak Hour 7:15-8:15AM
  - [X] MID Peak Hour 2:45-3:45PM
  - (X) PM Peak Hour 5:15-6:15PM
  - {X} SAT Peak Hour 12:45-1:45PM
  - Signalized Intersection
  - Unsignalized Intersection



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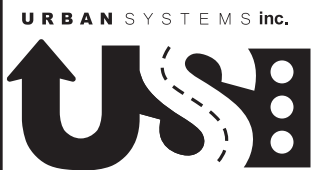


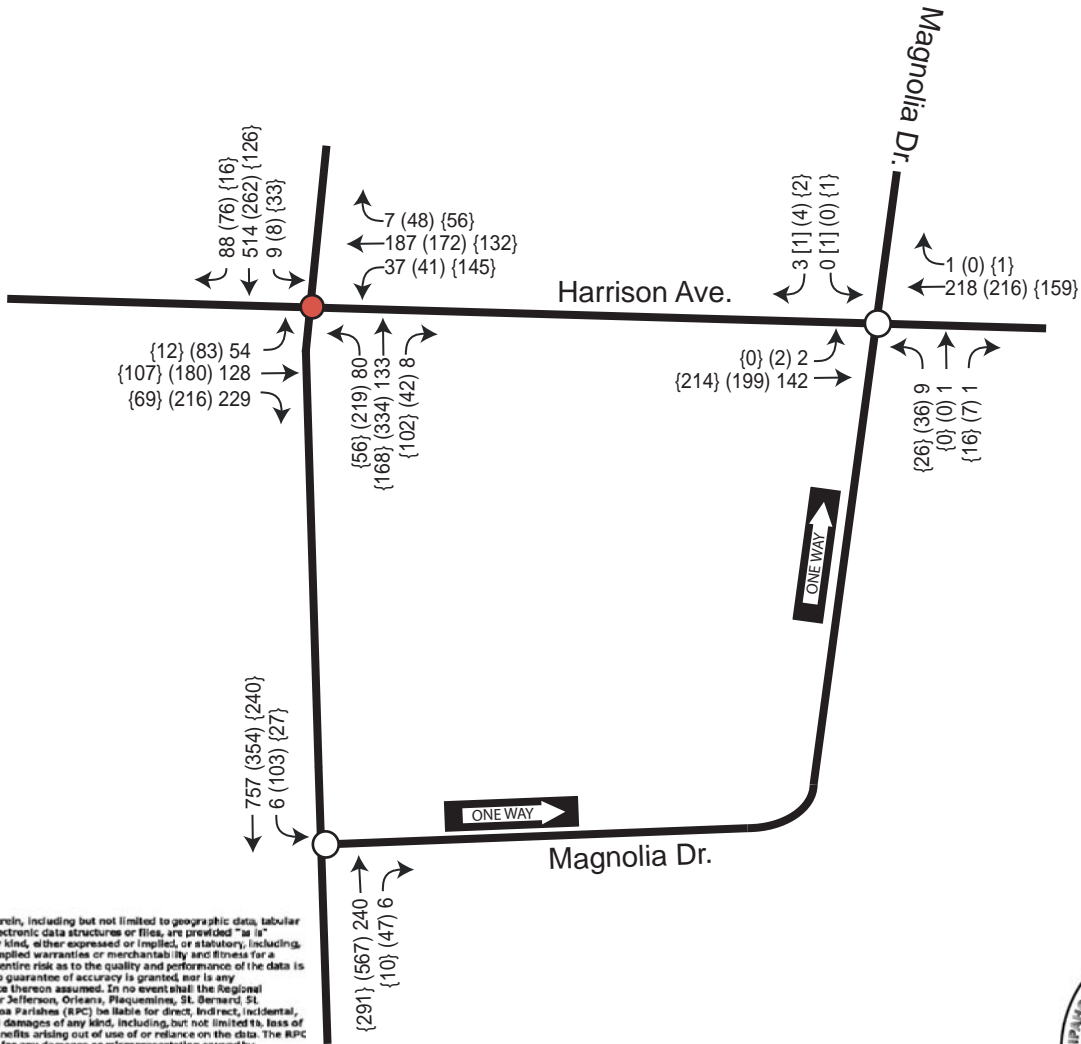
Figure 6: Existing Vehicular Volumes

2018 Existing Conditions  
 Vehicular Traffic Volumes  
**Marconi Drive Feasibility & Safety Study**  
 New Orleans, LA  
 NOT TO SCALE  
 FOR PLANNING PURPOSES ONLY



**LEGEND:**

- X AM Peak Hour
- (X) PM Peak Hour
- {X} SAT Peak Hour
- Signalized Intersection
- Unsignalized Intersection



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Magnolia Dr. One Way Lakebound  
 Macorni Drive  
 Marconi Drive Feasibility & Safety Study  
 New Orleans, LA

## **2.4 EXISTING TRAFFIC ANALYSIS**

Existing conditions traffic analysis for the weekday AM and PM peaks included capacity analysis to estimate operational conditions and left turn lane warrant analyses to identify locations for potential turn lanes. These types of analyses are the industry standard and the methods are the widely accepted practice of evaluating impacts on traffic operations.

### **Capacity Analysis**

Levels of Service (LOS) represent a qualitative and quantitative evaluation of the traffic operation of a given intersection using procedures developed by the Transportation Research Board and contained in the Hwy Capacity Manual Special Report 209. The Hwy Capacity Manual (HCM) procedures have been adapted to computer-based analysis packages.

Levels of Service range from LOS A, a condition of little or no delay, to LOS F, a condition of capacity breakdown represented by heavy delay and congestion. LOS B is characterized as stable flow. LOS C is considered to have a stable traffic flow but is becoming susceptible to congestion with general levels of comfort and convenience declining noticeably. LOS D approaches unstable flow as speed and freedom to maneuver are severely restricted and LOS E represents unstable flow at or near capacity levels with poor levels of comfort and convenience.

Highway Capacity Software (HCS) was used to analyze signalized and unsignalized intersections. For signalized and unsignalized intersections the HCM bases LOS quality on delay.

Tables x and x present the Level of Service criteria for signalized and unsignalized intersections

**Table 1**  
**Level of Service Criteria:**  
**Signalized Intersections**

Level of Service	Control Delay (sec/veh)
A	$\leq 10$
B	$> 10$ and $\leq 20$
C	$> 20$ and $\leq 35$
D	$> 35$ and $\leq 55$
E	$> 55$ and $\leq 80$
F	$> 80$

**Table 2**  
**Level of Service Criteria:**  
**Unsignalized Intersections**

Level of Service	Control Delay (sec/veh)
A	$\leq 10$
B	$> 10$ and $\leq 15$
C	$> 15$ and $\leq 25$
D	$> 25$ and $\leq 35$
E	$> 35$ and $\leq 50$
F	$> 50$

The existing conditions capacity analyses were based on the existing intersection geometry and traffic control. The signal timing used in these analyses was estimated based on field observations. Table x presents the results of the existing conditions analysis results for the subject intersections along the corridor. The analysis reports are included in Appendix X.

**Table 3**  
**Existing Conditions Capacity Analysis**

Intersection/Approach	AM		PM	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
<b>Robert E Lee Blvd at Marconi Dr</b>	<b>C</b>	<b>23.8</b>	<b>B</b>	<b>15.5</b>
Eastbound	A	8.1	A	8.3
Westbound	D	37.5	A	9.2
Northbound	D	40.2	D	38.0
Southbound	D	36.1	C	30.3
<b>Filmore Ave at Marconi Dr</b>	<b>E</b>	<b>41.9</b>	<b>C</b>	<b>21.9</b>
Eastbound	F	81.4	D	25.0
Westbound	D	27.2	C	22.5
Northbound	C	15.4	C	23.1
Southbound	C	21.1	C	16.8
<b>Harrison Ave at Marconi Dr</b>	<b>F</b>	<b>81.6</b>	<b>E</b>	<b>64.0</b>
Eastbound	F	102.2	F	111.4
Westbound	D	45.5	D	53.2
Northbound	C	33.7	D	41.1
Southbound	F	98.8	D	49.5
<b>Zachary Taylor Dr at Marconi Dr</b>				
Westbound	B	12.1	C	16.6
Southbound	A	8.0	A	9.2

A review of the analysis results presented in Table x indicates Robert E Lee Blvd at Marconi Dr and Zachary Taylor at Marconi Dr operate acceptably in both the weekday AM and PM peaks and may have available excess capacity. The analysis results indicate the intersection of Filmore Ave at Marconi Dr operates with heavy delays on the eastbound approach in the AM peak and moderate delays in the PM peak. The analysis results at the intersection of Harrison Ave and Marconi Dr indicate failing conditions in the AM peak. In the PM peak, long delays are experienced on the Harrison Ave eastbound approach. Field observations validate these results.

## Left Turn Warrant Analysis

Utilizing the guidance of NCHRP Report 457, left turn lane warrant analyses were conducted for the unsignalized intersections of Marconi Dr at Zachary Taylor Dr, Magnolia Dr, Filmore Dr, and three soccer field driveways. The warrant analyses were not conducted for the weekday AM peak at the soccer driveways as no activities were happening on the fields at that time. The Saturday traffic volumes were reviewed to determine if turn lane warrants were needed. In all locations the AM or PM peak volumes were higher than the Saturday volumes. Table X presents the analysis results and the full reports are included in the Appendix. Meeting warrants itself does not require a turn lane but indicates that a turn lane should be considered.

**Table 4**  
**Left Turn Warrant Results**

Intersection/Approach		Peak Hour	
		AM	PM
Marconi at Filmore	NB	Not Warranted	Warranted
	SB	Not Warranted	Not Warranted
Soccer Dwy 1	NB	*	Warranted
Marconi at Magnolia	SB	Not Warranted	Warranted
Soccer Dwy 2	NB	*	Not Warranted
Marconi at Zachary Taylor	SB	Warranted	Warranted

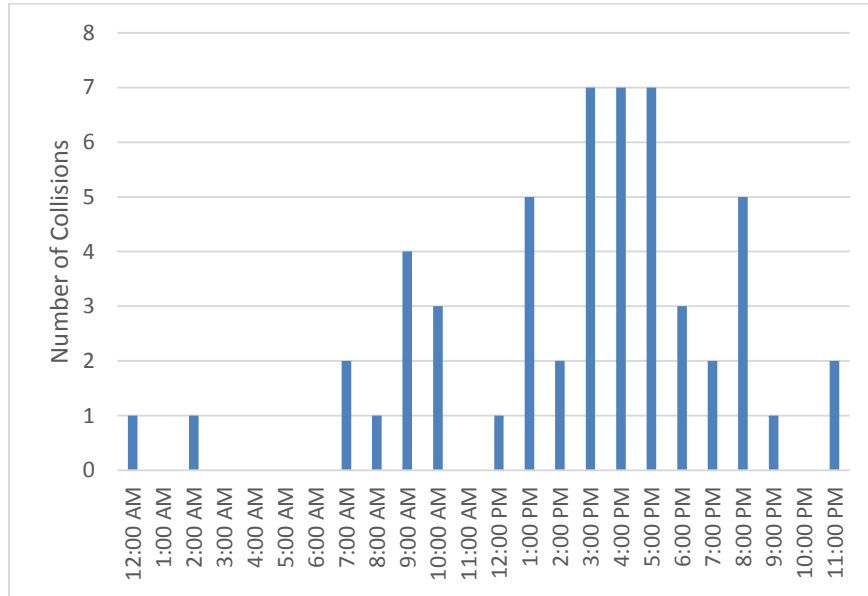
\* Analysis not conducted for this peak hour.

## Crash Review

Crashes between January 1, 2013 and December 31, 2016 on Marconi Dr between Zachary Taylor Dr and Robert E Lee Blvd were reviewed. There were 54 reported crashes, 35 of which happened between Harrison Ave and Zachary Taylor Dr. There were 32 injuries resulting from the crashes, 1 of which involved a pedestrian. All vehicle damages severity was between minor and moderate. The most reported crash was a left turn crash. Recently, the signalized intersection of Harrison Ave at Marconi Dr was

changed to allow protected northbound lefts, which is expected to reduce the number of crashes. Tables X, X and X present the time of day, day of week, and manner of collision.

**Table 5**  
Crash - Time of Day



**Table 6**  
Crash - Manner of Collision

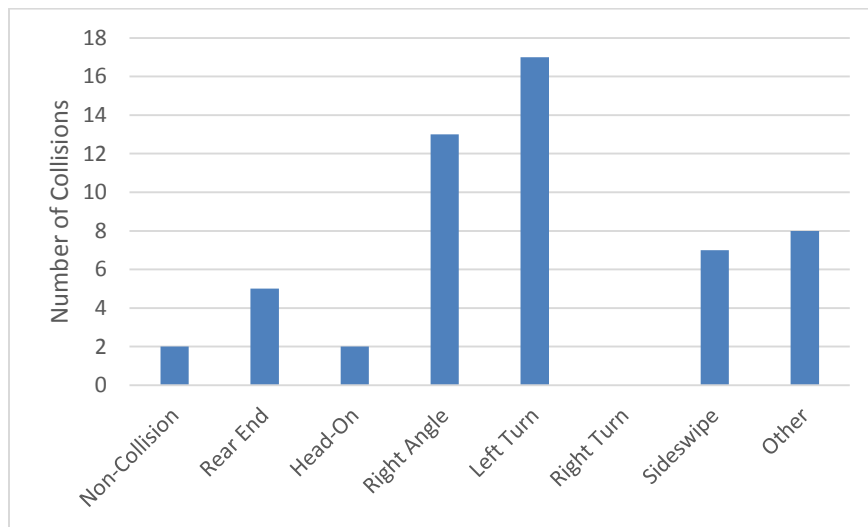
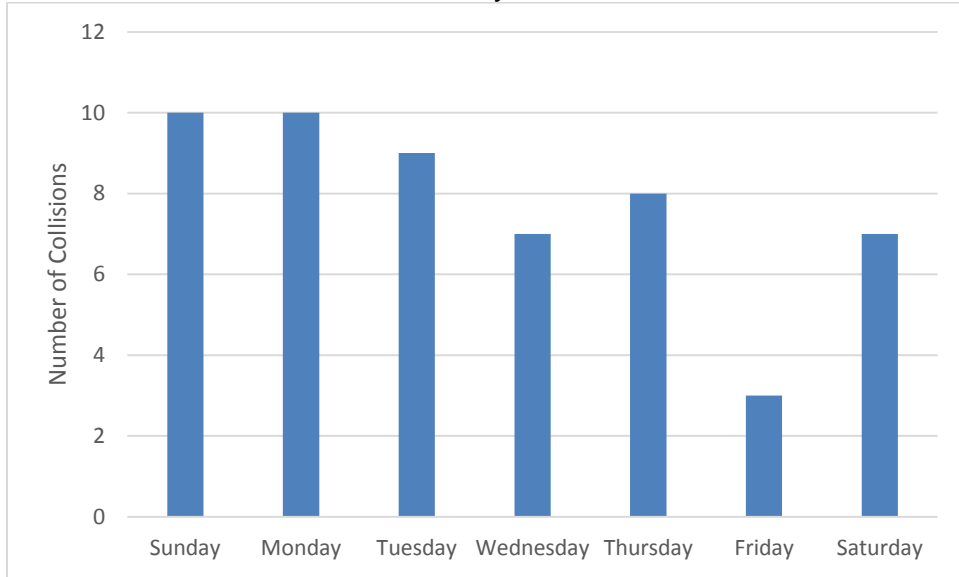




Table 7  
Crash - Day of Week



## 2.5 PRELIMINARY MEETINGS

Preliminary meetings were held with the Regional Planning Commission, City Park, LADOTD, and The City of New Orleans Department of Public Works. An initial project kick off meeting was held on January 23, 2018. Based on the scope of work and project meetings with the above stated parties the following considerations were discussed:

- Parking issues, specifically around the recreation fields
- A DOTD recreational trail project which is an extension of the shared-use path between Robert E. Lee and Harrison Avenue
- A City of New Orleans Department of Public Works project which is a road diet for the stretch of Marconi Drive from City Park Avenue to Zachary Taylor Drive. This project will incorporate a two-way, two-lane cycling track on the northbound side of the drive, and a one-way, one-lane cycle track on the southbound side.
- Marconi Drive Traffic Study, provided to consultant by the Regional Planning Commission, which includes Complete Streets options for realignment of Marconi Drive. This document can be found in the Appendix.
- The need for designated bike lane
- The desire to have a turn lane on Marconi Drive

### Meetings:

- *January 23, 2018:* Initial kick off meeting with Regional Planning Commission (RPC), City of New Orleans Department of Public Works (DPW), Louisiana Department of Transportation (LADOTD), New Orleans City Park (NOCP), Urban Systems Inc. (USI) and Mathes Brierre Architects (MBA).
- *March 27, 2018:* Status meeting with RPC, DPW, NOCP, DOTD, USI, and MBA to review progress and present preliminary design alternatives.
- *April 25, 2018:* Coordination meeting with NOCP, MBA, HNTB, and Digital Engineering (DEI).
- *May 3, 2018:* Progress meeting with RPC, NOCP, MBA and USI.

Refer to Appendix A for meeting minutes from meetings mentioned above.

### 3. CONCEPT DEVELOPMENT

The current roadway design profile consists of a 38' wide street profile, divided into 4 travel lanes: two 10' wide lanes, and two 9' wide shared vehicle/bicycle lanes. The design team has determined that any reconfiguration of the street shall be done with striping only, since the existing oak trees make it impossible to expand the roadway profile without damaging the trees.

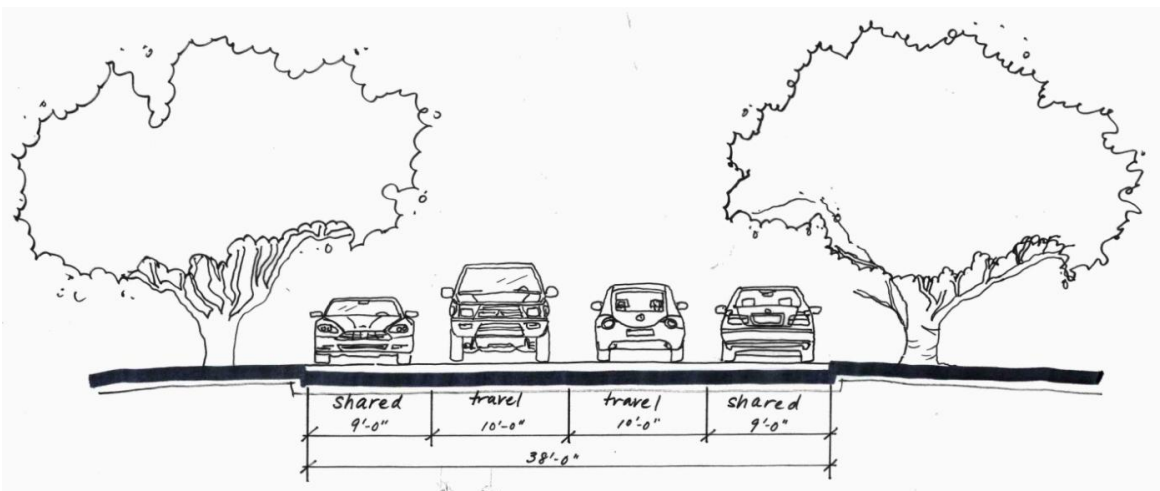


Figure 9- Existing roadway section profile.

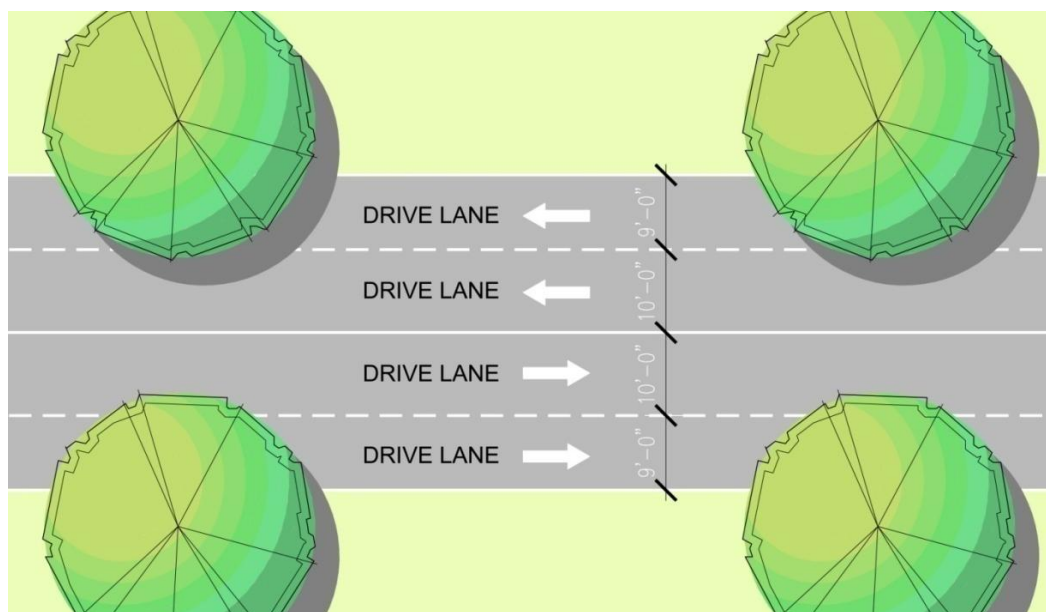


Figure 10- Existing roadway plan and lane striping layout

The design team thus pursued a number of roadway intersection design alternatives and segmental design alternatives. Each intersection alternative was studied based on the unique situation at each intersection, specifically with regard to traffic analysis and geometric considerations. The segment alternatives explored were unique to the different conditions found in the northern, middle, and southern segments of the roadway. These conditions are explained in more detail below.

### **3.1 ROADWAY DESIGN GUIDELINES**

Marconi Drive is an Arterial / Collector road with a speed limit of 35 mph. The graphic below illustrates the components of the road as it exists. Arterial roadway notable features may include:

- Through lane width minimum 10', recommended 11'.
- Auxilliary lane width minimum 9', recommended 10'.
- Bike lane recommended width 5'.
- Shoulder width without curb recommended minimum 2'.

*Figure 11- Current conditions.*

The design alternatives explored sought to bring the roadway into compliance with these guidelines, while also implementing a "Complete Streets" program to satisfy the goals of the project.



**LEGEND**

- LANES
- LANES
- 35 mph SPEED
- SCOPE, LENGTH, CORRIDOR
- ANALYSIS SECTION



1.66 MILES

Figure 11: Existing Conditions in the Corridor

City Park - Marconi Drive  
New Orleans, Louisiana  
Aerial Imagery 2014

City of New Orleans  
Department of Transportation  
Office of Engineering  
1000 Poydras Street, Suite 2000  
New Orleans, LA 70112  
504.566.2200  
www.nola.gov

### 3.2 COMPLETE STREETS DESIGN CRITERIA

The City of New Orleans passed a Complete Streets Ordinance on February 17, 2011. This ordinance requested the Department of Public Works to require that “all planning, designing, funding, operation and maintenance of the City’s transportation system accommodate and encourage travel for all users in a balanced, responsible and equitable manner consistent with, and supportive of, the surrounding community.” (*Article II, Chapter 146, Code of City of New Orleans*) The ordinance dictates that all effort must be made to design roadways with all forms of transportation in mind, including motorists, transit users, bicyclists, and pedestrians of all ages and abilities. This planning shall include an array of facilities and amenities, including crosswalks, traffic calming measures, sidewalk lighting, bike racks, landscaping, storm water management, and street furniture.



*Photo 15 - Complete Streets implementation on Esplanade Avenue.*

### **3.3 INTERSECTION ALTERNATIVES**

The objective of this project was to determine the feasibility of adjusting the profile of Marconi Drive to include bike lanes and potentially turning lanes to improve safety for these users. Capacity analyses, left turn lane warrants, lane utilization, existing pavement, and surrounding conditions were reviewed to develop improvements along the corridor and at each subject intersection.

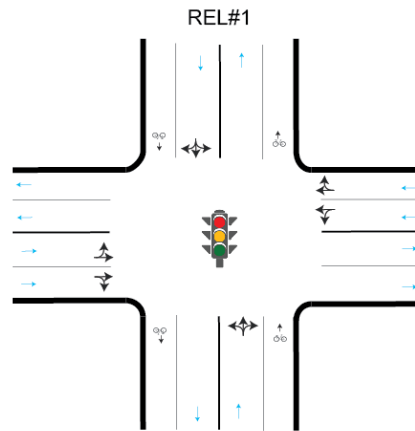
The methodology was to first evaluate designated bike lanes in the existing pavement at each intersection and then incrementally evaluate alternatives until the optimum balance of safety and operation was identified. Dedicated bike lanes would improve safety for both the bikes and vehicles by providing separate lanes for each user.

#### **Robert E Lee Blvd at Marconi Dr**

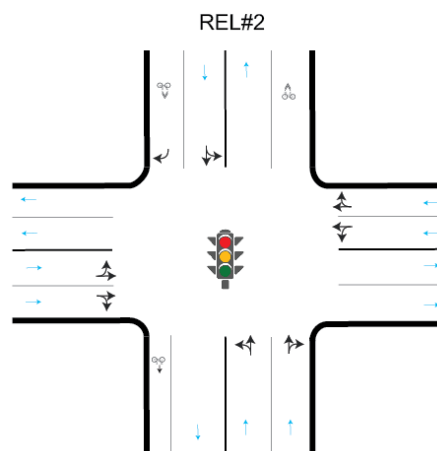
The signalized intersection of Robert E Lee Blvd at Marconi Dr is a four-way intersection with two lanes on each approach. The eastbound and westbound approaches have multi-use paths located outside of the roadway. The outside travel lanes on the northbound and southbound approaches include shared bike lanes. A multi-use path runs parallel to Marconi Dr on the east side. Existing condition analysis indicates the intersection currently operates with an overall LOS C in the AM and LOS B in the PM indicating excess capacity may be available for dedicated bike lanes.

The potential improvements considered for Robert E Lee at Marconi Dr (REL) were as follows:

REL #1- Dedicated bike lanes with northbound and southbound Marconi Dr reduced to a two-lane section. The analysis results for this alternative indicated failing operating conditions for the northbound approach.



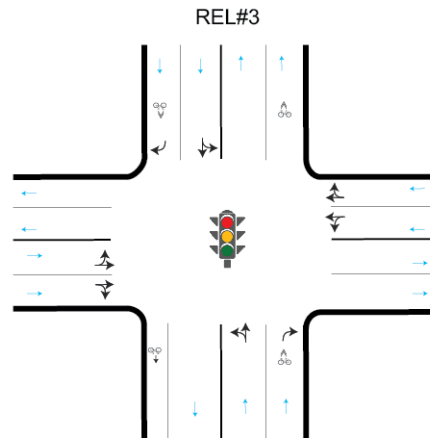
REL #2- Dedicated southbound bike lane and dedicated northbound bike lane connected from the roadway to the existing multi-use path south of Robert E Lee to allow the northbound approach to have two vehicular lanes at the intersection. The dedicated bike lanes with the northbound bike lane connected to the existing multi-use path would maintain the existing capacity for the northbound approach while improving safety by providing separate lanes for bikes and vehicles. The analysis results for this alternative indicated negligible differences in delay compared to the existing conditions. It would require the construction of additional pavement to connect the roadway to the multi-use path.



REL #3- Dedicated southbound bike lane and dedicated northbound bike lane becoming shared at the intersection with a right turn only lane for both approaches. The northbound and southbound left-thru and vehicular right turn only with shared bike lane would provide a safety improvement for bicyclists



over the current configuration as less vehicles would be in the shared lane and provide additional capacity for vehicles versus a single approach lane. The analysis results for this alternative indicated negligible differences in delay compared to the existing conditions. It would only require restriping of the existing pavement.



Tables x and x presents the capacity analysis result for the potential intersection improvements compared to the existing analysis for the AM and PM peaks respectively.

**Table 8**  
**Robert E Lee Blvd at Marconi Dr Comparison- AM Peak**

Intersection/Approach	AM							
	Existing		REL #1		REL #2		REL #3	
			Dedicated NB and SB Bike Lanes		Dedicated SB Bike Lane and NB to Shared Path + Pavement		Dedicated SB Bike Lane and NB Shared Bike Lane in Right Turn Lane	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Robert E Lee Blvd at Marconi Dr</b>	<b>C</b>	<b>23.8</b>	<b>D</b>	<b>47.4</b>	<b>C</b>	<b>23.9</b>	<b>C</b>	<b>23.7</b>
Eastbound	A	8.1	A	8.1	A	8.1	A	8.1
Westbound	D	37.5	D	37.5	D	37.5	D	37.5
Northbound	D	40.2	F	299.1	D	40.1	D	40.1
Southbound	D	36.1	D	39.4	D	38.2	D	37.9

**Table 9**  
**Robert E Lee Blvd at Marconi Dr Comparison- PM Peak**

Intersection/Approach	PM							
	Existing		REL #1		REL #2		REL #3	
			Dedicated NB and SB Bike Lanes		Dedicated SB Bike Lane and NB to Shared Path + Pavement		Dedicated SB Bike Lane and NB Shared Bike Lane in Right Turn Lane	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Robert E Lee Blvd at Marconi Dr</b>	<b>B</b>	<b>15.5</b>	<b>D</b>	<b>52.3</b>	<b>B</b>	<b>15.4</b>	<b>B</b>	<b>15.3</b>
Eastbound	A	8.3	A	8.3	A	8.3	A	8.3
Westbound	A	9.2	A	9.2	A	9.2	A	9.2
Northbound	D	38.0	F	259.4	D	37.1	D	39.0
Southbound	C	30.3	C	31.1	C	31.0	C	30.9

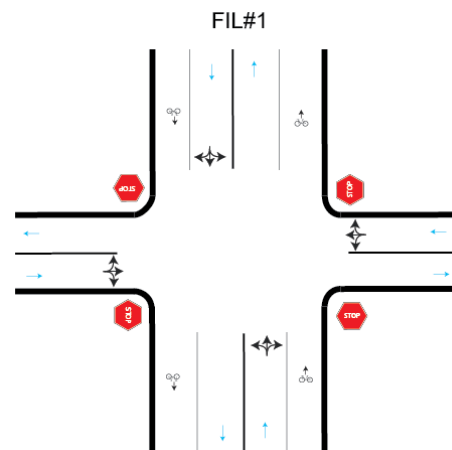
Based on this evaluation which focused on traffic operations, intersection improvement REL#3 is recommended. This alternative configuration would allow a dedicated southbound bike lane and a dedicated northbound bike lane becoming shared with a right turn only lane at the intersection. The modifications would stay within the existing pavement, only require restriping, and provide a safety improvement for bicyclists by having less vehicles in the shared lane than the existing configuration.

**Filmore Ave at Marconi Dr**

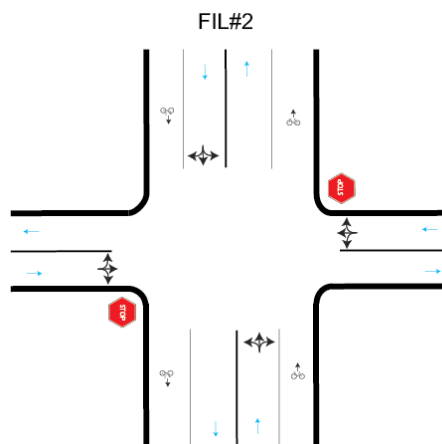
The intersection of Filmore Ave at Marconi Dr is a four-way, unsignalized, all-way stop controlled intersection with two lanes on the northbound and southbound approaches and one lane on the eastbound and westbound approaches. The outside travel lanes on the northbound and southbound approaches include shared bike lanes. A multi-use path runs parallel to Marconi Dr on the east side. Existing condition analysis indicates the intersection currently operates with an overall LOS E in the AM and LOS C in the PM indicating excess capacity may not be available for dedicated bike lanes.

The potential improvements considered for Filmore Ave at Marconi Dr (FIL) were as follows:

FIL #1- Dedicated bike lanes with northbound and southbound Marconi Dr reduced to a two-lane section and maintaining the existing all-way stop condition. The analysis results for this alternative indicated failing operating conditions for the AM and PM peaks.



FIL #2- Dedicated bike lanes with northbound and southbound Marconi Dr reduced to a two-lane section and changed intersection control from an all-way stop to two-way stop on the eastbound and westbound approaches. The analysis results for this alternative indicated failing operating conditions for the eastbound and westbound approaches in both the AM and PM peaks.



FIL #3- Dedicated bike lanes on new pavement outside the existing with the intersection remaining as is. The southbound approach of Marconi Dr at Filmore Ave would

widen out to two vehicular lanes. This would not change the existing operations/ impact the existing capacity. It would require the construction of additional pavement on both sides of Marconi Dr.

Tables x and x presents the capacity analysis results for the potential intersection improvements compared to the existing analysis for the AM and PM peaks respectively.

**Table 10**

**Filmore Ave at Marconi Dr Comparison- AM Peak**

Intersection/Approach	AM					
	Existing and FIL #3		FIL #1		FIL #2	
			All-Way Stop Two Lanes NB and SB		Two-Way Stop Two Lanes NB and SB	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Filmore Ave at Marconi Dr</b>	<b>E</b>	<b>41.9</b>	<b>F</b>	<b>89.6</b>	*	*
Eastbound	F	81.4	F	136.8	F	325.6
Westbound	D	27.2	E	37.0	F	1005.0
Northbound	C	15.4	D	25.9	A	8.4
Southbound	C	21.1	F	104.2	A	7.6

\* Overall delay not reported for two-way stop-controlled intersections

**Table 11  
Filmore Ave at Marconi Dr Comparison- PM Peak**

Intersection/Approach	AM					
	Existing and FIL #3		FIL #1		FIL #2	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Filmore Ave at Marconi Dr</b>	<b>C</b>	<b>21.9</b>	<b>F</b>	<b>88.2</b>	*	*
Eastbound	D	25.0	E	36.4	F	2440.0
Westbound	C	22.5	D	31.1	F	5245.0
Northbound	C	23.1	F	173.5	A	8.2
Southbound	C	16.8	E	46.5	A	8.1

\* Overall delay not reported for two-way stop-controlled intersections

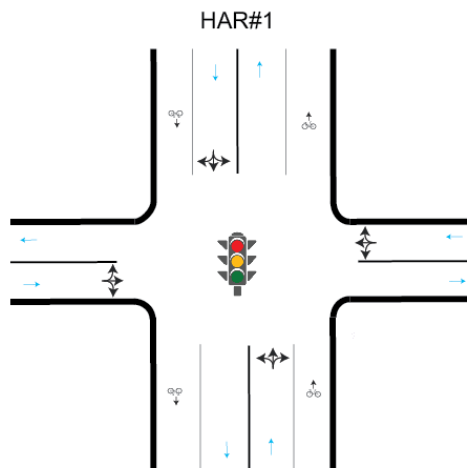
Based on this evaluation which focused on traffic operations, intersection improvement FIL#3 is recommended. This intersection improvement would allow dedicated northbound and southbound bike lanes while maintaining the two vehicular lanes on these approaches. The modifications would require the construction of additional pavement on both sides of Marconi Dr and provide a safety improvement for bicyclist by removing them from the intersection.

**Harrison Ave at Marconi Dr**

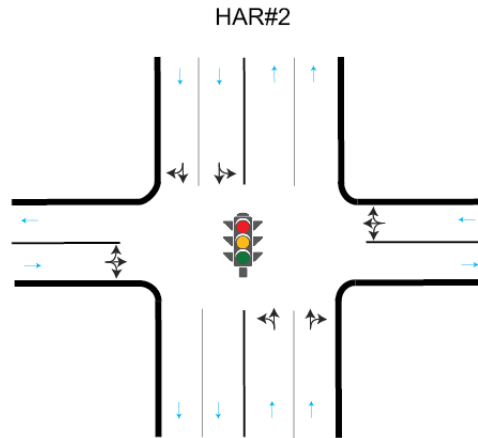
Harrison Ave at Marconi Dr is a four-way, signalized intersection with two lanes on the northbound and southbound approaches and one lane on the eastbound and westbound approaches. The outside travel lanes on the northbound and southbound approaches include shared bike lanes. A multi-use path runs parallel to Marconi Dr on the east side and north of Harrison Ave. Existing condition analysis indicates the intersection currently operates with an overall LOS F in the AM and LOS E in the PM indicating excess capacity may not be available for dedicated bike lanes.

The potential improvements considered for Harrison Ave at Marconi Dr (HAR) included the Magnolia Dr one-way northbound rerouted traffic and were as follows:

HAR #1- Dedicated bike lanes with northbound and southbound Marconi Dr reduced to a two-lane section and maintaining the existing signal timing and phasing. The analysis results for this alternative indicated failing operating conditions for the AM and PM peaks.



HAR #2- Dedicated bike lanes for northbound and southbound Marconi Dr with these approaches remaining two lanes. The dedicated bike lanes would be moved to outside of the existing travel lanes via new pavement. This intersection improvement includes changing the eastbound and westbound phasing from split phasing to concurrent phasing and changing the cycle length from 120 seconds to 90 seconds. The analysis results for this alternative indicated an LOS C in both the AM and PM peaks. It would require the construction of additional pavement on both sides of Marconi Dr.



Tables x and x presents capacity analysis for the potential intersection improvements compared to the existing analysis for the AM and PM peaks respectively.

**Table 12**  
**Harrison Ave at Marconi Dr Comparison- AM Peak**

Intersection/Approach	AM					
	Existing		HAR#1		HAR#2	
			Two-Lanes with Existing Signal Timing and Phasing		Four-Lanes with Improved Signal Timing and Phasing	
LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	
<b>Harrison Ave at Marconi Dr</b>	<b>F</b>	<b>81.6</b>	<b>F</b>	<b>249.2</b>	<b>C</b>	<b>25.5</b>
Eastbound	F	102.2	F	102.2	C	28.6
Westbound	D	45.5	D	46.7	B	18.7
Northbound	C	33.7	F	156.7	B	18.0
Southbound	F	98.8	F	473.8	C	28.8

**Table 13  
Harrison Ave at Marconi Dr Comparison- PM Peak**

Intersection/Approach	PM					
	Existing		HAR#1		HAR#2	
			Two-Lanes with Existing Signal Timing and Phasing		Four-Lanes with Improved Signal Timing and Phasing	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
<b>Harrison Ave at Marconi Dr</b>	<b>E</b>	<b>64.0</b>	<b>F</b>	<b>322.0</b>	<b>C</b>	<b>27.1</b>
Eastbound	F	111.4	F	127.2	C	33.9
Westbound	D	53.2	E	59.2	B	18.8
Northbound	D	41.1	F	662.1	C	23.5
Southbound	D	49.5	F	183.2	C	29.5

Based on this evaluation which focused on traffic operations, intersection improvement HAR#2 is recommended. This intersection improvement would allow dedicated northbound and southbound bike lanes while maintaining the two vehicular lanes on these approaches. The modifications would require the construction of additional pavement on both sides of Marconi Dr and provide a safety improvement for bicyclist by removing them from the intersection.

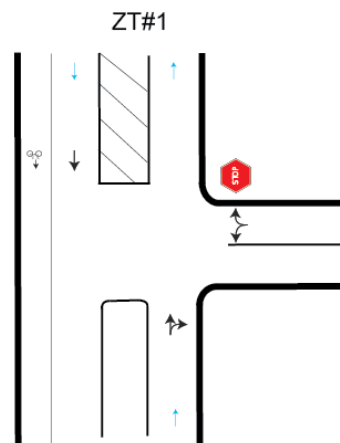
### **Zachary Taylor Dr at Marconi Dr**

Zachary Taylor Dr at Marconi Dr is a three-way, unsignalized intersection with stop control on Zachary Taylor Dr and it includes two lanes on the northbound and southbound approaches and one lane on the westbound approach. The outside travel lanes on the northbound and southbound approaches include shared bike lanes. Existing conditions analysis indicates the intersection currently operates with an overall LOS B in the AM and LOS C in the PM indicating excess capacity may be available for dedicated bike lanes.

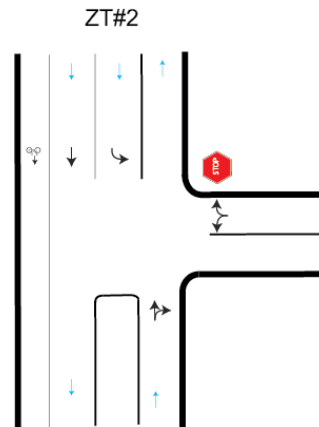


The potential improvements considered for Zachary Taylor Dr at Marconi Dr (ZT) included tying into bike paths currently under design by the City of New Orleans Department of Public Works. State project H.012371 Marconi Drive Rehabilitation is adding dedicated bike lanes on both sides of Marconi Dr from City Park Ave to Zachary Taylor Dr. The additional potential improvements were as follows:

ZT #1- Dedicated bike lanes with northbound and southbound Marconi Dr reduced to a two-lane section and maintaining the existing stop control. The northbound dedicated bike lane is located outside of the roadway and does not affect intersection operation. These bike lanes would connect to the planned bike lanes from state project H.012371. The analysis results for this alternative indicated LOS C in the AM and LOS E in the PM.



ZT #2- Dedicated bike lanes with northbound Marconi Dr reduced to a single-lane and southbound to include a through lane and a left turn lane while maintaining the existing stop control. These bike lanes would connect to the planned bike lanes from state project H.012371. The analysis results for this alternative indicated LOS C in the AM and LOS C in the PM.



Tables x and x presents capacity analysis for the potential intersection improvements compared to the existing analysis for the AM and PM peaks respectively.

**Table 14  
Zachary Taylor Dr at Marconi Dr Comparison- AM Peak**

Intersection/Approach	AM					
	Existing		ZT#1		ZT#2	
			Two Lane NB and SB		Two Lane with SB Left Turn Lane	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Zachary Taylor Dr at Marconi Dr	*	*	*	*	*	*
Westbound	B	14.1	C	20.8	C	15.2
Southbound	A	8.0	A	8.0	A	8.0

**Table 15  
Zachary Taylor Dr at Marconi Dr Comparison- PM Peak**

Intersection/Approach	PM					
	Existing		ZT#1		ZT#2	
			Two Lane NB and SB		Two Lane with SB Left Turn Lane	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Zachary Taylor Dr at Marconi Dr	*	*	*	*	*	*
Westbound	C	23.5	E	35.3	C	20.6
Southbound	A	9.2	A	9.2	A	9.2

Based on this evaluation which focused on traffic operations, intersection improvement ZAT#2 is recommended. This intersection improvement would allow dedicated northbound and southbound bike lanes, a southbound left turn lane and provide a safety improvement for both bicyclists and vehicles.

### **3.4 ROADWAY SEGMENT ALTERNATIVES**

Three preliminary schematic design alternatives were produced in an effort to address multiple options and all safety concerns, given the space that was available. Some of these options did not offer a valid result and were not furthered studied. The Schematics are:

#### **Schematic A**

This option included reduction of the vehicular traffic to two lanes, with a center left turn lane, and a two-way bicycle path located on one side of the roadway. Vertical separators could be installed between the bicycle path and the vehicle lanes. This option does produce some safety features inherent in the separation of the bicycle pathway, traffic calming, and the addition of a left turn lane. However, the study of the entire corridor indicates that this solution would be best implemented in the southern segment. Transitioning the vehicular traffic lanes toward the center of the roadway north of Harrison Blvd could be a problem, and the vertical separators could also present a problem in accessing the different parking lots along the corridor.

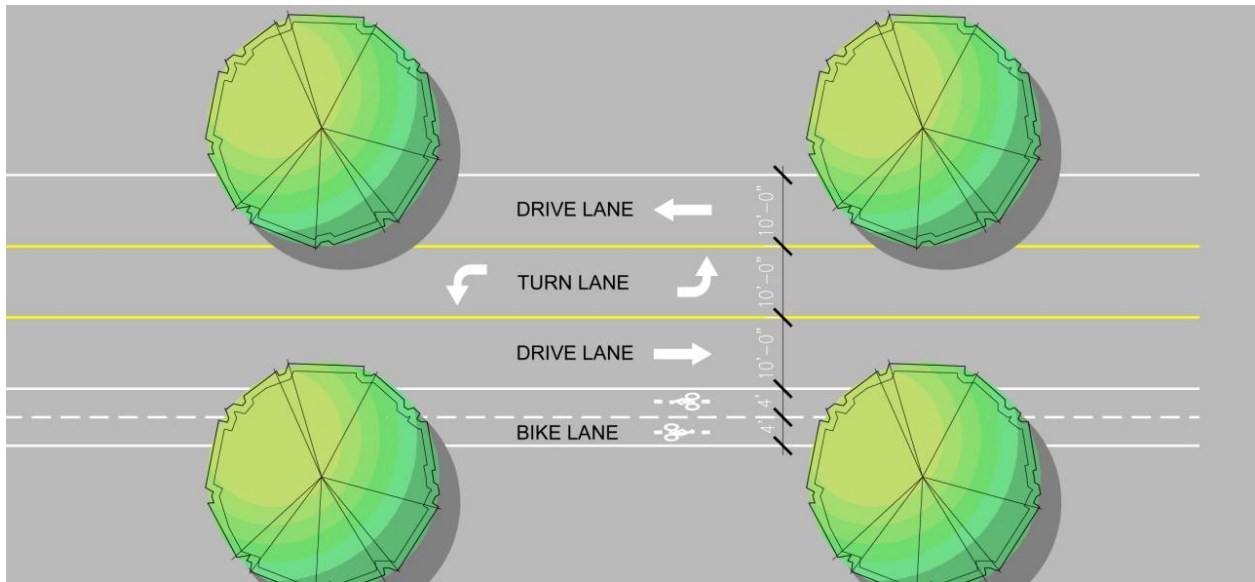


Figure 12 - Schematic A

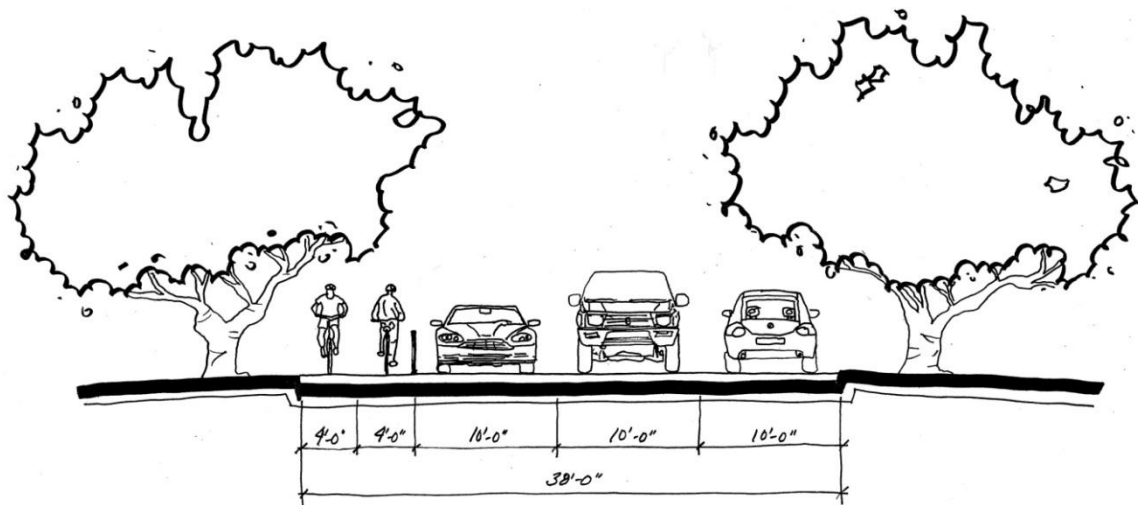


Figure 12.1 – Schematic A Plan View and Section

**Schematic B**

This option involves two vehicle traffic lanes, and a two way bicycle pathway separated from the vehicular lanes by a landscaped median. This scheme provides a good level of safety protection for the bicyclists, but the vehicular traffic is compromised more than is acceptable from a traffic analysis standpoint. Accessing parking lots to either side of the roadway becomes more difficult, as does negotiating left turns from and onto the

roadway. Furthermore, the cost of implementing this plan would be prohibitive due to the cost of cutting out a portion of the existing roadway paving.

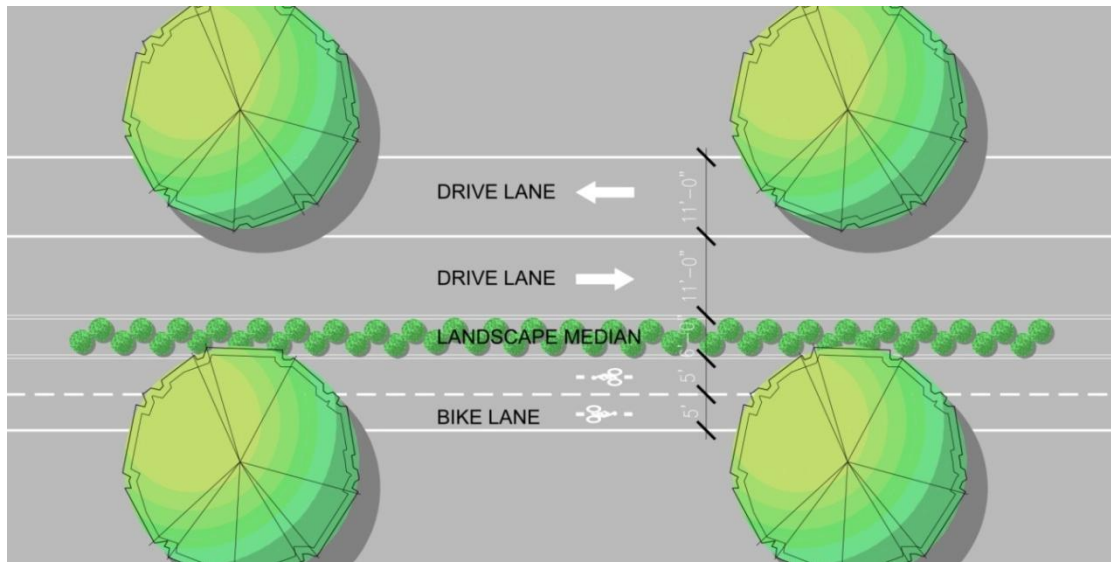


Figure 13 - Schematic B

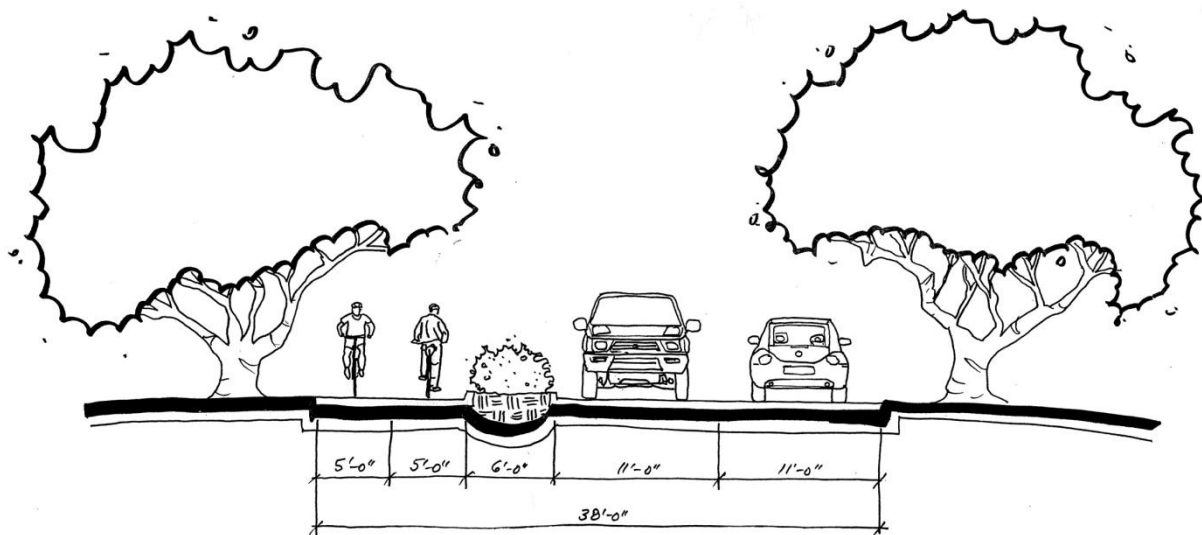


Figure 13.1– Schematic B Plan View and Section

**Schematic C**

This third option involves restriping only, and results in two through lanes for traffic, a center left turn lane, and a single bike lane on either outside edge of the roadway, travelling in the same direction as the vehicles. This option allows for traffic calming, increased safety for both motorists and bicyclists/pedestrians due to the center turn lane that offers two decision movements into and out of the roadway, and provides a bicycle lane without interrupting the traffic flow excessively. After reviewing the schematic design efforts and analyzing the traffic data, Schematic C was further developed into a more comprehensive design with different options for how to accomplish this layout. The following pages describe Option 1 and Option 2, which were some methods of applying Schematic C to the actual conditions of the corridor. Ultimately, the Preferred Alternative design was synthesized from this process, based on this Schematic C.

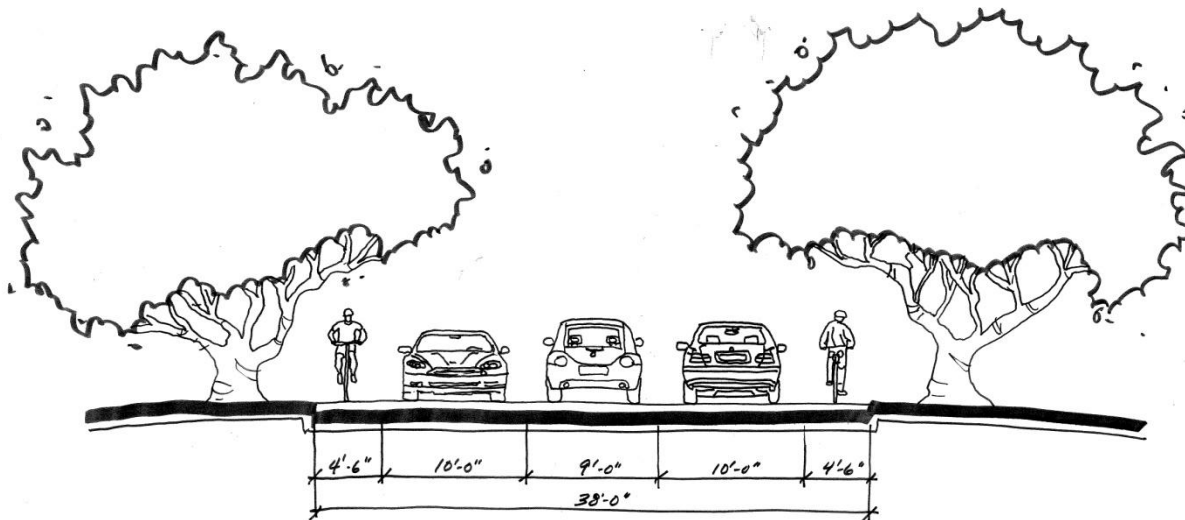
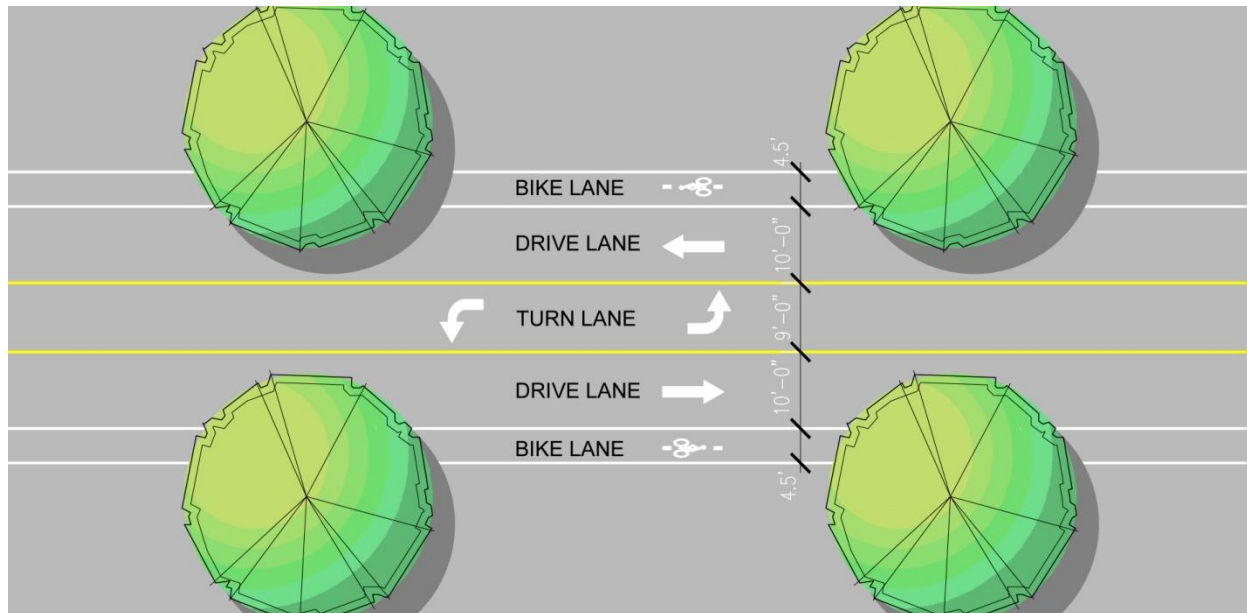


Figure 14 – Schematic C Plan View and Section

**OPTION 1**

This option was a result of trying to implement traffic calming measures along Marconi Drive while implementing complete streets efforts.

Northern Segment (Robert E. Lee to Filmore)

Starting at Robert E. Lee, this segment reduces the vehicle traffic to two lanes from four lanes and includes a central landscaped median and two bike lanes. The bike lanes merge back to sharing the vehicle lanes when approaching Filmore Drive and Robert E. Lee intersections so that the vehicles will maintain the existing 4 lane condition at each intersection. The traffic studies indicated that reducing the road to only two lanes at the intersections would result in a failing conditions for stopping and turning wait times, so it was recommended that the intersections retain four lanes on Marconi Drive. Criticism of this option included the additional cost it would take to install the central landscaped median in this area, making it infeasible. Also, the fact that the cyclists would have a dedicated lane for only a short period of time and then have to share the lane again at the intersections was seen as a safety hazard.

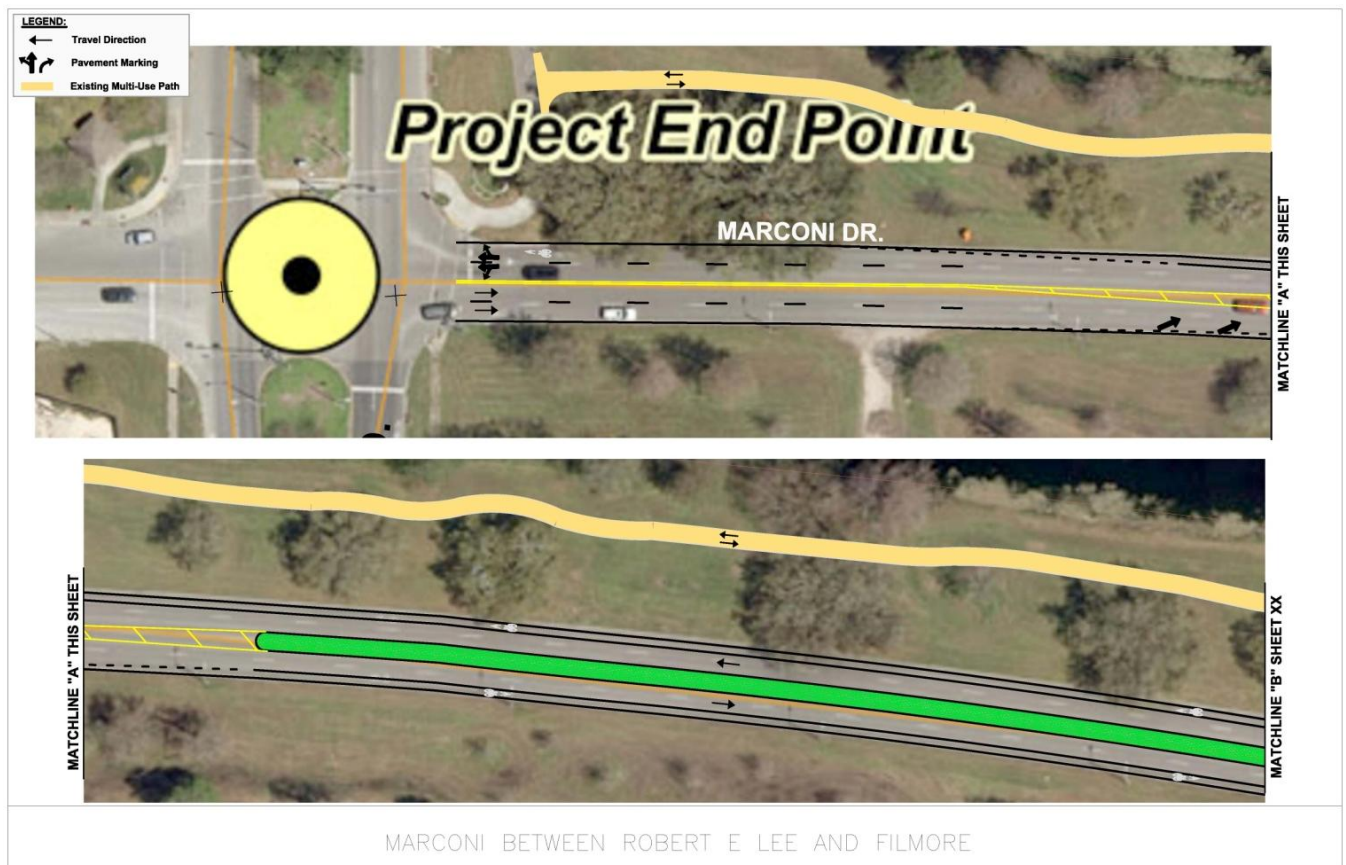


Figure 15 – Option 1 – Northern Segment – Illustrating potential median in center of roadway



### Middle Segment (Filmore Dr to Harrison Avenue)

From Filmore Drive, the vehicle traffic lanes merge down to two lanes again, allowing for a left turn lane in the center and two bike lanes on either side. It was noted that along this segment there is only one location for motorists to turn off, at the fishing pier. The resulting comments from the project management committee focused on there not being a need for a left turn lane on this segment because there was nowhere to turn off. Again, the two lanes expanded back into four lanes at the intersection of Harrison Avenue because the traffic analysis showed that the volume of traffic at that location warranted the need for four lanes. At the intersection, the bike lane became a shared lane with the vehicles.

### Southern Segment (Harrison Avenue to Zachary Taylor Drive)

From Harrison Avenue heading south, this segment reduces from four travel lanes to two travel lanes, one left turn lane and two bicycle lanes on either side of the road. The overall layout of this segment and its configuration was acceptable to most. The turn lane would allow vehicles to stack while waiting to turn into parking areas, alleviating pressure on travel lanes. This segment does not need to increase back to four lanes because there is an ongoing project south of I-610 being implemented by the City of New Orleans that reduced the lanes of Marconi to two lanes and incorporates bicycles lanes as well. This segment is design to seamlessly merge into these new sections. The option 1 drawings in the entirety are shown in the Appendix.



Figure 16 – Option 1 – Southern Segment – Illustrating left turn lane in center of roadway

## OPTION 2

In response to comments made on Option 1 layout, the project team developed a second Option.

### Northern Segment (Robert E. Lee to Filmore)

This segment again reduces vehicle traffic from four lanes down to two lanes. In response to the cost of the landscape median, the median has been removed and the travel lanes and bicycle path are larger. To address the safety concerns at the approaches to intersections, to avoid cyclists having to re-enter the vehicular traffic path, pavement was added on the western side of the road to keep the path separate from vehicles. On the eastern side of the road, the bike lane connects to the recreation path that already exists between the road and the bayou.



Figure 17 – Option 2 – Northern Segment – Illustrating additional paving for bikes at intersections

Middle Segment (Filmore Dr to Harrison Avenue)

Similar to the northern segment, the middle segment also has two traffic lanes and two separate bicycle lanes. At the intersection of Harrison and Marconi, the vehicle traffic lanes increase to four total and the bicycle lanes either join with the existing recreation path in the park or extend past the roadway on new paving.

Southern Segment (Harrison Avenue to Zachary Taylor Drive)

This segment hasn't changed from Option 1 except for the inclusion of additional pavement at the Harrison Avenue intersection, to allow for cyclists to maintain a

separate path of their own, and where the bike lane meets up with Zachary Taylor Drive.

Upon further review by members of the Project Management Committee at the Regional Planning Commission and City Park, the preferred alternative includes making significant realignment changes to only the southern segment. It was decided that the segment of the corridor from Robert E. Lee to Harrison Ave. was sufficient in its current condition, with two dedicated vehicle lanes in the center, and two shared vehicle/bicycle lanes on the outside edges of the corridor. More detailed discussion of the preferred alternative is in section 4 of this report.

### **3.5 PARKING ALTERNATIVES**

One of the most challenging aspects in regards to safety on this project is parking. The tennis courts have adequate parking, but the current parking arrangement at the recreation fields does not appear to meet demand. The soccer/rugby fields in the southern section attract parents and children on a daily basis during soccer season. There are cars parked in every available space and even in some areas that are not designated to be parking. Practices and games on weekdays and weekends mean that there is nonstop activity along Marconi Drive during these times. This includes pedestrians trying to cross the busy four lane roadway. Cars are parking on both sides of Marconi Drive because there are fields on both sides.

The current available parking includes two unimproved gravel lots on the western side of Marconi, one unimproved parking lot near the tennis courts, and two pull off parking areas directly off of Marconi Drive. While not designated parking areas, many people also park on both sides Magnolia Drive between the soccer fields and the Scout Island area. Others users are parking across the Orleans Canal near the public school, Hynes Charter School, and walking across the bridge to access the fields. The sidewalk that crosses this canal ends at the corner of Harrison Avenue and Marconi Drive, thus making it difficult for pedestrians to gain safe passage to their destination.

It would be ideal if users would park adjacent to the field on the side of Marconi Drive where they are planning to go. Unfortunately the available parking to do this does not exist or is being used inefficiently.

Some recommendations for improving the overall safety and functionality of the existing parking spaces are as follows:

- Physically and visually delineate parking lots and individual spaces. Lack of delineation leads to inefficient use of the parking lots, resulting in less parking than could be accommodated.
- Add concrete wheel stops held in place by steel reinforcing rods, example see figure below. This directs drivers to utilize specific size constraints not usually followed without adequate guidelines/direction, making parking more efficient which equals more spaces available.

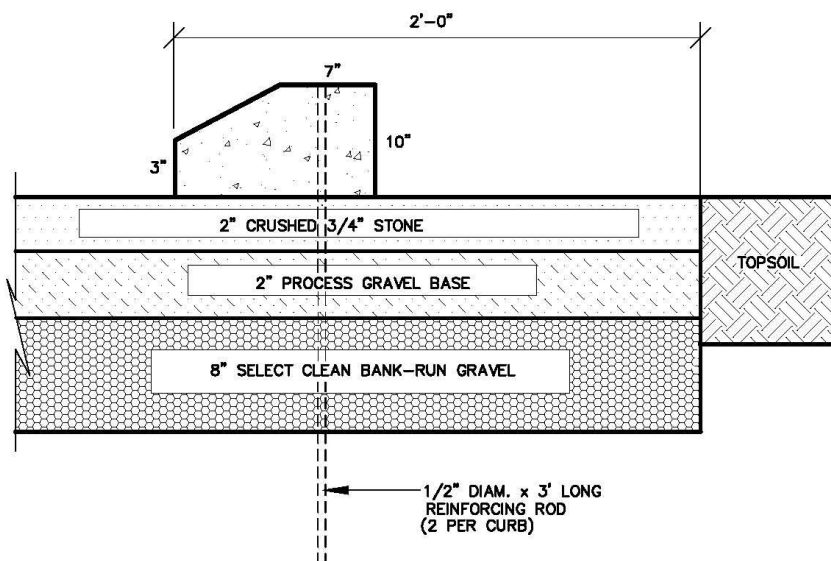


Figure 18 –Example detail of concrete wheel stop installed in gravel parking lot



Figure 19 –Southern Segment – Available/Proposed Parking

Another option for increasing parking safety is to add another parking lot to service the recreation fields. It is apparent that the demand for parking in this area is high and that the current situation is not servicing that demand. There is a space near the area that has been suggested by City Park officials as a potential for new parking lot. The space is designated in pink in the figure above. The potential future parking area is at the corner of Harrison Avenue and Magnolia Drive. This location could service not only the recreation fields during practices and games, but also service the nearby Scout Island during times it is being used.

#### 4. PREFERRED DESIGN ALTERNATIVE

As noted in the Concept Development section of this document, the Preferred Design Alternative that was ultimately chosen is to keep the current existing roadway conditions in the northern and middle segments, and to redesign the southern segment of the corridor. The crash analysis does not indicate a need for a design change north of Harrison since the shared lanes and multi-use path provide adequate cycling facilities. The following sub-sections describe the proposed restriping and parking improvements.

## 4.1 ROADWAY SEGMENTS

### Robert E. Lee to Harrison Avenue

The northern and middle segments, which include the entire area from Robert E. Lee to Harrison, will remain unchanged from the present layout. It was determined that this area functions in an acceptable way now, and with the off-street shared bicycle/pedestrian path in the park on the east side, there is a safe place for these users away from the roadway. The project scope for this area is thus recommended to be simply repainting the stripes to rejuvenate the roadway markings.

### Harrison Avenue to Zachary Taylor Drive

The southern section of the roadway will get a fully implemented re-striping design based on Schematic Design C, as presented in the concept development section of this report and shown again below. The vehicle travel lanes will be reduced to two 10' wide lanes, and a center 9' wide lane will be created for left turns. Two 4.5' wide bicycle lanes will be striped on the outside edges of the roadway. The four design plan sheets on the following pages show this entire part of the corridor, from Harrison Ave. to Zachary Taylor Drive.

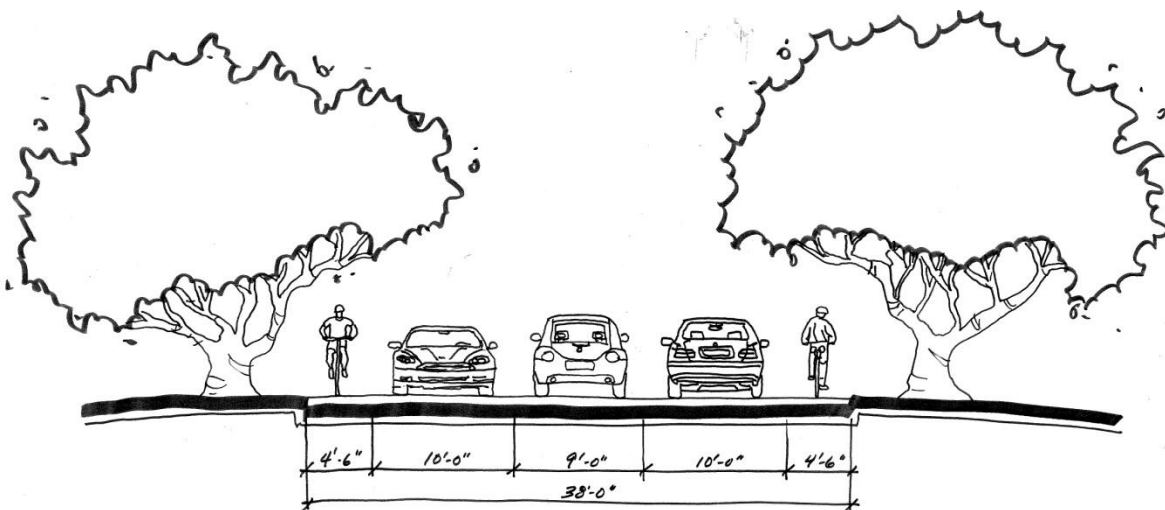


Figure 20 –Preferred Alternative Section between Harrison Avenue and Zachary Taylor Drive

Southern Segment - Sheet 1

Sheet 1 shows the area at the Harrison Ave. intersection, and south to the first soccer field parking lot. At the intersection, there will be 4 vehicle travel lanes, and the two outside lanes will be shared with bicycles. This is the same as the existing condition, which is necessary to maintain due to the left turn warrants. At a point 450 feet south of the intersection, a left turn lane in the center begins, and the vehicle through lanes are reduced to two lanes. This center lane is positioned to allow turns into and out of the northern-most soccer field parking lot. A new crosswalk will be striped at this soccer parking lot to allow people to cross between soccer fields in a designated location. Appropriate signage and adequate lighting shall be included in the design.

#### Southern Segment – Sheet 2

Sheet 2 shows a continuation of the same design layout. In this section, the center turn lane is present along the entire section, allowing vehicles to turn into the parking lot on the east side of the road as well.

#### Southern Segment – Sheet 3

Sheet 3 again shows a continuation of the center turn lane throughout this section, and the southern-most soccer parking lot on the west side is shown here in its unimproved condition. Also shown is the entrance to the City Park Tennis Center.

#### Southern Segment – Sheet 4

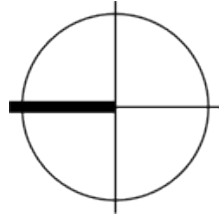
Sheet 4 shows the southern terminus of the area in the scope of work, at Zachary Taylor Drive. Here the center turn lane continues, providing a turn into Zachary Taylor Drive. The center turn lane will terminate at this point, with the center median beginning at the I-610 bridge immediately south of Zachary Taylor. The single vehicle travel lane on either side of the road continues to the south, as the City of New Orleans is in the process of redesigning the road in that configuration to allow for new bike lanes south to City Park Avenue. As part of that project, the City will design connections for both the vehicle and bicycle lanes.



# SOUTHERN SEGMENT - SHEET 1

**LEGEND:**

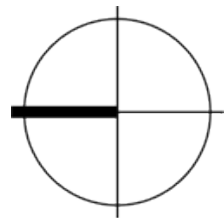
- ← Travel Direction
- ↔ Pavement Marking
- Existing Multi-Use Path



# SOUTHERN SEGMENT - SHEET 2

**LEGEND:**

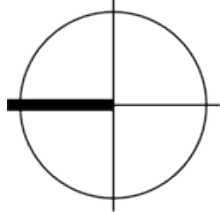
- ← Travel Direction
- ↕ Pavement Marking
- Existing Multi-Use Path



# SOUTHERN SEGMENT - SHEET 3

**LEGEND:**

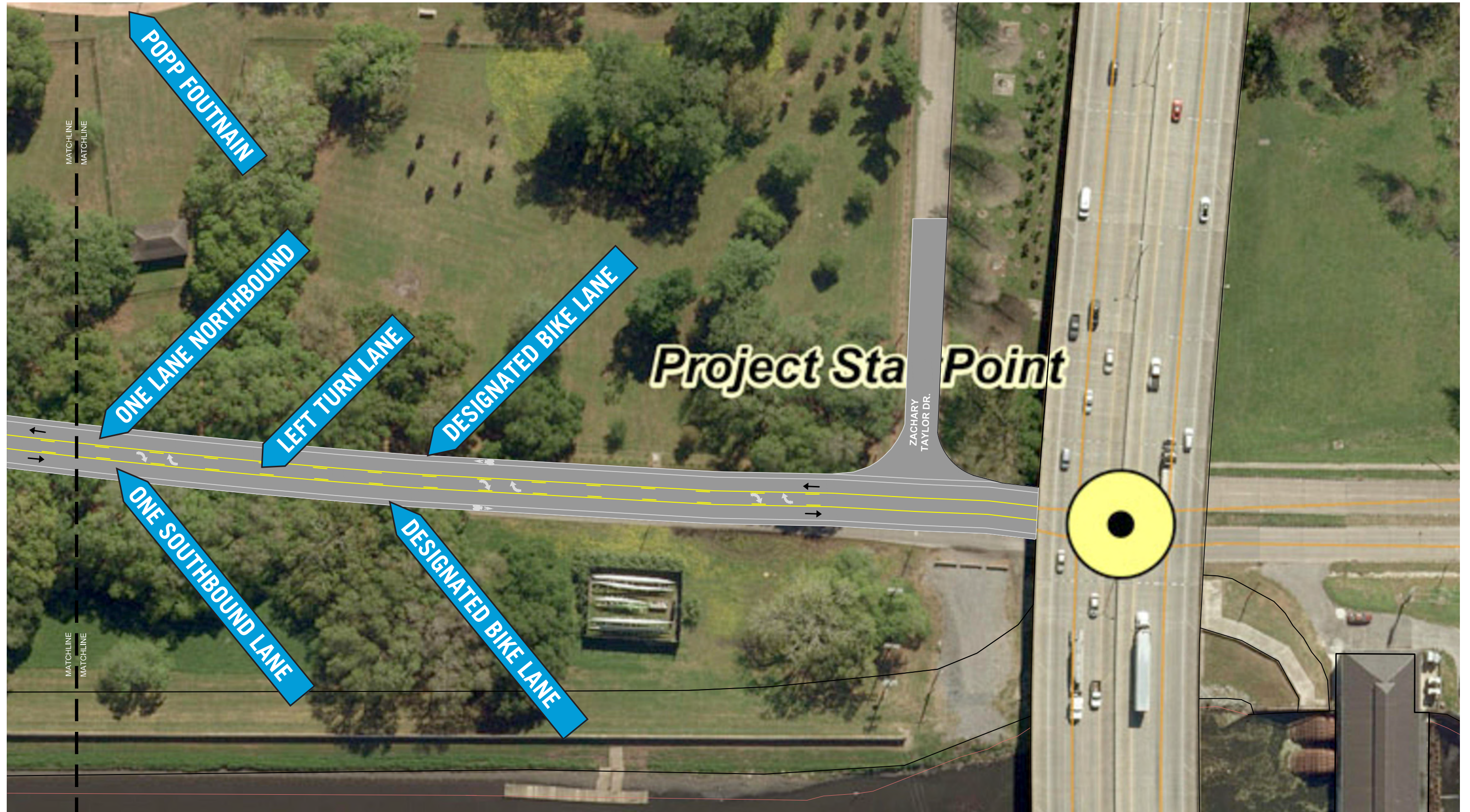
- ← Travel Direction
- ↶ ↷ Pavement Marking
- Existing Multi-Use Path



# SOUTHERN SEGMENT - SHEET 4

**LEGEND:**

- ← Travel Direction
- ↔ Pavement Marking
- Existing Multi-Use Path



## 4.2 INTERSECTIONS

### **Marconi Drive at Robert E. Lee Boulevard, Filmore Avenue, and Harrison Avenue**

As stated above, these three intersections will have striping repainted in the existing configuration. Based on the analyses that were conducted on the existing conditions, and the studies that were done for various options during the concept development stages of the project, the turn warrants determined that modifying these intersections would cause undue negative impact on the traffic flow in these areas, there is so much use demand on these streets.

### **Marconi Drive at Zachary Taylor Drive**

As noted in the text above regarding the preferred alternative, Sheet 4, this three-way intersection is modified by the addition of a center turn lane, and reduction of the vehicle travel lanes to 2 lanes. No other changes are warranted at this time. A stop sign on Zachary Taylor will still be the only traffic control device.

## 4.3 VEHICLE PARKING

Reconfiguration and improvement to parking areas along the southern segment of the corridor are an important component to improving safety of the roadway. Below is a list of recommendations for the various parking areas. Details of how to accomplish these recommendations, and the associated costs, will need to be determined through a specific design study, and is not included in the scope of this project.

### **Gravel lots on west side of Marconi Drive**

It is recommended that these two soccer parking lots be improved through measures previously described, to maximize parking efficiency. The lots could be paved and striped, or wheel stops could be added to control traffic flow within the lots. The lot on the southern side could also be expanded into the green space to the south of the existing parking area, which could as much as double the existing capacity of that lot. If the lots remain as gravel lots, a concrete apron with new curb should be constructed at the edge of Marconi Drive to allow vehicles to enter and exit smoothly, as the current condition causes vehicles to have to accelerate dangerously in order to exit the lots.

### **Parking along shoulder of Marconi Drive**

The project team, including members of the City Park administration, decided that the existing shoulder parking along Marconi Drive is dangerous, and is also causing damage to the nearby oak trees. Additional wood bollards should be added to the edge of the roadway to prevent vehicular access to the shoulders. Sheet 1 of the Preferred Alternative plan shows one such parking shoulder area, which will be eliminated.

### **Gravel lot on east side of Marconi Drive**

The gravel lot on the east side of Marconi Drive is subject to the same recommendations as those on the west side. This gravel lot also has space for expansion to add capacity.

### **Magnolia Drive parallel parking**

Magnolia Drive currently accommodates significant numbers of cars parked parallel along the shoulder of this road. Analysis of the space indicates that the parking could be reconfigured with angled parking if the road were designated as a one-way road. Minimal construction would be necessary to accomplish this. Of course, further improvements, including building additional paving on both sides for angled parking would also help the parking situation as funding allows.

### **New Parking lot at Harrison Ave and Magnolia Drive**

As noted on the parking plan in the Concept Development section of this document, a location has been identified at the intersection of these two streets, where overflow parking currently happens, and which would benefit from the construction of a completely new paved parking lot in the future. This report notes its approximate location and size, but does not include a design layout. This should be included in the scope of any future parking improvement study for the area.

#### **4.4 BICYCLE CONNECTIVITY**

In keeping with the decree by the City of New Orleans to try to design with complete streets in mind, the design team took a look at the city wide bicycle infrastructure. The “Current Bicycle Infrastructure” map dated May 21, 2018 only illustrates currently installed facilities. Of those included, the following types of bicycle amenities are shown: off street bicycle paths, protected bike lanes, neighborhood bikeways, bicycle lanes, and shared bicycle lanes. There are two types of bicycle facilities in the project site, the separated path along the bayou to the east of Marconi Drive and the shared use path on Marconi Drive.

We know based on current plans being presented to LADOTD that and The City of New Orleans is about to construct a bike lane on Marconi South of I-610 stretching to City Park Avenue which would allow our project area to connect to the rest of the cities bicycle system. This would provide safe passage for a cyclist to maneuver through the city unharmed.

The addition of the bike lanes on Marconi in the southern segment of this project would only further increase the safety of those traveling by bicycle in this area of the city.

The preferred alternative described in this report complies with the City of New Orleans Complete Streets policy by enhancing the safety of non-motorized travel on the corridor and improving non-motorized network connectivity. The proposed bike lanes, crosswalk, and parking improvements would increase safety for cyclists and pedestrians on and near the subject corridor. The improvements would also enhance bicycle network connectivity via linkages with other facilities, including the Harrison Avenue and Filmore Avenue bike lanes; Robert E. Lee Boulevard and Marconi Drive multi-use paths; and the bike lanes proposed on Marconi Drive south of I-610.

## **5. COST ESTIMATION**

The preferred alternative, which would consist of design fees, demolition of current conditions, re-alignment and re-striping was used to produce the following cost estimate for this project:



**Safety Study - Stage 0  
New Orleans, LA**

Stage 0 Feasibility Report  
Project Budget - Marconi Drive  
From Robert E. Lee to Zachary Taylor Drive

6/12/2018

<b>ESTIMATED SITE COST PROJECTIONS BASED ON MBA STREETScape PLAN (JUNE, 2018)</b>						
<b>ELEMENT</b>	<b>DESCRIPTION</b>	<b>QTY.</b>	<b>UNIT</b>	<b>UNIT COST</b>	<b>SUB TOTAL</b>	<b>TOTALS</b>
	<b>Demolition</b>					\$14,720
	General - Temp Signs and Barricades	1	LUMP	\$ 5,000.00	\$ 5,000.00	
	Removal of Existing Markings	1.62	LIN. Miles	\$ 6,000.00	\$ 9,720.00	
	<b>New Construction</b>					\$96,525
	Plastic Pavement Striping(Solid)	40,750	LF	\$ 1.50	\$ 61,125.00	
	Plastic Pavement Striping (Broken)	17,100	LF	\$ 0.50	\$ 8,550.00	
	Plastic Pavement Legends and Symbols	65	LUMP	\$ 300.00	\$ 19,500.00	
	Reflectorized Raised Pavement Markers	1,225	EA	\$ 6.00	\$ 7,350.00	
	<b>General Conditions - The contractor shall provide payment bonds, performance bonds, and standard insurance and liability coverage.</b>					\$9,150
	Builder's Risk Insurance	1	LS	\$ 1,100.00	\$ 1,100.00	
	Permits	1	LS	\$ 550.00	\$ 550.00	
	Testing and Inspection Service			N.I.C.		
	Mobilization	1	LS	\$ 7,500.00	\$ 7,500.00	
	<b>Associated Costs</b>					\$23,408
	Supervision	1	LS	\$ 6,000.00	\$ 6,000.00	
	Construction Layout	1	LS	\$ 15,000.00	\$ 15,000.00	
	Bond	1	LS	\$ 2,407.90	\$ 2,407.90	
	<b>Total Base Construction Cost Projection</b>					<b>\$143,803</b>
	Design Fee	1	LS	\$ 12,039.50	\$ 12,039.50	\$12,040
	<b>Overhead &amp; Profit</b>			25%		\$35,951
	<b>Total Base Bid Projection</b>					<b>\$191,793</b>

\*Cost Data includes materials and installation, and approximate contractor markups and taxes.

## **6. CONCLUSION**

Alternative options were developed for the Marconi Drive corridor and were presented to stakeholders. The designs took into consideration the objectives and constraints established in the initial meetings with the Regional Planning Commission (RPC), the City of New Orleans, New Orleans City Park, and the Louisiana Department of Transportation. Alternatives include a combination of the following design elements: re-alignment and restriping, landscape medians, left turn lanes, crosswalks and separate bike lanes on the road.

Based on feedback from the Project Management Committee and interested stakeholders the preferred design alternative included re-alignment and restriping of the segment between Harrison Avenue and Zachary Taylor Drive to increase safety and access for bicyclists and pedestrians. This restriping will include the addition of a left turn lane and two bicycle lanes on the roadway, one northbound and one southbound. The consultants have determined that the sections north of Harrison Avenue are providing safe passage for cyclists and pedestrians by means of a separate path along the eastern side of the roadway and the inclusion of the shared use bicycle lane indicated by striping on the roadway. The recommendations for the area north of Harrison Avenue to Robert E. Lee will include some restriping to define the existing shared bike lane and symbols on the road. It is also recommended that a separate study build upon and refine the potential parking improvements identified in this report.

The next steps in this project should be to acquire a designer to layout the specific striping and design to be bid out to a general contractor to install and complete the aforementioned work.

## **7. ENVIRONMENTAL CHECKLIST**

See following page for Environmental Checklist.

**STAGE 0  
Environmental Checklist**

Route Marconi Dr Parish: Orleans

C.S. \_\_\_\_\_ Begin Log mile 2.425 End Log mile 2.343

**ADJACENT LAND USE:** Recreational Park

**Any property owned by a Native American Tribe?**  
(Y or **N** or Unknown) If so, which Tribe? \_\_\_\_\_

**Any property enrolled into the Wetland Reserve Program?**  
(Y or **N** or Unknown) If so, give the location Repealed in 2014

**Are there any other known wetlands in the area?**  
(**Y** or N) If so, give the location Orleans Canal / Citypark Lakes

**Community Elements: Is the project impacting or adjacent to any** (if the answer is yes, list names and locations):

(Y or **N**) Cemeteries \_\_\_\_\_

(Y or **N**) Churches \_\_\_\_\_

(**Y** or N) Schools Hynes Charter School (located on Argonne Blvd and Harrison Ave 1200ft west of Marconi Dr

(Y or **N**) Public Facilities (i.e., fire station, library, etc.) \_\_\_\_\_

(Y or **N**) Community water well/supply \_\_\_\_\_

**Section 4(f) issue: Is the project impacting or adjacent to any** (if the answer is yes, list names and locations):

(**Y** or N) Public recreation areas Gernon brown Recreation Center, Matt Savoie Soccer Complex, Pepsi Tennis Courts

(**Y** or N) Public parks New Orleans City Park

(Y or **N**) Wildlife Refuges \_\_\_\_\_

(Y or N) Historic Sites \_\_\_\_\_

**Is the project impacting, or adjacent to, a property listed on the National Register of Historic Places?**  
(Y or **N**) **Is the project within a historic district or a national landmark district?** (Y or N) If the answer is yes to either question, list names and locations below:

**Do you know of any threatened or endangered species in the area?** (Y or **N**)  
If so, list species and location. \_\_\_\_\_

**Does the project impact or adjacent to a stream protected by the Louisiana Scenic Rivers Act?** (Y or **N**)  
If yes, name the stream. \_\_\_\_\_

**Are there any Significant Trees as defined by EDSM I.1.1.21 within proposed ROW?** (**Y** or N) If so, where? Marconi Dr between Zachary Taylor Dr and Harrison Ave

**What year was the existing bridge built?** N/A

**Are any waterways impacted by the project considered navigable?** (Y or **N**) If unknown, state so, list the waterways: \_\_\_\_\_

**Hazardous Material: Have you checked the following DEQ and EPA databases for potential problems?** (If the answer is yes, list names and locations.)

(Y or **N**) Leaking Underground Storage Tanks \_\_\_\_\_

(Y or **N**) CERCLIS \_\_\_\_\_

(Y or **N**) ERNS \_\_\_\_\_

(Y or **N**) Enforcement and Compliance History \_\_\_\_\_

**STAGE 0**  
**Environmental Checklist**

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**Underground Storage Tanks (UST): Are there any Gasoline Stations or other facilities that may have UST on or adjacent to the project? (Y or **N**)** \_\_\_\_\_

If so, give the name and location: \_\_\_\_\_

**Any chemical plants, refineries or landfills adjacent to the project? (Y or **N**) Any large manufacturing facilities adjacent to the project? (Y or **N**) Dry Cleaners? (Y or **N**)** If yes to any, give names and locations: \_\_\_\_\_

**Oil/Gas wells: Have you checked DNR database for registered oil and gas wells? (Y or **N**)** List the type and location of wells being impacted by the project. \_\_\_\_\_

**Are there any possible residential or commercial relocations/displacements? (Y or **N**)**  
How many? \_\_\_\_\_

**Do you know of any sensitive community or cultural issues related to the project? (Y or **N**)**  
If so, explain \_\_\_\_\_

**Is the project area population minority or low income? (Y or **N**)** \_\_\_\_\_

**What type of detour/closures could be used on the job?** Roadway closures, lane closures, shoulder closures \_\_\_\_\_

**Did you notice anything of environmental concern during your site/windshield survey of the area? If so, explain below.**

No

Jonathan Gambino  
**Point of Contact**

504-523-5511  
**Phone Number**

5-2-2018  
**Date**

# STAGE 0

## Environmental Checklist

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### General Explanation:

To adequately consider projects in Stage 0, some consideration must be given to the human and natural environment which will be impacted by the project. The Environmental Checklist was designed knowing that some environmental issues may surface later in the process. This checklist was designed to obtain basic information, which is readily accessible by reviewing public databases and by visiting the site. It is recognized that some information may be more accessible than other information. Some items on the checklist may be more important than others depending on the type of project. It is recommended that the individual completing the checklist do their best to answer the questions accurately. Feel free to comment or write any explanatory comments at the end of the checklist.

### The Databases:

To assist in gathering public information, the previous sheet includes web addresses for some of the databases that need to be consulted to complete the checklist. As of February 2011, these addresses were accurate.

Note that you will not have access to the location of any threatened or endangered (T&E) species. The web address lists only the threatened or endangered species in Louisiana by Parish. It will generally describe their habitat and other information. If you know of any species in the project area, please state so, but you will not be able to confirm it yourself. If you feel this may be an issue, please contact the Environmental Section. We have biologist on staff who can confirm the presence of a species.

### Why is this information important?

Land Use? Indicator of biological issues such as T&E species or wetlands.

Tribal Land Ownership? Tells us whether coordination with tribal nations will be required.

WRP properties? Farmland that is converted back into wetlands. The Federal government has a permanent easement which cannot be expropriated by the State. Program is operated through the Natural Resources Conservation Service (formerly the Soil Conservation Service).

Community Elements? DOTD would like to limit adverse impacts to communities. Also, public facilities may be costly to relocate.

Section 4(f) issues? USDOT agencies are required by law to avoid certain properties, unless a prudent or feasible alternative is not available.

Historic Properties? Tells us if we have a Section 106 issue on the project. (Section 106 of the National Historic Preservation Act) See <http://www.achp.gov/work106.html> for more details.

Scenic Streams? Scenic streams require a permit and may require restricted construction activities.

Significant Trees? Need coordination and can be important to community.

Age of Bridge? Section 106 may apply. Bridges over 50 years old are evaluated to determine if they are eligible for the National Register of Historic Places.

Navigability? If navigable, will require an assessment of present and future navigation needs and US Coast Guard permit.

Hazardous Material? Don't want to purchase property if contaminated. Also, a safety issue for construction workers if right-of-way is contaminated.

Oil and Gas Wells? Expensive if project hits a well.

Relocations? Important to community. Real Estate costs can be substantial depending on location of project. Can result in organized opposition to a project.

Sensitive Issues? Identification of sensitive issues early greatly assists project team in designing public involvement plan.

Minority/Low Income Populations? Executive Order requires Federal Agencies to identify and address disproportionately high and adverse human health and environmental effects on minority or low income populations. (Often referred to as Environmental Justice)

Detours? The detour route may have as many or more impacts. Should be looked at with project. May be unacceptable to the public.

## STAGE 0 Environmental Checklist

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Louisiana Governor's Office of Indian Affairs:

<http://www.indianaffairs.com/tribes.htm>

Louisiana Wetlands Reserve Program:

<http://www.nrcs.usda.gov/programs/wrp/states/la.html>

Community Water Well/Supply

<http://sonris.com/default.htm>

Louisiana Department of Wildlife and Fisheries – Wildlife Refuges

<http://www.wlf.louisiana.gov/refuges>

<http://www.fws.gov/refuges/profiles/ByState.cfm?state=LA>

<http://www.fws.gov/refuges/refugelocatomaps/Louisiana.html>

U.S. Fish & Wildlife Service – National Wetlands Inventory:

<http://www.fws.gov/wetlands/>

Louisiana State Historic Sites:

<http://www.crt.state.la.us/parks/ihistoricsiteslisting.aspx>

National Register of Historic Places (Louisiana):

<http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>

<http://www.nationalregisterofhistoricplaces.com/la/state.html>

National Historic Landmarks Program:

<http://www.nps.gov/history/nhl/>

Threatened and Endangered Species Databases:

<http://www.wlf.louisiana.gov/wildlife/louisiana-natural-heritage-program>

Louisiana Scenic Rivers:

<http://www.wlf.louisiana.gov/wildlife/scenic-rivers>

<http://media.wlf.state.la.us/experience/scenicrivers/louisiananaturalandscenicriversdescriptions/>

<http://www.legis.state.la.us/lss/lss.asp?doc=104995>

Significant Tree Policy (EDSM I.1.1.21)

<http://notes1/ppmemos.nsf>

(Live Oak, Red Oak, White Oak, Magnolia or Cypress, aesthetically important, 18" or greater in diameter at breast height and has form that separates it from surrounding or that which may be considered historic.)

CERCLIS (Superfund Sites):

<http://www.epa.gov/superfund/sites/cursites/>

[http://www.epa.gov/enviro/html/cerclis/cerclis\\_query.html](http://www.epa.gov/enviro/html/cerclis/cerclis_query.html)

ERNS - Emergency Response Notification System - Database of oil and hazardous substances spill reports: <http://www.epa.gov/region4/r4data/erns/index.htm>

Enforcement & Compliance History (ECHO)

<http://www.epa-echo.gov/echo/>

DEQ – Underground Storage Tank Program Information:

<http://www.deq.louisiana.gov/portal/tabid/2674/Default.aspx>

Leaking Underground Storage Tanks:

<http://www.deq.state.la.us/portal/tabid/79/Default.aspx>

**STAGE 0**  
**Environmental Checklist**

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**SONRIS – Oil and Gas Well Information & Water Well Information**  
<http://sonris.com/default.htm>

**Environmental Justice (minority & low income)**  
<http://www.fhwa.dot.gov/environment/ej2000.htm>

**Demographics**  
<http://www.census.gov/>

**FHWA’s Environmental Website**  
<http://www.fhwa.dot.gov/environment/index.htm>

Additional Databases Checked

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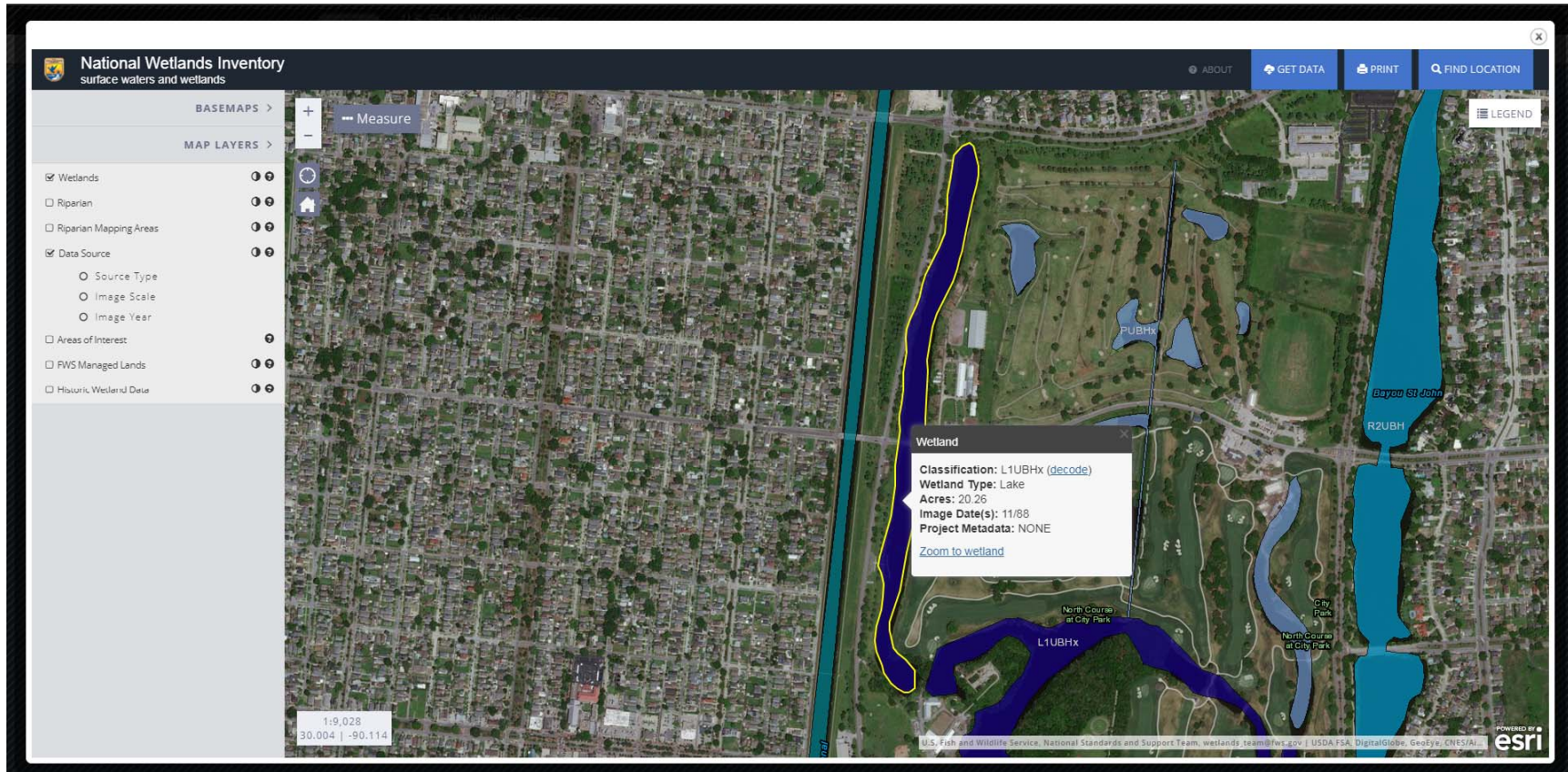
Other Comments:

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# STAGE 0 Environmental Checklist





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