N Lois Ave. Concept
Feasibility Memorandum

Prepared For
City of Tampa
By:

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1.0 Executive Summary

This technical memorandum prepared for the City of Tampa will serve to formalize a recommendation for bicycle and pedestrian improvements along N Lois Ave. from Kennedy Blvd. to Boy Scout Blvd. This study investigates the feasibility of several design alternatives and develops preliminary costs for each. The technical memorandum discusses the existing conditions, constraints, existing available mobility studies, describes the study methodology, and briefly discusses other factors affecting the decision-making process while recommending a preferred design alternative. The final recommendation considers compatibility with adjoining corridors, compliance with existing studies, public input, constructability, cost, ADA compliance, and safety.

1.1 Recommendation Summary

The recommended design alternative is to mill and resurface N Lois Ave. from Kennedy Blvd. to the pavement joint just south of Boy Scout Blvd. and reconstruct the eastern curb line for most of the corridor. This alternative will re-apportion the existing lanes and create a multi-use recreational trail along the east side of N Lois Ave. with the intent to extend the trail from Kennedy Blvd. for the full length of this project to Boy Scout Blvd. ADA Title II requirements state that ADA upgrades at curb ramps must be constructed when roadways are milled and resurfaced. As a result, the proposed design alternative also addresses the ADA deficiencies along the corridor's west side. Other selective improvements, including driveway reconstructions, drainage modifications, driveway closures, and targeted intersection improvements, will improve accessibility and safety for both vehicular and non-motorized users along the corridor.

This ten to twelve- foot wide multi-use recreational trail (MURT) will further increase mobility for various user types and provide safer connectivity to the planned pedestrian and safety improvements along W Spruce St., the I-275 trail, and other bicycle corridors such as Gray St. The existing six-foot-wide sidewalk north of the W Spruce St. intersection will be reconstructed as a multi-use trail to provide connectivity to bicycle and pedestrian facilities along Boy Scout Blvd.

In addition to the trail improvements along N Lois Ave., other areas of noted congestion with inherent safety issues will be addressed. A westbound right turn lane will be added to Cypress St. along with an extension of the existing westbound left turn lane. Turn lane lengths will also be extended for northbound, eastbound, and southbound left turns at Cypress St. This will be paired with timing improvements at Cypress St. ultimately improving the level of service and safety at the intersection.

The southbound and northbound left-turn lane queues for the I-275 ramps will also be maximized within the available space. The signal modifications at Cypress St. include new mast arms and upgraded pedestrian features. In addition, a six-foot sidewalk will be extended from the Cypress St. intersection at N Lois Ave. to the I-275 trailhead near the overpass at I-275. For these improvements, right-of-way acquisition will be necessary along Cypress St. for the extension of the left turn lane and the addition of the westbound right

turn lane. These modifications at the Spruce St. intersection will interface with the pedestrian improvements currently in design along the Spruce St. corridor. The total estimated cost of the recommended alternative is $3.79 million.

2.0 Description and Need for Study

This technical memorandum assesses the feasibility of potential design alternatives based on field conditions and available information. The City of Tampa has requested that Kimley-Horn develop a walk-bike concept along the N Lois Ave. corridor from Kennedy Blvd. to Boy Scout Blvd. The concept shows the proposed design alternative's connectivity to existing trails, bicycle corridors, and sidewalks while identifying specific ADA and drainage improvements necessary to complete this project. The proposed lane widths, sidewalks widths, and trail widths are shown on the concept to establish the proposed typical section's feasibility from a cost and right-of-way perspective.

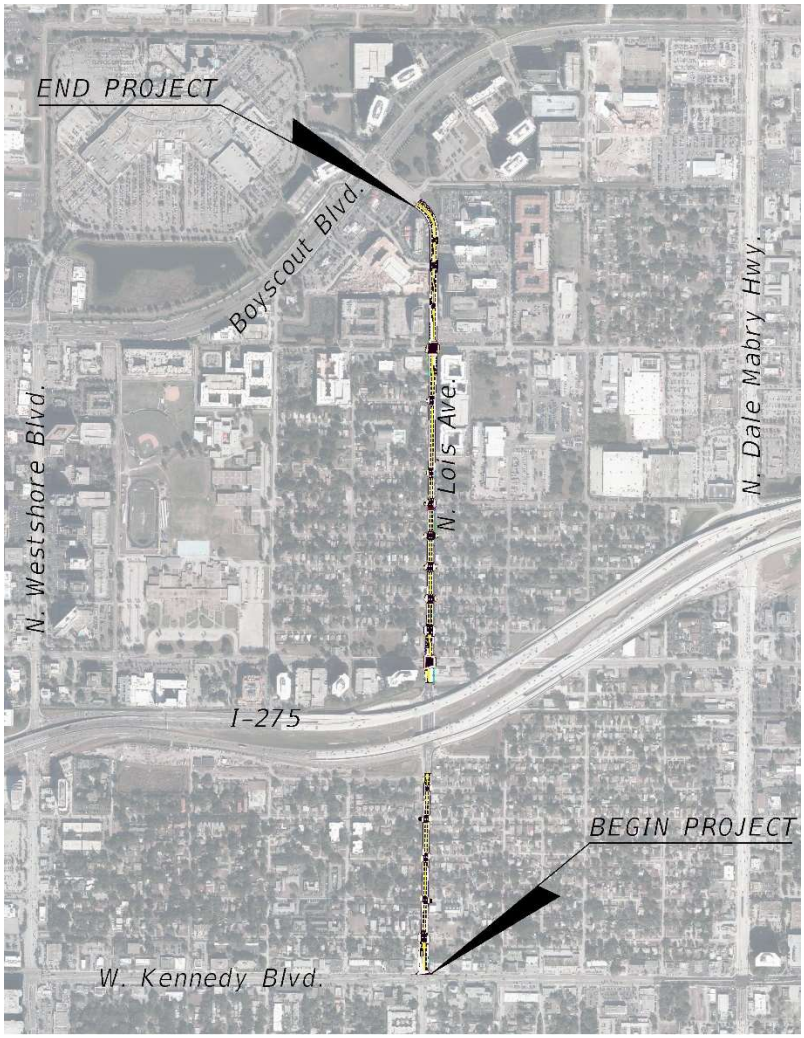
As a part of Phase I of the N Lois Ave. study, a public involvement effort was undertaken. During this process, the City and consulting team met with several key stakeholders, including the Westshore Alliance and members from the surrounding neighborhoods. As a result of these meetings, further input about the preference for the corridor was obtained. The Westshore Alliance has undertaken several studies within the recent past, including the Transportation Action Plan. This study outlines several improvements that will help to enhance the overall multi-modal connectivity throughout the Westshore District.

The information presented herein will help the City of Tampa staff select a bicycle and pedestrian-friendly design alternative for the N Lois Ave. corridor. An alternative assessment matrix is included in Appendix A. This helps identify the recommended alternative and assesses various impacts on critical design elements based on each alternative. The primary goal is to improve bicycle and pedestrian connectivity and safety along N Lois Ave. consistent with the community's needs and desires and major stakeholders. At the kickoff meeting, the City staff indicated that to meet the overall corridor needs some right-of-way acquisition may be necessary, specifically near the intersection of Cypress St. The study's initial layout will help further assess the specific right-of-way needs along the corridor and at the key intersections.

3.0 Description of Existing Facilities

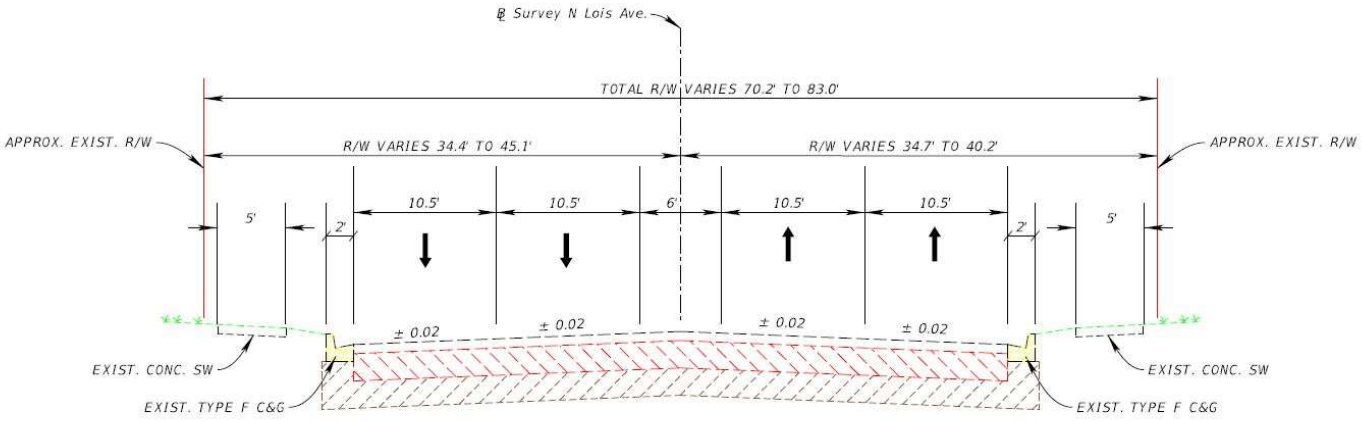
N Lois Ave. from Kennedy Blvd. to just north of the I-275 interchange is a north-south urban corridor functionally classified as an arterial. Further to the north of the I-275 interchange, the roadway functional classification changes to a collector as the road passes through residential and light commercial zoning.

Figure 1: Project Location Map



N Lois Ave. from W Kennedy Blvd. to W Boy Scout Blvd. is a four-lane facility with varying median widths and treatments. Near N Lois Ave. at the I-275 interchange, there is a raised median with landscaping treatments. The existing posted speed along the corridor is 40 mph from Kennedy Blvd. to I-275 and 35 mph north of the I-275 interchange to Boy Scout Blvd. North of W Spruce St. there is also a raised median, which varies in width from four feet to 20 feet. However, for most of the corridor north of I-275, there is a striped median approximately six feet in width, which currently serves as a make-shift turn lane for residents making left turns into the residential neighborhoods. South of I-275, there are four 12-foot lanes. There are currently five-foot-wide sidewalks on both sides of the road; however, there are numerous ADA compliancy issues and no bicycle facilities present.

Figure 2: Existing Typical Section North of I-275



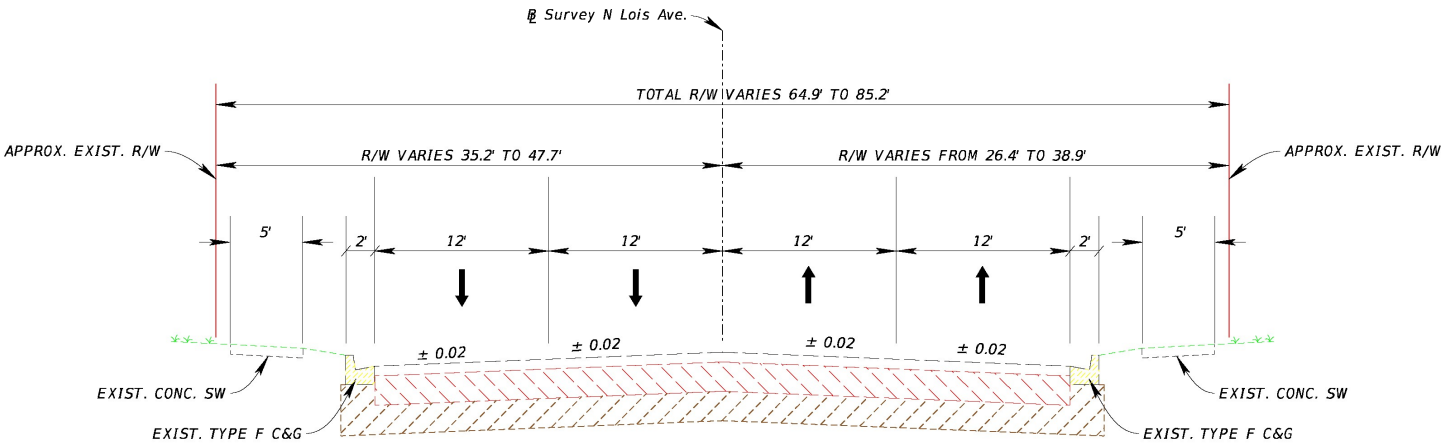
TYPICAL SECTION W. CYPRESS ST. TO W SPRUCE ST.

Adjacent land uses vary along the corridor, with active development underway. Currently, office professional land use exists at the northern limits of this project near Boy Scout Blvd. These developments consist of restaurants and hotels. Further south, the corridor turns to residential multi-family and single-family land uses. As the Westshore area continues to see further redevelopment into mid-rise residential and light commercial zoning uses, we anticipate the overall volumes and trips along the corridor to increase. We expect this to result in moderate traffic growth along the northern portion of this project corridor. Near I-275, a block of commercial general parcels exists with developments ranging from office buildings to gas stations. South of I-275, additional single-family is mixed with residential multi-family and commercial general uses.

Existing right-of-way varies along the corridor within the project's limits from 68 feet to over 90 feet in width. Right-of-way acquisition has been completed over the years on a project by project basis to accommodate safety improvements and signalization upgrades and modifications. Right-of-way information obtained for this report is based on the best available information. No survey has been performed as a part of this study. GIS line work, confirmed at some locations with City of Tampa right-of-way maps, form the right-of-way line work. Aerial photography coordinated with the GIS line work suggests that the existing sidewalk is within the right-of-way for the majority of the N Lois Ave. corridor.

Drainage will be accomplished through an existing urban closed drainage system. The corridor cuts through several drainage basins—the northernmost drainage basin outfalls into Fish Creek, which ultimately drains into Tampa Bay. A second outfall is located just north of I-275, which also outfalls into Tampa Bay near Cypress Point Park. Utilities present along the corridor include Frontier Communications, MCI, Tampa Electric Company, and the City of Tampa water and sewer.

Figure 3: Existing Typical Section South of I-275



TYPICAL SECTION W. KENNEDY BLVD. TO W CARMEN ST.

Currently, N Lois Ave. corridor sees significantly more pedestrian traffic than bicycle traffic. This is likely a combination of the lack of bicycle facilities and the adjacent residential single and multi-family land uses. Several drivers of pedestrian traffic exist in the area, including Roland Park Elementary and Middle School, as well as Jefferson High School. Field observed pedestrian travel patterns include crossing N Lois Ave. near Cypress St. and Laurel St. to travel to these two schools. Gray St. also sees a significant amount of crossing traffic, likely driven by the Westshore Plaza to the west of N Lois Ave. Other patterns observed in the field include crossing Lois to access transit facilities. There is currently a mid-block crossing present just south of W Laurel St. which has outdated flashing beacon assemblies. Pedestrian traffic in the area is notable but exists primarily near transit stops or pedestrian drivers such as restaurants and gas stations. Field observation confirms that this corridor is not currently used as a primary thoroughfare for bikes and pedestrians. It is anticipated that upon the completion of bicycle-pedestrian facilities, that these numbers will rise.

Transit services are currently operating along portions of N Lois Ave. Route 45 travels along N Lois Ave. from W Spruce St. to Cypress St. Other routes extend south on Lois Ave. but are outside the limits of this project. The corridor has one transit shelter just south of W Spruce St. that may be impacted by the construction of the trail option.

4.0 Description of Existing Studies

There are several available existing studies for the Westshore District or larger regions encompassing the Westshore area, which outline proposed mobility and bike-ped strategies and connectivity. Most notably, the Westshore Transportation Action Plan. The Hillsborough MPO-2016 Greenways and Trails Master Plan Update outlines existing and proposed trail and bicycle- pedestrian facilities within Hillsborough County and identifies regional connectivity beyond the County limits.

The City of Tampa adopted the Imagine 2040 Comprehensive Plan in 2016. In this document, the City outlined growth strategies for the City's three core business centers, including the Westshore District.

Mobility plays a significant role in the City's comprehensive plan. Consequently, the City has identified specific mobility goals within the framework of the overall comprehensive plan. The City's first primary mobility goal is to "provide a multimodal transportation system adequate to support the city's growth strategy through the coordination of land development review with existing and planned transportation investments and adopted level of service standards." Under the Imagine 2040 plan, the mobility policy MBY 1.3.6 states, "identify and document specific bicycle and pedestrian links as identified in the Tampa Walk Bike Plans and the Tampa Greenways and Trails Master Plan needs (or other approved pedestrian/bicycle plan) and capital costs necessary to provide area-wide connectivity within designated Urban Redevelopment districts." Furthermore, the second primary mobility goal states, "provide a safe, accessible, and efficient walk/bike network to facilitate walking and bicycling trips within and between neighborhoods, and village employment centers."

The City's Walk-Bike Plan consists of five phases, with the most recent completed in 2016. In 2011, the first phase of this study identified N Lois Ave. as a high priority Walk-Bike project. Specific improvements identified include bike lane markings or shared lane arrows and a side path from Spruce St. to Boy Scout Blvd. This document establishes N Lois Ave. as one of four primary North-South bike-ped corridors establishing a grid network within the Westshore District.

Hillsborough County MPO completed the Greenways and Trails Master Plan Update in 2016. This study identified portions of N Lois Ave. as a conceptual trail with pedestrian connectivity links, including at Spruce St. and Cypress St.

In 2013 the University of South Florida completed the Westshore District Public Realm Master Plan in conjunction with the Westshore Alliance Board of Directors, the Westshore Alliance Master Plan Committee, The City of Tampa, and the Tampa Bay Regional Planning Council. N Lois Ave. was one of six corridors of need identified to transform into a livable Boulevard. The proposed public realm enhancements identified included some "Complete Streets" concepts including widened 10-foot sidewalks, painted bike lanes, living wall privacy screens, and shade trees. Other improvements identified included shade structures for transit stops and lowered speed limits. The planning intent is clear that bicycle and pedestrian links are critical to the long-term growth and mobility goals developed for the Westshore area.

5.0 Methodology

This decision-making process for this corridor considers several factors, including existing standards, previous studies, right-of-way, drainage, ADA, safety, public input, engineering judgement, construction cost, and available budgets. N Lois Ave. has been identified in several studies as a north-south corridor within the Westshore District that should include upgraded pedestrian features and bicycle facilities. This corridor is a good candidate because there is an existing striped median north of I-275. This can be used to accommodate the required space to adjust the curb line for a multi-use trail or additional bike lanes without reconstruction or significant right-of-way acquisition.

To better organize the factors that influence the decision-making process, an alternative assessment matrix has been created that compares four different options, establishes specific criteria for each, and helps to identify a recommended alternative to accomplish the City's goals. The right-of-way acquisition assessment was based on GIS line work and existing right-of-way maps provided by the City of Tampa staff. These lines are a "best available information" assessment and do not reflect a certified right-of-

way map. Some of the recommended improvements will require right-of-way acquisition near intersections for implementation. Still, the overall intent is to avoid right-of-way acquisition for the full length of this project. In some cases, a license agreement or sidewalk easements may be required to complete the work where the existing sidewalk is outside the right-of-way.

Some utility relocations may also be necessary based on the selected alternative. There are gravity sewer laterals that cross N Lois Ave. along much of the corridor. In addition, two eight-inch gravity sewer trunk lines are present along N Lois Ave. but only for a small segment of the corridor. Some of the alternatives being considered may have drainage impacts that could affect the gravity sewer or other underground utilities. The multi-use trail along the east or west sides would require relocation or modification of overhead electric facilities for some locations along the corridor. Existing utilities and roadway signage may require easements to be secured outside of the existing right-of-way to ensure proper offset from the trail. In addition, mailboxes along portions of N Lois Ave. will need to be relocated to the right-of-way line of the adjacent property.

The existing adjacent portions of Lois Ave. south of Kennedy Blvd. and the recently constructed portion associated with the I-275 interchange improvements do not have on-street bicycle facilities. However, the interchange has a separate, newly constructed multi-use recreational trail. Adding bicycle lanes to the roadway will not be consistent with the adjoining segments of N Lois Ave. However, to meet the City's outlined and stated goals, both bicycle lanes and multi-use trails are being considered. The proposed N Lois Ave. improvements will accomplish the City's stated goals by further expanding bicycle and pedestrian mobility within the Westshore District. The environmental impacts along this corridor will be minimal. There are several significant trees along the corridor within the right-of-way. While we do not anticipate significant impacts to trees, root trimming may be required near new segments of sidewalks to avoid damage to the newly placed sidewalk.

Crash data from 2015-2019 was reviewed for the N Lois Ave. corridor from Kennedy Blvd. to Boy Scout Blvd. for consistent crash types and potential problem areas. It is typical for a higher crash rate to be present at intersections with higher numbers of conflict points and larger traffic volumes. The N Lois Ave. corridor experiences higher crash rates at intersection locations as expected, with higher crash rates present at Kennedy Blvd., the I-275 interchange, W Spruce St., W Cypress St. and Boy Scout Blvd. A review of the crash data confirmed that front to rear and sideswipe crashes are present at the Cypress St. intersection. Substandard queues can often result in this type of crash given that vehicles need to stop short on approach to the intersection to enter into the turn lanes that overflow into the through lanes. There were four crashes over the five years out of 199 along the corridor that involved bicyclists, and zero crashes involving pedestrians. Of those four crashes, there were three injury crashes and one fatality. Notably, this was the only traffic fatality during these five years.

The City of Tampa's Walk-Bike plan phase I technical memo and the Westshore Alliance Transportation Action Plan outlined Gray St. as a potential bicycle sleeve with installed shared lane arrows as an improvement. In addition, the reports recommended a mid-block pedestrian crossing location at Gray St. We recommend including this improvement at this location but do not recommend two crosswalks here as outlined in the Transportation Action Plan. A single crossing point will provide fewer conflict points and uncertainty from the driver perspective at this crossing location. This will further increase pedestrian safety at this intersection and work in concert with the proposed mid-block lane marking to facilitate better bike-ped movements across N Lois Ave.

The alternatives analysis considered the corridor's consistency with already completed planning elements for the Westshore area including the Westshore Transportation Action Plan, City of Tampa 2040 Comprehensive Plan, the City of Tampa Walk-Bike Plan, and the Tampa Greenways and Trails Plan, among others. Design alternative consistency with these studies is outlined in the Alternatives Assessment Matrix (See Appendix A). Permitting may be required for the final buildout of this project. Based on the widening required at the intersections and the potential for modifications to the drainage system, these activities will likely require permitting through the water management district. To help with the overall decision-making process a "Pro and Cons" list was developed to further outline each alternative's implications. This can be found in Appendix A, along with the alternative assessment matrix.

6.0 Other Considerations

In addition to assessing the potential typical section alternatives to determine the appropriate solution to better accommodate bicyclists and pedestrians along the corridor, this study also looked at traffic at key locations within the corridor that have been historically problematic. The locations assessed include Spruce St. at N Lois Ave., Cypress St. at N Lois Ave., and the I-275 interchange with N Lois Ave. Traffic counts were taken at the Cypress St. and Spruce St. intersections to better understand the traffic demands and patterns contributing to congestion and crash patterns. The traffic analysis's secondary goal was to determine if a lane elimination along the corridor north of the Cypress St. intersection is appropriate. Upon performing this analysis, the lane elimination option was not feasible and resulted in an unacceptable level of service along N Lois Ave.

Given the future improvements along Spruce St. to accommodate pedestrians, a roundabout feasibility analysis was performed at the Spruce St. intersection. Roundabouts provide considerable benefit to pedestrians and bicyclists by reduce the speed of vehicles at those conflict points and reducing the overall number of conflict points. A SIDRA analysis at the proposed roundabout location showed poor level of service at Spruce St. under a single lane scenario as well. As this alternative is detrimental to the corridor's overall goals, a roundabout alternative was not moved forward. For the full details of the traffic analysis, please see Appendix C.

The improvements identified along W Spruce St. will intersect this project and were discussed at the kickoff meeting. The primary goal of the off-street MURT would be to provide connectivity between the recently constructed MURT near the I-275 interchange and the improvements along W Spruce St. and up to Boy Scout Blvd. While a MURT would require relocating the curb line for most of the corridor, north of Spruce St., there is adequate room without significantly impacting the current roadway configuration.

It is not practical to suggest that all streets at all locations within the City of Tampa should have bicycle facilities. However, identifying specific corridors and retrofitting them with pedestrian and bicycle facilities can be an effective way to encourage multi-modal travel and increase safety for all users. This is particularly beneficial when improvements connect other existing facilities. In this case, connecting the I-275 trail with the planned improvements along Spruce St. will benefit cyclists and less skilled recreational users alike.

Cyclists, in particular, can come in a range of skill levels. Advanced riders will often travel a corridor at higher speeds and often prefer on-street bike lanes as they present fewer obstacles and allow for higher

speeds. Meanwhile, other less skilled users also need to be considered. Families with young riders or other slower users of bike facilities may prefer the safety and separation of a multi-use recreational trail. Ideally, a facility that can accommodate all levels of users is preferred. However, the City must construct and prioritize improvements based on their feasibility, cost, and consistency with planning efforts. Public input is also valuable from the community by providing first-hand user input.

Several of the identified studies that looked at alternatives and long-range planning for the area identified significant modifications to the corridor that would require additional right-of-way and an expansion of the roadway typical. The cost of the improvements requiring right-of-way along the length of N Lois Ave. would require purchasing many properties and potentially impact homes requiring full parcel purchase and would be prohibitively expensive. Those options are not considered within the context of this report. The options considered will maintain the proposed typical section within the existing right-of-way, with the exception of limited improvements proposed at key intersections.

This project presents an opportunity to update and revitalize the corridor while meeting the multi-modal goals and providing much-needed connectivity. As the typical section for this corridor changes, it will likely encourage a higher level of use from bicycle and pedestrian users. If no other upgrades are introduced, there is a possibility that crash rates for bicyclists and pedestrian users could increase. Consequently, intersection lighting and signing and marking upgrades have been included in the recommended alternative. While a cost-benefit analysis was not within the scope of this work, typical costs for these types of improvements are low and often are associated with a tangible reduction in crash rates.

Similarly, landscaping improvements can be used to revitalize and change the look of a corridor. While there are limited opportunities to complete landscaping, it is possible at selective locations along the corridor. We recommend including limited landscaping where feasible with this project.

7.0 Alternative Assessment Matrix

An alternative assessment matrix has been prepared to analyze impacts, needs, and consistency with Westshore area planning elements. This matrix can be found in Appendix A. These options analyzed include: Option 1, No Build; Option 2, Four Foot Bike Lanes Only; Option 3, Four Foot Bike Lanes and an Eight Foot Multi-Use Recreational Trail on the East Side; and Option 4, Twelve Foot Multi-Use Recreational Trail Only on East Side.

8.0 Preliminary Cost Estimates

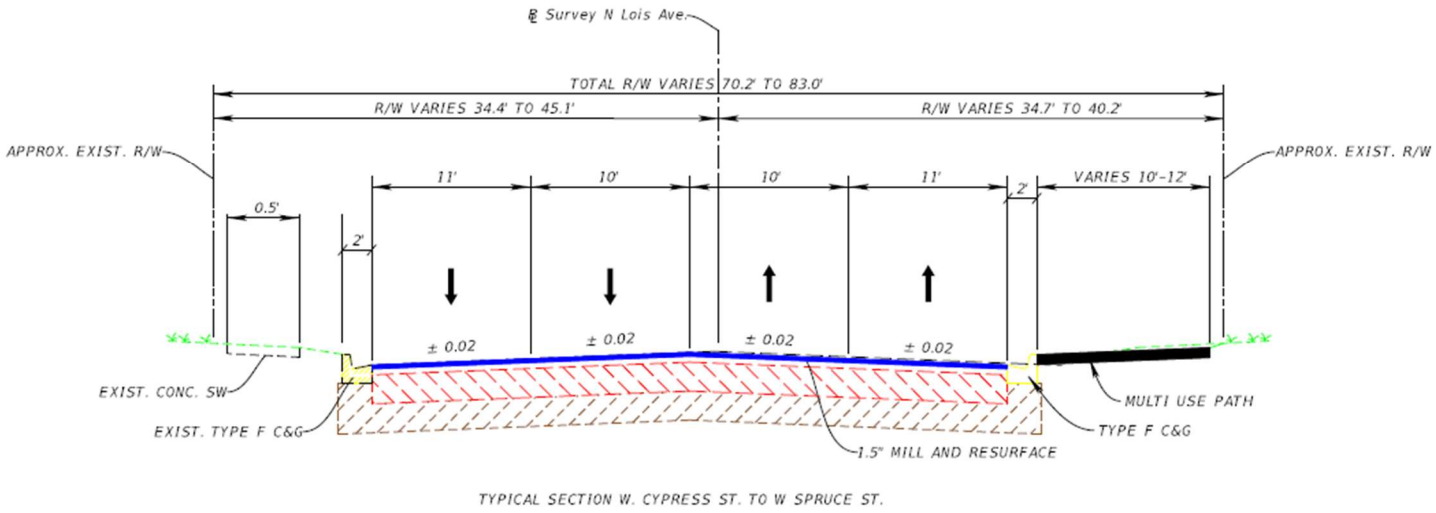
Preliminary cost estimates have been prepared for each option and can be found in Appendix B.

9.0 Recommendations

It is recommended to implement Option 4 to re-apportion the existing lanes add a ten to twelve-foot multi-use recreational trail along the full length of Lois Ave. Additional improvements including left turn extensions both eastbound and westbound along Cypress St. and southbound along N Lois Ave. at Cypress St. are recommended. Spruce St. turn lane improvements will help to alleviate congestion along the corridor further. This trail option provides vastly improved accessibility for pedestrians and cyclists, promotes connectivity to existing and planned bicycle and pedestrian features, and accommodates all riders' skill levels. Furthermore, this option is in line with input received from community stakeholders.

The existing pavement condition along the corridor is fair. Consequently, due to the City's planning efforts and early identification, this project's implementation could be delayed until resurfacing is needed. Alternatively, it could be implemented now at a low cost utilizing shallow milling and resurfacing. Title II of the ADA regulations requires non-compliant curb ramps to be reconstructed to meet ADA requirements when roads are altered through resurfacing. Given the shift of the curb line, the City may should also consider variable depth milling and crown correction measures to relocate the roadway's crown given the adjustment of the lane locations.

Figure 4: Proposed Typical Section N Lois Ave.



In addition, to maintain consistency with visioning documents in the area, we recommend a limited application of street trees and selective landscaping to beautify the corridor. Gateway landscape areas exist within the existing median just south of Boy Scout Blvd. and near I-275. If coupled with selective tree placement and sidewalk improvements, this could drastically improve the look and feel of the corridor. However, challenges will exist for street tree placement along the roadside due to the limited space between the sidewalk and the back of curb. Along most of the corridor, this space varies between two and three feet. Typical placement of street trees would require at least 4 feet in this application. It is not recommended to place street trees within the multi-use recreational trail as they can pose a significant hazard to bicyclists. However, along the corridor's westside, there may be limited opportunities to place some trees.

Along with the pedestrian and bicycle improvements throughout the corridor, safety improvements are also recommended. Lighting improvements provide significant safety benefit for bicyclist and pedestrian users at night. Full corridor lighting would be the most beneficial. However, intersection lighting and targeted lighting at pedestrian crossing locations would provide immediate safety benefits at high conflict areas at a relatively low cost. Other safety improvements included in the recommended option include rapid rectangular flashing beacons at all mid-block crossing locations. A pedestrian refuge at Gray St. would be a beneficial addition in combination with the proposed bikeway along Gray St. Once the current right-of-way has been surveyed, further development of an alternative to implement this

refuge should be explored. Options for that crossing could include a median for protection, a signalized intersection, or a raised area for pedestrians. An additional crossing along the corridor at either Laurel or Arch St. would eliminate long stretches of sidewalk without a designated safe crossing for pedestrians.

The final buildout of this option is a roadway typical with one ten-foot and one eleven-foot lane in each direction, and a ten to twelve-foot MURT along the east side of the corridor from Kennedy Blvd. to Boy Scout Blvd. and ADA compliant curb ramps, selective driveway closures and drainage upgrades along both sides. Turn lane extensions at Cypress St., Spruce St. and the I-275 interchange will help to reduce overall delay and congestion at the locations. Selective beautification and safety landscaping and lighting improvements will provide significant aesthetic and safety upgrades.

Appendix A

Alternative Assessment Matrix

Pros and Cons List for N Lois Ave. Design Alternatives

Design Options	Pros	Cons
Option 1: No Build	• Inexpensive • No impact to residents	• Doesn't comply with planning efforts • Doesn't improve bike ped. mobility for accessibility • Not consistent with existing study documents • Doesn't resolve safety issues
Option 2: Four Foot Bike Lanes Only	• Creates more bicycle-friendly corridor • Creates additional buffer for pedestrians • Improves some safety issues • Could be easily implemented next time road needs to be resurfaced	• More expensive than no-build • Doesn't connect Spruce St. improvements to I-275 trail • Public input viewed option negatively
Option 3: Four Foot Bike Lanes and Eight Foot MURT on the East Side	• Creates more bicycle-friendly corridor • Creates additional buffer for pedestrians • Improves some safety issues • Could be easily implemented next time road needs to be resurfaced • Provides full connectivity to Spruce St. for recreational trail users	• Impacts to residents during construction • MURT is restrictive and impacted by utility poles • Public input viewed option negatively
Option 4: Ten to twelve foot MURT only on East Side	• Creates more bicycle-friendly corridor • Provides full connectivity for recreational trail users • Accommodates lower skill users • Public input viewed favorably	• Impacts to residents during construction • Doesn't resolve all safety issues • Limited "transformative" feel for corridor

ALTERNATIVES ANALYSIS MATRIX

	Option 1	Option 2	Option 3	Option 4
Influence Factors	No Build	4' Bike Lanes Only	4' Bikes Lanes + 8' MURT on East Side	10'-12' MURT Only on East Side
Right of way acquisition	None	None	Limited R/W at intersections	Limited R/W at intersetions
Potential need for a License Agreement	None	Some - curb ramp replacement may require license agreement	Some- Curb ramps and driveway closeure improvements may require	Some- Curb ramps and driveway closeure improvements may require
Utility Relocation Costs	None	Low - anticipate minor valve cover adjustments	Low - anticipate minor valve cover adjustments	Low - anticipate minor valve cover adjustments
Adjacent Corridor Typical Consistency	Consistent	Inconsistent	Inconsistent	Inconsistent
Tree Impacts	None Anticipated	Minor Tree Impacts	Minor Tree Impacts	Minor Tree Impacts
Safety Impacts	N/A	Improves Safety for Bicyclists	Improves safety for Peds and Bicyclists	Improves safety for Peds and Bicyclists
Consistency with Westshore Transportation Action Plan	Not Consistent	Partially consistent with Action Plan strategy to provide a series of linked on-road and off-road pedestrian and bicycle facilities	Consistent with Action Plan strategies to provide better sidewalk connectivity and to provide a series of linked on-road and off-road pedestrian and bicycle facilities	Consistent with Action Plan strategies to provide better sidewalk connectivity and partially satisfies Action Plan strategy to provide a series of linked on-road and off-road pedestrian and bicycle facilities
Consistency with City of Tampa Imagine 2040 Comp Plan	Not Consistent	Consistent with Bicycle and Pedestrian Network Goals and partially consistent with Connectivity Objectives	Consistent with both Bicycle and Pedestrian Network Goals and Connectivity Objectives	Consistent with both Bicycle and Pedestrian Network Goals and Connectivity Objectives
Consistency with Hillsborough Greenways and Trails master Plan	Not Consistent	Consistent with Greenway and Trail Facility Toolbox elements: •bikeway •RRFB signed crosswalks	Consistent with Greenway and Trail Facility Toolbox elements: •side path •bikeway •RRFB signed crosswalks	Consistent with Greenway and Trail Facility Toolbox elements: •side path •bikeway •RRFB signed crosswalks
Consistency with City of Tampa Walk-Bike Plan	Not Consistent	Consistent with objectives to include: • on-road bike lanes from Kennedy to I-275 • Pedestrian Upgrades north of I-275	Consistent with objectives to include: • on-road bike lanes from Kennedy to I-275 • Pedestrian Upgrades north of I-275	Not consistent with recommendations for improvements south of I-275. Consistent north of I-275
Preliminary Cost Estimate	$0*	$1,511,000	$1,619,000	$3,792,000
Permitting Required	None	Exemption	Exemption	Possible Permitting required
Consistent with Public Input	No	No	Yes	Yes
Accomodation of Multiple User types	Limited	Yes	Yes	Yes

*Milling and resurfacing of corridor based on pavement condition is anticipated within next 10 years.

Appendix B

Concept Cost Estimates

Lois Ave Walk-Bike Improvements Concept **September 16, 2020**

Preliminary Option 2 (4' Bike Lane Only) Cost Estimate

Since the Engineer has no control over time, labor and material cost furnished by others, or over methods of determining prices, or market conditions, all opinions rendered herein as to cost, represent its best judgment; the Engineer does not guarantee that actual cost will not vary from opinion of cost."

ITEM NO.	ITEM	UNIT	PROJECT QUANTITY	UNIT COST	TOTAL COST
101-1	Mobilization	LS	1	$ 82,114.64	$ 82,115
102-1	Maintenance of Traffic	LS	1	$ 58,653.32	$ 58,653
107-1	Litter Removal	AC	2.28	$ 20.00	$ 46
107-2	Mowing	AC	2.28	$ 35.00	$ 80
110-1-1	Clearing & Grubbing	LS	1	$ 5,000.00	$ 5,000
120-1	Regular Excavation (3-R Projects)	LS	1	$ 10,000.00	$ 10,000
327-70-6	Milling Exist Asph Pavt, 1 1/2" Depth	SY	37,600	$ 2.50	$ 94,000
337-7-XX	Asphalt Friction Course	TN	3,100	$ 160.00	$ 496,000
425-1-XX	Inlet / Junction Box / Endwall	EA	16	$ 6,500.00	$ 104,000
430-17X-XXX	Pipe Culvert Optional Material	LF	25	$ 200.00	$ 5,000
520-1-10	Concrete Curb & Gutter, Type F	LF	1,737	$ 25.00	$ 43,425
522-1	Concrete Sidewalk and Driveways, 4" Thick	SY	952	$ 40.00	$ 38,080
522-2	Concrete Sidewalk and Driveways, 6" Thick	SY	277	$ 60.00	$ 16,632
527-2	Detectable Warnings	SF	545	$ 30.00	$ 16,350
570-1-2	Performance Turf, Sod	SY	100	$ 5.00	$ 500
630-2-12	Conduit, F&I, Directional Bore	LF	1,150	$ 20.00	$ 23,000
635-X-XX	Pull & Splice Box, F&I	EA	27	$ 1,200.00	$ 32,400
639-1-122	Electrical Power Service, F&I Underground, Meter Purchased by Contractor	AS	2	$ 2,620.03	$ 5,240
639-2-1	Electrical Service Wire, F&I	LF	45	$ 7.08	$ 319
654-2-22	Rectangular Rapid Flashing Beacon, F&I	EA	4	$ 10,000.00	$ 40,000
700-1-11	Single Post Sign, F&I	EA	8	$ 350.00	$ 2,800
700-1-50	Single Post Sign, Relocate	EA	2	$ 240.00	$ 480
700-1-60	Single Post Sign, Remove	EA	4	$ 30.00	$ 120
710-90	Painted Pavement Markings, Final Surface	LS	1	$ 15,000.00	$ 15,000
711-	6" White, Solid Striping	GM	1.912	$ 4,100.00	$ 7,839
	6" White, 2-4/6-10 Skip Striping	GM	0.169	$ 2,000.00	$ 338
	6" White, 10-30 Skip Striping	GM	1.934	$ 1,500.00	$ 2,901
	12" White, Solid Striping for Crosswalks	LF	3,362	$ 2.50	$ 8,405
	24" White, Solid Striping for Stop Line and Crosswalk	LF	1,323	$ 4.50	$ 5,954
	6" Yellow, Solid Striping	GM	1.923	$ 4,200.00	$ 8,077
	18" Yellow, Solid Striping for Diagonals	LF	390	$ 3.25	$ 1,268
	Message	EA	30	$ 300.00	$ 9,000
	Arrows	EA	45	$ 200.00	$ 9,000
715-1-12	Lighting Conductors, F&I, Insulated. No. 8-6	LF	5,274	$ 1.39	$ 7,331
715-4-XX	Light Pole Complete, Furnish & Install Standard Pole Standard Foundation	EA	22	$ 5,521.56	$ 121,474
715-500-1	Pole Cable Distribution System, Conventional	EA	22	$ 591.34	$ 13,009
	Selective Landscape	LS	1	$ 30,000.00	$ 30,000
	Subtotal (Excludes Mobilization and MOT)				$ 1,173,066
	Mobilization and MOT				$ 140,768
	Estimate Subtotal				$ 1,313,835
	Contingency (15%)				$ 197,075.20
	Grand Total				$ 1,510,910

Decorative Asphalt is included in Asphalt Friction Course Pay Item

Lois Ave Walk-Bike Improvements Concept **September 16, 2020**

Preliminary Option 3 (4' Bike Lane and 8' MURT) Cost Estimate

Since the Engineer has no control over time, labor and material cost furnished by others, or over methods of determining prices, or market conditions, all opinions rendered herein as to cost, represent its best judgment; the Engineer does not guarantee that actual cost will not vary from opinion of cost."

ITEM NO.	ITEM	UNIT	PROJECT QUANTITY	UNIT COST	TOTAL COST
101-1	Mobilization	LS	1	$ 88,016.20	$ 88,016
102-1	Maintenance of Traffic	LS	1	$ 62,868.72	$ 62,869
107-1	Litter Removal	AC	2.28	$ 20.00	$ 46
107-2	Mowing	AC	2.28	$ 35.00	$ 80
110-1-1	Clearing & Grubbing	LS	1	$ 5,000.00	$ 5,000
120-1	Regular Excavation (3-R Projects)	LS	1	$ 10,000.00	$ 10,000
327-70-6	Milling Exist Asph Pavt, 1 1/2" Depth	SY	37,600	$ 2.50	$ 94,000
337-7-XX	Asphalt Friction Course	TN	3,100	$ 160.00	$ 496,000
425-1-XX	Inlet / Junction Box / Endwall	EA	16	$ 6,500.00	$ 104,000
430-17X-XXX	Pipe Culvert Optional Material	LF	25	$ 200.00	$ 5,000
520-1-10	Concrete Curb & Gutter, Type F	LF	1,737	$ 25.00	$ 43,425
522-1	Concrete Sidewalk and Driveways, 4" Thick	SY	2,019	$ 40.00	$ 80,756
522-2	Concrete Sidewalk and Driveways, 6" Thick	SY	758	$ 60.00	$ 45,464
527-2	Detectable Warnings	SF	545	$ 30.00	$ 16,350
570-1-2	Performance Turf, Sod	SY	100	$ 5.00	$ 500
630-2-12	Conduit, F&I, Directional Bore	LF	1,150	$ 20.00	$ 23,000
635-X-XX	Pull & Splice Box, F&I	EA	27	$ 1,200.00	$ 32,400
639-1-122	Electrical Power Service, F&I Underground, Meter Purchased by Contractor	AS	2	$ 2,620.03	$ 5,240
639-2-1	Electrical Service Wire, F&I	LF	45	$ 7.08	$ 319
654-2-22	Rectangular Rapid Flashing Beacon, F&I	EA	8	$ 10,000.00	$ 80,000
700-1-11	Single Post Sign, F&I	EA	16	$ 350.00	$ 5,600
700-1-50	Single Post Sign, Relocate	EA	2	$ 240.00	$ 480
700-1-60	Single Post Sign, Remove	EA	4	$ 30.00	$ 120
710-90	Painted Pavement Markings, Final Surface	LS	1	$ 15,000.00	$ 15,000
711-	6" White, Solid Striping	GM	1.912	$ 4,100.00	$ 7,839
	6" White, 2-4/6-10 Skip Striping	GM	0.169	$ 2,000.00	$ 338
	6" White, 10-30 Skip Striping	GM	1.934	$ 1,500.00	$ 2,901
	12" White, Solid Striping for Crosswalks	LF	3,362	$ 2.50	$ 8,405
	24" White, Solid Striping for Stop Line and Crosswalk	LF	1,323	$ 4.50	$ 5,954
	6" Yellow, Solid Striping	GM	1.923	$ 4,200.00	$ 8,077
	18" Yellow, Solid Striping for Diagonals	LF	390	$ 3.25	$ 1,268
	Message	EA	30	$ 300.00	$ 9,000
	Arrows	EA	45	$ 200.00	$ 9,000
715-1-12	Lighting Conductors, F&I, Insulated. No. 8-6	LF	5,274	$ 1.39	$ 7,331
715-4-XX	Light Pole Complete, Furnish & Install Standard Pole Standard Foundation	EA	22	$ 5,521.56	$ 121,474
715-500-1	Pole Cable Distribution System, Conventional	EA	22	$ 591.34	$ 13,009
	Selective Landscape	LS	1	$ 30,000.00	$ 30,000
	Subtotal (Excludes Mobilization and MOT)				$ 1,257,374
	Mobilization and MOT				$ 150,885
	Estimate Subtotal				$ 1,408,259
	Contingency (15%)				$ 211,238.86
	Grand Total				$ 1,619,498

Decorative Asphalt is included in Asphalt Friction Course Pay Item

Lois Ave Walk-Bike Improvements Concept **September 16, 2020**

Preliminary Option 4 (12' MURT) Cost Estimate

Since the Engineer has no control over time, labor and material cost furnished by others, or over methods of determining prices, or market conditions, all opinions rendered herein as to cost, represent its best judgment; the Engineer does not guarantee that actual cost will not vary from opinion of cost."

ITEM NO.	ITEM	UNIT	PROJECT QUANTITY	UNIT COST	TOTAL COST
101-1	Mobilization	LS	1	$ 204,014.03	$ 204,014
102-1	Maintenance of Traffic	LS	1	$ 145,724.30	$ 145,724
107-1	Litter Removal	AC	3.00	$ 20.00	$ 60
107-2	Mowing	AC	3.00	$ 35.00	$ 105
110-1-1	Clearing & Grubbing	LS	1	$ 5,000.00	$ 5,000
120-1	Regular Excavation (3-R Projects)	LS	1	$ 10,000.00	$ 10,000
327-70-5	Milling Exist Asph Pavt, 2" Depth	SY	17,670	$ 2.50	$ 44,174
327-70-6	Milling Exist Asph Pavt, 1 1/2" Depth	SY	29,357	$ 2.50	$ 73,393
337-7-XX	Asphalt Friction Course	TN	3,789	$ 160.00	$ 606,286
425-1-XX	Inlet / Junction Box / Endwall / Conc. Collar	EA	53	$ 6,500.00	$ 344,500
430-17X-XXX	Pipe Culvert Optional Material	LF	409	$ 200.00	$ 81,772
520-1-7	Concrete Curb & Gutter, Type E	LF	1,235	$ 25.00	$ 30,875
520-1-10	Concrete Curb & Gutter, Type F	LF	6,993	$ 25.00	$ 174,833
520-5-21	Traffic Seperator Concrete - Type II, 4' Wide	LF	460	$ 55.00	$ 25,322
520-70	Concrete Traffic Separator, SP-Var Width	SY	284	$ 75.00	$ 21,315
522-1	Concrete Sidewalk and Driveways, 4" Thick	SY	7,056	$ 40.00	$ 282,224
522-2	Concrete Sidewalk and Driveways, 6" Thick	SY	1,347	$ 60.00	$ 80,820
527-2	Detectable Warnings	SF	1,094	$ 30.00	$ 32,820
536-1-1	Guardrail-Roadway, General TL-3	LF	218	$ 20.00	$ 4,355
570-1-2	Performance Turf, Sod	SY	784	$ 5.00	$ 3,920
630-2-11	Conduit, F&I, Open Trench	LF	410	$ 8.00	$ 3,280
630-2-12	Conduit, F&I, Directional Bore	LF	1,990	$ 20.00	$ 39,800
632-7-1	Signal Cable, New Or Reconstructed Intersection, Furnish And Install	LS	1	$ 21.00	$ 21
632-7-2	Signal Cable, Repair/Replace/Other, F&I	LF	650	$ 5.00	$ 3,250
633-X-XXX	Fiber Optic Modification To Existing	LS	5	$ 3,500.00	$ 17,500
635-X-XX	Pull & Splice Box, F&I	EA	62	$ 1,200.00	$ 74,400
639-1-122	Electrical Power Service, F&I Underground, Meter Purchased by Contractor	AS	2	$ 2,620.03	$ 5,240
639-1-420	Electrical Power Service, Relocate, Underground	AS	1	$ 1,600.00	$ 1,600
639-2-1	Electrical Service Wire, F&I	LF	45	$ 7.08	$ 319
0639-2-4	Electrical Pservice Wire, Relocate	LF	1	$ 8.00	$ 8
0639-3-11	Electrical Service Disconnect, F&I Pole Mount	EA	1	$ 1,700.00	$ 1,700
0641-2-12	Prestressed Concrete Pole, F&I, Type P-II Service Pole	EA	1	$ 1,500.00	$ 1,500
0641-2-70	Prestressed Concrete Pole, Shallow Pole Removal, Pole 30' And Greater	EA	2	$ 3,500.00	$ 7,000
0646-1-11	Aluminum Signals Pole, Pedestal	EA	8	$ 1,500.00	$ 12,000
0646-1-60	Aluminum Signals Pole, Remove	EA	2	$ 230.00	$ 460
649-21-1X	Steel Mast Arm Assembly, F&I	EA	9	$ 55,000.00	$ 495,000
649-26-3	Steel Mast Arm Assembly, Remove	EA	4	$ 2,450.00	$ 9,800
0650-1-14	Vehicular Traffic Signal, F&I, 3 Section, 1 Way	AS	15	$ 970.00	$ 14,550
0650-1-18	Vehicular Traffic Signal, F&I, 5 Section, 1 Way	AS	4	$ 1,350.00	$ 5,400
0653-1-11	Pedestrian Signal, F&I Led Countdown, 1 Way	AS	8	$ 700.00	$ 5,600
654-2-22	Rectangular Rapid Flashing Beacon, F&I - Solar Powered, Complete sign Assembly-Back to Back	EA	4	$ 10,000.00	$ 40,000
0660-4-11	Vehicle Detection System, Video, F&I, Cabinet Equipment	EA	1	$ 7,500.00	$ 7,500
0660-4-12	Vehicle Detection System, Video, F&I, Above Ground Equipment	EA	8	$ 4,000.00	$ 32,000
0670-5-111	Traffic Controller Assembly, F&I, Nema, 2 Preemption	AS	1	$ 34,100.00	$ 34,100
670-5-400	Traffic Controller Assembly, Modify	AS	2	$ 1,750.00	$ 3,500
0670-5-600	Traffic Controller Assembly, Remove Controller With Cabinet	AS	1	$ 760.00	$ 760
0684-1-1	Managed Field Ethernet Switch, F&I	EA	1	$ 5,200.00	$ 5,200
0685-1-11	Uninterruptible Power Supply, F&I	EA	1	$ 3,450.00	$ 3,450
0700-5-22	Internally Illuminated Sign, F&I, 12-18 Sf	EA	9	$ 3,600.00	$ 32,400
700-1-11	Single Post Sign	EA	8	$ 350.00	$ 2,800
700-1-50	Single Post Sign, Relocate	EA	13	$ 240.00	$ 3,120
710-90	Painted Pavement Markings, Final Surface	LS	1	$ 15,000.00	$ 15,000
711-	6" White, Solid Striping	GM	0.740	$ 4,100.00	$ 3,034
	6" White, 10-30,3-9 Skip Striping	GM	2.300	$ 1,500.00	$ 3,450
	12" White, Solid Striping for Crosswalks	LF	4,070	$ 2.50	$ 10,176
	24" White, Solid Striping for Stop Line and Crosswalk	LF	744	$ 4.50	$ 3,347
	6" Yellow, Solid Striping	GM	2.640	$ 4,200.00	$ 11,088
	18" Yellow, Solid Striping for Diagonals	LF	155	$ 3.25	$ 503
	Yellow, Island Nose	SF	78	$ 2.87	
	Message	EA	1	$ 300.00	$ 300
	Arrows	EA	33	$ 200.00	$ 6,600
715-1-12	Lighting Conductors, F&I, Insulated. No. 8-6	LF	5,274	$ 1.39	$ 7,331
715-4-XX	Light Pole Complete, Furnish & Install Standard Pole Standard Foundation	EA	22	$ 5,521.56	$ 121,474
715-500-1	Pole Cable Distribution System, Conventional	EA	22	$ 591.34	$ 13,009
1644-800	Fire Hydrant, Relocate	EA	1	$ 4,142.64	$ 4,143
	Selective Landscape	LS	1	$ 30,000.00	$ 30,000
	Subtotal (Excludes Mobilization and MOT)				$ 2,914,486
	Mobilization and MOT				$ 349,738
	Estimate Subtotal				$ 3,264,224
	Contingency (15%)				$ 489,633.66
	Grand Total				$ 3,753,858

Decorative Asphalt is included in Asphalt Friction Course Pay Item

Preliminary Option 4 (Alt. 1) (12' MURT) Cost Estimate

Since the Engineer has no control over time, labor and material cost furnished by others, or over methods of determining prices, or market conditions, all opinions rendered herein as to cost, represent its best judgment; the Engineer does not guarantee that actual cost will not vary from opinion of cost."

ITEM NO.	ITEM	UNIT	PROJECT QUANTITY	UNIT COST	TOTAL COST
101-1	Mobilization	LS	1	$ 206,088.60	$ 206,089
102-1	Maintenance of Traffic	LS	1	$ 147,206.14	$ 147,206
107-1	Litter Removal	AC	3.00	$ 20.00	$ 60
107-2	Mowing	AC	3.00	$ 35.00	$ 105
110-1-1	Clearing & Grubbing	LS	1	$ 5,000.00	$ 5,000
120-1	Regular Excavation (3-R Projects)	LS	1	$ 10,000.00	$ 10,000
327-70-5	Milling Exist Asph Pavt, 2" Depth	SY	17,642	$ 2.50	$ 44,104
327-70-6	Milling Exist Asph Pavt, 1 1/2" Depth	SY	29,436	$ 2.50	$ 73,591
337-7-XX	Asphalt Friction Course	TN	3,867	$ 160.00	$ 618,654
425-1-XX	Inlet / Junction Box / Endwall / Conc. Collar	EA	53	$ 6,500.00	$ 344,500
430-17X-XXX	Pipe Culvert Optional Material	LF	409	$ 200.00	$ 81,772
520-1-7	Concrete Curb & Gutter, Type E	LF	1,606	$ 25.00	$ 40,140
520-1-10	Concrete Curb & Gutter, Type F	LF	7,281	$ 25.00	$ 182,028
520-5-21	Traffic Seperator Concrete - Type II, 4' Wide	LF	460	$ 55.00	$ 25,322
520-70	Concrete Traffic Separator, SP-Var Width	SY	284	$ 75.00	$ 21,315
522-1	Concrete Sidewalk and Driveways, 4" Thick	SY	6,940	$ 40.00	$ 277,580
522-2	Concrete Sidewalk and Driveways, 6" Thick	SY	1,485	$ 60.00	$ 89,088
527-2	Detectable Warnings	SF	982	$ 30.00	$ 29,457
536-1-1	Guardrail-Roadway, General TL-3	LF	218	$ 20.00	$ 4,355
570-1-2	Performance Turf, Sod	SY	835	$ 5.00	$ 4,176
630-2-11	Conduit, F&I, Open Trench	LF	410	$ 8.00	$ 3,280
630-2-12	Conduit, F&I, Directional Bore	LF	1,990	$ 20.00	$ 39,800
632-7-1	Signal Cable, New Or Reconstructed Intersection, Furnish And Install	LS	1	$ 21.00	$ 21
632-7-2	Signal Cable, Repair/Replace/Other, F&I	LF	650	$ 5.00	$ 3,250
633-X-XXX	Fiber Optic Modification To Existing	LS	5	$ 3,500.00	$ 17,500
635-X-XX	Pull & Splice Box, F&I	EA	62	$ 1,200.00	$ 74,400
639-1-122	Electrical Power Service, F&I Underground, Meter Purchased by Contractor	AS	2	$ 2,620.03	$ 5,240
639-1-420	Electrical Power Service, Relocate, Underground	AS	1	$ 1,600.00	$ 1,600
639-2-1	Electrical Service Wire, F&I	LF	45	$ 7.08	$ 319
0639-2-4	Electrical Pservice Wire, Relocate	LF	1	$ 8.00	$ 8
0639-3-11	Electrical Service Disconnect, F&I Pole Mount	EA	1	$ 1,700.00	$ 1,700
0641-2-12	Prestressed Concrete Pole, F&I, Type P-II Service Pole	EA	1	$ 1,500.00	$ 1,500
0641-2-70	Prestressed Concrete Pole, Shallow Pole Removal, Pole 30' And Greater	EA	2	$ 3,500.00	$ 7,000
0646-1-11	Aluminum Signals Pole, Pedestal	EA	8	$ 1,500.00	$ 12,000
0646-1-60	Aluminum Signals Pole, Remove	EA	2	$ 230.00	$ 460
649-21-1X	Steel Mast Arm Assembly, F&I	EA	9	$ 55,000.00	$ 495,000
649-26-3	Steel Mast Arm Assembly, Remove	EA	4	$ 2,450.00	$ 9,800
0650-1-14	Vehicular Traffic Signal, F&I, 3 Section, 1 Way	AS	15	$ 970.00	$ 14,550
0650-1-18	Vehicular Traffic Signal, F&I, 5 Section, 1 Way	AS	4	$ 1,350.00	$ 5,400
0653-1-11	Pedestrian Signal, F&I Led Countdown, 1 Way	AS	8	$ 700.00	$ 5,600
654-2-22	Rectangular Rapid Flashing Beacon, F&I - Solar Powered, Complete sign Assembly-Back to Back	EA	4	$ 10,000.00	$ 40,000
0660-4-11	Vehicle Detection System, Video, F&I, Cabinet Equipment	EA	1	$ 7,500.00	$ 7,500
0660-4-12	Vehicle Detection System, Video, F&I, Above Ground Equipment	EA	8	$ 4,000.00	$ 32,000
0670-5-111	Traffic Controller Assembly, F&I, Nema, 2 Preemption	AS	1	$ 34,100.00	$ 34,100
670-5-400	Traffic Controller Assembly, Modify	AS	2	$ 1,750.00	$ 3,500
0670-5-600	Traffic Controller Assembly, Remove Controller With Cabinet	AS	1	$ 760.00	$ 760
0684-1-1	Managed Field Ethernet Switch, F&I	EA	1	$ 5,200.00	$ 5,200
0685-1-11	Uninterruptible Power Supply, F&I	EA	1	$ 3,450.00	$ 3,450
0700-5-22	Internally Illuminated Sign, F&I, 12-18 Sf	EA	9	$ 3,600.00	$ 32,400
700-1-11	Single Post Sign	EA	8	$ 350.00	$ 2,800
700-1-50	Single Post Sign, Relocate	EA	13	$ 240.00	$ 3,120
710-90	Painted Pavement Markings, Final Surface	LS	1	$ 15,000.00	$ 15,000
711-	6" White, Solid Striping	GM	0.740	$ 4,100.00	$ 3,034
	6" White, 10-30,3-9 Skip Striping	GM	2.310	$ 1,500.00	$ 3,465
	12" White, Solid Striping for Crosswalks	LF	4,075	$ 2.50	$ 10,186
	24" White, Solid Striping for Stop Line and Crosswalk	LF	743	$ 4.50	$ 3,344
	6" Yellow, Solid Striping	GM	2.670	$ 4,200.00	$ 11,214
	18" Yellow, Solid Striping for Diagonals	LF	159	$ 3.25	$ 518
	Yellow, Island Nose	SF	76	$ 2.87	
	Message	EA	1	$ 300.00	$ 300
	Arrows	EA	33	$ 200.00	$ 6,600
715-1-12	Lighting Conductors, F&I, Insulated. No. 8-6	LF	5,274	$ 1.39	$ 7,331
715-4-XX	Light Pole Complete, Furnish & Install Standard Pole Standard Foundation	EA	22	$ 5,521.56	$ 121,474
715-500-1	Pole Cable Distribution System, Conventional	EA	22	$ 591.34	$ 13,009
1644-800	Fire Hydrant, Relocate	EA	1	$ 4,142.64	$ 4,143
	Selective Landscape	LS	1	$ 30,000.00	$ 30,000
	Subtotal (Excludes Mobilization and MOT)				$ 2,944,123
	Mobilization and MOT				$ 353,295
	Estimate Subtotal				$ 3,297,418
	Contingency (15%)				$ 494,612.70
	Grand Total				$ 3,792,031

Decorative Asphalt is included in Asphalt Friction Course Pay Item

Lois Ave Walk-Bike Improvements Concept **September 16, 2020**

Preliminary Option 4 (Alt. 2) (12' MURT) Cost Estimate

Since the Engineer has no control over time, labor and material cost furnished by others, or over methods of determining prices, or market conditions, all opinions rendered herein as to cost, represent its best judgment; the Engineer does not guarantee that actual cost will not vary from opinion of cost."

ITEM NO.	ITEM	UNIT	PROJECT QUANTITY	UNIT COST	TOTAL COST
101-1	Mobilization	LS	1	$ 206,415.08	$ 206,415
102-1	Maintenance of Traffic	LS	1	$ 147,439.34	$ 147,439
107-1	Litter Removal	AC	3.00	$ 20.00	$ 60
107-2	Mowing	AC	3.00	$ 35.00	$ 105
110-1-1	Clearing & Grubbing	LS	1	$ 5,000.00	$ 5,000
120-1	Regular Excavation (3-R Projects)	LS	1	$ 10,000.00	$ 10,000
327-70-5	Milling Exist Asph Pavt, 2" Depth	SY	17,069	$ 2.50	$ 42,673
327-70-6	Milling Exist Asph Pavt, 1 1/2" Depth	SY	28,572	$ 2.50	$ 71,430
337-7-XX	Asphalt Friction Course	TN	3,840	$ 160.00	$ 614,413
425-1-XX	Inlet / Junction Box / Endwall / Conc. Collar	EA	53	$ 6,500.00	$ 344,500
430-17X-XXX	Pipe Culvert Optional Material	LF	409	$ 200.00	$ 81,772
520-1-7	Concrete Curb & Gutter, Type E	LF	1,755	$ 25.00	$ 43,880
520-1-10	Concrete Curb & Gutter, Type F	LF	7,397	$ 25.00	$ 184,923
520-5-21	Traffic Seperator Concrete - Type II, 4' Wide	LF	460	$ 55.00	$ 25,322
520-70	Concrete Traffic Separator, SP-Var Width	SY	284	$ 75.00	$ 21,315
522-1	Concrete Sidewalk and Driveways, 4" Thick	SY	7,185	$ 40.00	$ 287,396
522-2	Concrete Sidewalk and Driveways, 6" Thick	SY	1,358	$ 60.00	$ 81,474
527-2	Detectable Warnings	SF	1,073	$ 30.00	$ 32,181
536-1-1	Guardrail-Roadway, General TL-3	LF	218	$ 20.00	$ 4,355
570-1-2	Performance Turf, Sod	SY	838	$ 5.00	$ 4,191
630-2-11	Conduit, F&I, Open Trench	LF	410	$ 8.00	$ 3,280
630-2-12	Conduit, F&I, Directional Bore	LF	1,990	$ 20.00	$ 39,800
632-7-1	Signal Cable, New Or Reconstructed Intersection, Furnish And Install	LS	1	$ 21.00	$ 21
632-7-2	Signal Cable, Repair/Replace/Other, F&I	LF	650	$ 5.00	$ 3,250
633-X-XXX	Fiber Optic Modification To Existing	LS	5	$ 3,500.00	$ 17,500
635-X-XX	Pull & Splice Box, F&I	EA	62	$ 1,200.00	$ 74,400
639-1-122	Electrical Power Service, F&I Underground, Meter Purchased by Contractor	AS	2	$ 2,620.03	$ 5,240
639-1-420	Electrical Power Service, Relocate, Underground	AS	1	$ 1,600.00	$ 1,600
639-2-1	Electrical Service Wire, F&I	LF	45	$ 7.08	$ 319
0639-2-4	Electrical Pservice Wire, Relocate	LF	1	$ 8.00	$ 8
0639-3-11	Electrical Service Disconnect, F&I Pole Mount	EA	1	$ 1,700.00	$ 1,700
0641-2-12	Prestressed Concrete Pole, F&I, Type P-II Service Pole	EA	1	$ 1,500.00	$ 1,500
0641-2-70	Prestressed Concrete Pole, Shallow Pole Removal, Pole 30' And Greater	EA	2	$ 3,500.00	$ 7,000
0646-1-11	Aluminum Signals Pole, Pedestal	EA	8	$ 1,500.00	$ 12,000
0646-1-60	Aluminum Signals Pole, Remove	EA	2	$ 230.00	$ 460
649-21-1X	Steel Mast Arm Assembly, F&I	EA	9	$ 55,000.00	$ 495,000
649-26-3	Steel Mast Arm Assembly, Remove	EA	4	$ 2,450.00	$ 9,800
0650-1-14	Vehicular Traffic Signal, F&I, 3 Section, 1 Way	AS	15	$ 970.00	$ 14,550
0650-1-18	Vehicular Traffic Signal, F&I, 5 Section, 1 Way	AS	4	$ 1,350.00	$ 5,400
0653-1-11	Pedestrian Signal, F&I Led Countdown, 1 Way	AS	8	$ 700.00	$ 5,600
654-2-22	Rectangular Rapid Flashing Beacon, F&I - Solar Powered, Complete sign Assembly-Back to Back	EA	4	$ 10,000.00	$ 40,000
0660-4-11	Vehicle Detection System, Video, F&I, Cabinet Equipment	EA	1	$ 7,500.00	$ 7,500
0660-4-12	Vehicle Detection System, Video, F&I, Above Ground Equipment	EA	8	$ 4,000.00	$ 32,000
0670-5-111	Traffic Controller Assembly, F&I, Nema, 2 Preemption	AS	1	$ 34,100.00	$ 34,100
670-5-400	Traffic Controller Assembly, Modify	AS	2	$ 1,750.00	$ 3,500
0670-5-600	Traffic Controller Assembly, Remove Controller With Cabinet	AS	1	$ 760.00	$ 760
0684-1-1	Managed Field Ethernet Switch, F&I	EA	1	$ 5,200.00	$ 5,200
0685-1-11	Uninterruptible Power Supply, F&I	EA	1	$ 3,450.00	$ 3,450
0700-5-22	Internally Illuminated Sign, F&I, 12-18 Sf	EA	9	$ 3,600.00	$ 32,400
700-1-11	Single Post Sign	EA	8	$ 350.00	$ 2,800
700-1-50	Single Post Sign, Relocate	EA	13	$ 240.00	$ 3,120
710-90	Painted Pavement Markings, Final Surface	LS	1	$ 15,000.00	$ 15,000
711-	6" White, Solid Striping	GM	0.740	$ 4,100.00	$ 3,034
	6" White, 10-30,3-9 Skip Striping	GM	2.300	$ 1,500.00	$ 3,450
	12" White, Solid Striping for Crosswalks	LF	3,955	$ 2.50	$ 9,888
	24" White, Solid Striping for Stop Line and Crosswalk	LF	743	$ 4.50	$ 3,344
	6" Yellow, Solid Striping	GM	2.670	$ 4,200.00	$ 11,214
	18" Yellow, Solid Striping for Diagonals	LF	160	$ 3.25	$ 521
	Yellow, Island Nose	SF	81	$ 2.87	$ 232
	Message	EA	1	$ 300.00	$ 300
	Arrows	EA	38	$ 200.00	$ 7,600
715-1-12	Lighting Conductors, F&I, Insulated. No. 8-6	LF	5,274	$ 1.39	$ 7,331
715-4-XX	Light Pole Complete, Furnish & Install Standard Pole Standard Foundation	EA	22	$ 5,521.56	$ 121,474
715-500-1	Pole Cable Distribution System, Conventional	EA	22	$ 591.34	$ 13,009
1644-800	Fire Hydrant, Relocate	EA	1	$ 4,142.64	$ 4,143
	Selective Landscape	LS	1	$ 30,000.00	$ 30,000
	Subtotal (Excludes Mobilization and MOT)				$ 2,948,787
	Mobilization and MOT				$ 353,854
	Estimate Subtotal				$ 3,302,641
	Contingency (15%)				$ 495,396.18
	Grand Total				$ 3,798,037

Decorative Asphalt is included in Asphalt Friction Course Pay Item

Appendix C

Traffic Analysis

LOIS AVENUE

Traffic Analysis

MAY 2020

Prepared By

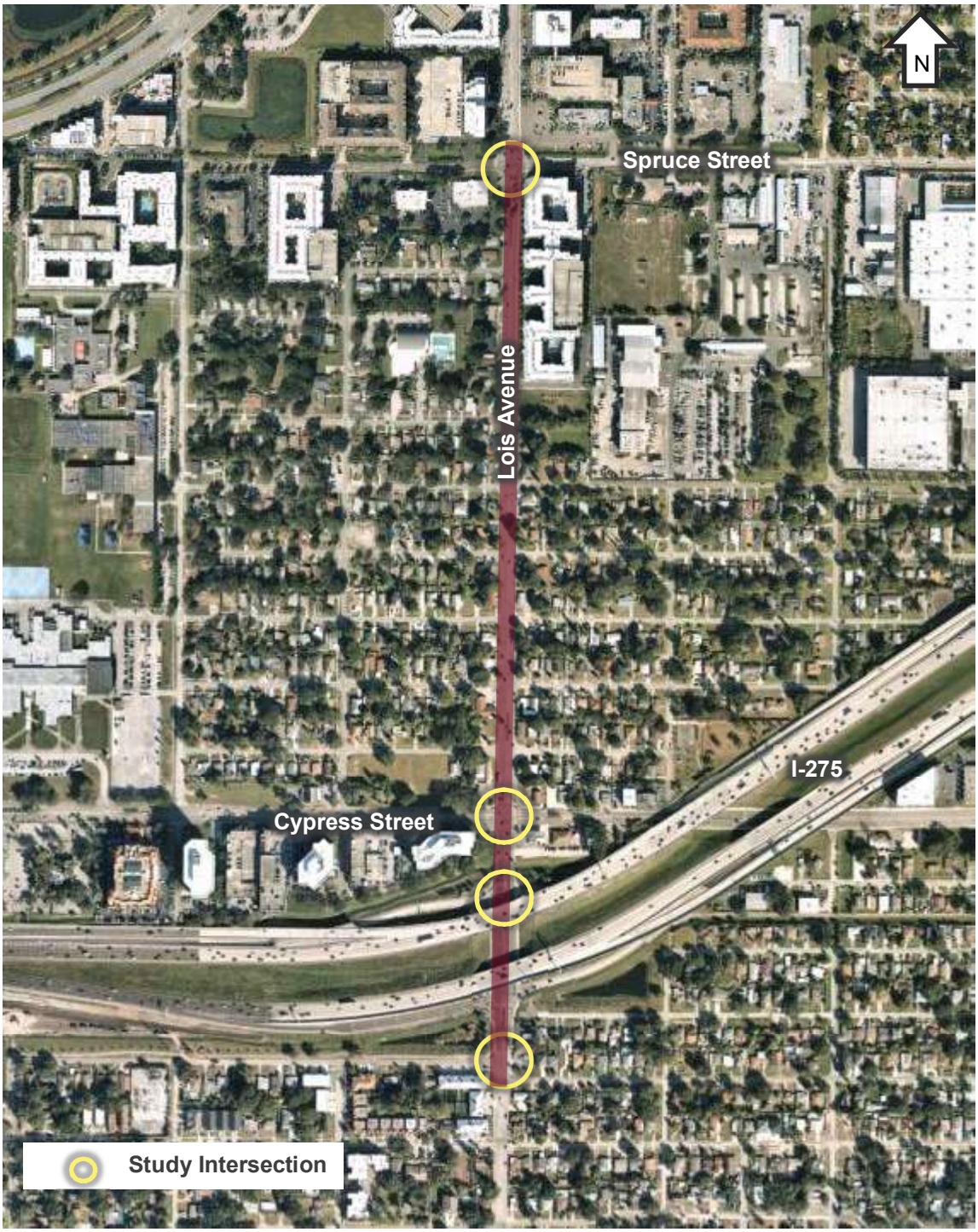
Kimley»Horn

TABLE OF CONTENTS

INTRODUCTION

Kimley-Horn was retained to perform a traffic impact analysis for the Lois Avenue concept design from the I-275 interstate ramps to Spruce Street. The purpose of the traffic analysis is to analyze the existing traffic conditions and proposed design improvements including a lane elimination along Lois Avenue. Traffic conditions were analyzed for the roadway and the four signalized study area intersections along Lois Avenue, shown in **Figure 1**.

FIGURE 1: PROJECT LOCATION MAP



Data Collection

Lois Avenue is currently a 4-lane divided roadway with a posted speed limit of 35 miles-per-hour north of Cypress Street and 40 miles-per-hour south of Cypress Street. Weekday AM and PM peak hour period (7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM) intersection turning movement counts were collected on Tuesday November 19, 2019 for the following study intersections:

- Lois Avenue & Spruce Street
- Lois Avenue & Cypress Street
- Lois Avenue & I-275 Northbound Ramp
- Lois Avenue & I-275 Southbound Ramp

Turning movement counts at the four (4) intersections are provided in **Appendix A**. Raw counts were adjusted to local peak season weekday conditions using a peak season factor of 1.05 provided by the Florida Department of Transportation (FDOT) 2018 peak season factor category report. FDOT's 2018 peak season factor category report is included in **Appendix B**. Peak season AM and PM peak hour turning movement volumes for the study intersections along Lois Avenue are shown in **Figure 2** and **Figure 3**.

The daily traffic volumes were also collected along Lois Avenue at three locations. The volumes are summarized in **Table 1** and indicate the highest segment of the study area along Lois Avenue is north of Cypress Street.

TABLE 1: DAILY TRAFFIC VOLUMES

		Lois Avenue		
		Northbound	Southbound	Total
Daily Traffic Volumes	North of Kennedy Boulevard	9,967	7,809	**17,776**
	North of Cypress Street	10,743	9,690	**20,433**
	North of Spruce Street	8,524	7,537	**16,061**

FIGURE 2: AM PEAK-HOUR PEAK SEASON EXISTING TRAFFIC

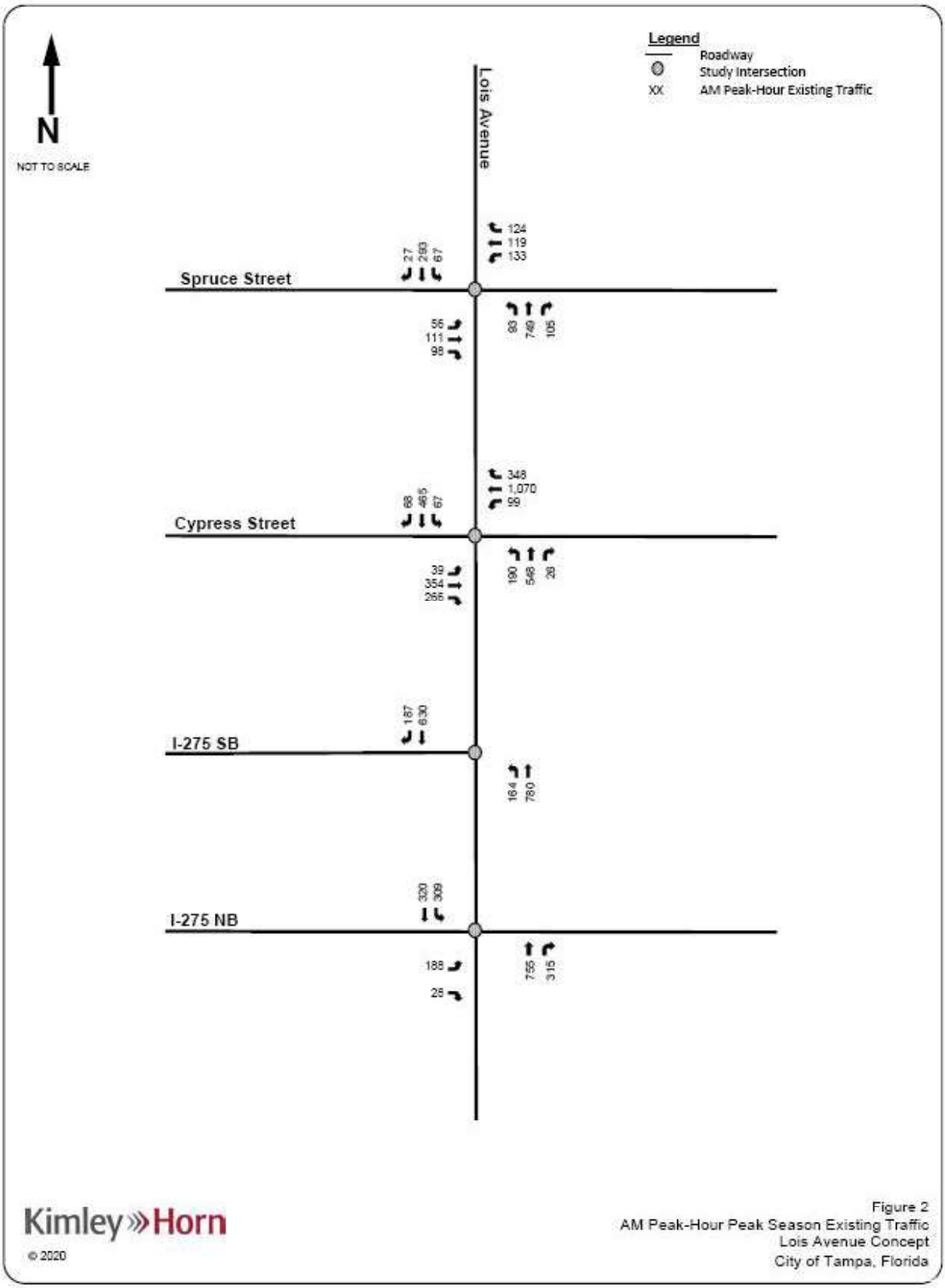
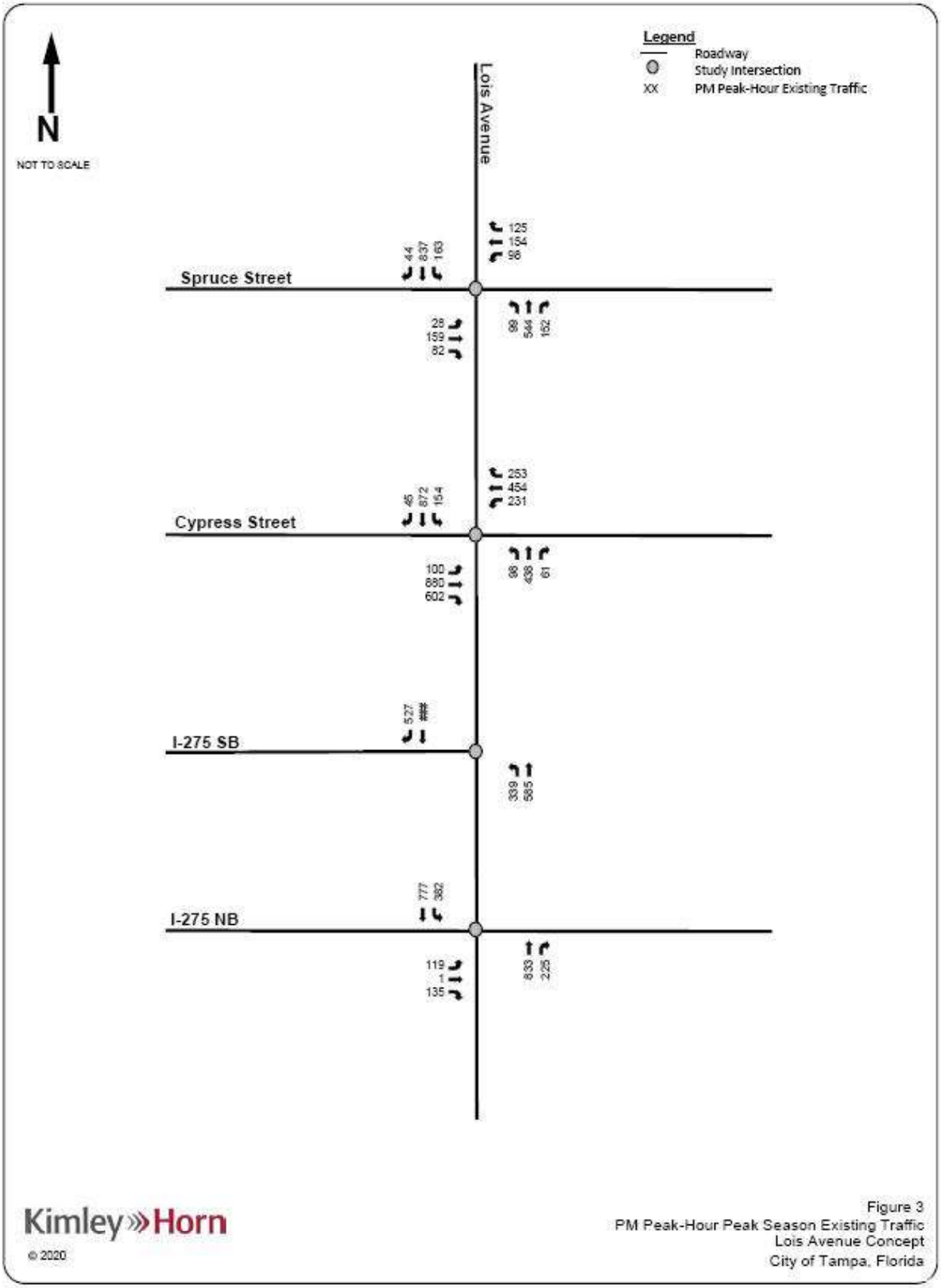


FIGURE 3: PM PEAK-HOUR PEAK SEASON EXISTING TRAFFIC



Intersection Analysis

To assess the transportation impacts of the lane elimination design, *Synchro* (v10) software was used to determine AM and PM peak-hour operational conditions for the study area intersections. A summary of intersection level of service (LOS) and maximum volume to capacity (v/c) ratios by approach for the AM and PM peak-hour conditions is provided in **Table 2**.

Under AM and PM peak-hour conditions, the signalized study area intersections operate at an acceptable LOS with Lois Avenue as a four-lane facility with the exception of Lois Avenue & Cypress Street. Lois Avenue & Cypress Street currently operates at an overall LOS E during the AM peak-hour. The westbound movements for the intersection of Lois Avenue & Cypress Street operate with volume to capacity ratios greater than 1.0 during the AM peak-hour. Synchro outputs are contained in **Appendix C**.

TABLE 2: PEAK-HOUR INTERSECTION ANALYSIS SUMMARY

			Intersection		EBL			EBT			EBR			WBL			WBT			WBR		
			Delay	LOS	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)
Existing Year (2019)	A.M. Peak-Hour	Lois Avenue & Spruce Street	18.0	B	54.9	0.28	93	45.5	0.49	228	45.5	0.46	228	61.7	0.66	#222	45.7	0.50	265	45.7	0.50	265
		Lois Avenue & Cypress Street	75.2	E	39.9	0.40	43	35.6	0.31	167	35.3	0.27	61	29.8	0.27	90	126.6	1.14	#971	133.7	1.16	#971
		Lois Avenue & I-275 SB Ramp	12.7	B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Lois Avenue & I-275 NB Ramp	25.5	C	48.2	0.54	106	--	--	--	44.0	0.02	0	--	--	--	--	--	--	--	--	--
	P.M. Peak-Hour	Lois Avenue & Spruce Street	29.7	C	58.5	0.18	53	49.9	0.60	283	49.9	0.60	283	67.3	0.62	#171	50.9	0.63	324	50.9	0.63	324
		Lois Avenue & Cypress Street	44.2	D	31.8	0.35	90	48.4	0.80	478	79.4	0.97	#511	67.2	0.91	#350	37.1	0.55	338	37.3	0.55	338
		Lois Avenue & I-275 SB Ramp	20.0	B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Lois Avenue & I-275 NB Ramp	26.5	C	63.5	0.49	92	--	--	--	60.6	0.09	67	--	--	--	--	--	--	--	--	--

			NBL			NBT			NBR			SBL			SBT			SBR		
			Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)
Existing Year (2019)	A.M. Peak-Hour	Lois Avenue & Spruce Street	0.5	0.15	m51	1.2	0.44	m230	1.2	0.44	m230	10.3	0.16	46	9.4	0.15	85	9.4	0.15	87
		Lois Avenue & Cypress Street	26.9	0.49	162	31.2	0.39	284	31.2	0.39	284	28.2	0.19	m37	50.2	0.42	292	50.3	0.42	225
		Lois Avenue & I-275 SB Ramp	51.8	0.56	104	8.6	0.38	107	--	--	--	--	--	--	9.0	0.21	102	8.3	0.12	30
		Lois Avenue & I-275 NB Ramp	--	--	--	14.4	0.56	345	14.4	0.56	345	72.3	0.68	179	2.6	0.16	13	--	--	--
	P.M. Peak-Hour	Lois Avenue & Spruce Street	37.3	0.29	m130	35.5	0.37	161	35.5	0.37	161	14.2	0.42	97	11.1	0.39	266	11.1	0.39	266
		Lois Avenue & Cypress Street	31.9	0.37	63	51.8	0.42	276	51.9	0.42	276	27.0	0.43	m151	22.5	0.72	#528	22.3	0.72	#528
		Lois Avenue & I-275 SB Ramp	76.7	0.77	232	6.6	0.27	68	--	--	--	--	--	--	12.4	0.37	m267	15.4	0.43	m180
		Lois Avenue & I-275 NB Ramp	--	--	--	13.7	0.51	378	13.7	0.51	378	81.8	0.76	263	5.2	0.36	52	--	--	--

M = Volume for 95th percentile queue is metered by upstream signal

LANE ELIMINATION

The Lois Avenue concept design included a scenario to analyze the impacts of traffic with a lane elimination. This included the decrease of the total amount of lanes from 4-lanes to 2-lanes. Analysis of traffic conditions were conducted with a generalized roadway segment analysis and a detailed arterial analysis to determine anticipated project impacts.

Roadway Analysis

A roadway analysis was performed along Lois Avenue from Laurel Street to Spruce Street to document the existing conditions and a potential lane elimination. The service volume was calculated based upon the Florida Department of Transportation (FDOT) Quality/Level of Service (QLOS) Tables. Based upon the existing count data, the volumes are significantly higher in one direction during peak periods. Therefore, an analysis of the lane elimination was performed for each period utilizing the peak direction.

Based upon the existing traffic data, the northbound direction was determined to be the peak direction during the AM peak-hour. The northbound approach, a two-lane section, currently operates acceptably, below the service volume. As indicated in **Table 3**, the lane elimination is assumed to reduce the northbound approach to one lane between Laurel Street to Spruce Street. The existing traffic volumes would operate unacceptably, above the service volume, with the lane elimination.

TABLE 3: AM PEAK-HOUR INTERSECTION ANALYSIS SUMMARY

Scenario	Roadway	From	To	Peak Hour Directional Service Volume			AM Peak-Hour	
				Lanes	LOS Standard	Service Volume	AM Peak-Hour Direction	AM Peak-Hour Volume
Existing Conditions	Lois Avenue	Laurel Street	Spruce Street	2	D	1,141	Northbound	947
Lane Elimination	Lois Avenue	Laurel Street	Spruce Street	1	D	525	Northbound	947

Based upon the existing traffic data, the southbound direction was determined to be the peak direction during the PM peak-hour. The southbound approach, a two-lane section, currently operates acceptably, below the service volume. As indicated in **Table 4**, the lane elimination is assumed to reduce the southbound approach to one lane between Laurel Street to Spruce Street. The existing traffic volumes would operate unacceptably, above the service volume with the lane elimination.

TABLE 4: PM PEAK-HOUR INTERSECTION ANALYSIS SUMMARY

Scenario	Roadway	From	To	Peak Hour Directional Service Volume			PM Peak-Hour	
				Lanes	LOS Standard	Service Volume	PM Peak-Hour Direction	PM Peak-Hour Volume
Existing Conditions	Lois Avenue	Laurel Street	Spruce Street	2	D	1,141	Southbound	1,017
Lane Elimination	Lois Avenue	Laurel Street	Spruce Street	1	D	525	Southbound	1,017

Arterial Analysis

A more detailed arterial analysis was conducted for the study roadway segment of Lois Avenue to review arterial level of service (LOS) with the lane elimination scenario. In the analysis, the two-lane roadway was assumed to be widened at the intersections to accommodate the dual northbound through lanes, at the intersection of Lois Avenue & Spruce Street, and the dual southbound through lanes at the intersection of Lois Avenue & Cypress Street.

Synchro (v10) software was used to determine AM and PM peak-hour arterial LOS for the study roadway segment. Peak season adjusted turning movement counts from the study intersections were utilized for the volumes on Lois Avenue. A summary of arterial level of service (LOS) and operational conditions by approach for the PM peak-hour condition is provided in **Table 5.**

Under PM peak-hour conditions with the two-lane cross section of Lois Avenue, the study roadway segment is anticipated to operate at LOS D in the southbound direction. Synchro outputs for the arterial analysis are contained in **Appendix C**.

TABLE 5: BUILDOUT PEAK-HOUR ARTERIAL ANALYSIS SUMMARY

Roadway	From	To	Peak Hour Period	Approach	Arterial LOS
Lois Avenue	Cypress Street	Spruce Street	AM	Northbound	C
				Southbound	C
			PM	Northbound	B
				Southbound	D

The detailed arterial analysis indicates the roadway could be maintained at the LOS D during the PM peak-hour without a future growth of traffic volumes. However, this would require the intersections to maintain the dual through lanes at Cypress Street and Spruce Street.

A reduction to one northbound through lane (converting the second northbound through/right-turn lane to an exclusive northbound right-turn lane) at the intersection of Spruce Street & Lois Avenue and a reduction to one southbound through lane (converting the second southbound through/right-turn lane to an exclusive southbound right-turn lane) at the intersection of Lois Avenue & Cypress Street is anticipated to result in a failing level of service for the southbound direction.

Roundabout Analysis

An intersection analysis was performed for Lois Avenue & Spruce Street utilizing SIDRA, version 8. The analysis, summarized in **Table 6**, indicates a single lane roundabout is anticipated to operate at an overall LOS F during the PM peak-hour at the intersection of Lois Avenue & Spruce Street. During the AM peak-hour the intersection is anticipated to operate at LOS D. SIDRA outputs for the roundabout analysis are contained in **Appendix D**.

TABLE 6: ROUNDABOUT ANALYSIS

			Intersection		Eastbound			Westbound			Northbound			Southbound		
			Delay	LOS	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)	Delay	v/c Ratio	Queue (feet)
Roundabout	A.M. Peak-Hour	Lois Avenue & Spruce Street	29.8	D	35.3	0.81	200	8.9	0.36	45	9.5	0.46	72	41.8	0.97	1267
	P.M. Peak-Hour	Lois Avenue & Spruce Street	72.7	F	18.6	0.65	135	20.7	0.60	95	134.9	1.24	2560	34.2	0.92	785

A turn lane analysis was performed at the existing intersections to determine the required turn lane lengths. The queue length was calculated from Synchro 95th percentile queue and the deceleration/taper length was determined based upon the FDOT Design Manual. The required deceleration/taper distance for Cypress Street was determined to be 155 feet, based upon a 40 mile per hour design speed. The required deceleration/taper length for Lois Avenue was determined to be 145 feet for the 35 mile per hour portion (north of Cypress Street). The analysis is summarized in **Table 7**. Lois Avenue & Spruce Street and Lois Avenue & Cypress Street are anticipated to require an extension of the turn lanes based upon the Synchro 95th percentile queue. No turn lane extensions are needed at the interstate ramps along Lois Avenue.

TABLE 7: TURN LANE ANALYSIS

			Movement	Deceleration + Taper (ft)	Queue Length (ft)	Total (ft)	Existing Turn Lane (ft)	Extension (ft)
Existing Year (2019)	Recommended Turn Lane Length (ft)	Lois Avenue & Spruce Street	EBL	145	100	245	100	145
			WBL	145	230	375	175	200
			NBL	145	130	275	160	115
			SBL	145	100	245	160	85
		Lois Avenue & Cypress Street	EBL	155	100	255	170	85
			WBL	155	350	505	150	355
			NBL	145	165	310	250	60
			SBL	145	155	300	125	175
		Lois Avenue & I-275 SB Ramp	NBL	0	235	235	330	0
		Lois Avenue & I-275 NB Ramp	SBL	155	265	420	550	0

CONCLUSION

This traffic impact study was conducted to assess the anticipated transportation impact of the design improvements to Lois Avenue in the City of Tampa. The report includes a review of the existing conditions at the signalized intersections and a turn lane queue analysis. A roundabout at the intersection of Lois Avenue & Spruce Street is not recommended based upon the existing traffic volumes during the PM peak-hour.

Appendix

Appendix A

Prepared by National Data & Surveying Services

VOLUME

Lois Ave N/O Kennedy Blvd

Day: Tuesday
Date: 11/19/2019

City: Tampa
Project #: FL19_3761_001

DAILY TOTALS	NB	SB	EB	WB	Total
	9,967	7,809	0	0	17,776

AM Period	NB		SB		EB		WB		TOTAL	
00:00	8		12						20	
00:15	6		6						12	
00:30	6		4						10	
00:45	6	26	6	28					12	54
01:00	7		7						14	
01:15	8		7						15	
01:30	8		3						11	
01:45	4	27	3	20					7	47
02:00	3		5						8	
02:15	2		3						5	
02:30	1		2						3	
02:45	3	9	3	13					6	22
03:00	6		3						9	
03:15	6		2						8	
03:30	5		2						7	
03:45	3	20	2	9					5	29
04:00	7		4						11	
04:15	3		2						5	
04:30	10		7						17	
04:45	5	25	10	23					15	48
05:00	4		9						13	
05:15	13		8						21	
05:30	21		11						32	
05:45	25	63	16	44					41	107
06:00	45		36						81	
06:15	46		32						78	
06:30	86		46						132	
06:45	122	299	58	172					180	471
07:00	118		64						182	
07:15	152		69						221	
07:30	195		78						273	
07:45	229	694	94	305					323	999
08:00	222		84						306	
08:15	222		89						311	
08:30	219		114						333	
08:45	203	866	100	387					303	1253
09:00	162		112						274	
09:15	153		103						256	
09:30	160		82						242	
09:45	112	587	89	386					201	973
10:00	141		94						235	
10:15	113		92						205	
10:30	133		123						256	
10:45	116	503	112	421					228	924
11:00	112		107						219	
11:15	135		127						262	
11:30	151		144						295	
11:45	169	567	169	547					338	1114
TOTALS		3686		2355						6041
SPLIT %		61.0%		39.0%						34.0%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	150		161						311	
12:15	170		159						329	
12:30	179		142						321	
12:45	195	694	127	589					322	1283
13:00	177		125						302	
13:15	172		145						317	
13:30	164		138						302	
13:45	147	660	140	548					287	1208
14:00	151		130						281	
14:15	158		94						252	
14:30	170		126						296	
14:45	143	622	112	462					255	1084
15:00	161		108						269	
15:15	173		122						295	
15:30	173		190						363	
15:45	222	729	189	609					411	1338
16:00	175		170						345	
16:15	187		177						364	
16:30	203		200						403	
16:45	230	795	208	755					438	1550
17:00	203		230						433	
17:15	231		214						445	
17:30	249		239						488	
17:45	219	902	214	897					433	1799
18:00	197		153						350	
18:15	171		163						334	
18:30	184		168						352	
18:45	157	709	106	590					263	1299
19:00	118		118						236	
19:15	130		79						209	
19:30	95		97						192	
19:45	97	440	70	364					167	804
20:00	107		75						182	
20:15	76		70						146	
20:30	68		65						133	
20:45	74	325	61	271					135	596
21:00	62		66						128	
21:15	43		51						94	
21:30	56		47						103	
21:45	42	203	43	207					85	410
22:00	30		35						65	
22:15	26		25						51	
22:30	25		32						57	
22:45	25	106	14	106					39	212
23:00	26		15						41	
23:15	33		18						51	
23:30	21		11						32	
23:45	16	96	12	56					28	152
TOTALS		6281		5454						11735
SPLIT %		53.5%		46.5%						66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,967	7,809	0	0	17,776

AM Peak Hour	07:45	11:30			11:45	PM Peak Hour	16:45	17:00			16:45
AM Pk Volume	892	633			1299	PM Pk Volume	913	897			1804
Pk Hr Factor	0.974	0.936			0.961	Pk Hr Factor	0.917	0.938			0.924
7 - 9 Volume	1560	692	0	0	2252	4 - 6 Volume	1697	1652	0	0	3349
7 - 9 Peak Hour	07:45	08:00			07:45	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	892	387	0	0	1273	4 - 6 Pk Volume	913	897	0	0	1804
Pk Hr Factor	0.974	0.849	0.000	0.000	0.956	Pk Hr Factor	0.917	0.938	0.000	0.000	0.924

Prepared by National Data & Surveying Services

VOLUME

Lois Ave N/O Cypress St

Day: Tuesday
Date: 11/19/2019

City: Tampa
Project #: FL19_3761_002

DAILY TOTALS	NB	SB	EB	WB	Total
	10,743	9,690	0	0	20,433

AM Period	NB		SB		EB		WB		TOTAL	
00:00	9		11						20	
00:15	17		16						33	
00:30	13		8						21	
00:45	9	48	10	45					19	93
01:00	9		10						19	
01:15	6		3						9	
01:30	7		10						17	
01:45	2	24	7	30					9	54
02:00	9		2						11	
02:15	4		1						5	
02:30	6		3						9	
02:45	8	27	1	7					9	34
03:00	7		1						8	
03:15	8		3						11	
03:30	2		9						11	
03:45	7	24	3	16					10	40
04:00	2		5						7	
04:15	3		5						8	
04:30	17		6						23	
04:45	10	32	13	29					23	61
05:00	23		10						33	
05:15	41		18						59	
05:30	31		23						54	
05:45	54	149	36	87					90	236
06:00	46		51						97	
06:15	54		54						108	
06:30	77		85						162	
06:45	113	290	80	270					193	560
07:00	106		88						194	
07:15	170		104						274	
07:30	200		127						327	
07:45	225	701	143	462					368	1163
08:00	237		131						368	
08:15	241		138						379	
08:30	214		132						346	
08:45	217	909	116	517					333	1426
09:00	227		123						350	
09:15	188		119						307	
09:30	181		115						296	
09:45	147	743	90	447					237	1190
10:00	173		99						272	
10:15	108		120						228	
10:30	149		112						261	
10:45	155	585	102	433					257	1018
11:00	137		111						248	
11:15	166		121						287	
11:30	176		151						327	
11:45	196	675	113	496					309	1171
TOTALS		4207		2839						7046
SPLIT %		59.7%		40.3%						34.5%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	177		156						333	
12:15	176		164						340	
12:30	200		146						346	
12:45	199	752	144	610					343	1362
13:00	177		192						369	
13:15	182		152						334	
13:30	139		165						304	
13:45	157	655	130	639					287	1294
14:00	178		176						354	
14:15	151		147						298	
14:30	174		146						320	
14:45	185	688	166	635					351	1323
15:00	158		171						329	
15:15	162		159						321	
15:30	184		244						428	
15:45	187	691	190	764					377	1455
16:00	164		208						372	
16:15	162		221						383	
16:30	203		239						442	
16:45	177	706	220	888					397	1594
17:00	198		288						486	
17:15	190		224						414	
17:30	189		255						444	
17:45	186	763	198	965					384	1728
18:00	170		210						380	
18:15	175		208						383	
18:30	218		190						408	
18:45	173	736	150	758					323	1494
19:00	163		153						316	
19:15	141		141						282	
19:30	141		127						268	
19:45	133	578	106	527					239	1105
20:00	131		114						245	
20:15	107		102						209	
20:30	92		109						201	
20:45	76	406	98	423					174	829
21:00	85		126						211	
21:15	68		92						160	
21:30	79		76						155	
21:45	66	298	69	363					135	661
22:00	46		74						120	
22:15	48		50						98	
22:30	27		51						78	
22:45	34	155	32	207					66	362
23:00	26		19						45	
23:15	34		18						52	
23:30	23		25						48	
23:45	25	108	10	72					35	180
TOTALS		6536		6851						13387
SPLIT %		48.8%		51.2%						65.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	10,743	9,690	0	0	20,433

AM Peak Hour	07:45	11:30				07:45	PM Peak Hour	16:30	16:45				16:45
AM Pk Volume	917	584				1461	PM Pk Volume	768	987				1741
Pk Hr Factor	0.951	0.890				0.964	Pk Hr Factor	0.946	0.857				0.896
7 - 9 Volume	1610	979	0	0		2589	4 - 6 Volume	1469	1853	0	0		3322
7 - 9 Peak Hour	07:45	07:45				07:45	4 - 6 Peak Hour	16:30	16:45				16:45
7 - 9 Pk Volume	917	544	0	0		1461	4 - 6 Pk Volume	768	987	0	0		1741
Pk Hr Factor	0.951	0.951	0.000	0.000		0.964	Pk Hr Factor	0.946	0.857	0.000	0.000		0.896

Prepared by National Data & Surveying Services

VOLUME

Lois Ave N/O Spruce St

Day: Tuesday
Date: 11/19/2019

City: Tampa
Project #: FL19_3761_003

DAILY TOTALS	NB	SB	EB	WB	Total
	8,524	7,537	0	0	16,061

AM Period	NB		SB		EB		WB		TOTAL	
00:00	9		10						19	
00:15	8		10						18	
00:30	2		5						7	
00:45	4	23	4	29					8	52
01:00	3		1						4	
01:15	5		6						11	
01:30	4		4						8	
01:45	3	15	2	13					5	28
02:00	7		1						8	
02:15	2		2						4	
02:30	2		1						3	
02:45	1	12	1	5					2	17
03:00	9		2						11	
03:15	5		3						8	
03:30	1		0						1	
03:45	0	15	2	7					2	22
04:00	0		4						4	
04:15	0		4						4	
04:30	13		7						20	
04:45	9	22	15	30					24	52
05:00	8		7						15	
05:15	7		9						16	
05:30	24		3						27	
05:45	36	75	12	31					48	106
06:00	31		14						45	
06:15	47		22						69	
06:30	49		39						88	
06:45	103	230	52	127					155	357
07:00	91		55						146	
07:15	153		78						231	
07:30	179		78						257	
07:45	220	643	95	306					315	949
08:00	203		109						312	
08:15	244		89						333	
08:30	227		92						319	
08:45	263	937	94	384					357	1321
09:00	183		85						268	
09:15	146		84						230	
09:30	142		86						228	
09:45	130	601	63	318					193	919
10:00	142		60						202	
10:15	102		87						189	
10:30	119		82						201	
10:45	110	473	76	305					186	778
11:00	114		78						192	
11:15	116		90						206	
11:30	137		111						248	
11:45	150	517	107	386					257	903
TOTALS		3563		1941						5504
SPLIT %		64.7%		35.3%						34.3%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	150		107						257	
12:15	152		139						291	
12:30	176		83						259	
12:45	149	627	102	431					251	1058
13:00	157		123						280	
13:15	149		129						278	
13:30	125		124						249	
13:45	120	551	118	494					238	1045
14:00	130		108						238	
14:15	123		130						253	
14:30	122		100						222	
14:45	126	501	118	456					244	957
15:00	137		126						263	
15:15	135		146						281	
15:30	176		154						330	
15:45	168	616	134	560					302	1176
16:00	135		195						330	
16:15	120		175						295	
16:30	157		194						351	
16:45	144	556	213	777					357	1333
17:00	170		287						457	
17:15	179		241						420	
17:30	168		236						404	
17:45	165	682	214	978					379	1660
18:00	145		180						325	
18:15	108		168						276	
18:30	147		146						293	
18:45	120	520	131	625					251	1145
19:00	115		110						225	
19:15	92		107						199	
19:30	85		113						198	
19:45	73	365	85	415					158	780
20:00	78		96						174	
20:15	72		70						142	
20:30	48		89						137	
20:45	35	233	96	351					131	584
21:00	43		92						135	
21:15	33		91						124	
21:30	43		60						103	
21:45	31	150	60	303					91	453
22:00	36		54						90	
22:15	29		28						57	
22:30	24		39						63	
22:45	18	107	25	146					43	253
23:00	24		13						37	
23:15	12		21						33	
23:30	7		15						22	
23:45	10	53	11	60					21	113
TOTALS		4961		5596						10557
SPLIT %		47.0%		53.0%						65.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,524	7,537	0	0	16,061

AM Peak Hour	08:00	11:30			08:00
AM Pk Volume	937	464			1321
Pk Hr Factor	0.891	0.835			0.925
7 - 9 Volume	1580	690	0	0	2270
7 - 9 Peak Hour	08:00	07:45			08:00
7 - 9 Pk Volume	937	385	0	0	1321
Pk Hr Factor	0.891	0.883	0.000	0.000	0.925

PM Peak Hour	17:00	17:00			17:00
PM Pk Volume	682	978			1660
Pk Hr Factor	0.953	0.852			0.908
4 - 6 Volume	1238	1755	0	0	2993
4 - 6 Peak Hour	17:00	17:00			17:00
4 - 6 Pk Volume	682	978	0	0	1660
Pk Hr Factor	0.953	0.852	0.000	0.000	0.908

National Data & Surveying Services

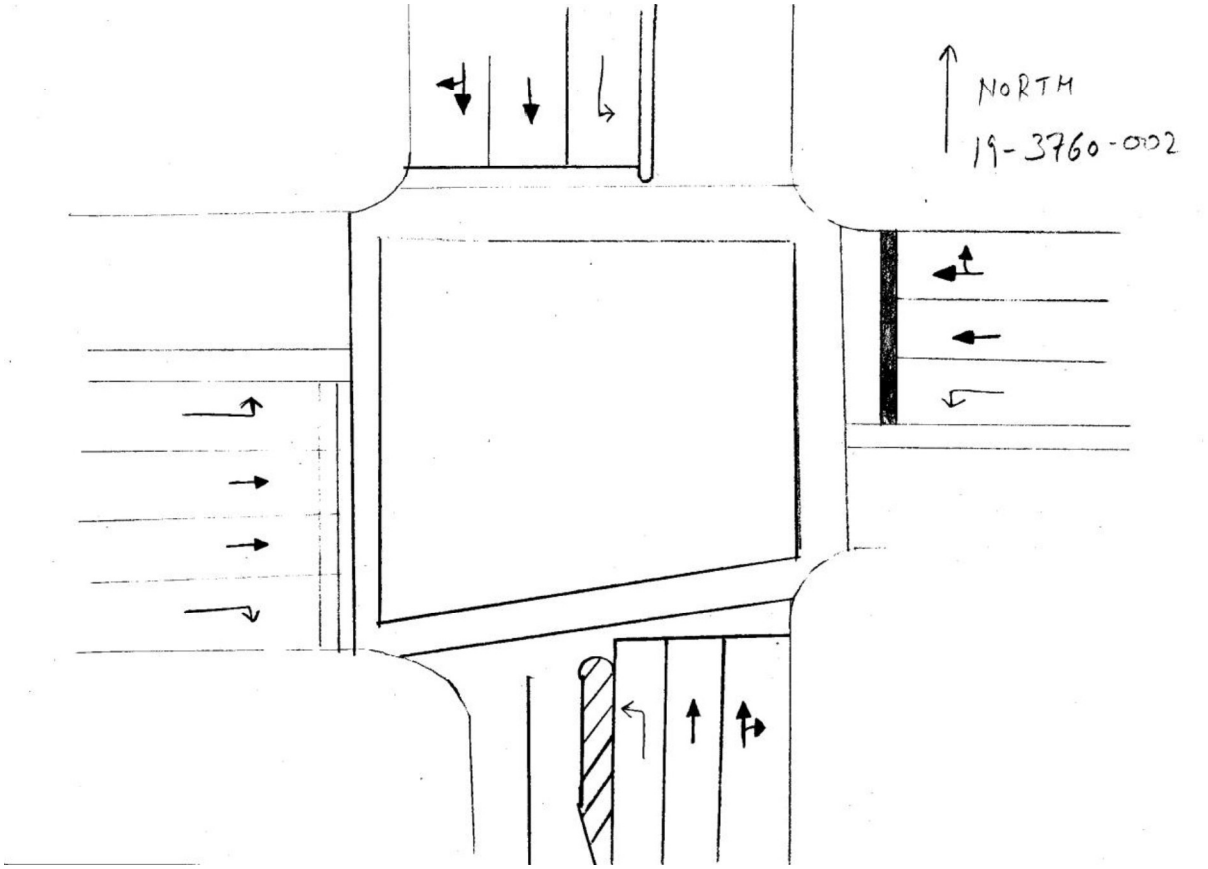
N

N/S Street: **Lois Ave**

Speed: **35 MPH**

E/W Street: **Cypress St**

Speed: **40 MPH**



Site Code: **19-3760-002**

Date: **11/19/2019**

Weather: **Sunny**

City: **Tampa**

County: **Hillsborough**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

SIGNAL TIMING

PHASES	**1**	**2**	**3**
SL/ST	-	00:16	-
NL/SL	00:17	-	00:14
NT/ST	00:53	00:55	00:54
EL/WL	00:12	00:07	-
WL/WT	00:09	00:15	00:21
ET/WT	00:48	00:50	00:48

Prepared by National Data & Surveying Services

Lois Ave & Spruce St

Peak Hour Turning Movement Count

ID: 19-03760-001
City: Tampa

Day: Tuesday
Date: 11/19/2019

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Lois Ave

SOUTHBOUND

AM	26	279	64	0	884	AM
NOON	0	0	0	0	0	NOON
PM	42	797	155	0	664	PM

EASTBOUND (Spruce St)

AM	NOON	PM	
228	0	283	⇦
0	0	0	↶ 0
53	0	27	↱ 0
106	0	151	→ 0
93	0	78	↴ 0

WESTBOUND (Spruce St)

PM	NOON	AM	
119	0	118	↰ 0
147	0	113	← 0
93	0	127	↲ 0
0	0	0	↳ 0
451	0	270	⇨

CONTROL: Signalized

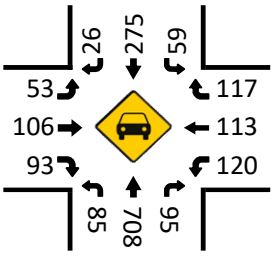
TEV	1881 AM	0 NOON	2366 PM
PHF	0.93		0.91

NORTHBOUND

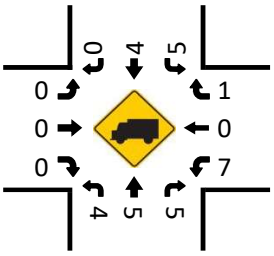
PM	968	0	94	518	145	PM
NOON	0	0	0	0	0	NOON
AM	499	0	89	713	100	AM

Lois Ave

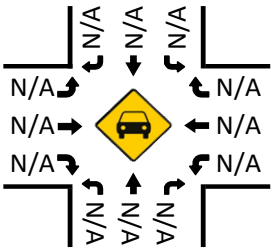
Cars (AM)



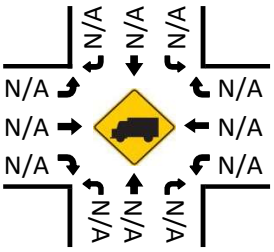
HT (AM)



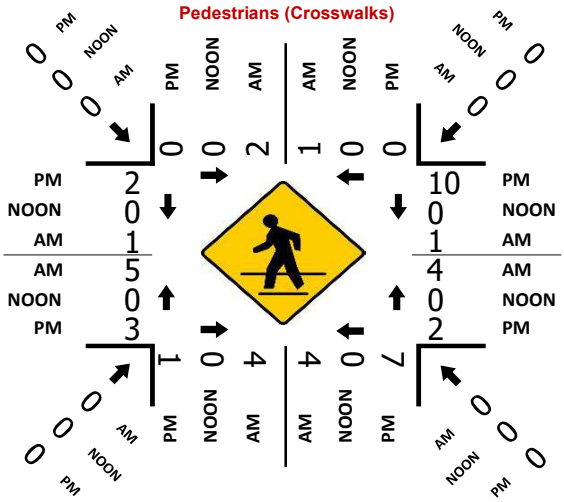
Cars (NOON)



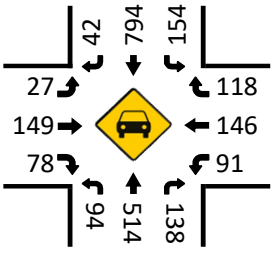
HT (NOON)



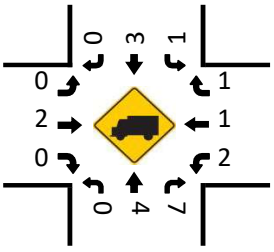
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



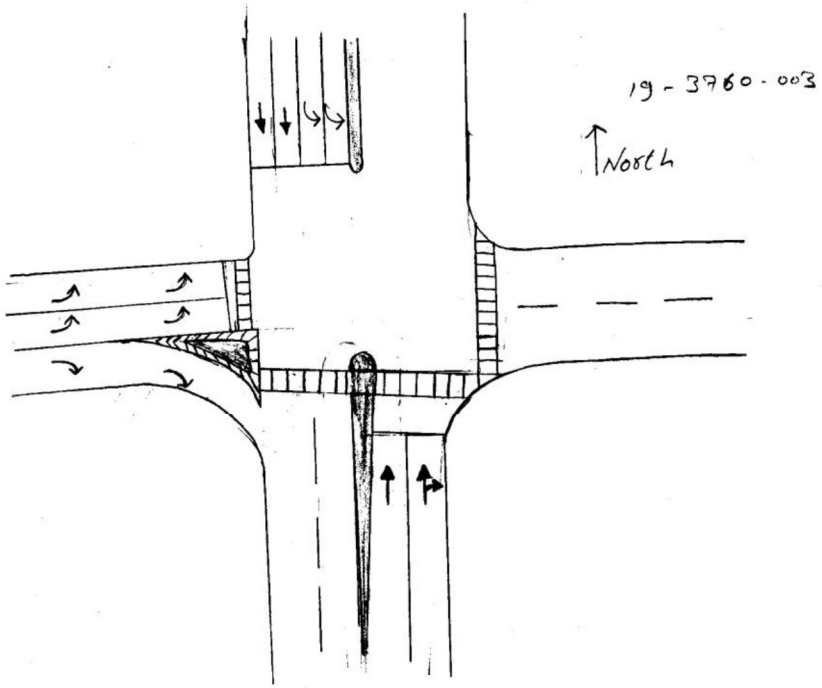
National Data & Surveying Services

N/S Street: **Lois Ave**

Speed: **35 MPH**

E/W Street: **I-275 NB On/Off Ramps**

Speed: **N/A**



Site Code: **19-3760-003**

Date: **11/19/2019**

Weather: **Sunny**

City: **Tampa**

County: **Hillsborough**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

SIGNAL TIMING

PHASES	**1**	**2**	**3**
NT/ST	01:28	01:28	01:30
SL/ST	00:35	00:35	00:34
EL	00:17	00:16	00:27

Prepared by National Data & Surveying Services

Lois Ave & Cypress St

Peak Hour Turning Movement Count

ID: 19-03760-002
City: Tampa

Day: Tuesday
Date: 11/19/2019

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Lois Ave — SOUTHBOUND

	Right	Thru	Left	U-Turn	Total (out)
AM	65	443	64	0	889
NOON	0	0	0	0	0
PM	43	830	147	0	753
	0	0	0	0	

Cypress St — EASTBOUND

	AM	NOON	PM	
Total (out)	1266	0	567	
U-Turn	1	0	0	0
Left	36	0	95	0
Thru	337	0	838	0
Right	253	0	573	0

Cypress St — WESTBOUND

		PM	NOON	AM
Right	0	241	0	331
Thru	0	432	0	1019
Left	0	214	0	93
U-Turn	0	6	0	1
Total (out)		1049	0	427

Lois Ave — NORTHBOUND

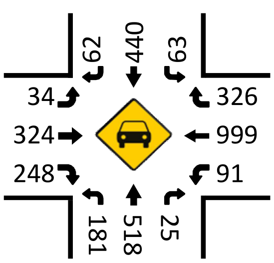
	Total (out)	U-Turn	Left	Thru	Right
		0	0	0	0
PM	1618	1	92	417	58
NOON	0	0	0	0	0
AM	789	0	181	522	25

CONTROL

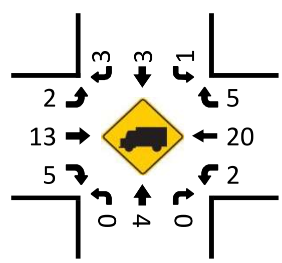
Signalized

	AM	NOON	PM
TEV	3371	0	3987
PHF	0.93		0.98

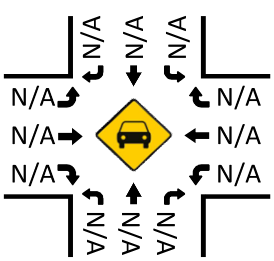
Cars (AM)



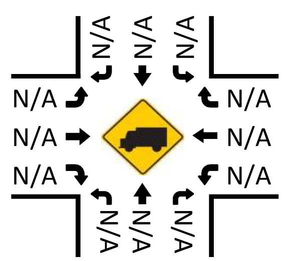
HT (AM)



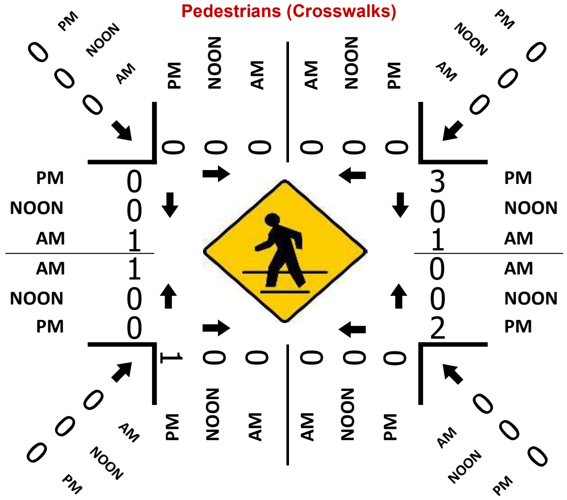
Cars (NOON)



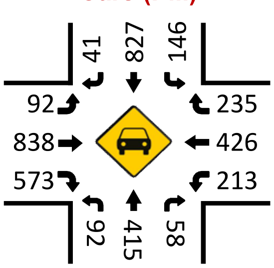
HT (NOON)



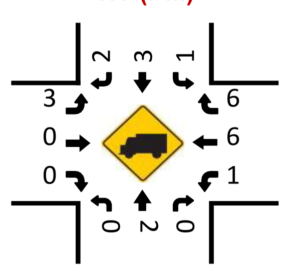
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

N/S Street: **Lois Ave**	Speed: **35 MPH**

E/W Street: **I-275 SB On Ramps** | Speed: **N/A**

Site Code: **19-3760-004**

Date: **11/19/2019**

Weather: **Sunny**

City: **Tampa**

County: **Hillsborough**

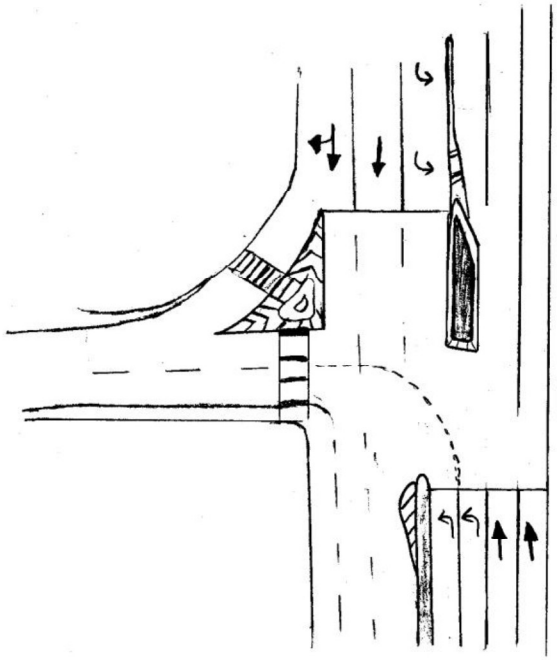
Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

SIGNAL TIMING

PHASES	**1**	**2**	**3**
NL/NT	00:40	00:40	00:53
NT/ST	01:38	01:40	01:26



Prepared by National Data & Surveying Services

Lois Ave & I-275 NB On/Off Ramps

Peak Hour Turning Movement Count

ID: 19-03760-003
City: Tampa

Day: Tuesday
Date: 11/19/2019

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1824	0	2354
PHF	0.97		0.92

Lois Ave — SOUTHBOUND

AM	0	305	291	3	901	AM
NOON	0	0	0	0	0	NOON
PM	0	740	364	0	906	PM

I-275 NB On/Off Ramps — EASTBOUND

AM	NOON	PM	
0	0	0	
0	0	0	0
179	0	113	0
0	0	1	0
27	0	129	0
AM	NOON	PM	

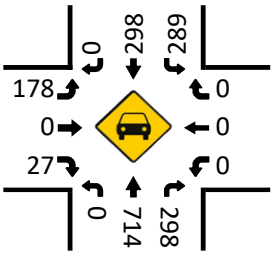
I-275 NB On/Off Ramps — WESTBOUND

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
579	0	591	
PM	NOON	AM	

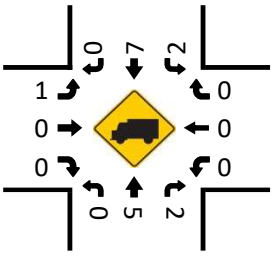
Lois Ave — NORTHBOUND

PM	869	0	0	793	214	PM
NOON	0	0	0	0	0	NOON
AM	332	0	0	719	300	AM

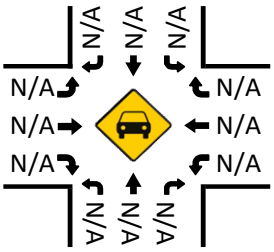
Cars (AM)



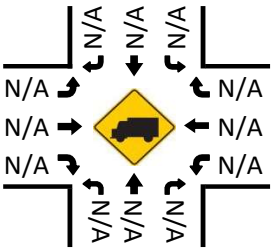
HT (AM)



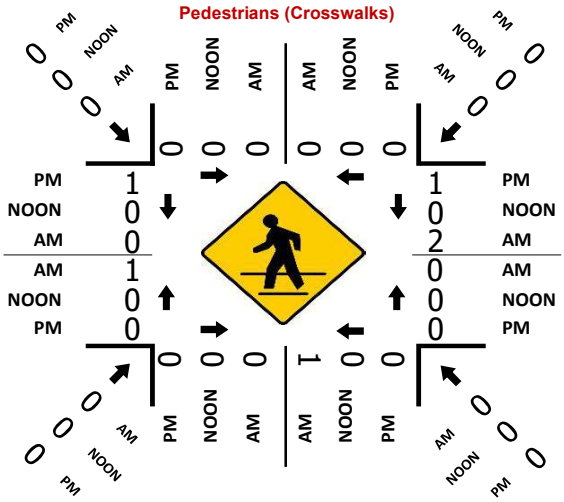
Cars (NOON)



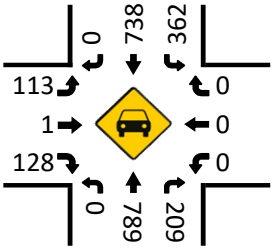
HT (NOON)



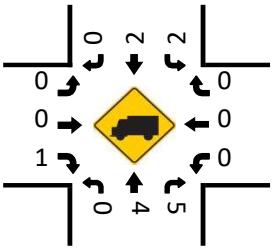
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

N/S Street: **Lois Ave**

Speed: **35 MPH**

E/W Street: **Spruce St**

Speed: **25 MPH**

Site Code: **19-3760-001**

Date: **11/19/2019**

Weather: **Sunny**

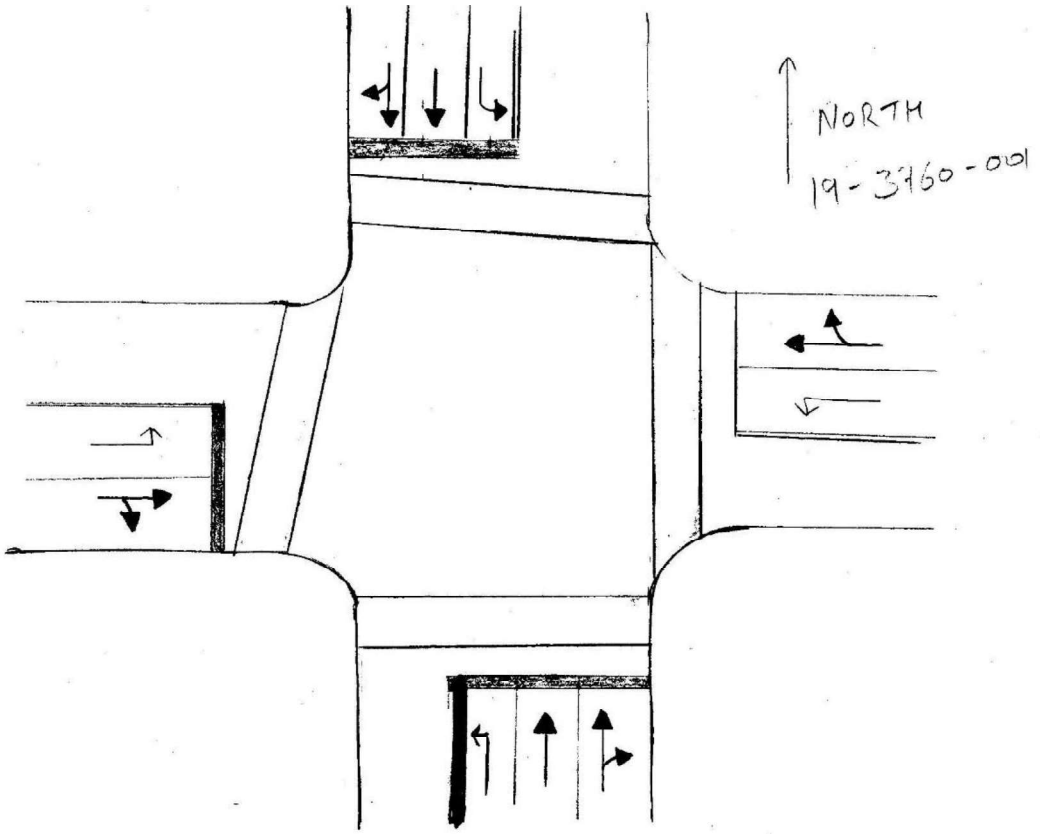
City: **Tampa**

County: **Hillsborough**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**



SIGNAL TIMING

PHASES	1	2	3
SL/ST	-	00:17	-
NT/ST	01:42	01:40	01:44
ET/WT	00:21	00:36	00:38

Prepared by National Data & Surveying Services

Lois Ave & I-275 SB On Ramps

Peak Hour Turning Movement Count

ID: 19-03760-004
City: Tampa

Day: Tuesday
Date: 11/19/2019

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:45 PM - 05:45 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Lois Ave — SOUTHBOUND

AM	178	600	0	0	743	AM
NOON	0	0	0	0	0	NOON
PM	502	1133	0	0	557	PM

I-275 SB On Ramps — EASTBOUND

AM	NOON	PM	
334	0	824	⇦
0	0	0	↶ 0
0	0	0	↱ 0
0	0	0	→ 0
0	0	0	↷ 0
AM	NOON	PM	

I-275 SB On Ramps — WESTBOUND

PM	NOON	AM	
0	0	0	↰ 0
0	0	0	← 0
0	0	0	↰ 0
0	0	0	↰ 0
0	0	0	⇨
PM	NOON	AM	

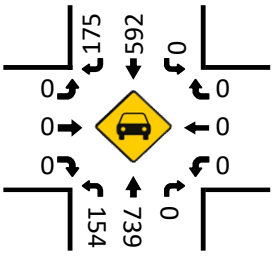
CONTROL: Signalized

TEV	1677 AM	0 NOON	2515 PM
PHF	0.97		0.95

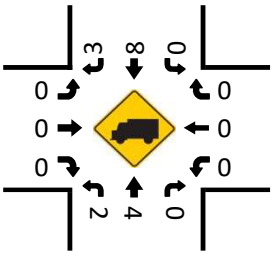
Lois Ave — NORTHBOUND

PM	1134	1	322	557	0	PM
NOON	0	0	0	0	0	NOON
AM	600	0	156	743	0	AM

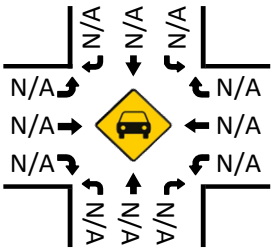
Cars (AM)



HT (AM)



Cars (NOON)



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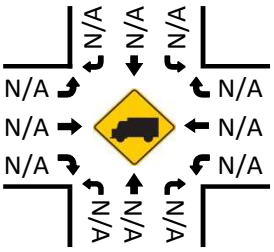
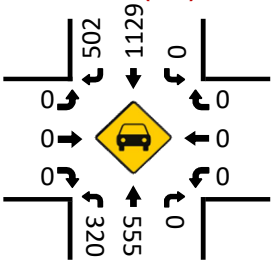
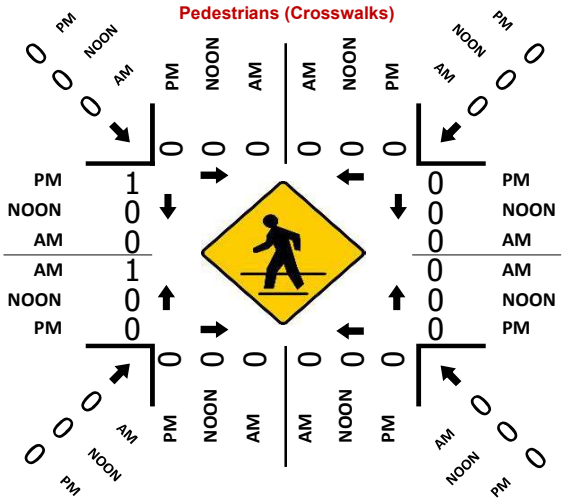


Cars (PM)



Pedestrians (Crosswalks)



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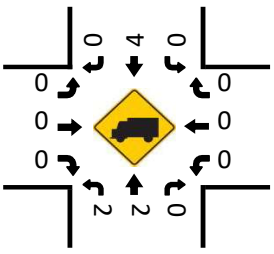


City of Tampa Signal Timing Sheet

Section ID: 3503 Computer: M CCU: 37 Drop: 2 Shop ID: 1599

Timing Date: 12/1/2014 Phase Date: 3/2/2005 Controller: ~~ASC2S~~ ASC3

Intersection: LOIS / CYPRESS

Phase Numbers Direction	1 NBLT	2 SB	3 EBLT	4 WB	5 SBLT	6 NB	7 WBLT	8 EB
Minimum Green	5	10	5	10	5	10	5	10
Walk		7		7		7		7
Flash Don't Walk	---	29	---	25	---	29	---	25
Vehicle Extension	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Max. Green I	35	35	20	35	35	35	20	35
Max. Green II	35	35	20	35	35	35	20	35
Yellow Clearance	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All Red Clearance	2.2	2.3	2.0	2.0	2.2	2.3	2.0	2.0
Phase Recall	---	MAX	---	---	---	MAX	---	---
Detector Memory	---	---	---	---	---	---	---	---
Ped. Recall	---	ON	---	---	---	ON	---	---
Flash Operation	---	YEL	---	RED	---	YEL	---	RED

Special Modes and Times of Operation:

Surveillance Times:

Flash Source: Flash Times:

C = Computer Flash T = Time Clock/Controller

Special Functions: 0
0
0

FDOT SOP: 1

Backup Protection (Y/N): Y

FDOT FDW (Y/N): Y

Please Implement Within : [ ] 1 Week [ ] 1 Month

Comments:

Submitted By: [illegible] Date: 12-1-2014

Reviewed By: [illegible] Date: 5-5-15

Approved By: RJ Date: 6-1-15

Signal Timing Implemented: [ ] As sent . [ ] With the following revisions

Date: 6/23/15 By: [illegible]

Signal Timing Not Implemented: [ ] Reasons: _____

Date: _____ By: _____

CITY OF TAMPA COMPUTER PATTERN SHEET 3503

3503 - LOIS & CYPRESS ASC/3

Timing Date: 11/14/2016			MIN	10	5	10	5
			YEL	4.4	4.4	4.4	4.4
MSX: M CCU: 37 Drop: 2			RED	2.3	2	2	2.2
			WLK	7		7	
Structures: 1			FDW	29		25	
Lead / Lag:			Min - 84	43	12	17	12
Pat			CYC	OS	NS	EWLT	EW	NSLT
1	Am	0615 - 0900	140	88	45	15	55	25
2	Am off	0900 - 1115	120	9	45	17	40	18
3	Noon	1115 - 1330	120	9	45	17	40	18
4	Pm off	1330 - 1515	120	9	45	17	40	18
5	Pm	1515 - 1830	140	11	45	20	50	25
6	Evening	1830 - 2200	120	9	45	15	45	15
7	Late	2200 - 0615	120	9	45	15	45	15
8	Buc IN		120	50	51	12	27	30
9	Buc OUT		95	86	53	12	17	13
10								
11								
12								
13								
14								
15								
16	Hurricane		200	189	59	12	39	90

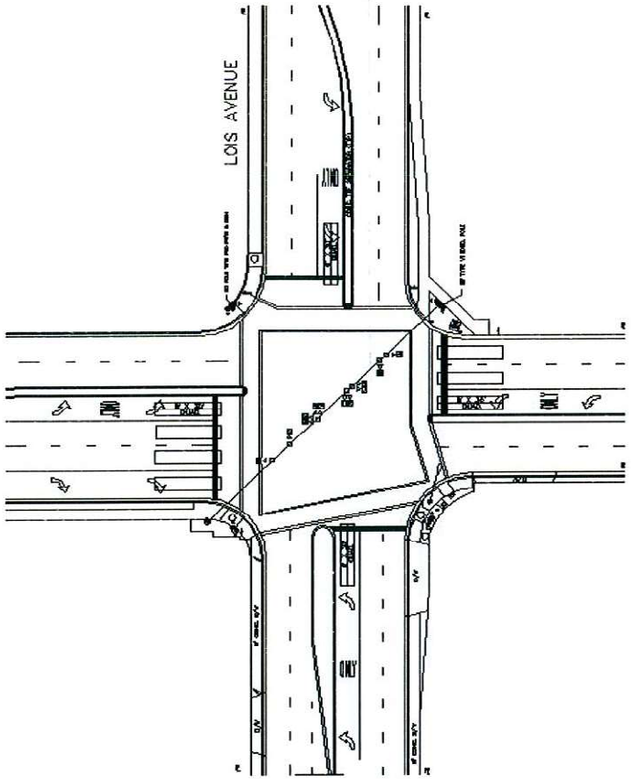
8-2-04: SBLT Phase 5 omitted during pattern 1

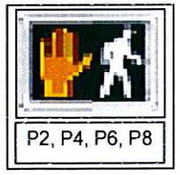
T.B.C. Day Plan 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
Day Plan 3: S-Su patt 7 and patt 2 all other times

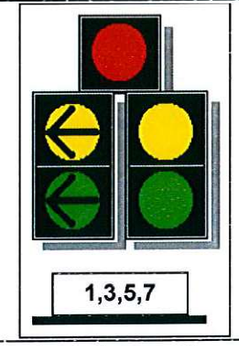
CITY OF TAMPA - Phasing Diagram

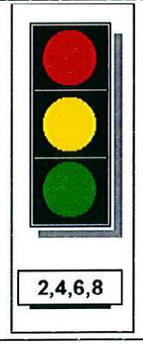
Pg: 1 of 2

Sect. I.D.#: 3503 | Controller: Econolite | Lois & Cypress | Mylar #.: | Prep. WJ | Rev.



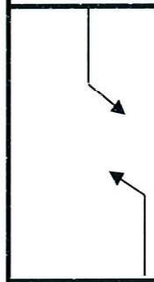
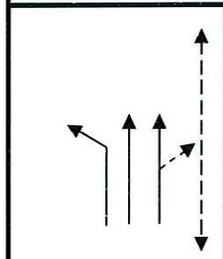
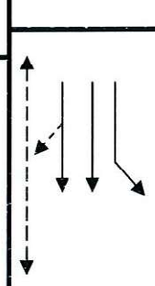
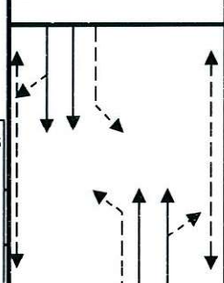

P2, P4, P6, P8


1,3,5,7


2,4,6,8

Notes: 8 phase semi-actuated operation. Concurrent ped phases with heads and buttons all corners.

*CNA & Flash exit phase

Date: 6/1/2015	Signal Head Numbers	1	2	3	4	5	6	7	8	P 2	P 4	P 6	P 8
Vehicle Movements	Flashing Operation		Y	Y		R	R		Y	Y		R	R					
	Phase	Interval	Display Sequence															
	Ø	RW	←G	R	R		R	R	←G	R	R		R	R		DW	DW	DW	DW
		CLR TO	←G	R	R		R	R	←Y	R	R		R	R		DW	DW	DW	DW
	1	1 & 6	←G	R	R		R	R		R	R		R	R		DW	DW	DW	DW
		CLR TO	←Y	R	R		R	R	←G	R	R		R	R		DW	DW	DW	DW
	&	2 & 5		R	R		R	R	←G	R	R		R	R		DW	DW	DW	DW
		CLR TO	←Y	R	R		R	R	←Y	R	R		R	R		DW	DW	DW	DW
	5	ALL OTHER		R	R		R	R		R	R		R	R		DW	DW	DW	DW
	Ø	RW	←G	G	R		R	R		R	G		R	R		DW	DW	W	DW
		CLR PED	←G	G	R		R	R		R	G		R	R		DW	DW	FDW	DW
	1	CLR TO	←Y	G	R		R	R		R	G		R	R		DW	DW	DW	DW
		2 & 6		G	R		R	R		R	G		R	R		DW	DW	DW	DW
	&																		
	6																		
	Ø	RW		R	G		R	R	←G	G	R		R	R		W	DW	DW	DW
		CLR PED		R	G		R	R	←G	G	R		R	R		FDW	DW	DW	DW
		CLR TO		R	G		R	R	←Y	G	R		R	R		DW	DW	DW	DW
	2	2 & 6		R	G		R	R		G	R		R	R		DW	DW	DW	DW
	&																		
	5																		
	Ø	RW		G	G		R	R		G	G		R	R		W	DW	W	DW
		CLR PED		G	G		R	R		G	G		R	R		FDW	DW	FDW	DW
		CLR TO		Y	Y		R	R		Y	Y		R	R		DW	DW	DW	DW
	2*	ALL OTHER		R	R		R	R		R	R		R	R		DW	DW	DW	DW
	&																		
	6*																		

CITY OF TAMPA - Phasing Diagram

Pg: 2 of 2

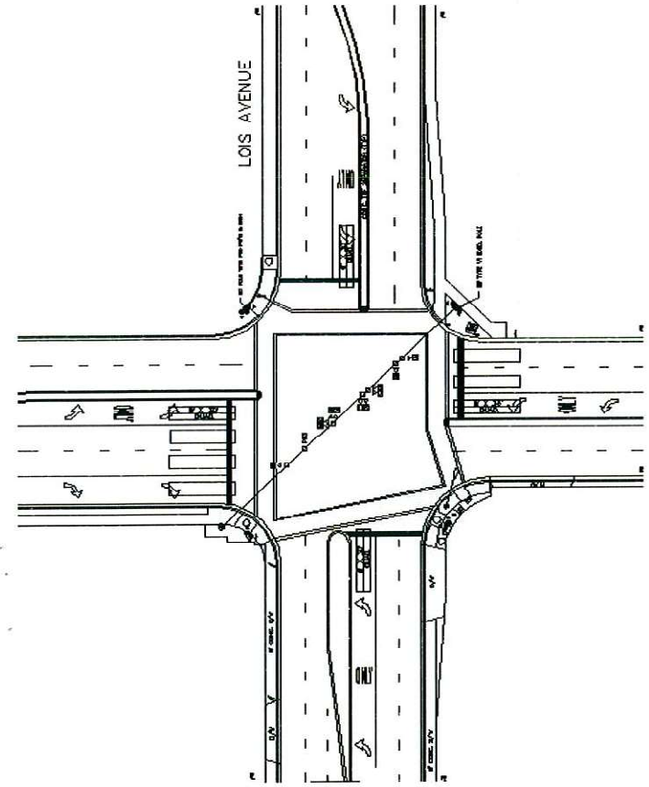
Sect. I.D.#: 3503

Location: Lois & Cypress

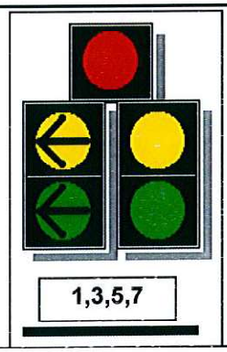
Mylar #.:

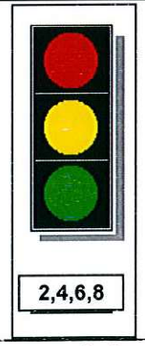
Prep. WJ

Rev.



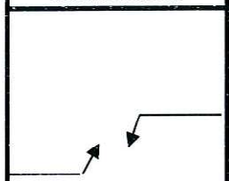
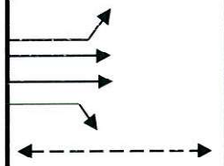
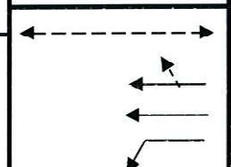
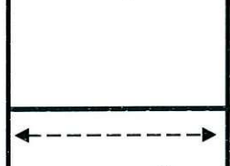

P2, P4, P6, P8


1,3,5,7


2,4,6,8

Notes: 8 phase semi-actuated operation. Concurrent ped phases with heads and buttons all corners.

*CNA & Flash exit phase

Vehicle Movements	Phase	Interval	1	2	3	4	5	6	7	8	P 2	P 4	P 6	P 8
Date: 6/1/2015	Signal Head Numbers		1	2	3	4	5	6	7	8	P 2	P 4	P 6	P 8
	Flashing Operation		Y	Y	R	R	Y	Y	R	R				
			Display Sequence											
	Ø	RW	R	R	←G	R	R	R	←G	R	DW	DW	DW	DW
		CLR TO	R	R	←G	R	R	R	←Y	R	DW	DW	DW	DW
	3	3 & 8	R	R	←G	R	R	R		R	DW	DW	DW	DW
		CLR TO	R	R	←Y	R	R	R	←G	R	DW	DW	DW	DW
	&	4 & 7	R	R		R	R	R	←G	R	DW	DW	DW	DW
		CLR TO	R	R	←Y	R	R	R	←Y	R	DW	DW	DW	DW
	7	ALL OTHER	R	R		R	R	R		R	DW	DW	DW	DW
	Ø	RW	R	R	←G	G	R	R		R	DW	DW	DW	W
		CLR PED	R	R	←G	G	R	R		R	DW	DW	DW	FDW
		CLR TO	R	R	←Y	G	R	R		R	DW	DW	DW	DW
	3	4 & 8	R	R	←Y	G	R	R		R	DW	DW	DW	DW
		CLR TO	R	R		Y	R	R		R	DW	DW	DW	DW
	&	ALL OTHER	R	R		R	R	R		R	DW	DW	DW	DW
	8													
	Ø	RW	R	R		R	G	R	←G	G	DW	W	DW	DW
		CLR PED	R	R		R	G	R	←G	G	DW	FDW	DW	DW
		CLR TO	R	R		R	G	R	←Y	G	DW	DW	DW	DW
	4	4 & 8	R	R		R	G	R		G	DW	DW	DW	DW
		CLR TO	R	R		R	Y	R	←Y	Y	DW	DW	DW	DW
	&	ALL OTHER	R	R		R	R	R		R	DW	DW	DW	DW
	7													
	Ø	RW	R	R		G	G	R		G	DW	W	DW	W
		CLR PED	R	R		G	G	R		G	DW	FDW	DW	FDW
		CLR TO	R	R		Y	Y	R		Y	DW	DW	DW	DW
	4	ALL OTHER	R	R		R	R	R		R	DW	DW	DW	DW
	&													
	8													

City of Tampa Signal Timing Sheet

Section ID 3504 Computer M CCU: 37 DROP: 3 MYLAR: 548 SHOP ID 1467

Timing Date 7/25/01 Phase Date: 7/10/00 Controller: ECONOLITE

Intersection **LOIS** and **I-275 (N)**

Phase Numbers	1	2		4		6		
Direction	NB LT	SB		WB		NB		
Minimum Green	5	10		5		10		
Walk	---	9		---		9		
Flash Don't Walk	---	1		---		1		
Vehicle Extension	2.0	3.0		3.0		3.0		
Max. Green I	25	50		50		50		
Max. Green II	25	50		50		50		
Yellow Clearance	3.0	3.9		3.0		3.9		
All Red Clearance	2.5	1.0		2.5		1.0		
Phase Recall	---	MAX		---		MAX		
Detector Memory	---	---		ON		---		
Ped. Recall	---	---		---		---		
Flash Operation	---	YEL		RED		YEL		

Special Modes and Times of Operations:

Surveillance Times

Flash Source Times:

C = Computer Flash T = Time Clock/Controller

Special Function

Please Implement Within: [✓] 1 Week [ ] 1 Month

Comments:

UPDATE TIMINGS

Submitted By: SK Date: 7-25-01

Reviewed By: RL Date: 7-27-01

Approved By: [illegible] Date: 7-27-01

Signal Timing Implemented: [✓] As Sent [ ] With Following Revisions

Date: 08-08-01

[ ] Signal Timing Not Implemented Reason:

Date: _____ By: [illegible]

CITY OF TAMPA COMPUTER PATTERN SHEET

3505 - LOIS & I-275

ASC/3

Timing Date: 11/14/2016 MSX: M CCU: 37 Drop: 4 Structures: 1 Lead / Lag:		MIN YEL RED WLK FDW	10 4 3.5 7 23	5 4 3.5	5 4 3.5 7 24	5 4 3.5
		Min - 64	38	13	13	13
Pat	CYC OS		2+6	2+5	8	1+6
1 Am 0615 - 0900	110 35		28	23	39	20
2 Am off 0900 - 1115	120 114		50	20	40	30
3 Noon 1115 - 1330	120 114		50	20	40	30
4 Pm off 1330 - 1515	120 114		50	20	40	30
5 Pm 1515 - 1830	140 124		70	35	40	30
6 Evening 1830 - 2200	120 118		50	20	40	30
7 Late 2200 - 0615	120 118		50	20	40	30
8 Buc IN	120 37		70	20	30	20
9 Buc OUT	120 71		85	45	15	20
10						
11						
12						
13						
14						
15						
16 Hurricane	200 109		100	30	50	20

T.B.C. Day Plan 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
Day Plan 3: S-Su patt 7 and patt 2 all other times

Channel #37 Drop #3 Sec ID# 3526

Mylar Filed: 100.548

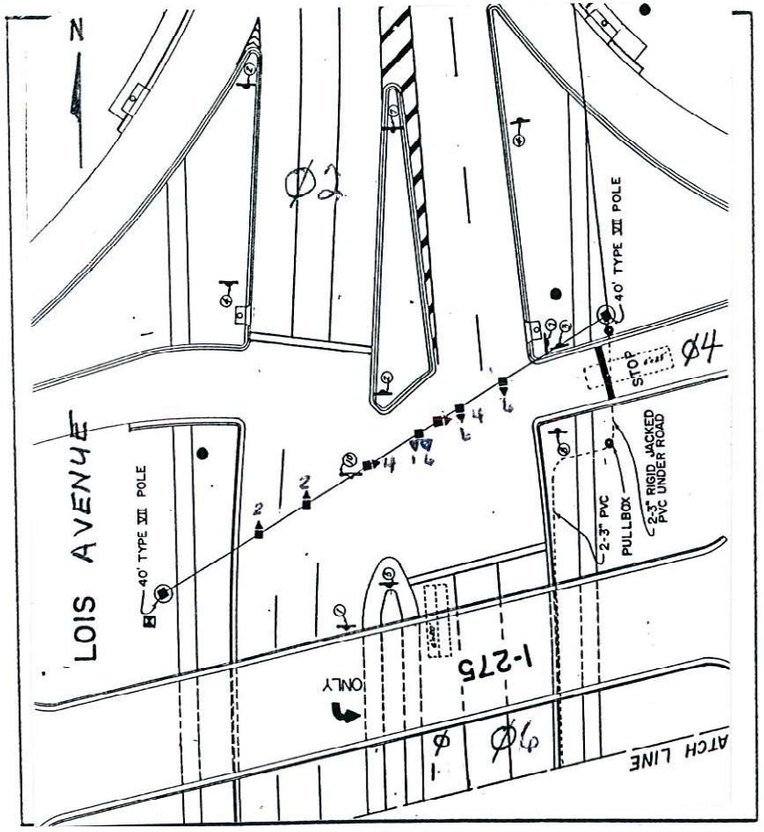
CITY OF TAMPA - Phasing Diagram

Page 1 of 1

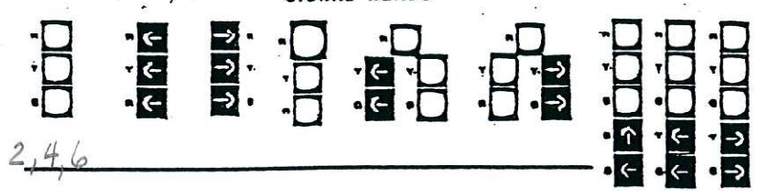
Location: Lois Ave + I-275 (NORTH)

Prep. By: SK

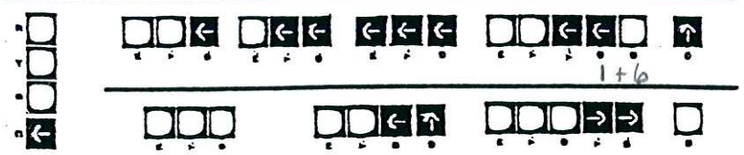
Date: 7/10/00



SIGNAL HEADS



2,4,6



Vehicle Movements	Phase	Interval	Signal Head Number	1/6	2	4	6	P2	P4	P6	P8
			Flashing Operation	Y	Y	R	Y				
			Display Sequence								
	1+6	RW	←G	G	R	R	G				
		CLR TO	←Y	G	R	R	G				
		2+6		G	R	R	G				
		CLR TO	←Y	Y	R	R	Y				
		All Other		R	R	R	R				
	2+6	RW		G	G	R	G				
		CLR TO		G	Y	R	G				
		1+6		G	R	R	G				
		CLR TO		Y	Y	R	Y				
		All Other		R	R	R	R				
	4	RW		R	R	G	R				
		CLR TO		R	R	Y	R				
		All Other		R	R	R	R				

Notes: 8-Phase semi-actuated controller operating w/ 4 phases. No ped heads or buttons

City of Tampa Signal Timing Sheet

Section ID: 3505 Computer: M CCU: 37 Drop: 4 Shop ID: 1512

Timing Date: 5/11/2016 Phase Date: 5/11/2016 Controller: ASC3

Intersection: LOIS / I-275

Phase Numbers	1	2	5	6	8
Direction	NBLT	SB	SBLT	NB	EBLT
Minimum Green	5	10	5	10	5
Walk	---	7	---	7	7
Flash Don't Walk	---	23	---	23	24
Vehicle Extension	2.0	3.0	2.0	3.0	3.0
Max. Green I	20	65	20	65	30
Max. Green II	35	65	35	65	40
Yellow Clearance	4.0	4.0	4.0	4.0	4.0
All Red Clearance	3.5	3.5	3.5	3.5	3.5
Phase Recall	---	MAX	---	MAX	---
Detector Memory	---	---	---	---	---
Ped. Recall	---	ON	ON	---	---
Flash Operation	RED	YEL	RED	YEL	RED

Special Modes and Times of Operation:

Surveillance Times:

Flash Source: Flash Times:

C = Computer Flash T = Time Clock/Controller

Special Functions: 0

0

0

FDOT SOP: 12 MOD

Backup Protection (Y/N): N

FDOT FDW (Y/N): Y

Please Implement Within : [ ] 1 Week [ ] 1 Month

Comments:

Submitted By: _____ Date: 5-11-16

Reviewed By: _____ Date: 5/16/16

Approved By: _____ Date: 5.16.16

Signal Timing Implemented: [ ] As sent . [ ] With the following revisions

Date: 5/16/16 By: _____

Signal Timing Not Implemented: [ ] Reasons: _____

Date: _____ By: _____

CITY OF TAMPA COMPUTER PATTERN SHEET 3505

3505 - LOIS & I-275 ECONOLITE

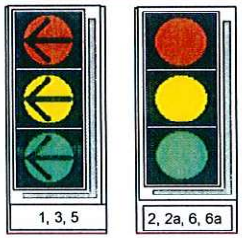
Timing Date: 09/20/2016 MSX: M CCU: 37 Drop: 4 Structures: 1 Lead / Lag:			MIN YEL RED WLK FDW	10 4 3.5 7 23	5 4 3.5	5 4 3.5 7 24	5 4 3.5
		Min - 64		38	13	13	13
Pat		CYC OS		2+6	2+5	8	1+6
1 Am	0615 - 0900	110 35		28	23	39	20
2 Am off	0900 - 1115	120 104		40	20	40	20
3 Noon	1115 - 1330	120 104		40	20	40	20
4 Pm off	1330 - 1515	120 104		40	20	40	20
5 Pm	1515 - 1830	140 124		45	35	40	20
6 Evening	1830 - 2200	120 118		40	20	40	20
7 Late	2200 - 0615	120 118		40	20	40	20
8 Buc IN		120 37		50	20	30	20
9 Buc OUT		120 71		40	45	15	20
10							
11							
12							
13							
14							
15							
16 Hurricane		200 109		100	30	50	20

T.B.C. Day Plan 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
Day Plan 3: S-Su patt 7 and patt 2 all other times

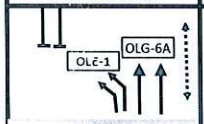
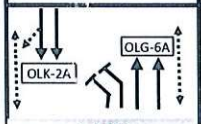
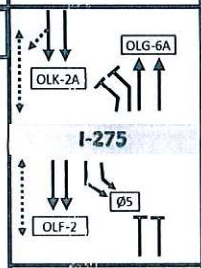
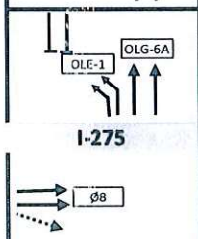
City of Tampa - Phasing Diagram

FDOT SOP#	12 MOD	Sect. I.D.#	3505
Location:	LOIS / I-275 (S)	Prepared by	GT
Phasing Date:	8/14/2015	Ø Diagram	8/14/2015
Controller:	Econolite ASC2S	Form Vers.	2/10/2014
Pg:	1 of 2	Reviewed by	

Signal Head Display:



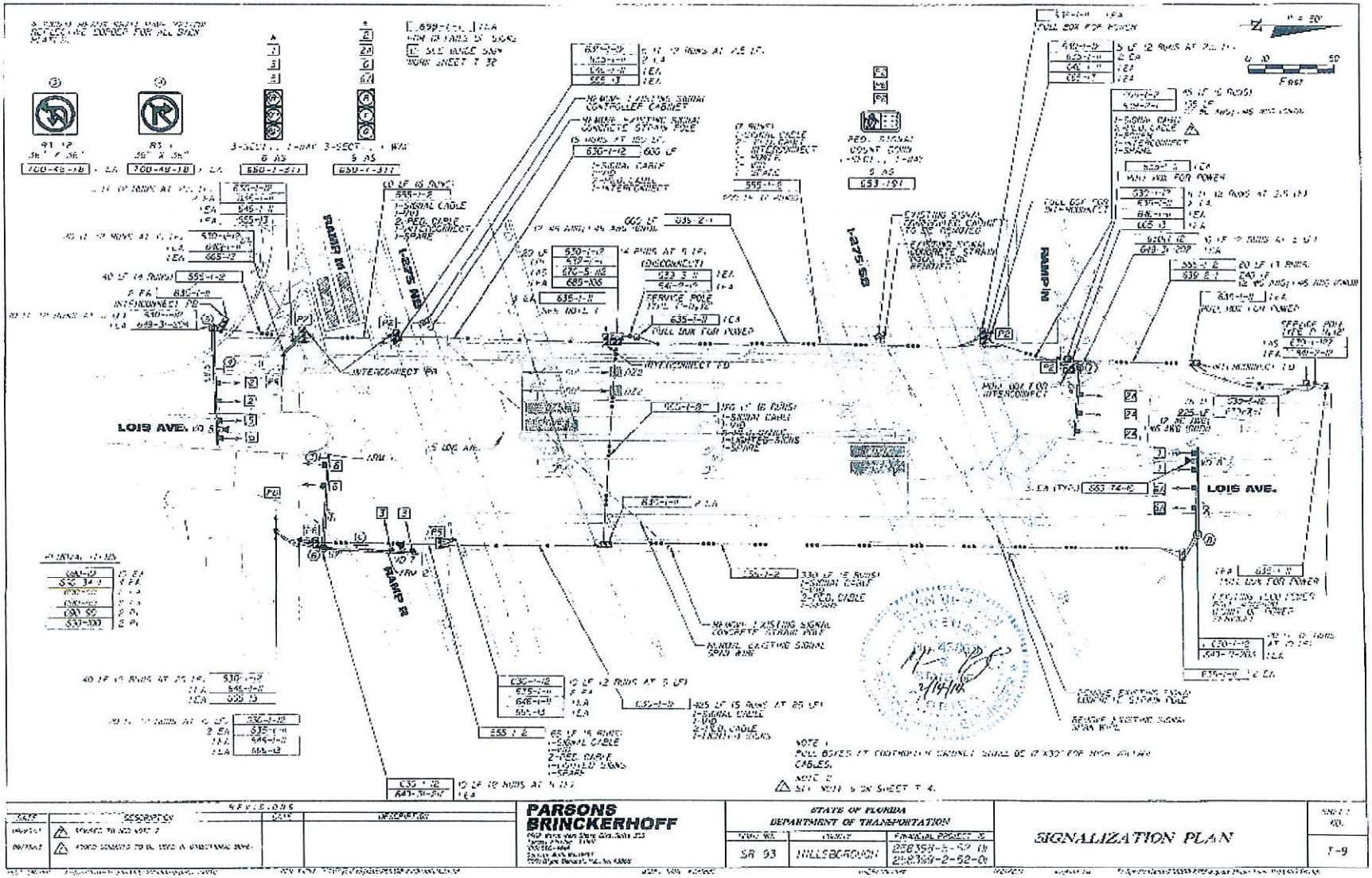
Comments:

Vehicle Movements	Phase	Interval	OLK 1	OLK 2	OLK 2a	OLG 5	OLG 6	OLG 6a	OLG 8	P2	P4	P6	P8
		Overlaps / Signal Head Numbers											
		Flashing Operation	←R	Y	Y	←R	Y	Y	←R		N/A		
			Display Sequence										
	Ø1	RW	←G	G	R	←R	G	G	←R	DW		W	DW
		Clear Ped	←G	G	R	←R	G	G	←R	DW		FDW	DW
	&	Clear to	←Y	G	R	←R	G	G	←R	DW		DW	DW
		Ø2 & Ø6	←R	G	R	←R	G	G	←R	DW		DW	DW
	Ø6												
	OLE												
	OLG												
	OLF												
	P6												
	Ø2	RW	←R	G	G	←R	G	G	←R	W		W	DW
		Clear Ped	←R	G	G	←R	G	G	←R	FDW		FDW	DW
	&	Clear to	←R	G	G	←R	Y	G	←R	DW		DW	DW
		Ø2 & Ø5	←R	G	G	←R	R	G	←R	DW		DW	DW
	Ø6	Clear to	←R	Y	Y	←R	Y	G	←R	DW		DW	DW
	OLF	Ø8	←R	R	R	←R	R	G	←R	DW		DW	DW
	OLG												
	OLK												
	P2												
	P6												
	Ø2	RW	←R	G	G	←G	R	G	←R	W		DW	DW
		Clear Ped	←R	G	G	←G	R	G	←R	FDW		DW	DW
		Clear to	←R	Y	Y	←Y	R	G	←R	DW		DW	DW
	&	Ø8	←R	R	R	←R	R	G	←R	DW		DW	DW
		Clear to	←R	G	G	←Y	R	G	←R	DW		DW	DW
	Ø5	Ø2 & Ø6	←R	G	G	←R	R	G	←R	DW		DW	DW
	OLF												
	OLG												
	OLK												
	P2												
	Ø8	RW	←G	R	R	←R	R	G	←G	DW		DW	W
		Clear Ped	←G	R	R	←R	R	G	←G	DW		DW	FDW
		Clear to	←Y	R	R	←R	R	G	←Y	DW		DW	DW
		Ø2 & Ø6	←R	R	R	←R	R	G	←R	DW		DW	DW
	OLE												
	OLG												
	P8												
Signal Head #			1	2	2a	5	6	6a	8				
Econolite Overlaps			OLE	OLF	OLK			OLG					
Load Switch #			LS8	LS2	LS7	LS5	LS6	LS3	LS8	LS13	LS14	LS15	LS16
Peek Overlaps													

Intersection Drawing

FDOT SOP#	12 MOD		Sect. I.D.#	3505
Phasing Date:	8/14/2015		Location:	LOIS / I-275 (S)

Ø Diagram	8/14/2015
Form Vers.	2/10/2014
Pg: 2	of 2



City of Tampa Signal Timing Sheet

Section ID: 3501 Computer: M CCU: 37 Drop: 7 Shop ID: 1550

Timing Date: 10/6/2016 Phase Date: 7/14/2000 Controller: ASC3

Intersection: LOIS / SPRUCE

Phase Numbers	2	4	5	6	8
Direction	SB	WB	SB LT	NB	EB
Minimum Green	10	10	5	10	10
Walk	7	7		7	7
Flash Don't Walk	19	21	---	19	21
Vehicle Extension	3.0	3.0	2.0	3.0	3.0
Max. Green I	40	45	15	40	45
Max. Green II	40	45	15	40	45
Yellow Clearance	4.0	3.7	4.0	4.0	3.7
All Red Clearance	2.2	2.7	2.0	2.2	2.7
Phase Recall	MIN	---	---	MIN	---
Detector Memory	---	---	---	---	---
Ped. Recall	---	---	---	---	---
Flash Operation	YEL	RED	---	YEL	RED

Special Modes and Times of Operation:

Surveillance Times: 24 Hrs. except M-F 1515-1830

Flash Source: Flash Times:

C = Computer Flash T = Time Clock/Controller

Special Functions: 0
0
0

FDOT SOP: 1 MOD

Backup Protection (Y/N): Y

FDOT FDW (Y/N): Y

Please Implement Within : [X] 1 Week [ ] 1 Month

Comments:

Controller / MMU Upgrade 10-6-2016

Submitted By: _____ Date: 10-6-16

Reviewed By: GT Date: 10-6-16

Approved By: VB Date: 10/6/16

Signal Timing Implemented: [✓] As sent . [ ] With the following revisions

Date: 10-31-16 By: J. Castillo

Signal Timing Not Implemented: [ ] Reasons: _____

Date: _____ By: _____

City of Tampa Signal Timing Sheet

Form Ver : 10/19/2016

Section ID: 3501 Computer: M CCU: 37 Drop: 7 Facilities ID: Shop ID: 1550

Timing Date: 10/6/2016 Phase Date: 7/14/2000 Controller: ASC3

Intersection: LOIS / SPRUCE

Phase Numbers	2	4	5	6	8
Direction	SB	WB	SB LT	NB	EB
Minimum Green	10	10	5	10	10
Walk	7	7		7	7
Walk - XGuard					
FDW	19	21	---	19	21
FDW - XGuard					
Vehicle Extension	3.0	3.0	2.0	3.0	3.0
Max. Green I	40	45	15	40	45
Max. Green II	40	45	15	40	45
Yellow Clearance	4.0	3.7	4.0	4.0	3.7
All Red Clearance	2.2	2.7	2.0	2.2	2.7
Phase Recall	MIN	---	---	MIN	---
Detector Memory	---	---	---	---	---
Ped. Recall	---	---	---	---	---
Flash Operation	YEL	RED	---	YEL	RED

Special Modes and Times of Operation:

Surveillance Time 24Hrs except M-F 1515-1830 Surveillance Other Time

Crossing Guard Times A

Crossing Guard Times P

Railroad Preempt: No Fire Preempt: No Bridge Preempt: No

Flash Source: C = Computer T = TOD/Controller

Special Functions: 0 0 0

Flash Time Primary:

Flash Time Secondary:

FDOT SOP: 1 MOD

Backup Protection (Y/N): Y

FDOT FDW (Y/N): Y

Comments:

Controller / MMU Upgrade 10-6-2016

Please Implement Signal Timings Within : [ ] 1 Week [ ] 1 Month

Submitted By: [signature] Date: 10-3L-16

Reviewed By: [signature] Date: 10-3-16

Approved By: [signature] Date: 10/31/16

Implemented By: [signature] Date: 10/31/2016

Implemented as sent: [✓] With the following revisions below: [ ] Returned, not implemented: [ ]

INS NEW ASC/3-2100 CON & MMU2-16LEip

CITY OF TAMPA COMPUTER PATTERN SHEET

3501 - LOIS & SPRUCE

ECONOLITE

Timing Date: 05/01/2015

MSX: M CCU: 37 Drop: 7

Structures: 1
Lead / Lag: 1

			MIN	10	10	5
			YEL	4	3.7	4
			RED	2.2	2.7	2
			WLK	7	7	
			FDW	19	21	
			Min - 62	33	17	12

Pat			CYC	FOS	OS	NS	EW	SBLT
1	Am	0615 - 0900	140	115	135	70	50	20
2	Am off	0900 - 1115	120	42	57	60	45	15
3	Noon	1115 - 1330	120	42	57	60	45	15
4	Pm off	1330 - 1515	120	42	57	60	45	15
5	Pm	1515 - 1830	140	100	120	80	40	20
6	Evening	1830 - 2200	120	32	47	60	45	15
7	Late	2200 - 0615	120	32	47	60	45	15
8	Buc IN		95	43	56	38	44	13
9	Buc OUT		95	43	56	64	18	13
10								
11								
12								
13								
14			200	187	0	158	29	13
15			200	187	0	158	29	13
16	Hurricane		95	43	56	38	44	13

ONLINE M-F 1515 - 1830 HRS, IN SURVEILLANCE ALL OTHER TIMES.

T.B.C. Day Plan 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
Day Plan 3: S-Su patt 7 and patt 2 all other times

Appendix B

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1000 HILLSBOROUGH COUNTYWIDE

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	1.12	1.15
2	01/07/2018 - 01/13/2018	1.07	1.10
3	01/14/2018 - 01/20/2018	1.03	1.06
4	01/21/2018 - 01/27/2018	1.01	1.04
* 5	01/28/2018 - 02/03/2018	0.99	1.02
* 6	02/04/2018 - 02/10/2018	0.98	1.01
* 7	02/11/2018 - 02/17/2018	0.96	0.99
* 8	02/18/2018 - 02/24/2018	0.96	0.99
* 9	02/25/2018 - 03/03/2018	0.96	0.99
*10	03/04/2018 - 03/10/2018	0.95	0.98
*11	03/11/2018 - 03/17/2018	0.95	0.98
*12	03/18/2018 - 03/24/2018	0.96	0.99
*13	03/25/2018 - 03/31/2018	0.96	0.99
*14	04/01/2018 - 04/07/2018	0.96	0.99
*15	04/08/2018 - 04/14/2018	0.97	1.00
*16	04/15/2018 - 04/21/2018	0.97	1.00
*17	04/22/2018 - 04/28/2018	0.98	1.01
18	04/29/2018 - 05/05/2018	1.00	1.03
19	05/06/2018 - 05/12/2018	1.01	1.04
20	05/13/2018 - 05/19/2018	1.02	1.05
21	05/20/2018 - 05/26/2018	1.02	1.05
22	05/27/2018 - 06/02/2018	1.01	1.04
23	06/03/2018 - 06/09/2018	1.01	1.04
24	06/10/2018 - 06/16/2018	1.00	1.03
25	06/17/2018 - 06/23/2018	1.01	1.04
26	06/24/2018 - 06/30/2018	1.02	1.05
27	07/01/2018 - 07/07/2018	1.02	1.05
28	07/08/2018 - 07/14/2018	1.03	1.06
29	07/15/2018 - 07/21/2018	1.04	1.07
30	07/22/2018 - 07/28/2018	1.03	1.06
31	07/29/2018 - 08/04/2018	1.01	1.04
32	08/05/2018 - 08/11/2018	1.00	1.03
33	08/12/2018 - 08/18/2018	0.99	1.02
34	08/19/2018 - 08/25/2018	0.99	1.02
35	08/26/2018 - 09/01/2018	1.00	1.03
36	09/02/2018 - 09/08/2018	1.00	1.03
37	09/09/2018 - 09/15/2018	1.00	1.03
38	09/16/2018 - 09/22/2018	1.00	1.03
39	09/23/2018 - 09/29/2018	0.99	1.02
40	09/30/2018 - 10/06/2018	0.99	1.02
41	10/07/2018 - 10/13/2018	0.98	1.01
42	10/14/2018 - 10/20/2018	0.98	1.01
43	10/21/2018 - 10/27/2018	0.99	1.02
44	10/28/2018 - 11/03/2018	1.00	1.03
45	11/04/2018 - 11/10/2018	1.02	1.05
46	11/11/2018 - 11/17/2018	1.03	1.06
47	11/18/2018 - 11/24/2018	1.05	1.08
48	11/25/2018 - 12/01/2018	1.07	1.10
49	12/02/2018 - 12/08/2018	1.09	1.12
50	12/09/2018 - 12/15/2018	1.12	1.15
51	12/16/2018 - 12/22/2018	1.09	1.12
52	12/23/2018 - 12/29/2018	1.06	1.09
53	12/30/2018 - 12/31/2018	1.03	1.06

* PEAK SEASON

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1004 HILLSBOROUGH I4

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	1.04	1.09
2	01/07/2018 - 01/13/2018	1.03	1.08
3	01/14/2018 - 01/20/2018	1.02	1.07
4	01/21/2018 - 01/27/2018	1.00	1.05
* 5	01/28/2018 - 02/03/2018	0.98	1.03
* 6	02/04/2018 - 02/10/2018	0.96	1.01
* 7	02/11/2018 - 02/17/2018	0.94	0.99
* 8	02/18/2018 - 02/24/2018	0.93	0.98
* 9	02/25/2018 - 03/03/2018	0.93	0.98
*10	03/04/2018 - 03/10/2018	0.93	0.98
*11	03/11/2018 - 03/17/2018	0.93	0.98
*12	03/18/2018 - 03/24/2018	0.94	0.99
*13	03/25/2018 - 03/31/2018	0.95	1.00
*14	04/01/2018 - 04/07/2018	0.96	1.01
*15	04/08/2018 - 04/14/2018	0.97	1.02
*16	04/15/2018 - 04/21/2018	0.98	1.03
*17	04/22/2018 - 04/28/2018	0.99	1.04
18	04/29/2018 - 05/05/2018	1.00	1.05
19	05/06/2018 - 05/12/2018	1.02	1.07
20	05/13/2018 - 05/19/2018	1.03	1.08
21	05/20/2018 - 05/26/2018	1.03	1.08
22	05/27/2018 - 06/02/2018	1.02	1.07
23	06/03/2018 - 06/09/2018	1.02	1.07
24	06/10/2018 - 06/16/2018	1.01	1.06
25	06/17/2018 - 06/23/2018	1.01	1.06
26	06/24/2018 - 06/30/2018	1.02	1.07
27	07/01/2018 - 07/07/2018	1.02	1.07
28	07/08/2018 - 07/14/2018	1.02	1.07
29	07/15/2018 - 07/21/2018	1.03	1.08
30	07/22/2018 - 07/28/2018	1.02	1.07
31	07/29/2018 - 08/04/2018	1.02	1.07
32	08/05/2018 - 08/11/2018	1.02	1.07
33	08/12/2018 - 08/18/2018	1.02	1.07
34	08/19/2018 - 08/25/2018	1.03	1.08
35	08/26/2018 - 09/01/2018	1.03	1.08
36	09/02/2018 - 09/08/2018	1.04	1.09
37	09/09/2018 - 09/15/2018	1.05	1.11
38	09/16/2018 - 09/22/2018	1.04	1.09
39	09/23/2018 - 09/29/2018	1.04	1.09
40	09/30/2018 - 10/06/2018	1.03	1.08
41	10/07/2018 - 10/13/2018	1.03	1.08
42	10/14/2018 - 10/20/2018	1.03	1.08
43	10/21/2018 - 10/27/2018	1.03	1.08
44	10/28/2018 - 11/03/2018	1.03	1.08
45	11/04/2018 - 11/10/2018	1.04	1.09
46	11/11/2018 - 11/17/2018	1.04	1.09
47	11/18/2018 - 11/24/2018	1.04	1.09
48	11/25/2018 - 12/01/2018	1.04	1.09
49	12/02/2018 - 12/08/2018	1.04	1.09
50	12/09/2018 - 12/15/2018	1.04	1.09
51	12/16/2018 - 12/22/2018	1.03	1.08
52	12/23/2018 - 12/29/2018	1.03	1.08
53	12/30/2018 - 12/31/2018	1.02	1.07

* PEAK SEASON

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1027 HILLSBOROUGH I275

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	0.99	1.02
2	01/07/2018 - 01/13/2018	1.03	1.06
3	01/14/2018 - 01/20/2018	1.06	1.09
4	01/21/2018 - 01/27/2018	1.05	1.08
5	01/28/2018 - 02/03/2018	1.03	1.06
6	02/04/2018 - 02/10/2018	1.02	1.05
* 7	02/11/2018 - 02/17/2018	1.00	1.03
* 8	02/18/2018 - 02/24/2018	0.98	1.01
* 9	02/25/2018 - 03/03/2018	0.97	1.00
*10	03/04/2018 - 03/10/2018	0.95	0.98
*11	03/11/2018 - 03/17/2018	0.93	0.96
*12	03/18/2018 - 03/24/2018	0.94	0.97
*13	03/25/2018 - 03/31/2018	0.95	0.98
*14	04/01/2018 - 04/07/2018	0.95	0.98
*15	04/08/2018 - 04/14/2018	0.96	0.99
*16	04/15/2018 - 04/21/2018	0.97	1.00
*17	04/22/2018 - 04/28/2018	0.98	1.01
*18	04/29/2018 - 05/05/2018	1.00	1.03
*19	05/06/2018 - 05/12/2018	1.01	1.04
20	05/13/2018 - 05/19/2018	1.02	1.05
21	05/20/2018 - 05/26/2018	1.02	1.05
22	05/27/2018 - 06/02/2018	1.01	1.04
23	06/03/2018 - 06/09/2018	1.01	1.04
24	06/10/2018 - 06/16/2018	1.00	1.03
25	06/17/2018 - 06/23/2018	1.00	1.03
26	06/24/2018 - 06/30/2018	1.00	1.03
27	07/01/2018 - 07/07/2018	1.01	1.04
28	07/08/2018 - 07/14/2018	1.01	1.04
29	07/15/2018 - 07/21/2018	1.01	1.04
30	07/22/2018 - 07/28/2018	1.02	1.05
31	07/29/2018 - 08/04/2018	1.02	1.05
32	08/05/2018 - 08/11/2018	1.03	1.06
33	08/12/2018 - 08/18/2018	1.03	1.06
34	08/19/2018 - 08/25/2018	1.04	1.07
35	08/26/2018 - 09/01/2018	1.05	1.08
36	09/02/2018 - 09/08/2018	1.06	1.09
37	09/09/2018 - 09/15/2018	1.07	1.10
38	09/16/2018 - 09/22/2018	1.06	1.09
39	09/23/2018 - 09/29/2018	1.04	1.07
40	09/30/2018 - 10/06/2018	1.03	1.06
41	10/07/2018 - 10/13/2018	1.01	1.04
42	10/14/2018 - 10/20/2018	1.00	1.03
43	10/21/2018 - 10/27/2018	0.99	1.02
44	10/28/2018 - 11/03/2018	0.98	1.01
45	11/04/2018 - 11/10/2018	0.97	1.00
46	11/11/2018 - 11/17/2018	0.96	0.99
47	11/18/2018 - 11/24/2018	0.97	1.00
48	11/25/2018 - 12/01/2018	0.98	1.01
49	12/02/2018 - 12/08/2018	0.98	1.01
50	12/09/2018 - 12/15/2018	0.99	1.02
51	12/16/2018 - 12/22/2018	1.01	1.04
52	12/23/2018 - 12/29/2018	1.04	1.07
53	12/30/2018 - 12/31/2018	1.06	1.09

* PEAK SEASON

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1075 HILLSBOROUGH I75

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	0.98	1.00
2	01/07/2018 - 01/13/2018	1.01	1.03
3	01/14/2018 - 01/20/2018	1.03	1.05
4	01/21/2018 - 01/27/2018	1.02	1.04
5	01/28/2018 - 02/03/2018	1.01	1.03
6	02/04/2018 - 02/10/2018	1.00	1.02
7	02/11/2018 - 02/17/2018	0.99	1.01
8	02/18/2018 - 02/24/2018	0.99	1.01
9	02/25/2018 - 03/03/2018	1.00	1.02
10	03/04/2018 - 03/10/2018	1.00	1.02
11	03/11/2018 - 03/17/2018	1.00	1.02
12	03/18/2018 - 03/24/2018	1.00	1.02
13	03/25/2018 - 03/31/2018	1.00	1.02
14	04/01/2018 - 04/07/2018	1.01	1.03
15	04/08/2018 - 04/14/2018	1.01	1.03
16	04/15/2018 - 04/21/2018	1.01	1.03
17	04/22/2018 - 04/28/2018	1.02	1.04
18	04/29/2018 - 05/05/2018	1.03	1.05
19	05/06/2018 - 05/12/2018	1.03	1.05
20	05/13/2018 - 05/19/2018	1.04	1.06
21	05/20/2018 - 05/26/2018	1.04	1.06
22	05/27/2018 - 06/02/2018	1.03	1.05
23	06/03/2018 - 06/09/2018	1.03	1.05
24	06/10/2018 - 06/16/2018	1.02	1.04
25	06/17/2018 - 06/23/2018	1.02	1.04
26	06/24/2018 - 06/30/2018	1.03	1.05
27	07/01/2018 - 07/07/2018	1.03	1.05
28	07/08/2018 - 07/14/2018	1.04	1.06
29	07/15/2018 - 07/21/2018	1.04	1.06
30	07/22/2018 - 07/28/2018	1.02	1.04
31	07/29/2018 - 08/04/2018	1.01	1.03
32	08/05/2018 - 08/11/2018	0.99	1.01
*33	08/12/2018 - 08/18/2018	0.97	0.99
*34	08/19/2018 - 08/25/2018	0.98	1.00
*35	08/26/2018 - 09/01/2018	0.98	1.00
*36	09/02/2018 - 09/08/2018	0.99	1.01
*37	09/09/2018 - 09/15/2018	0.99	1.01
*38	09/16/2018 - 09/22/2018	0.99	1.01
*39	09/23/2018 - 09/29/2018	0.98	1.00
*40	09/30/2018 - 10/06/2018	0.98	1.00
*41	10/07/2018 - 10/13/2018	0.97	0.99
*42	10/14/2018 - 10/20/2018	0.97	0.99
*43	10/21/2018 - 10/27/2018	0.98	1.00
*44	10/28/2018 - 11/03/2018	0.98	1.00
*45	11/04/2018 - 11/10/2018	0.99	1.01
46	11/11/2018 - 11/17/2018	0.99	1.01
47	11/18/2018 - 11/24/2018	0.99	1.01
48	11/25/2018 - 12/01/2018	0.99	1.01
49	12/02/2018 - 12/08/2018	0.98	1.00
50	12/09/2018 - 12/15/2018	0.98	1.00
51	12/16/2018 - 12/22/2018	1.00	1.02
52	12/23/2018 - 12/29/2018	1.01	1.03
53	12/30/2018 - 12/31/2018	1.03	1.05

* PEAK SEASON

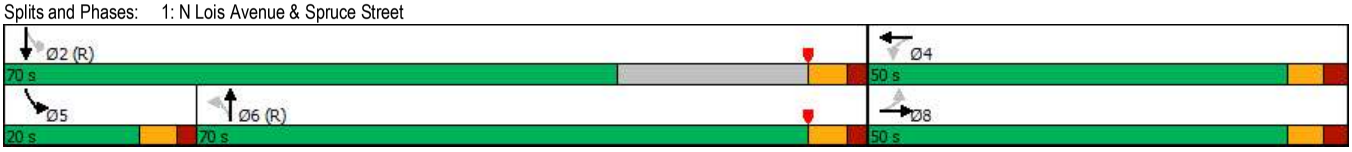
Appendix C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	111	98	133	119	124	93	749	105	67	293	27
Future Volume (vph)	56	111	98	133	119	124	93	749	105	67	293	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	100		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		627			844			2645			1107	
Travel Time (s)		17.1			23.0			51.5			21.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	2%	1%	1%	0%	1%	5%	1%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	230	0	146	267	0	102	938	0	74	352	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	34.4	34.4		34.4	34.4		32.2	32.2		11.0	32.2	
Total Split (s)	50.0	50.0		50.0	50.0		70.0	70.0		20.0	70.0	
Total Split (%)	35.7%	35.7%		35.7%	35.7%		50.0%	50.0%		14.3%	50.0%	
Yellow Time (s)	3.7	3.7		3.7	3.7		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2		2.0	2.2	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4		6.4	6.4		6.2	6.2		6.0	6.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
Act Effct Green (s)	27.6	27.6		27.6	27.6		88.8	88.8		100.0	99.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.63	0.63		0.71	0.71	
v/c Ratio	0.53	0.62		1.02	0.72		0.16	0.42		0.19	0.14	
Control Delay	64.6	49.6		134.6	54.3		15.2	16.3		8.7	7.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	64.6	49.6		134.6	54.3		15.2	16.3		8.7	7.3	
LOS	E	D		F	D		B	B		A	A	
Approach Delay		52.7			82.6			16.2			7.5	
Approach LOS		D			F			B			A	
Queue Length 50th (ft)	51	167		~142	198		41	210		18	46	
Queue Length 95th (ft)	93	228		#222	265		m51	m230		46	87	
Internal Link Dist (ft)		547			764			2565			1027	
Turn Bay Length (ft)	50			100			100			100		
Base Capacity (vph)	184	570		226	568		651	2219		457	2521	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.34	0.40		0.65	0.47		0.16	0.42		0.16	0.14	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135 (96%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay: 32.0		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: N Lois Avenue & Spruce Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	111	98	133	119	124	93	749	105	67	293	27
Future Volume (veh/h)	56	111	98	133	119	124	93	749	105	67	293	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1885	1870	1885	1885	1900	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	62	122	96	146	131	93	102	823	105	74	322	30
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	2	1	1	0	1	1	1	1	1
Cap, veh/h	220	247	195	222	260	184	658	1854	237	465	2177	202
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	1.00	1.00	1.00	0.03	0.66	0.66
Sat Flow, veh/h	1175	978	769	1163	1026	728	1045	3195	408	1795	3314	307
Grp Volume(v), veh/h	62	0	218	146	0	224	102	461	467	74	173	179
Grp Sat Flow(s),veh/h/ln	1175	0	1747	1163	0	1754	1045	1791	1812	1795	1791	1830
Q Serve(g_s), s	6.7	0.0	14.9	17.2	0.0	15.3	0.0	0.0	0.0	2.2	5.1	5.2
Cycle Q Clear(g_c), s	22.0	0.0	14.9	32.1	0.0	15.3	0.0	0.0	0.0	2.2	5.1	5.2
Prop In Lane	1.00		0.44	1.00		0.42	1.00		0.22	1.00		0.17
Lane Grp Cap(c), veh/h	220	0	442	222	0	444	658	1039	1052	465	1177	1202
V/C Ratio(X)	0.28	0.00	0.49	0.66	0.00	0.50	0.15	0.44	0.44	0.16	0.15	0.15
Avail Cap(c_a), veh/h	289	0	544	290	0	546	658	1039	1052	584	1177	1202
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	0.0	44.6	58.3	0.0	44.8	0.0	0.0	0.0	10.1	9.1	9.1
Incr Delay (d2), s/veh	0.7	0.0	0.9	3.4	0.0	0.9	0.5	1.2	1.2	0.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	6.7	5.3	0.0	6.9	0.1	0.4	0.4	0.9	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	0.0	45.5	61.7	0.0	45.7	0.5	1.2	1.2	10.3	9.4	9.4
LnGrp LOS	D	A	D	E	A	D	A	A	A	B	A	A
Approach Vol, veh/h		280			370			1030			426	
Approach Delay, s/veh		47.6			52.0			1.2			9.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		98.2		41.8	10.7	87.5		41.8				
Change Period (Y+Rc), s		* 6.2		6.4	6.0	* 6.2		6.4				
Max Green Setting (Gmax), s		* 64		43.6	14.0	* 64		43.6				
Max Q Clear Time (g_c+I1), s		7.2		34.1	4.2	2.0		24.0				
Green Ext Time (p_c), s		2.2		1.4	0.1	7.8		1.5				

Intersection Summary		
HCM 6th Ctrl Delay		18.0
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

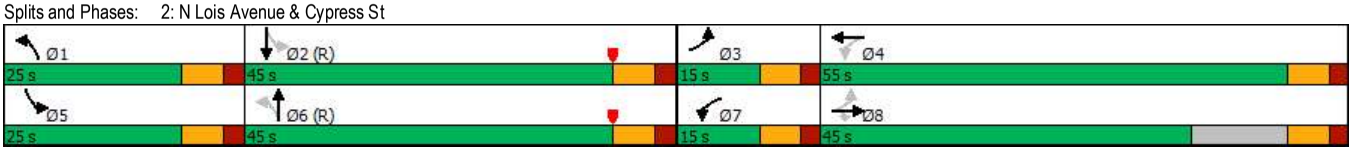
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	354	266	99	1070	348	190	548	26	67	465	68
Future Volume (vph)	39	354	266	99	1070	348	190	548	26	67	465	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		400	75		0	190		0	75		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	50			75			60			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		705			760			361			2645	
Travel Time (s)		12.0			13.0			7.0			51.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	0%	0%	1%	1%	3%	0%	1%	0%	1%	1%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	361	271	101	1447	0	194	586	0	68	543	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Detector Phase	3	8	8	7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.4	38.4	38.4	11.4	38.4		11.6	42.7		11.6	42.7	
Total Split (s)	15.0	45.0	45.0	15.0	55.0		25.0	45.0		25.0	45.0	
Total Split (%)	10.7%	32.1%	32.1%	10.7%	39.3%		17.9%	32.1%		17.9%	32.1%	
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.2	2.3		2.2	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4		6.6	6.7		6.6	6.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	56.1	48.9	48.9	59.3	52.4		63.3	50.7		50.0	41.4	
Actuated g/C Ratio	0.40	0.35	0.35	0.42	0.37		0.45	0.36		0.36	0.30	
v/c Ratio	0.28	0.29	0.37	0.24	1.11		0.52	0.46		0.21	0.52	
Control Delay	26.9	33.8	5.0	23.8	100.7		28.9	36.4		16.6	33.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		1.4	1.9		0.0	0.0	
Total Delay	26.9	33.8	5.0	23.8	100.7		30.3	38.2		16.6	33.6	
LOS	C	C	A	C	F		C	D		B	C	
Approach Delay		21.7			95.7			36.3			31.7	
Approach LOS		C			F			D			C	
Queue Length 50th (ft)	20	125	0	52	~811		107	218		23	240	
Queue Length 95th (ft)	43	167	61	90	#971		162	284		m37	225	
Internal Link Dist (ft)		625			680			281			2565	
Turn Bay Length (ft)	100		400	75			190			75		
Base Capacity (vph)	159	1261	740	430	1303		401	1287		448	1038	
Starvation Cap Reductn	0	0	0	0	0		85	521		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.25	0.29	0.37	0.23	1.11		0.61	0.77		0.15	0.52	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 88 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 58.3 Intersection LOS: E
Intersection Capacity Utilization 92.2% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: N Lois Avenue & Cypress St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	354	266	99	1070	348	190	548	26	67	465	68
Future Volume (veh/h)	39	354	266	99	1070	348	190	548	26	67	465	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	1885	1885	1885	1900	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	40	361	142	101	1092	316	194	559	19	68	474	62
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	0	1	1	1	0	1	1	1	1	1
Cap, veh/h	101	1172	523	368	954	273	393	1421	48	360	1131	147
Arrive On Green	0.03	0.32	0.32	0.05	0.35	0.35	0.08	0.40	0.40	0.01	0.12	0.12
Sat Flow, veh/h	1767	3610	1610	1795	2747	787	1810	3534	120	1795	3186	415
Grp Volume(v), veh/h	40	361	142	101	708	700	194	283	295	68	265	271
Grp Sat Flow(s),veh/h/ln	1767	1805	1610	1795	1791	1743	1810	1791	1864	1795	1791	1810
Q Serve(g_s), s	2.1	10.5	9.1	5.2	48.6	48.6	9.2	15.7	15.7	3.4	19.3	19.4
Cycle Q Clear(g_c), s	2.1	10.5	9.1	5.2	48.6	48.6	9.2	15.7	15.7	3.4	19.3	19.4
Prop In Lane	1.00		1.00	1.00		0.45	1.00		0.06	1.00		0.23
Lane Grp Cap(c), veh/h	101	1172	523	368	622	605	393	720	749	360	636	643
V/C Ratio(X)	0.40	0.31	0.27	0.27	1.14	1.16	0.49	0.39	0.39	0.19	0.42	0.42
Avail Cap(c_a), veh/h	160	1172	523	387	622	605	480	720	749	531	636	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.92	0.92	0.92
Uniform Delay (d), s/veh	37.4	35.5	35.0	29.4	45.7	45.7	25.6	29.7	29.7	28.0	48.4	48.4
Incr Delay (d2), s/veh	2.5	0.1	0.3	0.4	80.9	88.0	1.3	1.5	1.4	0.2	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.6	3.6	2.3	35.0	35.2	4.1	7.1	7.4	1.5	9.6	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	35.6	35.3	29.8	126.6	133.7	26.9	31.2	31.2	28.2	50.2	50.3
LnGrp LOS	D	D	D	C	F	F	C	C	C	C	D	D
Approach Vol, veh/h		543			1509			772			604	
Approach Delay, s/veh		35.8			123.4			30.1			47.8	
Approach LOS		D			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	56.4	10.3	55.0	11.7	63.0	13.5	51.8
Change Period (Y+Rc), s	* 6.6	* 6.7	6.4	6.4	* 6.6	* 6.7	6.4	6.4
Max Green Setting (Gmax), s	* 18	* 38	8.6	48.6	* 18	* 38	8.6	38.6
Max Q Clear Time (g_c+I1), s	11.2	21.4	4.1	50.6	5.4	17.7	7.2	12.5
Green Ext Time (p_c), s	0.5	2.9	0.0	0.0	0.1	3.3	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	75.2
HCM 6th LOS	E

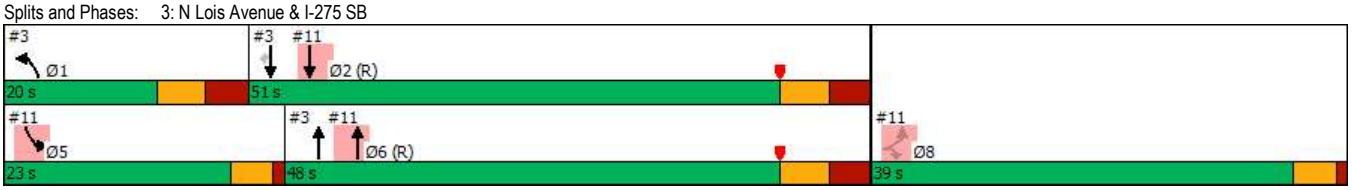
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø8
Lane Configurations								
Traffic Volume (vph)	0	0	164	780	630	187		
Future Volume (vph)	0	0	164	780	630	187		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	0			100		
Storage Lanes	0	0	2			2		
Taper Length (ft)	25		25					
Right Turn on Red		Yes				Yes		
Link Speed (mph)	30			35	35			
Link Distance (ft)	455			350	361			
Travel Time (s)	10.3			6.8	7.0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles (%)	0%	0%	1%	1%	1%	0%		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	173	821	663	197		
Turn Type			Prot	NA	NA	Perm		
Protected Phases			1	6	2		5	8
Permitted Phases						2		
Detector Phase			1	6	2	2		
Switch Phase								
Minimum Initial (s)			5.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)			12.5	37.5	37.5	37.5	9.5	22.5
Total Split (s)			20.0	48.0	51.0	51.0	23.0	39.0
Total Split (%)			18.2%	43.6%	46.4%	46.4%	21%	35%
Yellow Time (s)			4.0	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)			3.5	3.5	3.5	3.5	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			7.5	7.5	7.5	7.5		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode			None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)			9.8	65.9	68.9	68.9		
Actuated g/C Ratio			0.09	0.60	0.63	0.63		
v/c Ratio			0.56	0.38	0.21	0.18		
Control Delay			56.4	9.2	9.5	1.9		
Queue Delay			0.0	0.3	0.0	0.0		
Total Delay			56.4	9.5	9.5	1.9		
LOS			E	A	A	A		
Approach Delay				17.6	7.8			
Approach LOS				B	A			
Queue Length 50th (ft)			67	87	67	0		
Queue Length 95th (ft)			104	104	102	30		
Internal Link Dist (ft)	375			270	281			
Turn Bay Length (ft)						100		
Base Capacity (vph)			395	2140	3216	1084		
Starvation Cap Reductn			0	640	0	0		
Spillback Cap Reductn			0	0	0	0		
Storage Cap Reductn			0	0	0	0		
Reduced v/c Ratio			0.44	0.55	0.21	0.18		

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 35 (32%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: N Lois Avenue & I-275 SB



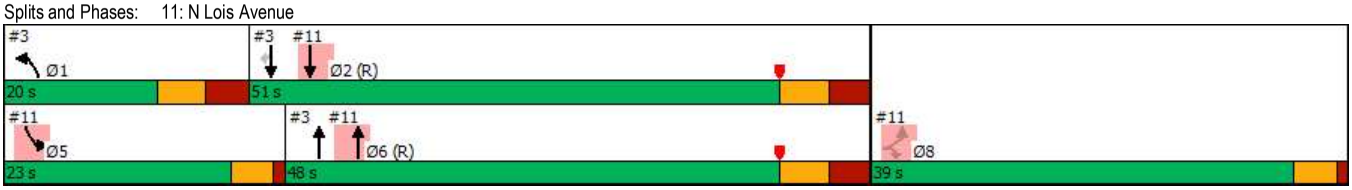
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	164	780	630	187
Future Volume (vph)	0	0	164	780	630	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.5	7.5	7.5	7.5
Lane Util. Factor			0.97	0.95	0.91	1.00
Frt			1.00	1.00	1.00	0.85
Flt Protected			0.95	1.00	1.00	1.00
Satd. Flow (prot)			3467	3574	5136	1615
Flt Permitted			0.95	1.00	1.00	1.00
Satd. Flow (perm)			3467	3574	5136	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	173	821	663	197
RTOR Reduction (vph)	0	0	0	0	0	74
Lane Group Flow (vph)	0	0	173	821	663	123
Heavy Vehicles (%)	0%	0%	1%	1%	1%	0%
Turn Type			Prot	NA	NA	Perm
Protected Phases			1	6	2	
Permitted Phases						2
Actuated Green, G (s)			9.8	65.9	68.9	68.9
Effective Green, g (s)			9.8	65.9	68.9	68.9
Actuated g/C Ratio			0.09	0.60	0.63	0.63
Clearance Time (s)			7.5	7.5	7.5	7.5
Vehicle Extension (s)			2.0	3.0	3.0	3.0
Lane Grp Cap (vph)			308	2141	3217	1011
v/s Ratio Prot			c0.05	c0.23	c0.13	
v/s Ratio Perm						0.08
v/c Ratio			0.56	0.38	0.21	0.12
Uniform Delay, d1			48.0	11.5	8.8	8.3
Progression Factor			1.05	0.70	1.00	1.00
Incremental Delay, d2			1.2	0.5	0.1	0.2
Delay (s)			51.8	8.6	9.0	8.6
Level of Service			D	A	A	A
Approach Delay (s)	0.0			16.1	8.9	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1
Lane Configurations													
Traffic Volume (vph)	188	0	28	0	0	0	0	755	315	309	320	0	
Future Volume (vph)	188	0	28	0	0	0	0	755	315	309	320	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	175		0	
Storage Lanes	2		1	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			75			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			35			35		
Link Distance (ft)		449			576			927			350		
Travel Time (s)		10.2			13.1			18.1			6.8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	2%	1%	1%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	204	0	30	0	0	0	0	1163	0	336	348	0	
Turn Type	Perm		Perm					NA		Prot	NA		
Protected Phases								6		5	2		1
Permitted Phases	8		8										
Detector Phase	8		8					6		5	2		
Switch Phase													
Minimum Initial (s)	5.0		5.0					10.0		5.0	10.0		5.0
Minimum Split (s)	22.5		22.5					37.5		9.5	37.5		12.5
Total Split (s)	39.0		39.0					48.0		23.0	51.0		20.0
Total Split (%)	35.5%		35.5%					43.6%		20.9%	46.4%		18%
Yellow Time (s)	3.5		3.5					4.0		3.5	4.0		4.0
All-Red Time (s)	1.0		1.0					3.5		1.0	3.5		3.5
Lost Time Adjust (s)	0.0		0.0					0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5					7.5		4.5	7.5		
Lead/Lag								Lag		Lead	Lag		Lead
Lead-Lag Optimize?								Yes		Yes	Yes		Yes
Recall Mode	None		None					C-Max		None	C-Max		None
Act Effct Green (s)	11.8		11.8					65.9		15.8	68.9		
Actuated g/C Ratio	0.11		0.11					0.60		0.14	0.63		
v/c Ratio	0.54		0.11					0.56		0.67	0.16		
Control Delay	51.7		0.8					14.6		75.1	2.8		
Queue Delay	0.0		0.0					0.0		0.0	0.0		
Total Delay	51.7		0.8					14.6		75.1	2.8		
LOS	D		A					B		E	A		
Approach Delay		45.2						14.6			38.3		
Approach LOS		D						B			D		
Queue Length 50th (ft)	71		0					230		131	10		
Queue Length 95th (ft)	106		0					345		179	13		
Internal Link Dist (ft)		369			496			847			270		
Turn Bay Length (ft)										175			
Base Capacity (vph)	1098		583					2066		592	2238		
Starvation Cap Reductn	0		0					0		0	0		
Spillback Cap Reductn	0		0					0		0	0		
Storage Cap Reductn	0		0					0		0	0		
Reduced v/c Ratio	0.19		0.05					0.56		0.57	0.16		

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 35 (32%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 25.8		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: N Lois Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	0	28	0	0	0	0	755	315	309	320	0
Future Volume (vph)	188	0	28	0	0	0	0	755	315	309	320	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5					7.5		4.5	7.5	
Lane Util. Factor	0.97		1.00					0.95		0.97	0.95	
Frt	1.00		0.85					0.96		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3502		1599					3407		3467	3574	
Flt Permitted	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3502		1599					3407		3467	3574	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	0	30	0	0	0	0	821	342	336	348	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	204	0	3	0	0	0	0	1137	0	336	348	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	2%	1%	1%	0%
Turn Type	Perm		Perm					NA		Prot	NA	
Protected Phases								6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	11.8		11.8					65.9		15.8	68.9	
Effective Green, g (s)	11.8		11.8					65.9		15.8	68.9	
Actuated g/C Ratio	0.11		0.11					0.60		0.14	0.63	
Clearance Time (s)	4.5		4.5					7.5		4.5	7.5	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	375		171					2041		497	2238	
v/s Ratio Prot								c0.33		c0.10	c0.10	
v/s Ratio Perm	c0.06		0.00									
v/c Ratio	0.54		0.02					0.56		0.68	0.16	
Uniform Delay, d1	46.5		43.9					13.3		44.7	8.5	
Progression Factor	1.00		1.00					1.00		1.54	0.28	
Incremental Delay, d2	1.6		0.0					1.1		3.6	0.1	
Delay (s)	48.2		44.0					14.4		72.3	2.6	
Level of Service	D		D					B		E	A	
Approach Delay (s)		47.6			0.0			14.4			36.8	
Approach LOS		D			A			B			D	

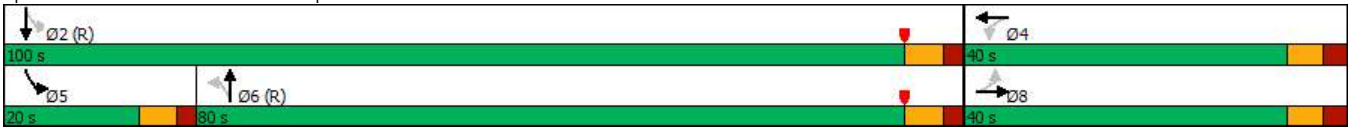
Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	159	82	98	154	125	99	544	152	163	837	44
Future Volume (vph)	28	159	82	98	154	125	99	544	152	163	837	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	100		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		627			844			2645			1107	
Travel Time (s)		14.3			19.2			60.1			25.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	2%	1%	1%	0%	1%	5%	1%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	265	0	108	306	0	109	765	0	179	968	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	34.4	34.4		34.4	34.4		32.2	32.2		11.0	32.2	
Total Split (s)	40.0	40.0		40.0	40.0		80.0	80.0		20.0	100.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%		57.1%	57.1%		14.3%	71.4%	
Yellow Time (s)	3.7	3.7		3.7	3.7		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2		2.0	2.2	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4		6.4	6.4		6.2	6.2		6.0	6.2	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Min	C-Min		None	C-Min	
v/c Ratio	0.33	0.70		0.88	0.81		0.33	0.38		0.37	0.39	
Control Delay	54.5	57.6		106.2	64.1		18.4	13.5		10.0	9.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	54.5	57.6		106.2	64.1		18.4	13.5		10.0	9.6	
Queue Length 50th (ft)	25	214		97	248		42	150		47	165	
Queue Length 95th (ft)	53	283		#171	324		m130	161		97	266	
Internal Link Dist (ft)		547			764			2565			1027	
Turn Bay Length (ft)	50			100			100			100		
Base Capacity (vph)	114	456		151	455		336	2066		516	2539	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.27	0.58		0.72	0.67		0.32	0.37		0.35	0.38	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 120 (86%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: N Lois Avenue & Spruce Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	159	82	98	154	125	99	544	152	163	837	44
Future Volume (veh/h)	28	159	82	98	154	125	99	544	152	163	837	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1885	1870	1885	1885	1900	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	31	175	78	108	169	94	109	598	157	179	920	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	1	2	1	1	0	1	1	1	1	1
Cap, veh/h	168	291	130	175	268	149	379	1617	424	429	2334	122
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.19	0.19	0.19	0.06	0.67	0.67
Sat Flow, veh/h	1134	1235	551	1127	1138	633	590	2808	736	1795	3463	181
Grp Volume(v), veh/h	31	0	253	108	0	263	109	381	374	179	476	492
Grp Sat Flow(s),veh/h/ln	1134	0	1786	1127	0	1771	590	1791	1753	1795	1791	1853
Q Serve(g_s), s	3.5	0.0	17.7	13.2	0.0	18.7	22.5	25.9	26.0	5.5	16.5	16.5
Cycle Q Clear(g_c), s	22.2	0.0	17.7	30.9	0.0	18.7	25.3	25.9	26.0	5.5	16.5	16.5
Prop In Lane	1.00		0.31	1.00		0.36	1.00		0.42	1.00		0.10
Lane Grp Cap(c), veh/h	168	0	421	175	0	418	379	1032	1010	429	1207	1249
V/C Ratio(X)	0.18	0.00	0.60	0.62	0.00	0.63	0.29	0.37	0.37	0.42	0.39	0.39
Avail Cap(c_a), veh/h	173	0	429	180	0	425	379	1032	1010	510	1207	1249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	0.0	47.6	61.4	0.0	48.0	35.5	34.5	34.6	13.5	10.1	10.1
Incr Delay (d2), s/veh	0.5	0.0	2.3	6.0	0.0	2.9	1.7	0.9	0.9	0.6	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	8.2	4.1	0.0	8.6	3.8	12.8	12.6	2.2	6.7	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	49.9	67.3	0.0	50.9	37.2	35.5	35.5	14.2	11.1	11.1
LnGrp LOS	E	A	D	E	A	D	D	D	D	B	B	B
Approach Vol, veh/h		284			371			864			1147	
Approach Delay, s/veh		50.8			55.7			35.7			11.6	
Approach LOS		D			E			D			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		100.6		39.4	13.7	86.8		39.4				
Change Period (Y+Rc), s		* 6.2		6.4	6.0	* 6.2		6.4				
Max Green Setting (Gmax), s		* 94		33.6	14.0	* 74		33.6				
Max Q Clear Time (g_c+I1), s		18.5		32.9	7.5	28.0		24.2				
Green Ext Time (p_c), s		8.0		0.2	0.2	7.3		1.1				

Intersection Summary		
HCM 6th Ctrl Delay		29.7
HCM 6th LOS		C

Notes

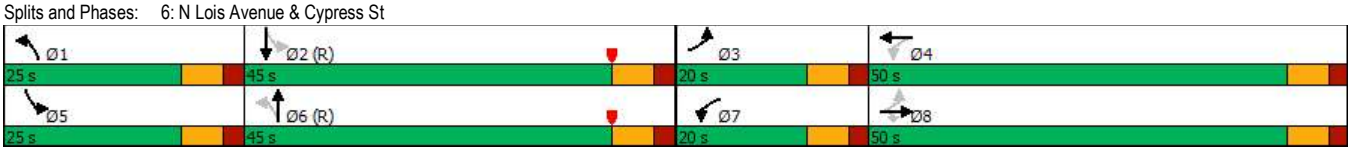
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	880	602	231	454	253	98	438	61	154	872	45
Future Volume (vph)	100	880	602	231	454	253	98	438	61	154	872	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		400	75		0	190		0	75		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	50			75			60			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			760			361			2645	
Travel Time (s)		16.0			17.3			8.2			60.1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	0%	0%	1%	1%	3%	0%	1%	0%	1%	1%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	898	614	236	721	0	100	509	0	157	936	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Detector Phase	3	8	8	7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.4	38.4	38.4	11.4	38.4		11.6	42.7		11.6	42.7	
Total Split (s)	20.0	50.0	50.0	20.0	50.0		25.0	45.0		25.0	45.0	
Total Split (%)	14.3%	35.7%	35.7%	14.3%	35.7%		17.9%	32.1%		17.9%	32.1%	
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.2	2.3		2.2	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4		6.6	6.7		6.6	6.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	0.39	0.82	0.87	1.01	0.63		0.46	0.45		0.41	0.79	
Control Delay	27.4	52.5	36.3	99.0	38.2		17.3	29.5		28.2	52.8	
Queue Delay	0.0	0.0	0.9	2.5	0.0		0.0	0.6		0.0	0.0	
Total Delay	27.4	52.5	37.2	101.5	38.2		17.3	30.1		28.2	52.8	
Queue Length 50th (ft)	53	395	286	~160	257		56	207		98	419	
Queue Length 95th (ft)	90	478	#511	#350	338		63	276		m151	#528	
Internal Link Dist (ft)		625			680			281			2565	
Turn Bay Length (ft)	100		400	75			190			75		
Base Capacity (vph)	304	1124	717	233	1148		312	1138		448	1189	
Starvation Cap Reductn	0	0	0	0	0		0	305		0	0	
Spillback Cap Reductn	0	0	18	2	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.34	0.80	0.88	1.02	0.63		0.32	0.61		0.35	0.79	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 11 (8%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: N Lois Avenue & Cypress St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	880	602	231	454	253	98	438	61	154	872	45
Future Volume (veh/h)	100	880	602	231	454	253	98	438	61	154	872	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	1885	1885	1885	1900	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	102	898	485	236	463	219	100	447	54	157	890	39
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	0	1	1	1	0	1	1	1	1	1
Cap, veh/h	294	1124	501	259	841	395	268	1066	128	366	1237	54
Arrive On Green	0.05	0.31	0.31	0.10	0.36	0.36	0.02	0.11	0.11	0.15	0.71	0.71
Sat Flow, veh/h	1767	3610	1610	1795	2365	1111	1810	3219	387	1795	3495	153
Grp Volume(v), veh/h	102	898	485	236	350	332	100	248	253	157	456	473
Grp Sat Flow(s),veh/h/ln	1767	1805	1610	1795	1791	1685	1810	1791	1816	1795	1791	1858
Q Serve(g_s), s	5.5	31.9	41.6	12.3	21.9	22.2	5.0	18.1	18.2	8.1	21.2	21.2
Cycle Q Clear(g_c), s	5.5	31.9	41.6	12.3	21.9	22.2	5.0	18.1	18.2	8.1	21.2	21.2
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.21	1.00		0.08
Lane Grp Cap(c), veh/h	294	1124	501	259	637	599	268	593	601	366	634	658
V/C Ratio(X)	0.35	0.80	0.97	0.91	0.55	0.55	0.37	0.42	0.42	0.43	0.72	0.72
Avail Cap(c_a), veh/h	372	1124	501	259	637	599	413	593	601	469	634	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.90	0.90	0.90
Uniform Delay (d), s/veh	31.1	44.2	47.5	33.5	36.1	36.2	30.7	49.7	49.8	26.3	16.3	16.3
Incr Delay (d2), s/veh	0.7	4.2	31.9	33.7	1.0	1.1	1.2	2.1	2.1	0.7	6.2	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	14.9	21.0	7.7	9.8	9.4	2.4	9.1	9.3	3.2	6.3	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	48.4	79.4	67.2	37.1	37.3	31.9	51.8	51.9	27.0	22.5	22.3
LnGrp LOS	C	D	E	E	D	D	C	D	D	C	C	C
Approach Vol, veh/h		1485			918			601			1086	
Approach Delay, s/veh		57.3			44.9			48.6			23.1	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	56.3	13.8	56.2	16.9	53.1	20.0	50.0
Change Period (Y+Rc), s	* 6.6	* 6.7	6.4	6.4	* 6.6	* 6.7	6.4	6.4
Max Green Setting (Gmax), s	* 18	* 38	13.6	43.6	* 18	* 38	13.6	43.6
Max Q Clear Time (g_c+I1), s	7.0	23.2	7.5	24.2	10.1	20.2	14.3	43.6
Green Ext Time (p_c), s	0.3	5.4	0.1	4.3	0.2	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

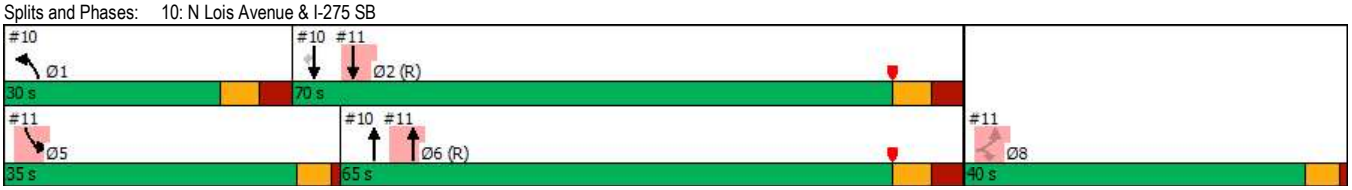
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø8
Lane Configurations								
Traffic Volume (vph)	0	0	339	585	1190	527		
Future Volume (vph)	0	0	339	585	1190	527		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	0			100		
Storage Lanes	0	0	2			2		
Taper Length (ft)	25		25					
Right Turn on Red		Yes				Yes		
Link Speed (mph)	30			30	30			
Link Distance (ft)	455			350	361			
Travel Time (s)	10.3			8.0	8.2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles (%)	0%	0%	1%	1%	1%	0%		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	357	616	1253	555		
Turn Type			Prot	NA	NA	Perm		
Protected Phases			1	6	2		5	8
Permitted Phases						2		
Detector Phase			1	6	2	2		
Switch Phase								
Minimum Initial (s)			5.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)			12.5	37.5	37.5	37.5	9.5	22.5
Total Split (s)			30.0	65.0	70.0	70.0	35.0	40.0
Total Split (%)			21.4%	46.4%	50.0%	50.0%	25%	29%
Yellow Time (s)			4.0	4.0	4.0	4.0	3.5	3.5
All-Red Time (s)			3.5	3.5	3.5	3.5	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			7.5	7.5	7.5	7.5		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode			None	C-Max	C-Max	C-Max	None	None
v/c Ratio			0.77	0.27	0.37	0.48		
Control Delay			80.6	7.1	13.0	8.4		
Queue Delay			0.3	0.2	1.1	2.8		
Total Delay			80.9	7.3	14.1	11.2		
Queue Length 50th (ft)			178	57	169	89		
Queue Length 95th (ft)			232	68	m267	m180		
Internal Link Dist (ft)	375			270	281			
Turn Bay Length (ft)						100		
Base Capacity (vph)			562	2321	3347	1150		
Starvation Cap Reductn			22	941	1753	465		
Spillback Cap Reductn			0	60	36	0		
Storage Cap Reductn			0	0	0	0		
Reduced v/c Ratio			0.66	0.45	0.79	0.81		

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 10: N Lois Avenue & I-275 SB



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	339	585	1190	527
Future Volume (vph)	0	0	339	585	1190	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			7.5	7.5	7.5	7.5
Lane Util. Factor			0.97	0.95	0.91	1.00
Frt			1.00	1.00	1.00	0.85
Flt Protected			0.95	1.00	1.00	1.00
Satd. Flow (prot)			3467	3574	5136	1615
Flt Permitted			0.95	1.00	1.00	1.00
Satd. Flow (perm)			3467	3574	5136	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	357	616	1253	555
RTOR Reduction (vph)	0	0	0	0	0	98
Lane Group Flow (vph)	0	0	357	616	1253	457
Heavy Vehicles (%)	0%	0%	1%	1%	1%	0%
Turn Type			Prot	NA	NA	Perm
Protected Phases			1	6	2	
Permitted Phases						2
Actuated Green, G (s)			18.7	90.9	91.2	91.2
Effective Green, g (s)			18.7	90.9	91.2	91.2
Actuated g/C Ratio			0.13	0.65	0.65	0.65
Clearance Time (s)			7.5	7.5	7.5	7.5
Vehicle Extension (s)			2.0	3.0	3.0	3.0
Lane Grp Cap (vph)			463	2320	3345	1052
v/s Ratio Prot			c0.10	0.17	0.24	
v/s Ratio Perm						c0.28
v/c Ratio			0.77	0.27	0.37	0.43
Uniform Delay, d1			58.6	10.4	11.3	11.9
Progression Factor			1.20	0.61	1.08	1.24
Incremental Delay, d2			6.4	0.3	0.2	0.7
Delay (s)			76.7	6.6	12.4	15.4
Level of Service			E	A	B	B
Approach Delay (s)	0.0			32.4	13.3	
Approach LOS	A			C	B	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

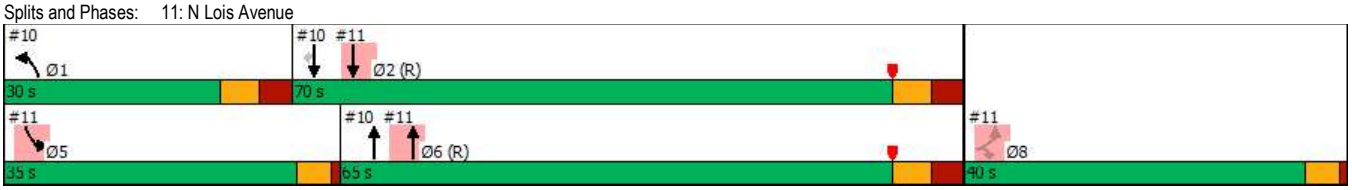
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1
Lane Configurations													
Traffic Volume (vph)	120	0	135	0	0	0	0	838	225	382	777	0	
Future Volume (vph)	120	0	135	0	0	0	0	838	225	382	777	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	0		0	175		0	
Storage Lanes	2		1	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			75			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		449			576			927			350		
Travel Time (s)		10.2			13.1			21.1			8.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	2%	1%	1%	0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	130	0	147	0	0	0	0	1156	0	415	845	0	
Turn Type	Perm		Perm					NA		Prot	NA		
Protected Phases								6		5	2		1
Permitted Phases	8		8										
Detector Phase	8		8					6		5	2		
Switch Phase													
Minimum Initial (s)	5.0		5.0					10.0		5.0	10.0		5.0
Minimum Split (s)	22.5		22.5					37.5		9.5	37.5		12.5
Total Split (s)	40.0		40.0					65.0		35.0	70.0		30.0
Total Split (%)	28.6%		28.6%					46.4%		25.0%	50.0%		21%
Yellow Time (s)	3.5		3.5					4.0		3.5	4.0		4.0
All-Red Time (s)	1.0		1.0					3.5		1.0	3.5		3.5
Lost Time Adjust (s)	0.0		0.0					0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5					7.5		4.5	7.5		
Lead/Lag								Lag		Lead	Lag		Lead
Lead-Lag Optimize?								Yes		Yes	Yes		Yes
Recall Mode	None		None					C-Max		None	C-Max		None
v/c Ratio	0.49		0.57					0.51		0.76	0.36		
Control Delay	68.1		18.1					14.2		84.6	5.5		
Queue Delay	0.0		0.0					0.0		0.3	0.1		
Total Delay	68.1		18.1					14.2		85.0	5.6		
Queue Length 50th (ft)	59		0					265		207	51		
Queue Length 95th (ft)	92		67					378		263	52		
Internal Link Dist (ft)		369			496			847			270		
Turn Bay Length (ft)										175			
Base Capacity (vph)	888		515					2253		755	2329		
Starvation Cap Reductn	0		0					0		72	434		
Spillback Cap Reductn	0		0					0		0	0		
Storage Cap Reductn	0		0					0		0	0		
Reduced v/c Ratio	0.15		0.29					0.51		0.61	0.45		

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 11: N Lois Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	0	135	0	0	0	0	838	225	382	777	0
Future Volume (vph)	120	0	135	0	0	0	0	838	225	382	777	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5					7.5		4.5	7.5	
Lane Util. Factor	0.97		1.00					0.95		0.97	0.95	
Frt	1.00		0.85					0.97		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3502		1599					3453		3467	3574	
Flt Permitted	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3502		1599					3453		3467	3574	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	0	147	0	0	0	0	911	245	415	845	0
RTOR Reduction (vph)	0	0	136	0	0	0	0	10	0	0	0	0
Lane Group Flow (vph)	130	0	11	0	0	0	0	1146	0	415	845	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	2%	1%	1%	0%
Turn Type	Perm		Perm					NA		Prot	NA	
Protected Phases								6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	10.6		10.6					90.9		22.0	91.2	
Effective Green, g (s)	10.6		10.6					90.9		22.0	91.2	
Actuated g/C Ratio	0.08		0.08					0.65		0.16	0.65	
Clearance Time (s)	4.5		4.5					7.5		4.5	7.5	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	265		121					2241		544	2328	
v/s Ratio Prot								c0.33		c0.12	0.24	
v/s Ratio Perm	c0.04		0.01									
v/c Ratio	0.49		0.09					0.51		0.76	0.36	
Uniform Delay, d1	62.1		60.2					12.9		56.5	11.1	
Progression Factor	1.00		1.00					1.00		1.34	0.43	
Incremental Delay, d2	1.4		0.3					0.8		5.9	0.4	
Delay (s)	63.5		60.6					13.7		81.8	5.2	
Level of Service	E		E					B		F	A	
Approach Delay (s)		62.0			0.0			13.7			30.4	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Arterial Level of Service: NB #N Lois Avenue

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Spruce Street	III	35	60.1	13.3	73.4	0.50	24.6	B
Total	III		60.1	13.3	73.4	0.50	24.6	B

Arterial Level of Service: SB #N Lois Avenue

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Cypress St	III	35	60.1	48.6	108.7	0.50	16.6	D
Total	III		60.1	48.6	108.7	0.50	16.6	D

Arterial Level of Service: NB #N Lois Avenue

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Spruce Street	III	35	60.1	16.4	76.5	0.50	23.6	C
Total	III		60.1	16.4	76.5	0.50	23.6	C

Arterial Level of Service: SB #N Lois Avenue

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Cypress St	III	35	60.1	36.3	96.4	0.50	18.7	C
Total	III		60.1	36.3	96.4	0.50	18.7	C

Appendix D

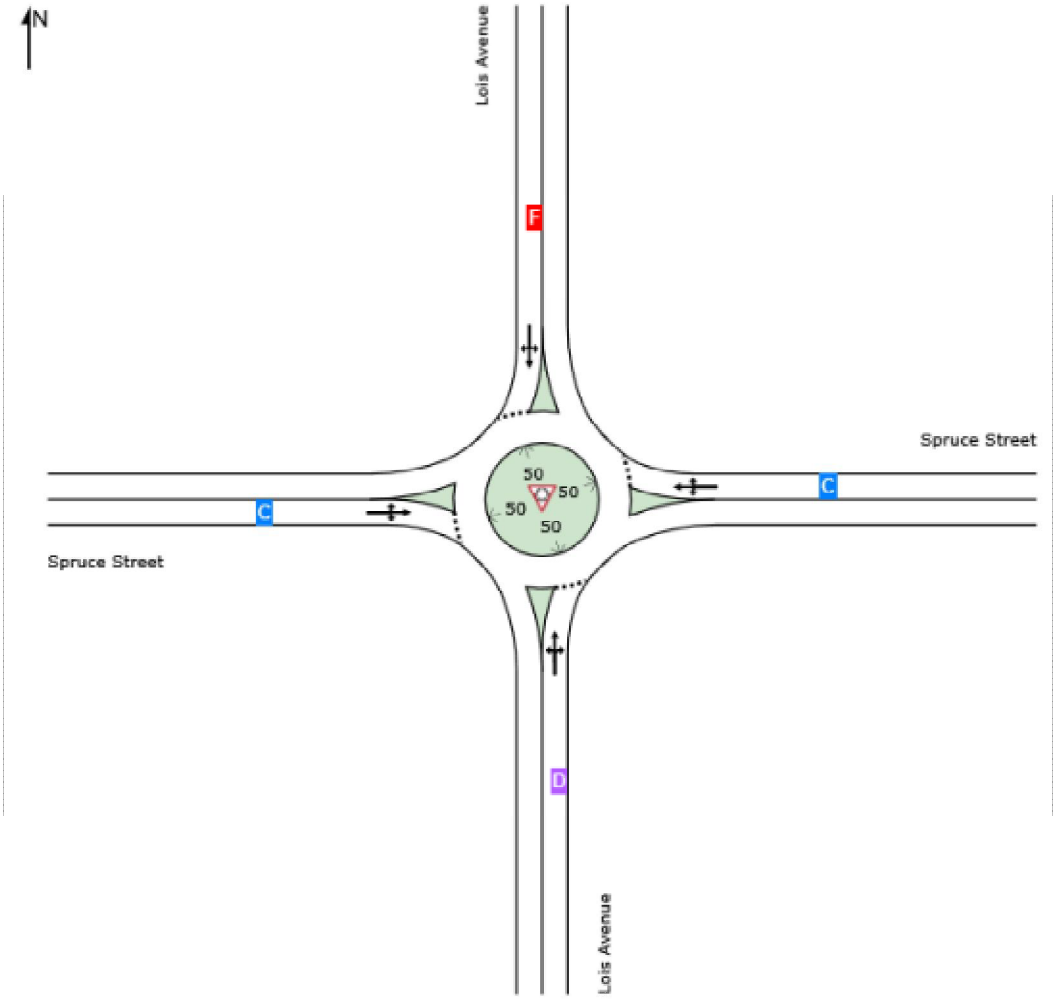
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 101 [Lois Avenue Concept (PM)]

Lois Avenue & Spruce Street
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	D	C	F	C	F



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

Site: 101 [Lois Avenue Concept (PM)]

Lois Avenue & Spruce Street
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Lois Avenue												
3	L2	109	0.0	0.922	34.1	LOS D	31.0	785.3	1.00	1.74	2.88	23.3
8	T1	598	0.8	0.922	34.2	LOS D	31.0	785.3	1.00	1.74	2.88	23.3
18	R2	167	4.8	0.922	34.3	LOS D	31.0	785.3	1.00	1.74	2.88	23.0
Approach		874	1.5	0.922	34.2	LOS D	31.0	785.3	1.00	1.74	2.88	23.3
East: Spruce Street												
1	L2	108	2.2	0.647	18.6	LOS C	5.4	135.4	0.83	1.05	1.51	27.6
6	T1	169	0.7	0.647	18.6	LOS C	5.4	135.4	0.83	1.05	1.51	27.7
16	R2	137	0.8	0.647	18.6	LOS C	5.4	135.4	0.83	1.05	1.51	27.3
Approach		414	1.1	0.647	18.6	LOS C	5.4	135.4	0.83	1.05	1.51	27.5
North: Lois Avenue												
7	L2	179	0.6	1.242	134.9	LOS F	102.1	2559.8	1.00	3.74	7.71	11.4
4	T1	920	0.4	1.242	134.9	LOS F	102.1	2559.8	1.00	3.74	7.71	11.4
14	R2	48	0.0	1.242	134.9	LOS F	102.1	2559.8	1.00	3.74	7.71	11.3
Approach		1147	0.4	1.242	134.9	LOS F	102.1	2559.8	1.00	3.74	7.71	11.4
West: Spruce Street												
5	L2	31	0.0	0.602	20.7	LOS C	3.8	95.3	0.82	1.00	1.43	27.1
2	T1	175	1.3	0.602	20.8	LOS C	3.8	95.3	0.82	1.00	1.43	27.2
12	R2	90	0.0	0.602	20.7	LOS C	3.8	95.3	0.82	1.00	1.43	26.7
Approach		296	0.8	0.602	20.7	LOS C	3.8	95.3	0.82	1.00	1.43	27.0
All Vehicles		2731	0.9	1.242	72.7	LOS F	102.1	2559.8	0.96	2.40	4.54	16.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

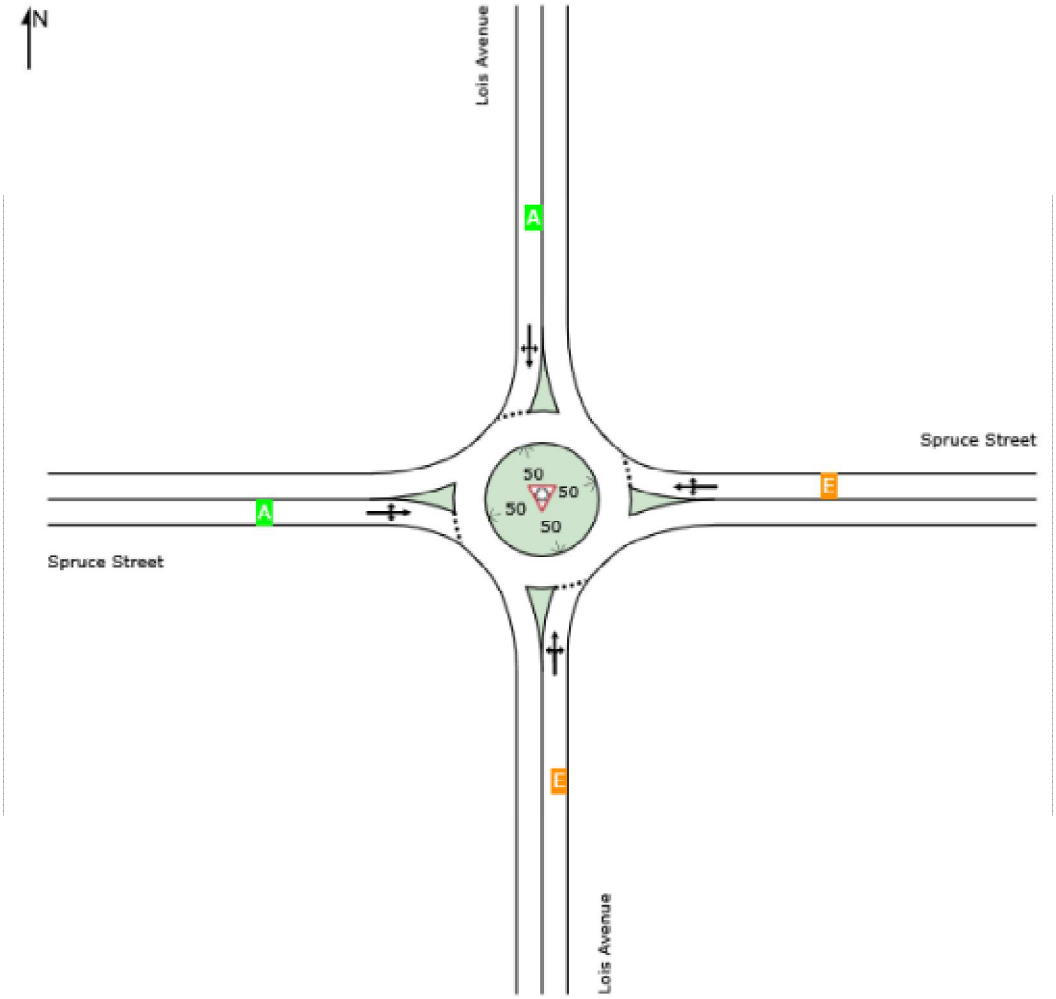
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 101 [Lois Avenue Concept (AM)]

Lois Avenue & Spruce Street
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	E	E	A	A	D



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

Site: 101 [Lois Avenue Concept (AM)]

Lois Avenue & Spruce Street
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Lois Avenue												
3	L2	100	4.5	0.974	41.9	LOS E	50.1	1267.8	1.00	1.86	3.11	21.5
8	T1	805	0.7	0.974	41.8	LOS E	50.1	1267.8	1.00	1.86	3.11	21.7
18	R2	113	5.0	0.974	41.9	LOS E	50.1	1267.8	1.00	1.86	3.11	21.3
Approach		1018	1.5	0.974	41.8	LOS E	50.1	1267.8	1.00	1.86	3.11	21.6
East: Spruce Street												
1	L2	143	5.5	0.810	35.5	LOS E	7.9	200.1	0.90	1.31	2.26	22.7
6	T1	128	0.0	0.810	35.1	LOS E	7.9	200.1	0.90	1.31	2.26	22.9
16	R2	133	0.8	0.810	35.2	LOS E	7.9	200.1	0.90	1.31	2.26	22.6
Approach		404	2.2	0.810	35.3	LOS E	7.9	200.1	0.90	1.31	2.26	22.7
North: Lois Avenue												
7	L2	72	7.8	0.457	9.7	LOS A	2.8	72.0	0.64	0.61	0.71	31.0
4	T1	315	1.4	0.457	9.5	LOS A	2.8	72.0	0.64	0.61	0.71	31.4
14	R2	29	0.0	0.457	9.4	LOS A	2.8	72.0	0.64	0.61	0.71	30.8
Approach		416	2.4	0.457	9.5	LOS A	2.8	72.0	0.64	0.61	0.71	31.3
West: Spruce Street												
5	L2	60	0.0	0.361	8.9	LOS A	1.8	45.0	0.65	0.66	0.68	31.4
2	T1	119	0.0	0.361	8.9	LOS A	1.8	45.0	0.65	0.66	0.68	31.6
12	R2	105	0.0	0.361	8.9	LOS A	1.8	45.0	0.65	0.66	0.68	31.0
Approach		285	0.0	0.361	8.9	LOS A	1.8	45.0	0.65	0.66	0.68	31.3
All Vehicles		2124	1.6	0.974	29.8	LOS D	50.1	1267.8	0.86	1.35	2.15	24.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix D

Crash Data

FDOT Crash Data 2015-2019 for N. Lois Ave.

Object Id	Calendar Year	ting Agenc	Crash Date	Crash Time	Day	On Roadway Name	Int Roadway Name	Nearest Inventory MP	Crash Side Of Road	Crash Lane Number	1st Vehicle Travel Direction	Intersecti on Type	Shoulder Type	Functional Class	RCI Shoulder Type First	RCI Shoulder Width First	RCI Shoulder Type Second	RCI Shoulder Width Second	Avg Daily Traffic	AADT Sourc e	Posted Speed Limit	Highest Injury in Crash	Alcohol/D rugs Involved	Site Location	Lighting	Weather	Road Surface	Traffic Way	Traffic Control Vehicle 1	Traffic Control Vehicle 2	Road Condition 1	Environm ent Condition 1	Crash Harmful Event	Manner of Collision	Driver Action Vehicle 1	Driver Action Vehicle 2	Count of Nonfatal Injuries	Count of Traffic Fatalities	Count of Serious Injuries	Count of Pedestrians	Count of Drivers	Count of Bicyclists	Count of Vehicles	Count of Persons	Wrong Way	Speeding	Workzone Inv	Commercial Veh Inv	Intersection Inv	Lane Departure	Impaired Driver	Distracted Driver
4227471	2015	SHERIFF'S	01/07/2015	1545	WEDNESDA	BOY SCOUT BLVD	LOIS AVE N	8.69	R	2	E	02	03	16	PAVED	5	LAWN	12	48000	RCI	50	1	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	ERATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	Y
3939189	2015	SHERIFF'S	12/27/2015	1232	SUNDAY	BOY SCOUT BLVD W	LOIS AVE N	8.728	R	R	S	01	01	16	PAVED	5	LAWN	12	48000	RCI	50	1	0	03	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	4	N	N	N	N	N	N	N	Y
3997513	2015	SHERIFF'S	12/15/2015	1412	TUESDAY	BOY SCOUT BLVD W	LOIS AVE N	8.69	R	4	E	02	02	16	PAVED	5	LAWN	12	48000	RCI	50	3	0	02	01	01	01	03	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	2	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	N
4025335	2015	SHERIFF'S	11/03/2015	1605	TUESDAY	BOY SCOUT BLVD W	LOIS AVE N	8.704	R	1	E	01	01	16	PAVED	5	LAWN	12	48000	RCI	50	1	0	03	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	01	RATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4457960	2015	SHERIFF'S	09/04/2015	0718	FRIDAY	BOY SCOUT BLVD W	LOIS AVE N	8.692	L	2	W	02	02	16	PAVED	5	LAWN	12	48000	RCI	50	2	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
3979935	2015	SHERIFF'S	04/04/2015	1829	SATURDAY	CYPRESS ST	N LOIS AVE	1.297	I	M	W	02	03			0		0		RCI		2	0	01	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
4014803	2015	SHERIFF'S	11/30/2015	1645	MONDAY	CYPRESS ST	N HUBERT AVE	1.172	I	M	S	02	03			0		0		RCI		3	0	02	02	01	01	01	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	3	0	3	3	N	N	N	N	Y	N	N	N
4174925	2015	SHERIFF'S	09/29/2015	1143	TUESDAY	CYPRESS ST	N LOIS AVE	1.299	L	L	O	02	01			0		0		RCI		2	0	01	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4654715	2015	SHERIFF'S	11/07/2015	0958	SATURDAY	CYPRESS ST	N LOIS AVE	1.29	R	1	E	01	03			0		0		RCI		2	0	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	RATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	3	0	3	4	N	N	N	N	Y	N	N	N
4203043	2015	SHERIFF'S	02/20/2015	1745	FRIDAY	LOIS AVE	CYPRESS ST	2.194	R	2	O	01	03			0		0		RCI		2	0	01	02	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
3935359	2015	SHERIFF'S	06/27/2015	1745	SATURDAY	LOIS AVE N	Y SCOUT BLVD	8.69	S	1	O	02	03	16	PAVED	5	LAWN	12	48000	RCI	50	2	0	02	01	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
3940290	2015	SHERIFF'S	08/13/2015	1755	THURSDAY	LOIS AVE N	Y SCOUT BLVD	8.69	S	2	S	02	03	16	PAVED	5	LAWN	12	48000	RCI	50	0	0	02	01	03	02	88	CONTROL	NOT CODED	UNKNOWN	UNKNOWN	33	00	NOT CODED	NOT CODED	0	0	0	0	0	0	1	0	N	N	N	N	N	N	N	N
4025337	2015	SHERIFF'S	06/16/2015	0800	TUESDAY	LOIS AVE N	SPRUCE ST W	8.69	S	R	N	01	03	16	PAVED	5	LAWN	12	48000	RCI	50	3	0	02	01	01	01	02	CONTROL	CONTROL	NONE	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	2	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4079646	2015	SHERIFF'S	04/15/2015	1815	WEDNESDA	LOIS AVE N	SPRUCE ST W	8.69	S	1	S	01	03	16	PAVED	5	LAWN	12	48000	RCI	50	2	0	02	01	01	01	04	D CONTRO	CONTROL	NONE	GLARE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
3975345	2015	SHERIFF'S	07/20/2015	0915	MONDAY	N HUBERT AVE	W MAIN ST	0.369	R	1	S	01	02			0		0		RCI		2	0	01	01	02	01	01	D CONTRO	CONTROL	NONE	NONE	14	03	HER CONTRIBUTING ACTI	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	Y
4192187	2015	SHERIFF'S	06/17/2015	1707	WEDNESDA	N HUBERT AVE	W LA SALLE ST	0.201	I	M	W	02	02			0		0		RCI		1	0	02	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	Y
3928980	2015	SHERIFF'S	06/04/2015	1130	THURSDAY	N LOIS AVE	W GRACE ST	2.28	R	1	N	01	03			0		0		RCI		2	0	01	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	04	LED TO KEEP IN PROPER LA	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
3937381	2015	SHERIFF'S	11/06/2015	0750	FRIDAY	N LOIS AVE	W CARMEN ST	2.022	I	M	S	02	03			0		0		RCI		2	0	01	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
3944417	2015	SHERIFF'S	09/24/2015	1245	THURSDAY	N LOIS AVE	W NORTH A ST	1.783	I	M	N	02	03			0		0		RCI		2	0	02	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	04	HER CONTRIBUTING ACTI	CONTRIBUTING ACT	1	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
3990960	2015	SHERIFF'S	09/18/2015	1501	FRIDAY	N LOIS AVE	W GRAY ST	1.972	I	M	N	02	03			0		0		RCI		3	0	01	01	01	01	01	D CONTRO	NOT CODED	NONE	NONE	14	05	NO CONTRIBUTING ACTION	NOT CODED	1	0	0	0	1	1	1	2	N	N	N	N	Y	N	N	N
4041605	2015	SHERIFF'S	06/28/2015	1527	SUNDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	E	02	03			0		0		RCI		1	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	NOT CODED	NOT CODED	0	0	0	0	2	0	2	5	N	N	N	N	Y	N	N	N
4126274	2015	SHERIFF'S	03/16/2015	1710	MONDAY	N LOIS AVE	W NORTH A ST	1.783	I	M	W	02	03			0		0		RCI		2	0	01	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	3	0	3	3	N	N	N	N	N	N	N	N
4178704	2015	SHERIFF'S	12/03/2015	1731	THURSDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	N	02	03			0		0		RCI		2	0	01	02	02	01	04	CONTROL	CONTROL	NONE	NONE	14	03	NO CONTRIBUTING ACTION	CONTRIBUTING ACT	2	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4215666	2015	SHERIFF'S	02/05/2015	1252	THURSDAY	N LOIS AVE	W CYPRESS ST	2.227	L	2	S	01	03			0		0		RCI		3	0	01	01	02	01	04	D CONTRO	CONTROL	NONE	NONE	14	01	RATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
4464179	2015	SHERIFF'S	10/19/2015	0915	MONDAY	N LOIS AVE	W CARMEN ST	2.04	R	1	O	01	03			0		0		RCI		1	0	01	01	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
4593041	2015	SHERIFF'S	10/17/2015	0800	SATURDAY	N LOIS AVE		2.1	R	1	N	01	03			0		0		RCI		1	0	01	01	01	01	01	CONTROL	CONTROL	NONE	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4653992	2015	SHERIFF'S	12/18/2015	1741	FRIDAY	N LOIS AVE	W GREEN ST	2.524	I	M	N	03	03			0		0		RCI		1	0	01	02	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	N
4655841	2015	SHERIFF'S	10/23/2015	1605	FRIDAY	N LOIS AVE	W GRAY ST	1.972	I	M	O	02	03			0		0		RCI		1	0	01	01	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	03	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4656211	2015	SHERIFF'S	11/22/2015	1003	SUNDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	S	02	03			0		0		RCI		3	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	02	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	N
4667033	2015	SHERIFF'S	12/30/2015	1705	WEDNESDA	N LOIS AVE	W CYPRESS ST	2.222	I	M	O	02	03			0		0		RCI		2	0	01	01	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4010949	2015	SHERIFF'S	08/18/2015	1215	TUESDAY	SPRUCE ST W	LOIS AVE N	8.69	R	2	E	02	03	16	PAVED	5	LAWN	12	48000	RCI	50	1	0	02	01	01	01	01	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4047081	2015	SHERIFF'S	05/26/2015	1920	TUESDAY	SPRUCE ST W	LOIS AVE N	8.69	L	1	W	02	03	16	PAVED	5	LAWN	12	48000	RCI	50	2	0	02	02	03	02	01	CONTROL	CONTROL	NONE	NONE	14	77	RAN RED LIGHT	CONTRIBUTING ACT	2	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4177703	2015	SHERIFF'S	12/13/2015	1835	SUNDAY	SPRUCE ST W	LOIS AVE N	8.714	R	1	N	01	03	16	PAVED	5	LAWN	12	48000	RCI	50	1	0	03	04	01	01	03	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4202248	2015	SHERIFF'S	12/21/2015	2215	MONDAY	SPRUCE ST W	LOIS AVE N	8.686	R	1	O	01	03	16	PAVED	5	LAWN	12	48000	RCI	50	1	0	02	04	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	04	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	Y
4228087	2015	SHERIFF'S	05/27/2015	1727	WEDNESDA	W BOY SCOUT BLVD	N LOIS AVE	8.668	R	1	E	01	03			0		0		RCI		1	0	01	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	01	RATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	Y
3933921	2015	SHERIFF'S	05/25/2015	1820	MONDAY	W CYPRESS ST	N LOIS AVE	1.307	L	2	W	01	03			0		0		RCI		1	0	01	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
3934994	2015	SHERIFF'S	03/19/2015	1840	THURSDAY	W CYPRESS ST	N LOIS AVE	1.335	L	2	W	04	03			0		0		RCI		1	0	01	01	01	01	05	D CONTRO	CONTROL	NONE	NONE	14	04	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	N
3944974	2015	SHERIFF'S	07/29/2015	0837	WEDNESDA	W CYPRESS ST	N LOIS AVE	1.297	I	M	S	02	03			0		0		RCI		4	0	01	01	01	01	03	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	3	0	1	0	2	0	2	3	N	N	N	N	N	N	N	N
3972265	2015	SHERIFF'S	01/14/2015	1830	WEDNESDA	W CYPRESS ST	N LOIS AVE	1.297	I	M	W	02	03			0		0		RCI		1	0	03	04	01	01	04	CONTROL	CONTROL	CONST/MT	OBSTRUC	14	01	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	6	N	N	Y	N	Y	N	N	N
3974534	2015	SHERIFF'S	01/15/2015	1814	THURSDAY	W CYPRESS ST	N HUBERT AVE	1.176	R	2	E	02	03			0		0		RCI		1	0	01	04	03	02	02	D CONTRO	CONTROL	WET, ICY, S	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	0	0	0	0	3	0	3	3	N	N	N	N	N	N	N	N
3995335	2015	SHERIFF'S	06/27/2015	0640	SATURDAY	W CYPRESS ST	N LOIS AVE	1.297	I	M	S	02	03			0		0		RCI		1	0	01	01	02	01	01	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4176766	2015	SHERIFF'S	07/30/2015	1440	THURSDAY	W CYPRESS ST	N LOIS AVE	1.286	R	1	E	01	03			0		0		RCI		2	0	01	01	02	01	03	D CONTRO	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4177128	2015	SHERIFF'S	09/02/2015	1518	WEDNESDA	W CYPRESS ST	N LOIS AVE	1.297	I	M	W	02	03			0		0		RCI		1	0	01	01	02	01	04	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
4214774	2015	SHERIFF'S	01/22/2015	0809	THURSDAY	W CYPRESS ST	N LOIS AVE	1.297	I	M	W	02	03			0		0		RCI		3	0	01	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4591146	2015	SHERIFF'S	02/11/2015	1655	WEDNESDA	W CYPRESS ST	N LOIS AVE	1.279	R	2	E	01	03			0		0		RCI		1	0	01	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	02	NO CONTRIBUTING ACTION	TO YIELD RIGHT-OF	0	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	Y
4643841	2015	SHERIFF'S	08/22/2015	1148	SATURDAY	W CYPRESS ST	N LOIS AVE	1.297	I	M	S	02	03			0		0		RCI		2	0	01	01	01	01	01	CONTROL	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4667941	2015	SHERIFF'S	02/03/2015	1320	TUESDAY	W CYPRESS ST	N LOIS AVE	1.307	L	L	W	01	03			0		0		RCI		1	0	01	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
3944185	2015	SHERIFF'S	07/27/2015	1815	MONDAY	W GRAY ST	N LOIS AVE	0.698	I	M	E	02	02			0		0		RCI		1	0	01	01	03	02	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
3954377	2015	SHERIFF'S	09/15/2015	1532	TUESDAY	W GRAY ST	N LOIS AVE	0.698	I	M	W	02	03			0		0		RCI		1	0	01	01	01	01	01	STOP SIGN	CONTROL	OPER, MIS	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	Y	N	N	N	N	N	N
3966805	2015	SHERIFF'S	11/06/2015	1430	FRIDAY	W LAUREL ST	N HUBERT AVE	0.126	I	M	N	02	02			0		0		RCI		1	0	01	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	NO CONTRIBUTING ACTION	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
4029325	2015	SHERIFF'S	04/25/2015	1232	SATURDAY	W NORTH A ST	N LOIS AVE	0.616	R	1	W	01	03			0		0		RCI		1	0	01	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	02	RATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
4015824	2015	SHERIFF'S	10/04/2015	0715	SUNDAY	W UNION ST	N HUBERT AVE	0	I	M	0	77	02			0		0		RCI		0	0	01	01	02	02	00	NOT CODED	NOT CODED	NONE	NONE	14	03	NOT CODED	NOT CODED	0	0	0	0	1	0	2	1	N	N	N	N	N	N	N	N
21627028	2016	SHERIFF'S	10/12/2016	1705	WEDNESDA	BOY SCOUT BLVD	LOIS AVE N	8.69	R	1	E	02	03	16	PAVED	5	LAWN	12	41500	RCI	50	1	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	0	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	N
21755354	2016	SHERIFF'S	01/23/2016	0246	SATURDAY	BOY SCOUT BLVD	LOIS AVE N	8.69	L	1	N	02	01	16	PAVED	5	LAWN	12	41500	RCI	50	1	0	02	04	03	02	04	CONTROL	CONTROL	WET, ICY, S	NONE	14	77	RAN RED LIGHT	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	Y	N	Y	N	N	N
21808720	2016	SHERIFF'S	06/30/2016	1631	THURSDAY	BOY SCOUT BLVD	LOIS AVE N	8.69	M	M	W	02	03	16	PAVED	5	LAWN	12	41500	RCI	50	1	0	02	01	01	01	04	CONTROL	NONE	NONE	NONE	36	00	RATED MV IN CARLESS OR	NOT CODED	0	0	0	0	1	0	1	1	N	N	N	N	N	N	N	N
21849741	2016	SHERIFF'S	06/24/2016	2008	FRIDAY	BOY SCOUT BLVD	LOIS AVE N	8.69	R	1	E	02	01	16	PAVED	5	LAWN	12	41500	RCI	50	2	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	2	0	0	0	3	0	3	6	N	N	N	N	N	N	N	N
21854941	2016	SHERIFF'S	10/05/2016	2008	WEDNESDA	BOY SCOUT BLVD	LOIS AVE N	8.69	R	4	W	02	02	16	PAVED	5	LAWN	12	41500	RCI	50	1	0	02	04	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
21937793	2016	SHERIFF'S	04/29/2016	1915	FRIDAY	BOY SCOUT BLVD	LOIS AVE N	8.69	R	3	E	02	03	16	PAVED	5	LAWN	12	41500	RCI	50	1	0	02	01	01	01	04	(SEE NARR	CONTROL	NONE	NONE	14	04	RATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	Y
21685215	2016	SHERIFF'S	07/13/2016	1945	WEDNESDA	CYPRESS ST	LOIS AVE	1.299	L	1	W	02	03			0		0		RCI		1	0	01	01	01	01	01	CONTROL	CONTROL	NONE	NONE	14	01	RATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
21863073	2016	SHERIFF'S	10/21/2016	1538	FRIDAY	LOIS AVE	LAUREL ST	2.477	I	M	N	02	03			0		0		RCI		3	0	01	01	01	01	03	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	3	0	3	3	N	N	N	N	N	N	N	N
21627025	2016	SHERIFF'S	02/17/2016	2315	WEDNESDA	LOIS AVE N	Y SCOUT BLVD	8.69	R	L	N	01	03	16	PAVED	5	LAWN	12	41500	RCI	50	2	1	03	04	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	RATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
21811978	2016	SHERIFF'S	04/12/2016	1905	TUESDAY	LOIS AVE N	Y SCOUT BLVD	8.69	R	S	N	01	03	16	PAVED	5	LAWN	12	41500	RCI	50	2	1	02	01	01	01	04	D CONTRO	NOT CODED	NONE	NONE	14	77	RAN OFF ROADWAY	NOT CODED	1	0	0	0	2	0	2	2	N	Y	N	N	N	N	N	N
21642140	2016	SHERIFF'S	12/12/2016	1350	MONDAY	N HUBERT AVE	W GREEN ST	0.302	I	M	W	02	03			0		0		RCI		1	0	01	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	6	N	N	N	N	N	N	N	N
21822298	2016	SHERIFF'S	03/28/2016	1750	MONDAY	N HUBERT AVE	W NASSAU ST	0.101	I	M	E	02	02			0		0		RCI		1	0	01	01	02	01	01	CONTROL	CONTROL	NONE	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
21640838	2016	SHERIFF'S	09/30/2016	1610	FRIDAY	N LOIS AVE	W GRAY ST	1.972	I	M	W	02	03			0

FDOT Crash Data 2015-2019 for N. Lois Ave.

Object Id	Calendar Year	ting Agenc	Crash Date	Crash Time	Day	On Roadway Name	Int Roadway Name	Nearest Inventory MP	Crash Side Of Road	Crash Lane Number	1st Vehicle Travel Direction	Intersecti on Type	Shoulder Type	Functional Class	RCI Shoulder Type First	RCI Shoulder Width First	RCI Shoulder Type Second	RCI Shoulder Width Second	Avg Daily Traffic	AADT Sourc e	Posted Speed Limit	Highest Injury in Crash	Alcohol/D rugs Involved	Site Location	Lighting	Weather	Road Surface	Traffic Way	Traffic Control Vehicle 1	Traffic Control Vehicle 2	Road Condition 1	Environm ent Condition 1	Crash Harmful Event	Manner of Collision	Driver Action Vehicle 1	Driver Action Vehicle 2	Count of Nonfatal Injuries	Count of Traffic Fatalities	Count of Serious Injuries	Count of Pedestrians	Count of Drivers	Count of Bicyclists	Count of Vehicles	Count of Persons	Wrong Way	Speeding	Workzone Inv	Commercial Veh Inv	Intersection Inv	Lane Departure	Impaired Driver	Distracted Driver
44897860	2017	SHERIFF'S	11/24/2017	1641	FRIDAY	LOIS AVE N	SPRUCE ST W	8.69	T	1	0	01	03	16	PAVED	7	LAWN	12	42500	RCI	50	1	0	03	01	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	04	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	5	N	N	N	N	N	N	N	N
44921335	2017	SHERIFF'S	03/16/2017	1800	THURSDAY	LOIS AVE N	SPRUCE ST W	8.69	S	1	W	02	03	16	PAVED	7	LAWN	12	42500	RCI	50	2	0	02	01	01	01	01	CONTROL	NOT CODE	NONE	NONE	11	00	NO CONTRIBUTING ACTION	NOT CODED	1	0	0	0	1	1	1	2	N	N	N	N	N	N	N	N
44925883	2017	SHERIFF'S	05/02/2017	1651	TUESDAY	LOIS AVE N	W SCOUT BLVD	8.69	T	R	N	01	01	16	PAVED	7	LAWN	12	42500	RCI	50	2	0	03	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
44926049	2017	OTHER	10/17/2017	1725	TUESDAY	LOIS AVE N	W SCOUT BLVD	8.69	T	R	N	02	02	16	PAVED	7	LAWN	12	42500	RCI	50	1	0	03	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	Y
44883725	2017	SHERIFF'S	02/18/2017	1510	SATURDAY	N HUBERT AVE	W GREEN ST	0.264	L	S	0	01	01			0		0		RCI		0	0	01	01	02	02	00	NOT CODED	CONTROL	NONE	NONE	14	05	NOT CODED	NOT CODED	0	0	0	0	1	0	2	1	N	N	N	N	N	Y	N	N
44771820	2017	SHERIFF'S	01/28/2017	1739	SATURDAY	N LOIS AVE	W NASSAU ST	2.324	I	M	E	02	03			0		0		RCI		3	0	02	02	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	RAN STOP SIGN	CEEDED POSTED SPE	7	0	0	0	2	0	2	7	N	Y	N	N	Y	N	N	N
44791582	2017	SHERIFF'S	06/12/2017	1640	MONDAY	N LOIS AVE	W NORTH A ST	1.785	R	1	N	01	03			0		0		RCI		2	0	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	04	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	5	N	N	N	Y	N	N	N	N
44802583	2017	SHERIFF'S	07/12/2017	1650	WEDNESDA	N LOIS AVE	W CYPRESS ST	2.241	L	2	S	02	03			0		0		RCI		1	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
44814591	2017	SHERIFF'S	09/28/2017	0745	THURSDAY	N LOIS AVE	W GRAY ST	1.973	I	M	W	02	03			0		0		RCI		1	0	02	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	02	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	3	0	3	4	N	N	N	N	Y	N	N	N
44816494	2017	SHERIFF'S	08/06/2017	2237	SUNDAY	N LOIS AVE	W LAUREL ST	2.477	I	M	E	03	03			0		0		RCI		1	0	02	04	01	01	01	STOP SIGN	CONTROL	NONE	ER (SEE NA	14	03	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
44879710	2017	SHERIFF'S	03/12/2017	1744	SUNDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	S	02	03			0		0		RCI		2	0	01	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
44881640	2017	SHERIFF'S	08/04/2017	2050	FRIDAY	N LOIS AVE	W CYPRESS ST	2.203	L	2	0	02	01			0		0		RCI		1	0	03	04	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	04	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
44882459	2017	SHERIFF'S	05/16/2017	1500	TUESDAY	N LOIS AVE	W NORTH A ST	1.779	L	1	S	01	03			0		0		RCI		1	0	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	04	LED TO KEEP IN PROPER LA	CONTRIBUTING ACT	0	0	0	0	3	0	3	4	N	N	N	N	Y	N	N	N
44882599	2017	SHERIFF'S	05/25/2017	1324	THURSDAY	N LOIS AVE	W NORTH A ST	1.777	R	1	N	01	03			0		0		RCI		1	0	01	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	03	IMPROPER TURN	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
44884924	2017	SHERIFF'S	02/14/2017	1043	TUESDAY	N LOIS AVE	W NASSAU ST	2.324	I	M	E	02	03			0		0		RCI		1	0	01	01	01	01	03	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
44908610	2017	SHERIFF'S	07/05/2017	1208	WEDNESDA	N LOIS AVE	W LAUREL ST	2.477	I	M	W	02	03			0		0		RCI		1	0	01	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
44908751	2017	SHERIFF'S	04/19/2017	1640	WEDNESDA	N LOIS AVE	W GRAY ST	1.973	R	1	E	03	03			0		0		RCI		2	0	01	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	1	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
44910795	2017	SHERIFF'S	09/29/2017	2227	FRIDAY	N LOIS AVE	W ARCH ST	2.365	L	1	S	01	03			0		0		RCI		1	0	01	04	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO KEEP IN PROPER LA	CONTRIBUTING ACT	0	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	N
44910945	2017	SHERIFF'S	02/17/2017	1213	FRIDAY	N LOIS AVE	W SPRUCE ST	2.716	L	S	S	01	03	16		0		0		RCI		1	0	01	01	01	01	D CONTRO	NOT CODE	NONE	NONE	32	00	OPERATED MV IN CARLESS OR	NOT CODED	0	0	0	0	1	0	1	2	N	N	N	N	N	Y	N	N
44916788	2017	SHERIFF'S	11/02/2017	1139	THURSDAY	N LOIS AVE	W NORTH A ST	1.783	I	M	S	02	03			0		0		RCI		3	0	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	2	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
44933315	2017	SHERIFF'S	10/12/2017	1251	THURSDAY	N LOIS AVE	W GRAY ST	1.973	I	M	E	02	03			0		0		RCI		1	0	02	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	3	0	3	4	N	N	N	Y	N	N	N	N
45021176	2017	SHERIFF'S	06/25/2017	1330	SUNDAY	N LOIS AVE	W NORTH B ST	1.842	I	M	N	02	03			0		0		RCI		1	0	01	01	01	01	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
45021379	2017	SHERIFF'S	08/24/2017	2040	THURSDAY	N LOIS AVE	W LA SALLE ST	2.433	R	S	N	02	03	19		0		0		RCI		5	0	02	04	02	01	01	NOT CODED	CONTROL	NONE	NONE	14	77	NO CONTRIBUTING ACTION	NOT CODED	0	1	0	0	1	1	3	3	N	N	N	N	N	N	N	N
45034513	2017	SHERIFF'S	03/28/2017	1629	TUESDAY	N LOIS AVE	W SPRUCE ST	2.793	L	1	S	01	03			0		0		RCI		2	0	01	01	01	03	D CONTRO	CONTROL	NONE	NONE	14	03	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
45035179	2017	SHERIFF'S	12/12/2017	2105	TUESDAY	N LOIS AVE	W ARCH ST	2.374	I	M	S	02	03			0		0		RCI		1	0	02	04	01	01	03	STOP SIGN	STOP SIGN	NONE	NONE	14	04	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
45115071	2017	SHERIFF'S	06/16/2017	1640	FRIDAY	N LOIS AVE	W NORTH B ST	1.845	L	1	S	01	03			0		0		RCI		3	0	01	01	02	01	01	D CONTRO	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
45115079	2017	SHERIFF'S	04/03/2017	1620	MONDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	N	01	03			0		0		RCI		1	0	01	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	NO CONTRIBUTING ACTION	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
44888925	2017	SHERIFF'S	01/01/2017	0824	SUNDAY	SPRUCE ST W	LOIS AVE N	8.709	R	S	E	01	03	16	PAVED	5	LAWN	12	42500	RCI	50	1	1	03	01	01	01	01	D CONTRO	NOT CODE	NONE	NONE	14	03	LED TO KEEP IN PROPER LA	NOT CODED	0	0	0	0	1	0	1	1	N	N	N	N	N	Y	N	N
44889262	2017	SHERIFF'S	11/13/2017	1530	MONDAY	SPRUCE ST W	LOIS AVE N	8.69	L	1	S	02	03	16	PAVED	7	LAWN	12	42500	RCI	50	2	0	02	01	01	01	01	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
44816053	2017	SHERIFF'S	04/25/2017	2221	TUESDAY	W CYPRESS ST	N HUBERT AVE	1.172	I	M	S	02	03			0		0		RCI		1	0	01	04	01	01	01	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	N	N	N	N
44879763	2017	SHERIFF'S	05/01/2017	1645	MONDAY	W CYPRESS ST	N HUBERT AVE	1.248	R	L	E	01	03			0		0		RCI		1	0	01	01	01	01	03	CONTROL	CONTROL	NONE	NONE	14	04	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	N
44883886	2017	SHERIFF'S	03/03/2017	1350	FRIDAY	W CYPRESS ST	N LOIS AVE	1.312	R	1	E	01	03			0		0		RCI		1	0	01	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	04	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	N
44890515	2017	SHERIFF'S	01/06/2017	1230	FRIDAY	W CYPRESS ST	N LOIS AVE	1.307	L	2	W	02	03			0		0		RCI		2	0	01	01	01	01	01	CONTROL	CONTROL	NONE	NONE	14	04	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	N	Y	N	Y
45022129	2017	OTHER	09/23/2017	2231	SATURDAY	W CYPRESS ST	N LOIS AVE	1.316	L	2	W	01	03			0		0		RCI		1	1	03	04	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	Y	N
45033810	2017	SHERIFF'S	04/21/2017	0900	FRIDAY	W CYPRESS ST	N LOIS AVE	1.297	I	M	E	01	03			0		0		RCI		1	0	01	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
45116351	2017	SHERIFF'S	03/18/2017	1935	SATURDAY	W CYPRESS ST	N LOIS AVE	1.297	I	M	W	02	03			0		0		RCI		1	0	01	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	0	0	0	0	2	0	2	5	N	N	N	N	N	N	N	N
45120011	2017	SHERIFF'S	04/06/2017	0915	THURSDAY	W CYPRESS ST	N LOIS AVE	1.316	L	L	W	77	03			0		0		RCI		2	0	03	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	04	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	1	0	0	0	2	0	2	9	N	N	N	Y	N	N	N	N
44881388	2017	SHERIFF'S	06/07/2017	1545	WEDNESDA	W NORTH A ST	N HUBERT AVE	0.501	I	M	E	02	03			0		0		RCI		2	0	01	01	03	02	01	STOP SIGN	STOP SIGN	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
49438046	2018	SHERIFF'S	11/21/2018	1424	WEDNESDA	BOY SCOUT BLVD W	LOIS AVE N	8.696	L	L	W	02	02	16	PAVED	5	LAWN	12	43500	RCI	50	1	0	03	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49439385	2018	SHERIFF'S	06/28/2018	0550	THURSDAY	BOY SCOUT BLVD W	LOIS AVE N	8.671	L	1	W	01	03	16	PAVED	7	LAWN	12	43500	RCI	50	3	0	02	04	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	RAN RED LIGHT	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49440096	2018	SHERIFF'S	02/05/2018	2115	MONDAY	BOY SCOUT BLVD W	LOIS AVE N	8.689	R	3	E	02	03	16	PAVED	7	LAWN	12	43500	RCI	50	2	0	03	05	01	01	04	CONTROL	NOT CODE	NONE	NONE	14	00	NO CONTRIBUTING ACTION	NOT CODED	1	0	0	0	1	1	3	3	N	N	N	N	Y	N	N	N
49441063	2018	SHERIFF'S	02/14/2018	2202	WEDNESDA	BOY SCOUT BLVD W	LOIS AVE N	8.699	L	1	0	01	03	16	PAVED	5	LAWN	12	43500	RCI	50	1	0	03	04	01	01	00	NOT CODED	CONTROL	NONE	NONE	14	01	NOT CODED	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49533457	2018	SHERIFF'S	08/14/2018	1826	THURSDAY	BOY SCOUT BLVD W	LOIS AVE N	8.595	L	2	W	01	03	16	PAVED	5	LAWN	8	43500	RCI	50	1	0	01	04	01	01	04	D CONTRO	CONTROL	NONE	L (S) IN ROA	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	0	0	0	0	3	0	3	4	N	N	N	N	N	N	N	N
49536156	2018	SHERIFF'S	02/21/2018	2040	WEDNESDA	BOY SCOUT BLVD W	LOIS AVE N	8.69	L	2	E	02	02	16	PAVED	7	LAWN	12	43500	RCI	50	3	0	02	04	01	01	04	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	4	0	0	0	3	0	3	4	N	N	N	N	Y	N	N	N
49539379	2018	SHERIFF'S	04/22/2018	1420	SUNDAY	BOY SCOUT BLVD W	LOIS AVE N	8.698	L	L	W	01	01	16	PAVED	5	LAWN	12	43500	RCI	50	3	0	03	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	04	LED TO KEEP IN PROPER LA	CONTRIBUTING ACT	2	0	0	0	4	0	4	8	N	N	N	N	Y	N	N	N
49640886	2018	SHERIFF'S	05/15/2018	1720	TUESDAY	BOY SCOUT BLVD W	LOIS AVE N	8.69	R	1	E	02	03	16	PAVED	7	LAWN	12	43500	RCI	50	2	0	02	01	01	01	04	CONTROL	CONTROL	NONE	NONE	14	01	OPERATED MV IN CARLESS OR	CONTRIBUTING ACT	2	0	0	0	4	0	4	4	N	N	N	N	Y	N	N	N
49435838	2018	SHERIFF'S	09/11/2018	1540	TUESDAY	LOIS AVE N	W SCOUT BLVD	8.69	S	L	E	02	03	16	PAVED	7	LAWN	12	43500	RCI	50	1	0	02	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	04	NO CONTRIBUTING ACTION	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
49439455	2018	SHERIFF'S	09/07/2018	1610	FRIDAY	LOIS AVE N	W SCOUT BLVD	8.69	T	R	N	01	03	16	PAVED	7	LAWN	12	43500	RCI	50	2	0	03	01	03	02	04	CONTROL	CONTROL	WET, ICY, S		14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	1	0	0	0	2	0	2	3	N	N	N	Y	Y	N	N	N
49441026	2018	SHERIFF'S	03/30/2018	2216	FRIDAY	LOIS AVE N	SPRUCE ST W	8.69	S	2	S	02	03	16	PAVED	7	LAWN	12	43500	RCI	50	3	0	02	05	01	01	04	(SEE NARR	(SEE NARR	OPER, MIS		14	03	OTHER CONTRIBUTING ACTI	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49534047	2018	SHERIFF'S	07/19/2018	1835	THURSDAY	LOIS AVE N	OY SCOUT BLV	8.69	T	2	N	01	03	16	PAVED	7	LAWN	12	43500	RCI	50	1	0	03	01	02	02	04	D CONTRO	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49571934	2018	SHERIFF'S	10/04/2018	1830	THURSDAY	LOIS AVE N	SPRUCE ST W	8.69	S	2	N	01	03	16	PAVED	7	LAWN	12	43500	RCI	50	1	0	03	01	01	01	04	D CONTRO	CONTROL	NONE	NONE	14	01	FOLLOWED TOO CLOSELY	CONTRIBUTING ACT	0	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
49453783	2018	SHERIFF'S	10/15/2018	1336	MONDAY	N HUBERT AVE	W GREEN ST	0.302	I	M	W	02	02			0		0		RCI		3	0	02	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	2	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	Y
49538927	2018	SHERIFF'S	04/27/2018	0930	FRIDAY	N HUBERT AVE	W NORTH A ST	0.556	I	M	0	02	03			0		0		RCI		1	0	03	01	01	01	00	NOT CODED	STOP SIGN	NONE	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
49436106	2018	SHERIFF'S	10/13/2018	2033	SATURDAY	N LOIS AVE	W CYPRESS ST	2.211	R	1	N	02	03			0		0		RCI		3	0	02	05	01	01	01	CONTROL	CONTROL	NONE	NONE	14	01	NO CONTRIBUTING ACTION	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
49439605	2018	SHERIFF'S	04/21/2018	0236	SATURDAY	N LOIS AVE	W GRAY ST	1.973	I	M	N	02	03			0		0		RCI		2	0	02	04	01	01	01	D CONTRO	STOP SIGN	NONE	NONE	14	03	NO CONTRIBUTING ACTION	RAN STOP SIGN	1	0	0	0	2	0	2	4	N	N	N	N	Y	N	N	N
49470093	2018	SHERIFF'S	01/31/2018	0618	WEDNESDA	N LOIS AVE	W CYPRESS ST	2.222	I	M	S	02	03			0		0		RCI		2	0	01	04	01	01	01	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	2	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
49470889	2018	SHERIFF'S	04/20/2018	2040	FRIDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	S	02	02			0		0		RCI		2	0	02	04	01	01	01	CONTROL	CONTROL	NONE	NONE	14	05	RAN RED LIGHT	CONTRIBUTING ACT	4	0	0	0	2	0	2	5	N	N	N	N	Y	N	N	N
49471234	2018	SHERIFF'S	03/08/2018	1946	THURSDAY	N LOIS AVE	W NORTH A ST	1.783	I	M	E	02	03			0		0		RCI		1	0	02	04	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	Y
49478945	2018	SHERIFF'S	12/14/2018	1635	FRIDAY	N LOIS AVE	W CARMEN ST	2.022	I	M	E	02	03			0		0		RCI		3	0	02	02	02	02	01	STOP SIGN	CONTROL	NONE	NONE	14	03	LED TO YIELD RIGHT-OF-W	CONTRIBUTING ACT	1	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49533760	2018	SHERIFF'S	09/22/2018	2158	SATURDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	S	02	03			0		0		RCI		3	0	02	04	01	01	03	CONTROL	CONTROL	NONE	NONE	14	03	RAN RED LIGHT	CONTRIBUTING ACT	1	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	Y
49534102	2018	SHERIFF'S	08/27/2018	0741	MONDAY	N LOIS AVE	W GRAY ST	1.973	I	M	E	02	03			0		0		RCI		2	0	02	01	01	01	01	STOP SIGN	CONTROL	NONE	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
49535346	2018	SHERIFF'S	09/10/2018	1615	MONDAY	N LOIS AVE	W CYPRESS ST	2.208	R	L	N	01	03			0		0		RCI		1	0	01	01	01	01	01	D CONTRO	NOT CODE	NONE	NONE	14	04	LED TO YIELD RIGHT-OF-W	NOT CODED	0	0	0	0	2	0	2	2	N	N	N	N	N	N	N	N
49535389	2018	SHERIFF'S	08/22/2018	1130	WEDNESDA	N LOIS AVE	W NORTH A ST	1.783	I	M	E	02	03			0		0		RCI		1	0	02	01	03	02	01	STOP SIGN	CONTROL	NONE	NONE	14	03	RAN STOP SIGN	CONTRIBUTING ACT	0	0	0	0	2	0	2	2	N	N	N	N	Y	N	N	N
49535617	2018	SHERIFF'S	09/23/2018	1753	SUNDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	N	02	03			0		0		RCI		2	0	02	01	02	02	04	CONTROL	CONTROL	NONE	NONE	14	02	RAN RED LIGHT	CONTRIBUTING ACT	2	0	0	0	2	0	2	3	N	N	N	N	Y	N	N	N
49536118	2018	SHERIFF'S	03/01/2018	0625	THURSDAY	N LOIS AVE	W CYPRESS ST	2.222	I	M	N	02	03			0		0		RCI		1	0	01	03	01	01	01	CONTROL

Appendix E

Recommended Alternative Concept

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

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P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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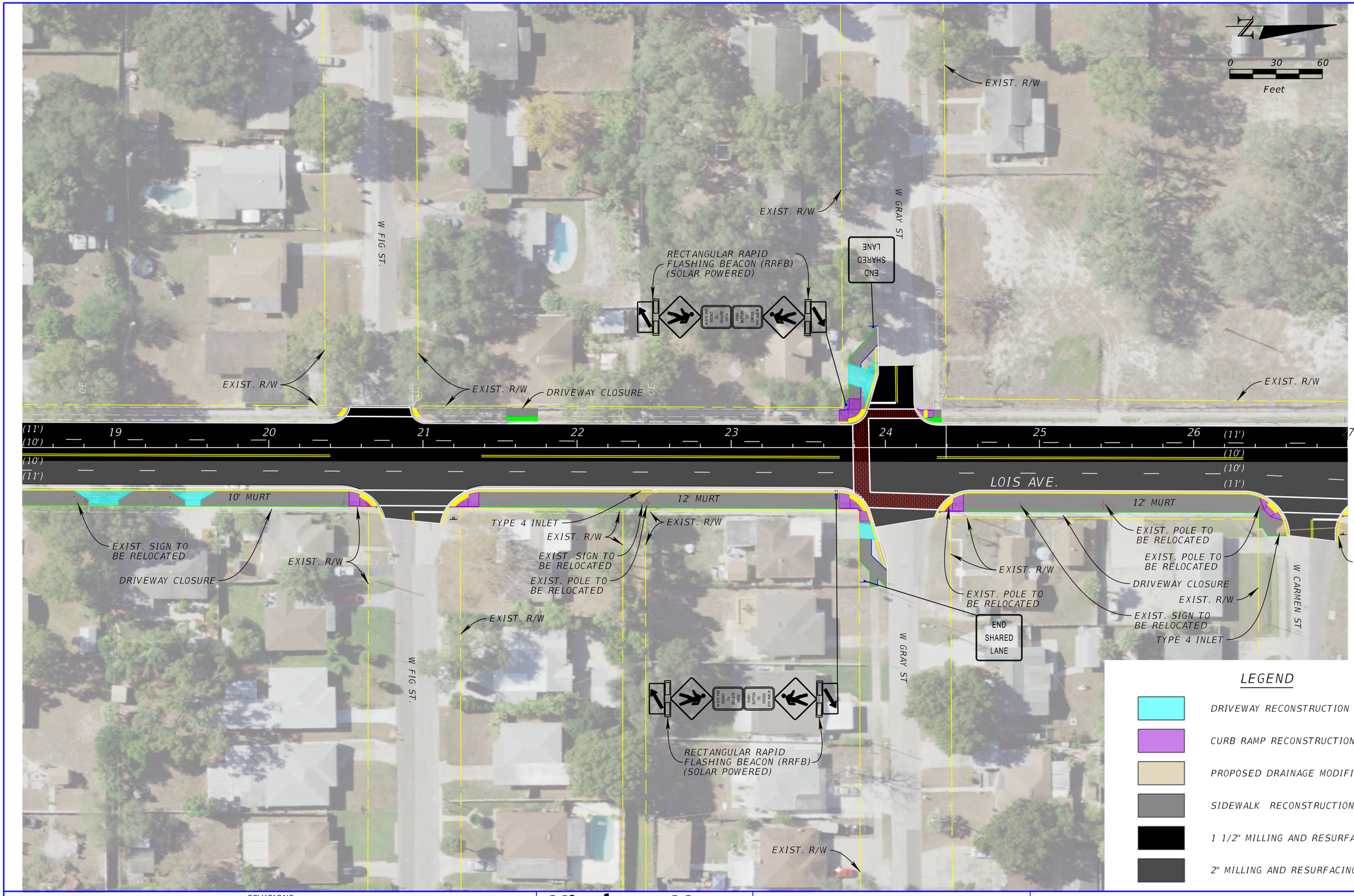
PHONE (941) 379-7600
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (1)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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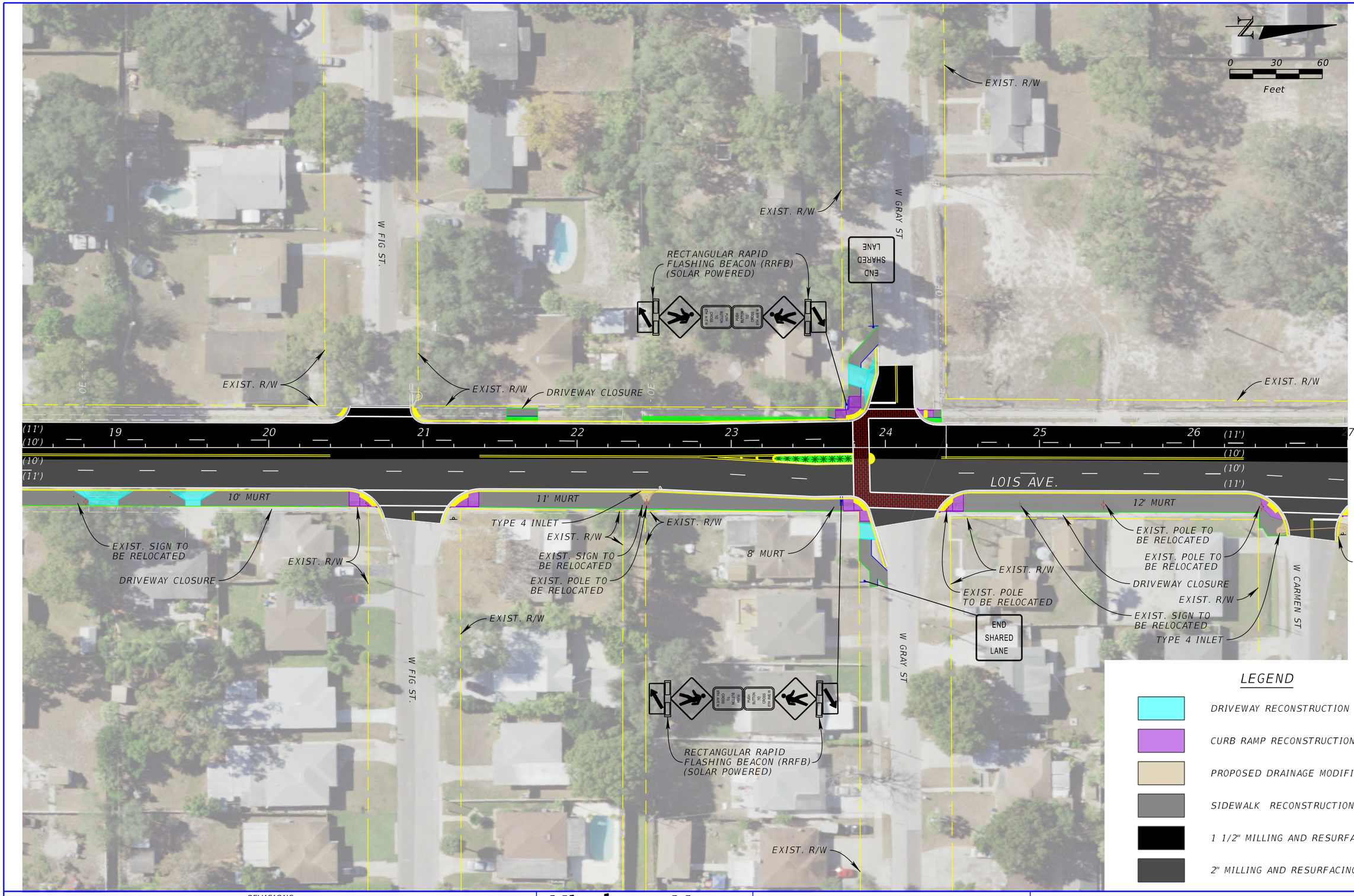
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (2)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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CERTIFICATE OF AUTHORIZATION: 00000696

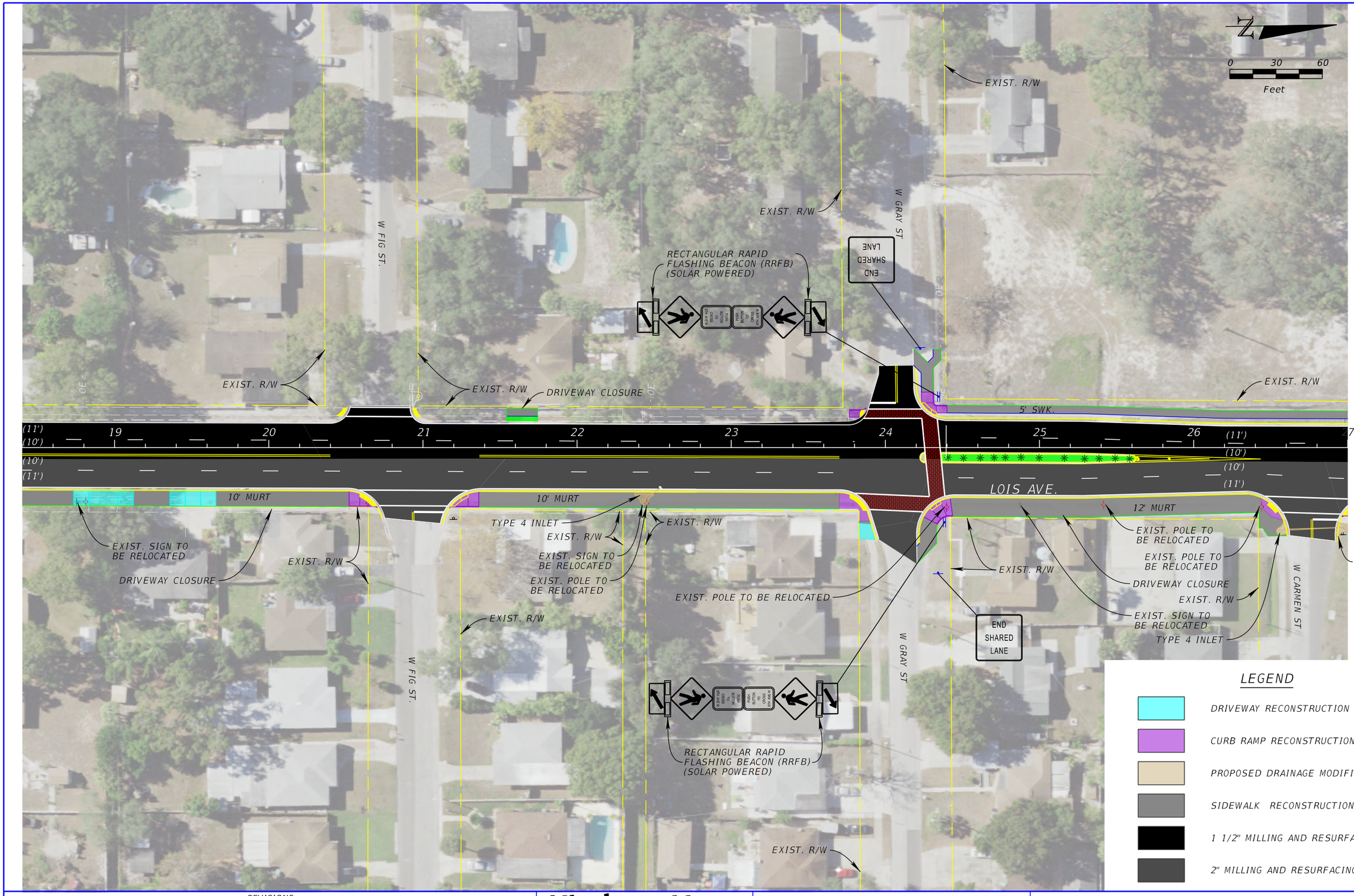
CITY OF TAMPA

LOIS AVENUE WALK-BIKE
IMPROVEMENTS CONCEPT

PLAN SHEET (2)
ALTERNATIVE 1

SHEET NO.

Erin.Swider 9/16/2020 7:53:57 PM K:\SAR_Roadway\048769010_Lois Ave Concept\048769015\roadway\PLANRD02_alt.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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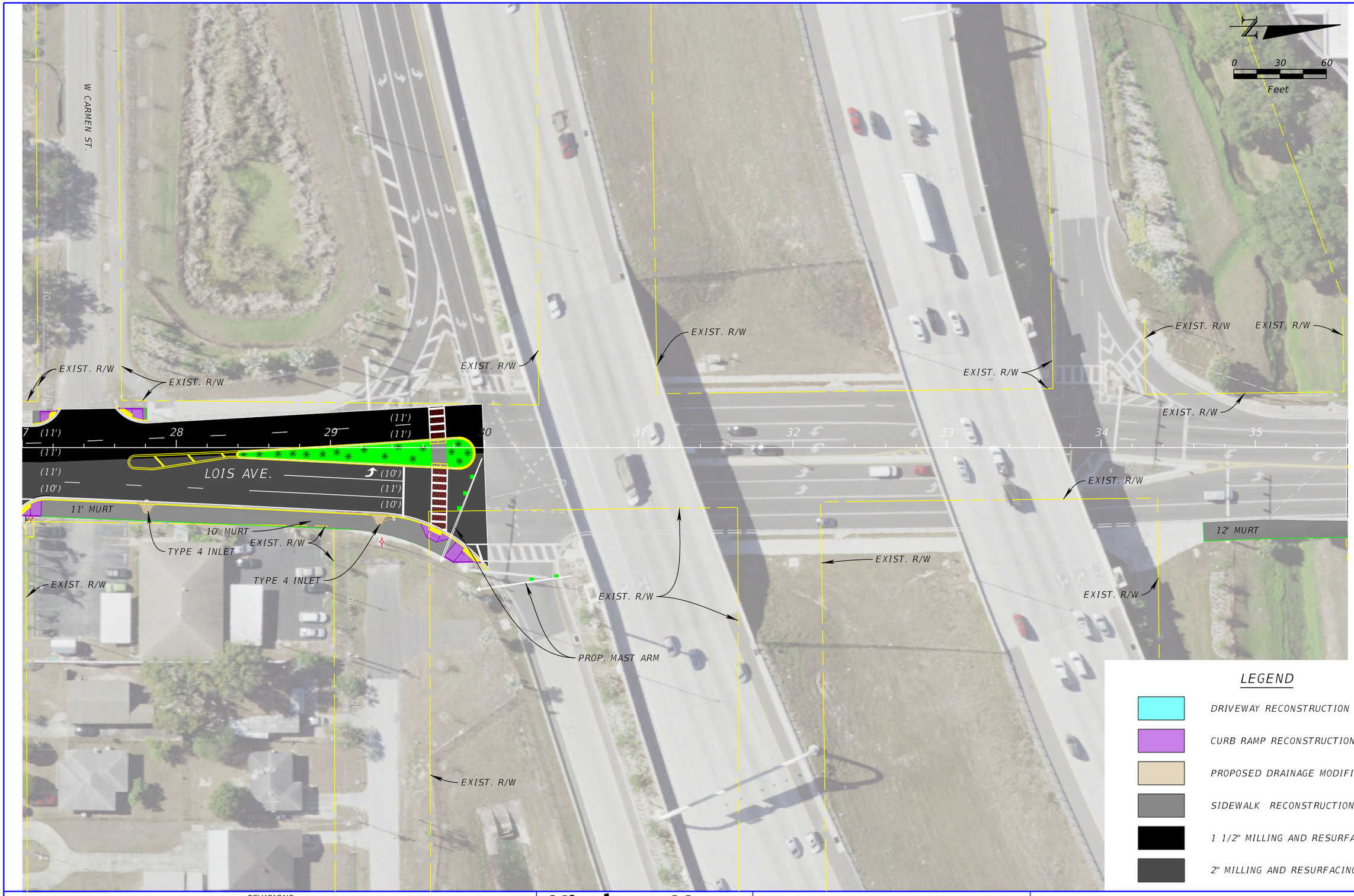
CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (2) ALTERNATIVE 2

SHEET NO.


W CARMEN ST.
LOIS AVE.
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
EXIST. R/W
11' MURT
10' MURT
12' MURT
TYPE 4 INLET
TYPE 4 INLET
PROP. MAST ARM
0E
0E
0E

MATCHLINE SHEET 4B

N

0 30 60
Feet

W CYPRESS ST

W GRACE ST

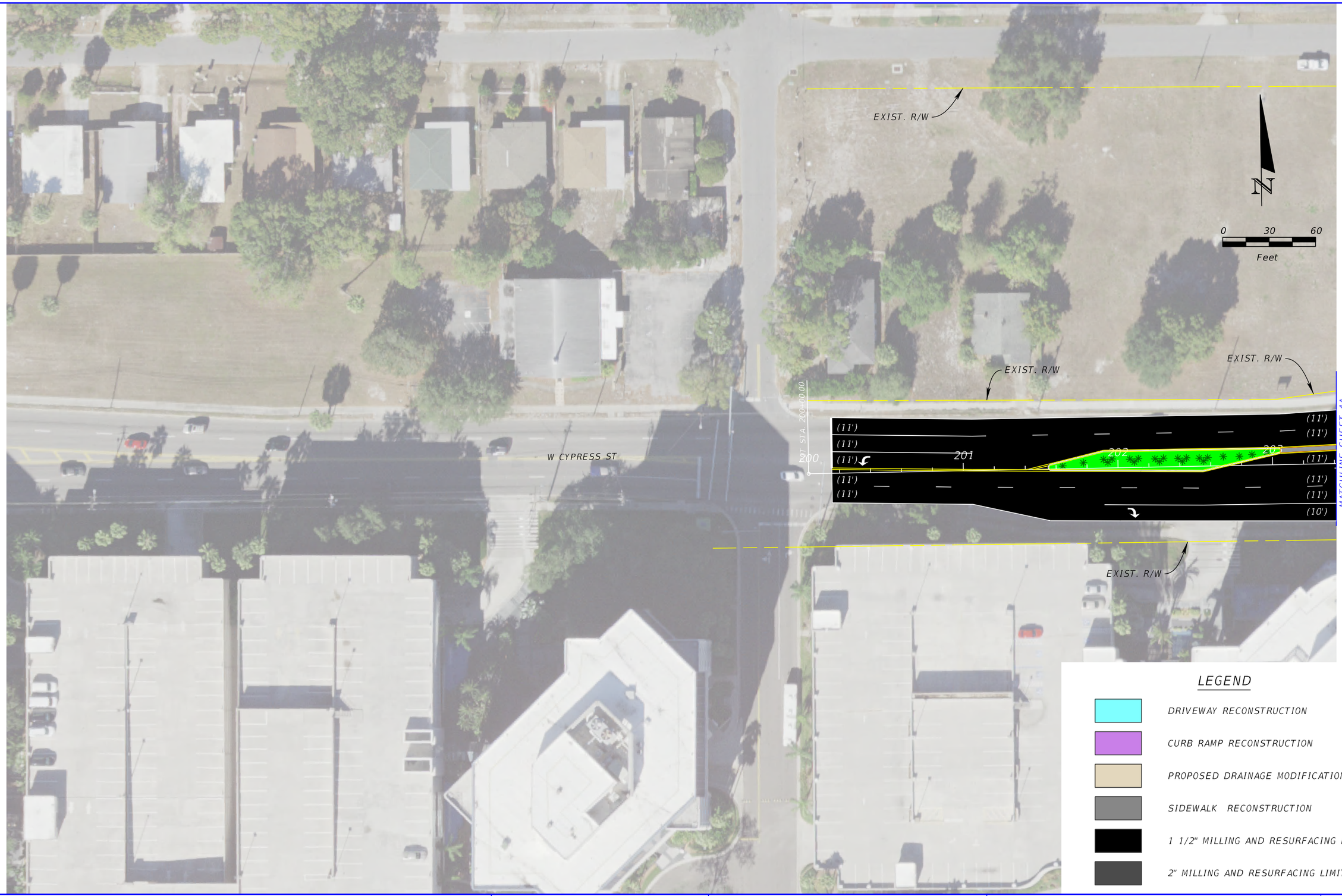
W NASSAU ST

LOIS AVE.

EXIST. R/W

EXIST. R/W

EXIST. R/W



LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- PROPOSED DRAINAGE MODIFICATION
- SIDEWALK RECONSTRUCTION
- 1 1/2" MILLING AND RESURFACING LIMITS
- 2" MILLING AND RESURFACING LIMITS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

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CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (4B)

SHEET NO.

LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- PROPOSED DRAINAGE MODIFICATION
- SIDEWALK RECONSTRUCTION
- 1 1/2" MILLING AND RESURFACING LIMITS
- 2" MILLING AND RESURFACING LIMITS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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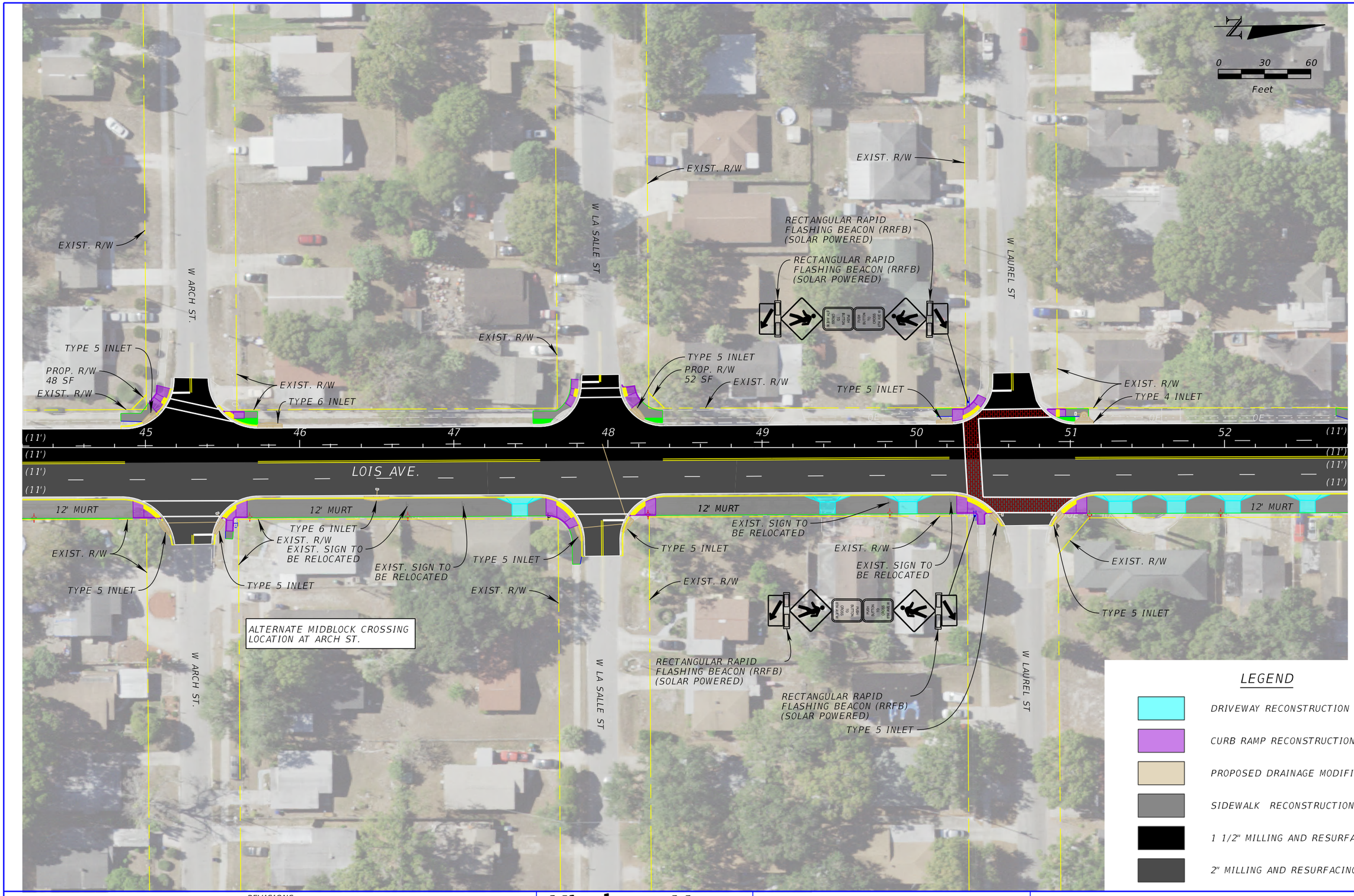
CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (4C)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (5)

SHEET NO.

LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- PROPOSED DRAINAGE MODIFICATION
- SIDEWALK RECONSTRUCTION
- 1 1/2" MILLING AND RESURFACING LIMITS
- 2" MILLING AND RESURFACING LIMITS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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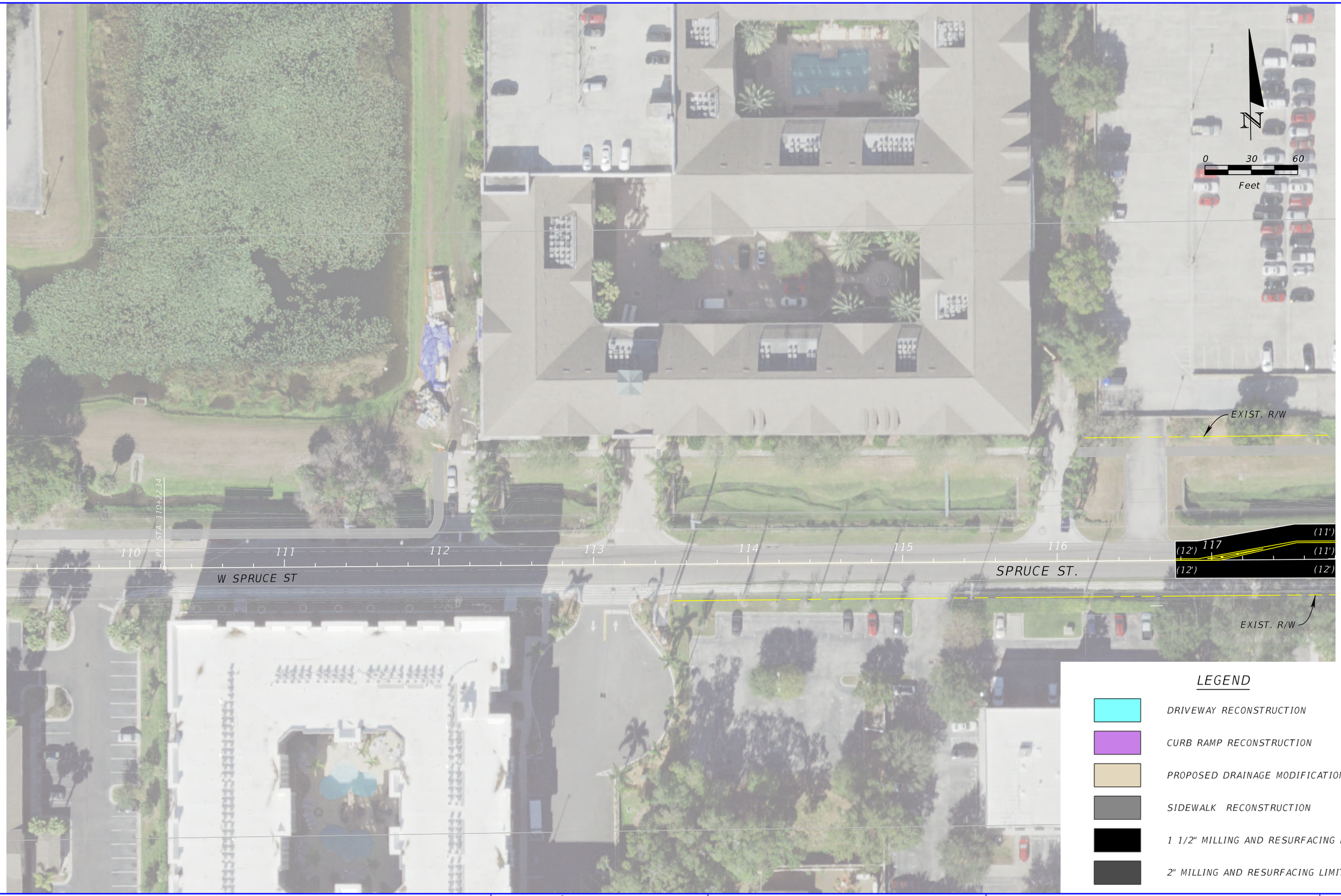
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (6)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (7A)

SHEET NO.

0 30 60
Feet

MATCHLINE SHEET 7A

EXIST. R/W
EXIST. R/W
PROP. MAST ARM
PROP. GUARD RAIL
EXIST. R/W
PI STA. 119+84.47
W SPRUCE ST
LOIS AVE.
12' MURT
12' MURT
EXIST. SIGN TO BE RELOCATED
EXIST. R/W
PROP. MAST ARM
EXIST. POLE TO BE RELOCATED
TYPE 5 INLET
EXIST. R/W
PI STA. 0+69.03
TYPE 4 INLET
PROP. MAST ARM
EXIST. R/W
EXIST. R/W
PROP. BOX CULVERT EXTENSION
PROP. GUARD RAIL
EXIST. WALL TO REMAIN

MATCHLINE SHEET 7C

LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- PROPOSED DRAINAGE MODIFICATION
- SIDEWALK RECONSTRUCTION
- 1 1/2" MILLING AND RESURFACING LIMITS
- 2" MILLING AND RESURFACING LIMITS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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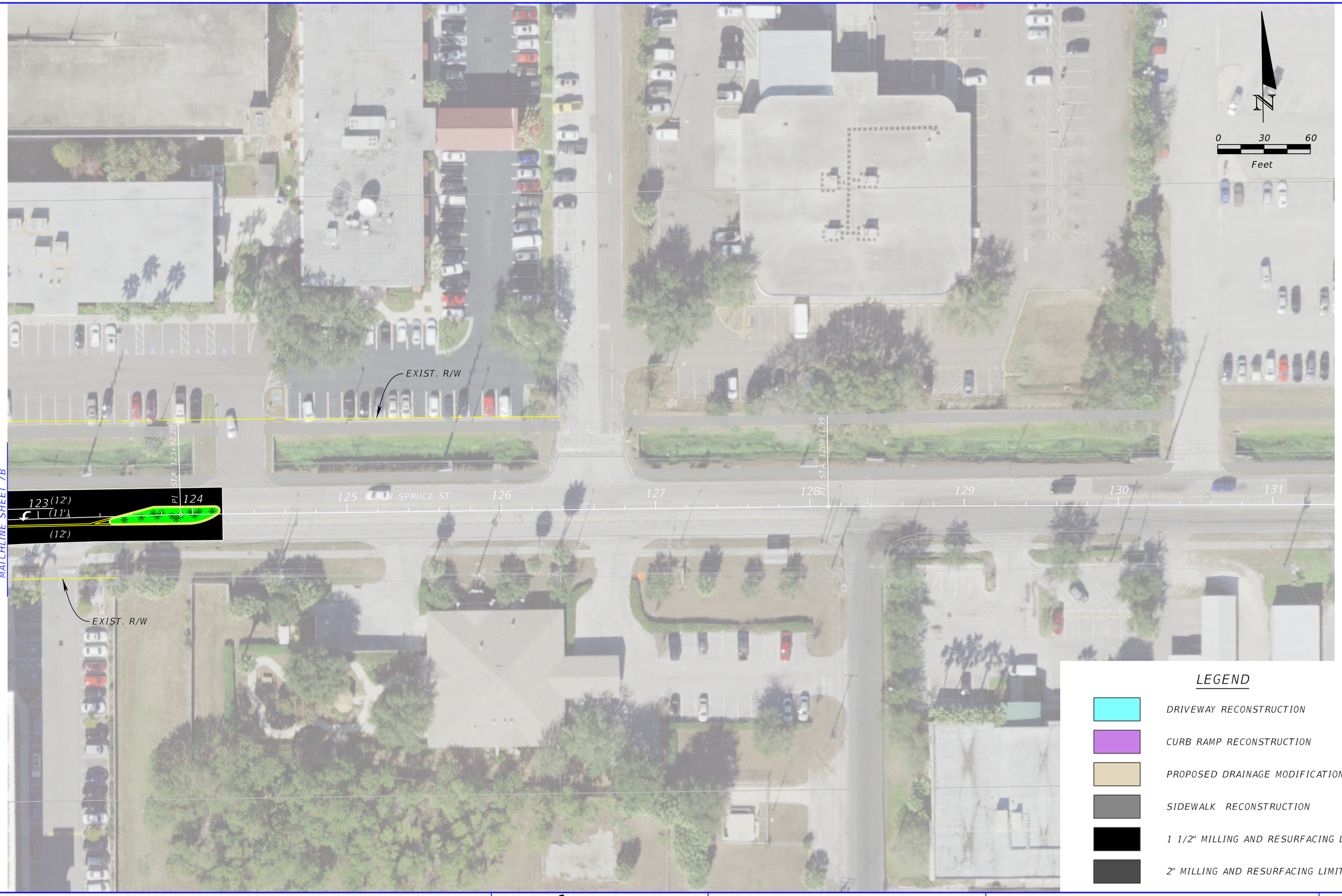
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (7B)

SHEET NO.



LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- PROPOSED DRAINAGE MODIFICATION
- SIDEWALK RECONSTRUCTION
- 1 1/2" MILLING AND RESURFACING LIMITS
- 2" MILLING AND RESURFACING LIMITS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
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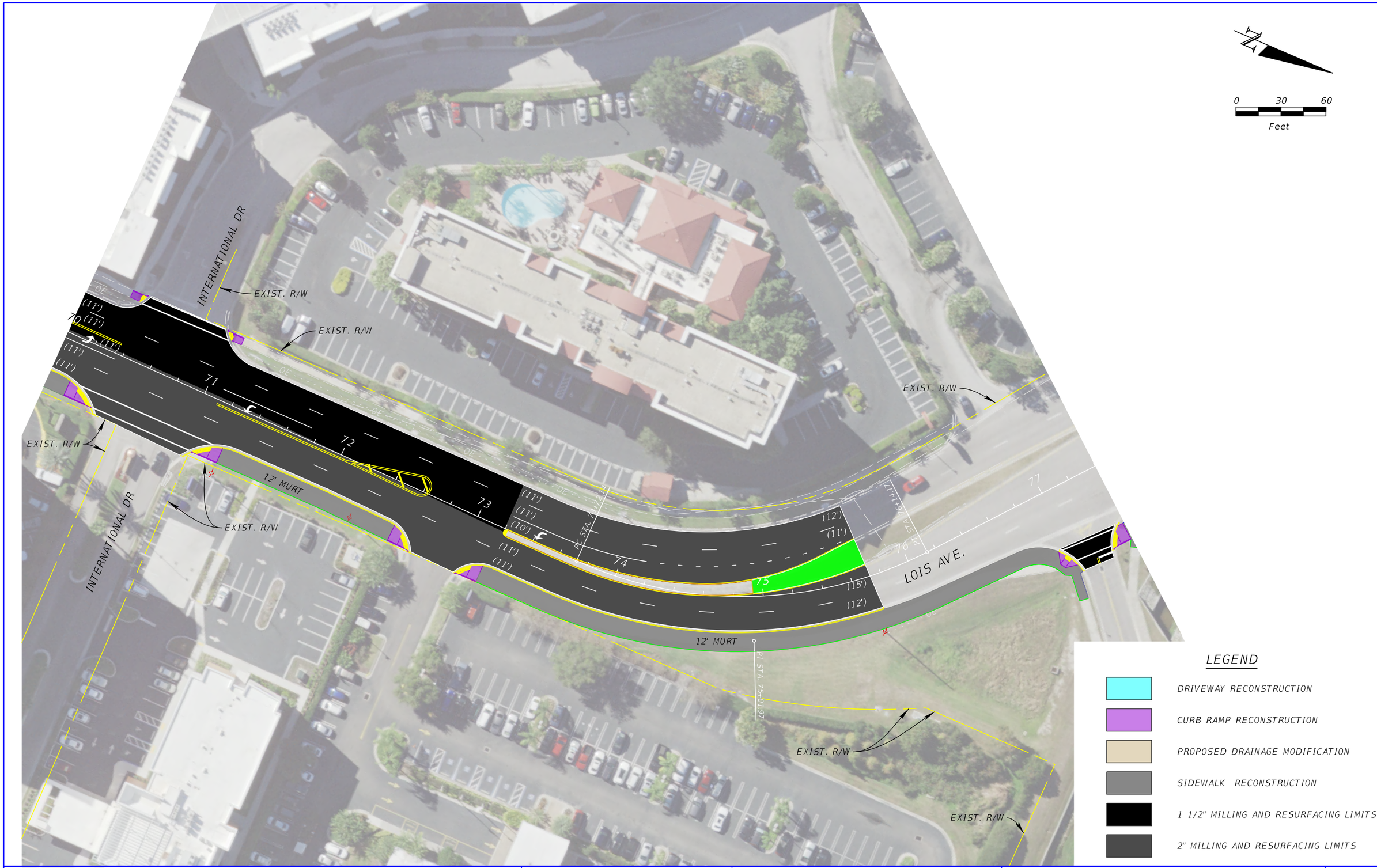
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (7C)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76202
1777 MAIN STREET, SUITE 200
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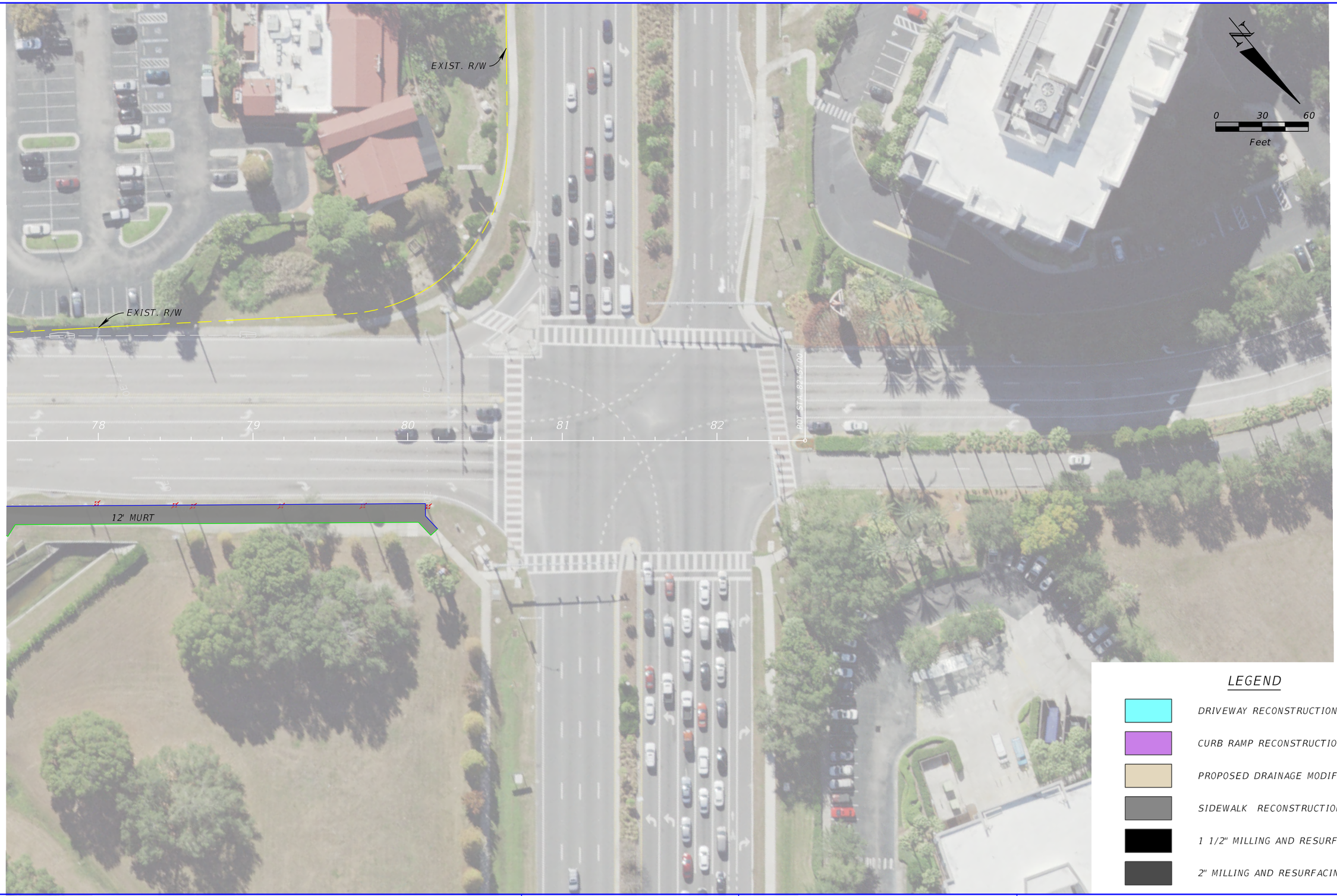
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (8)

SHEET NO.



LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- PROPOSED DRAINAGE MODIFICATION
- SIDEWALK RECONSTRUCTION
- 1 1/2" MILLING AND RESURFACING LIMITS
- 2" MILLING AND RESURFACING LIMITS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
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CITY OF TAMPA

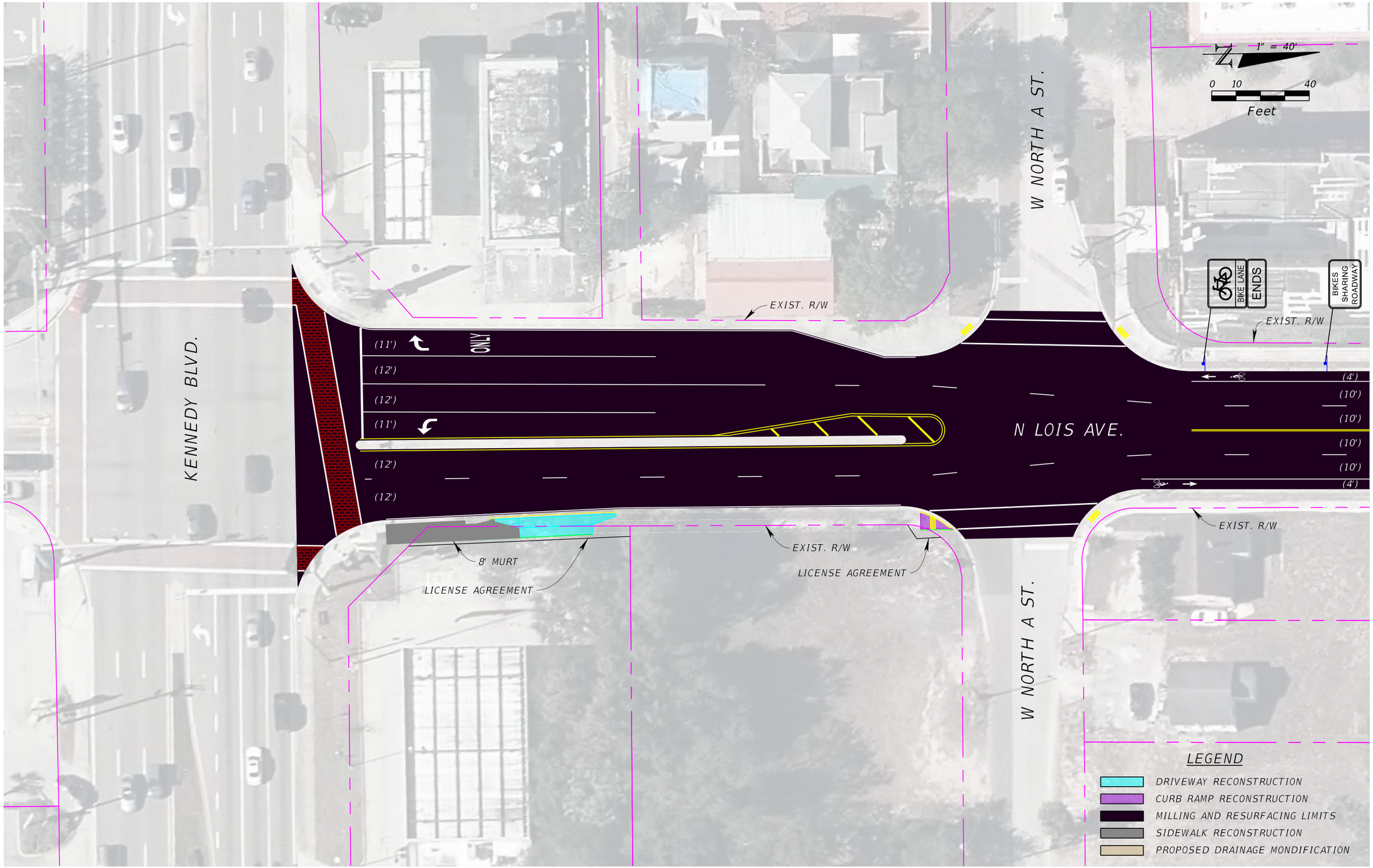
LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (9)

SHEET NO.

Appendix F

Bike Lanes Only Alternative Concept



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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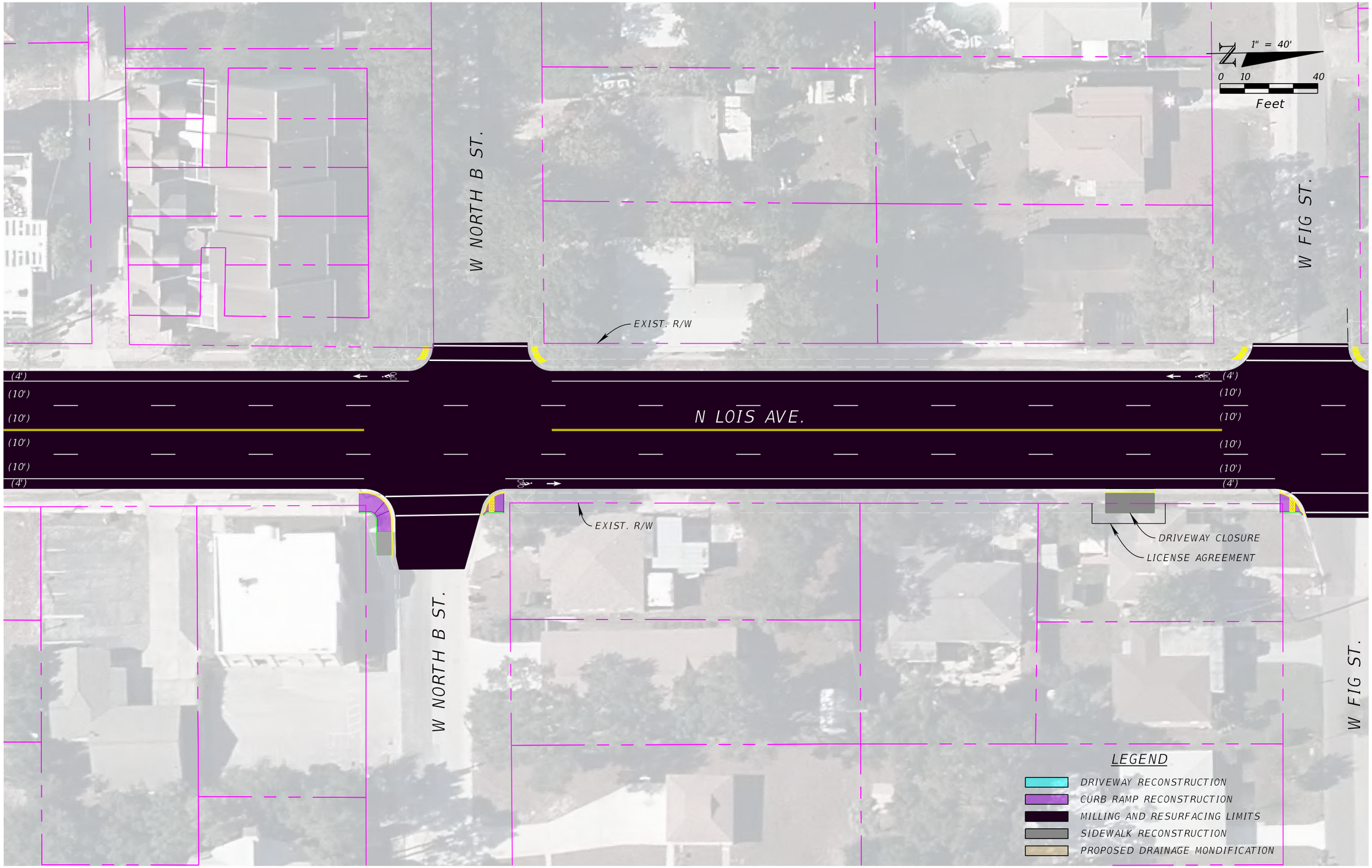
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (1)

SHEET NO. 1



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (2)

SHEET NO. 2

1" = 40'

0 10 40

Feet

W GRAY ST.

N LOIS AVE.

RECTANGULAR RAPID FLASHING BEACON (RRFB) (SOLAR POWERED)

PUSH BUTTON TO CROSS 6TH AVE W

DRIVEWAY CLOSURE

EXIST. R/W

(4') (10') (10') (10') (10') (4')

(4') (10') (10') (10') (10') (4')

EXIST. R/W

DRIVEWAY CLOSURE

EXIST. R/W

BIKES SHARING ROADWAY

BIKE LANE ENDS

DRIVEWAY CLOSURE

EXIST. R/W

RECTANGULAR RAPID FLASHING BEACON (RRFB) (SOLAR POWERED)

PUSH BUTTON TO CROSS 6TH AVE W

W GRAY ST.

LEGEND

- DRIVEWAY RECONSTRUCTION
- CURB RAMP RECONSTRUCTION
- MILLING AND RESURFACING LIMITS
- SIDEWALK RECONSTRUCTION
- PROPOSED DRAINAGE MONDIFICATION

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (3)

SHEET NO. 3

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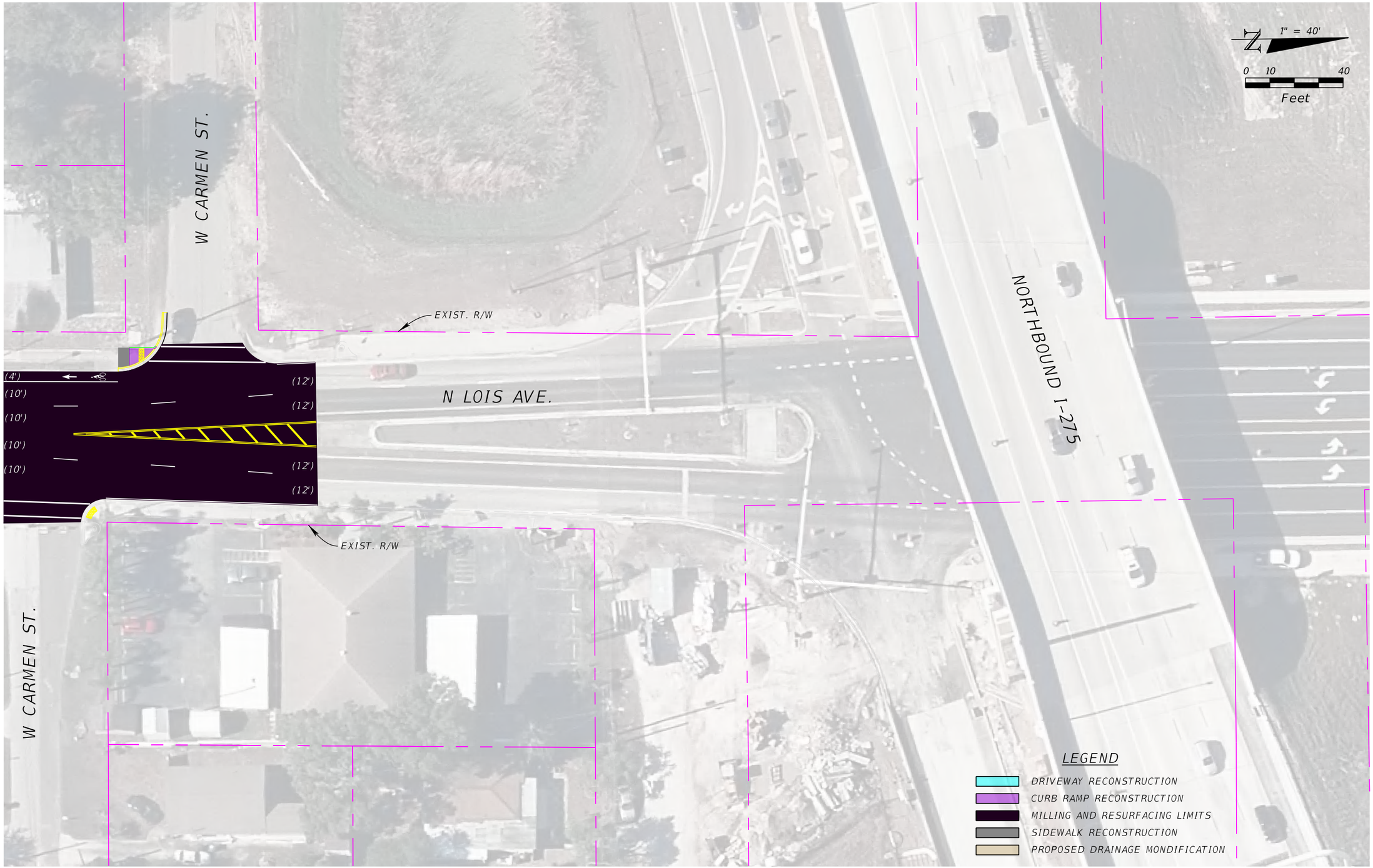

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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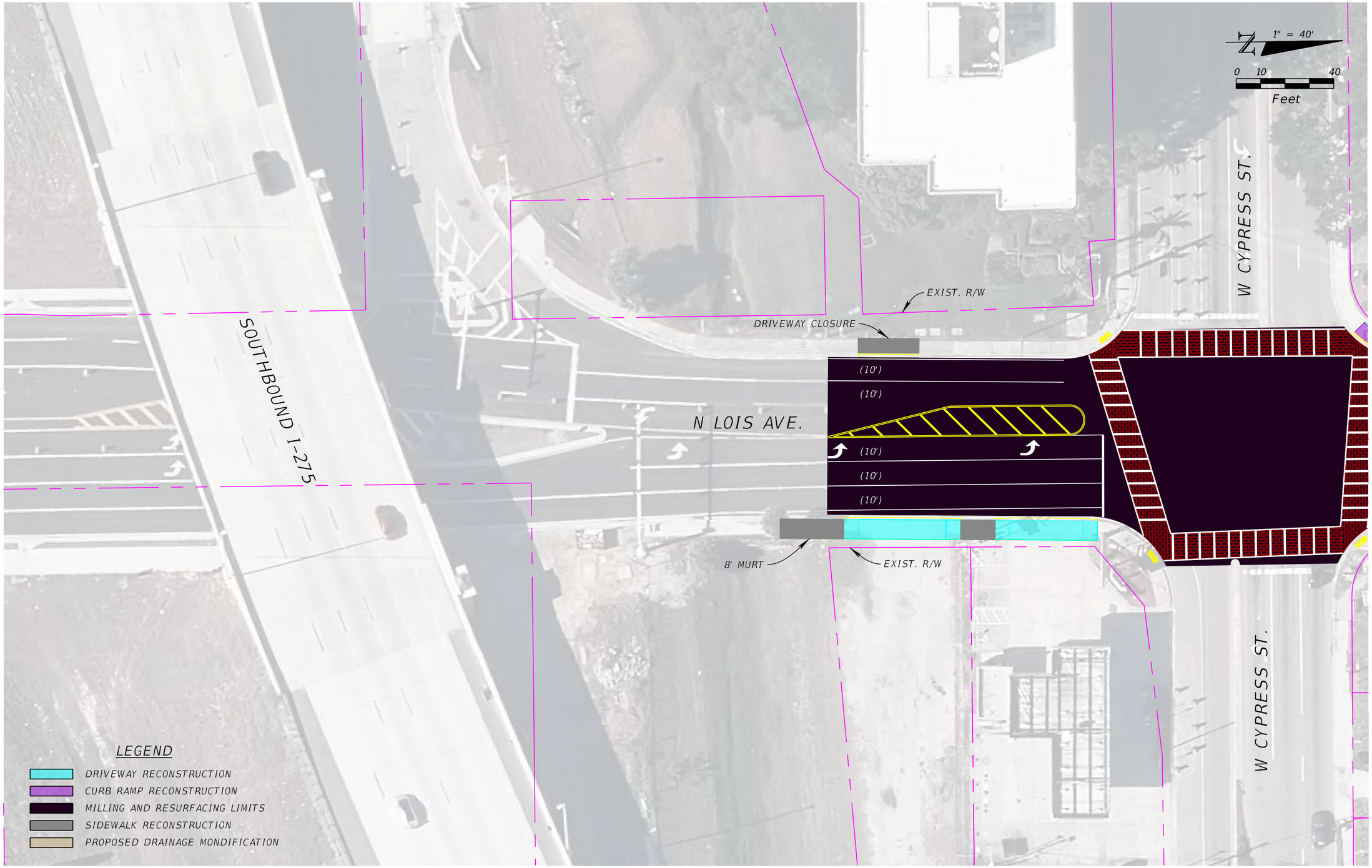
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (4)

SHEET NO. 4



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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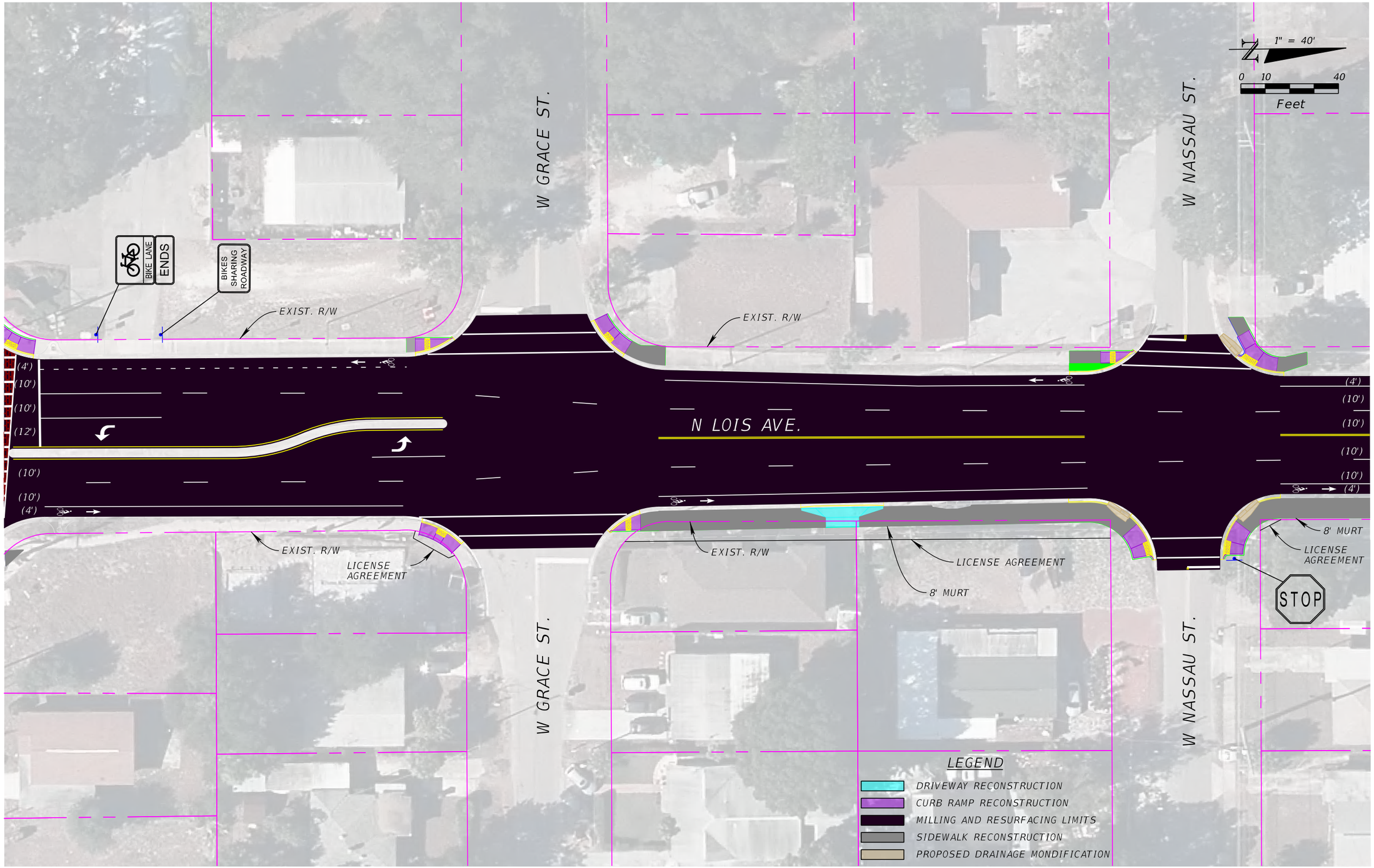
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (5)

SHEET NO. 5



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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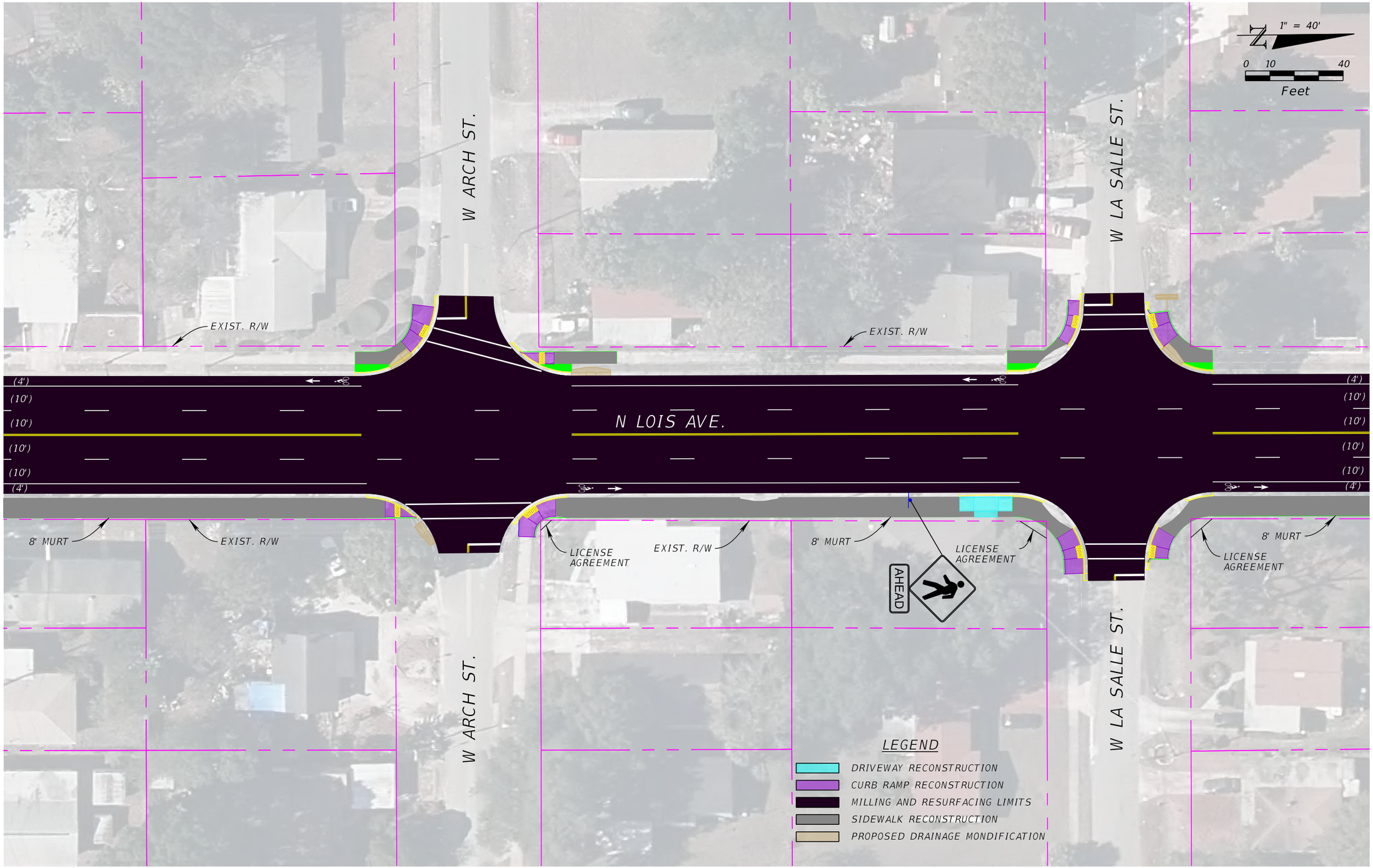
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (6)

SHEET NO. 6



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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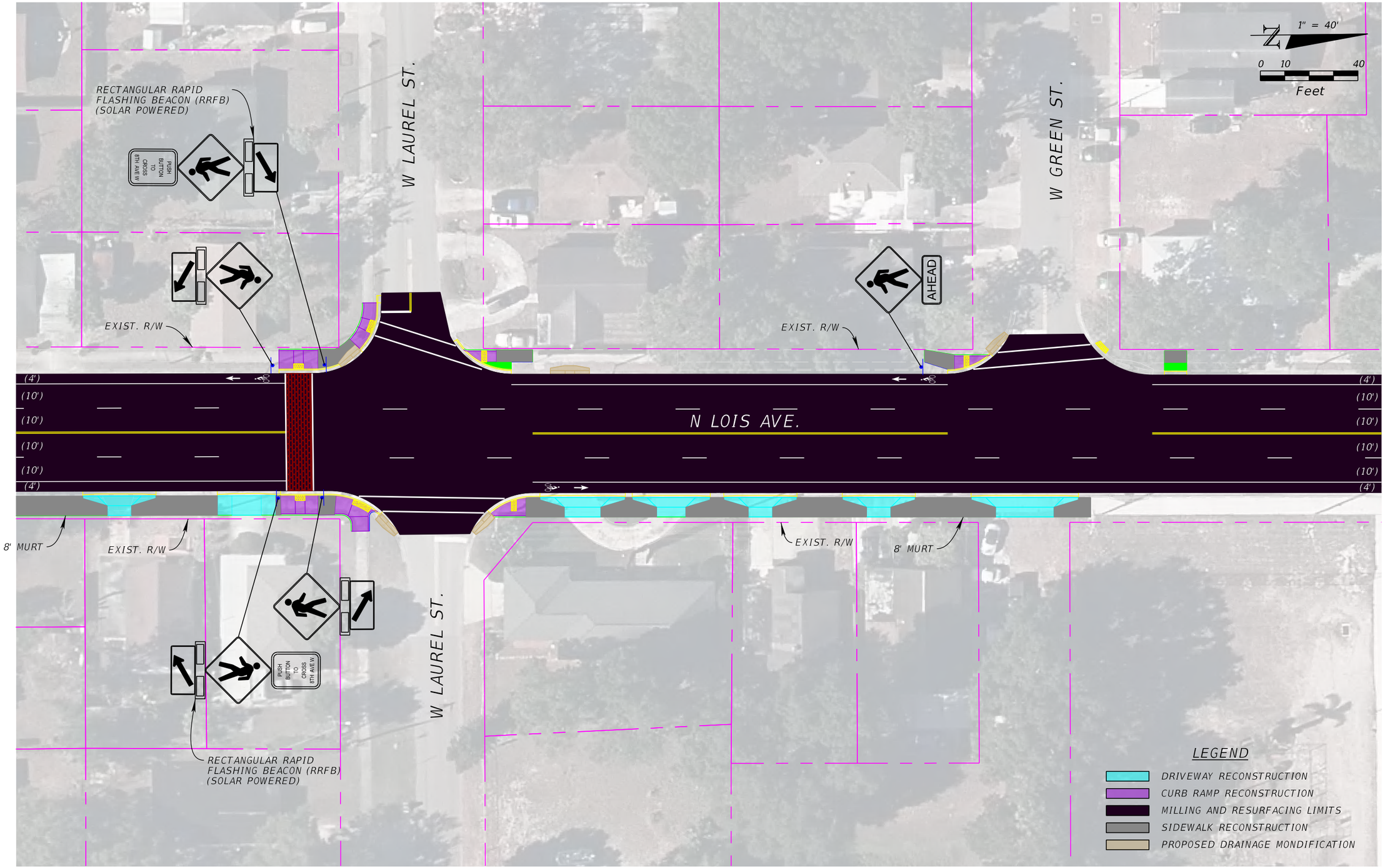
PHONE (941) 379-7600
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (7)

SHEET NO. 7



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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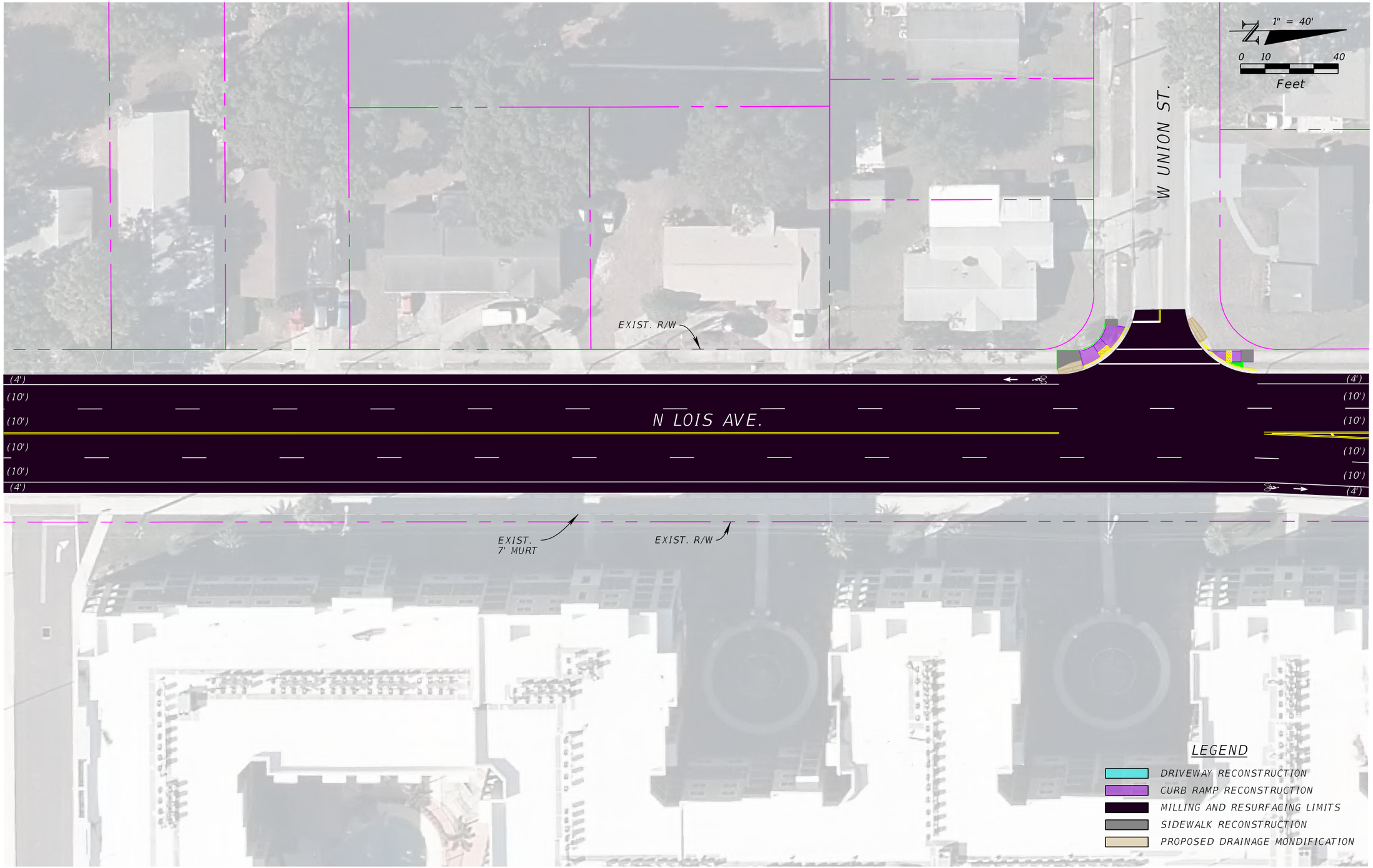
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (8)

SHEET NO. 8



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
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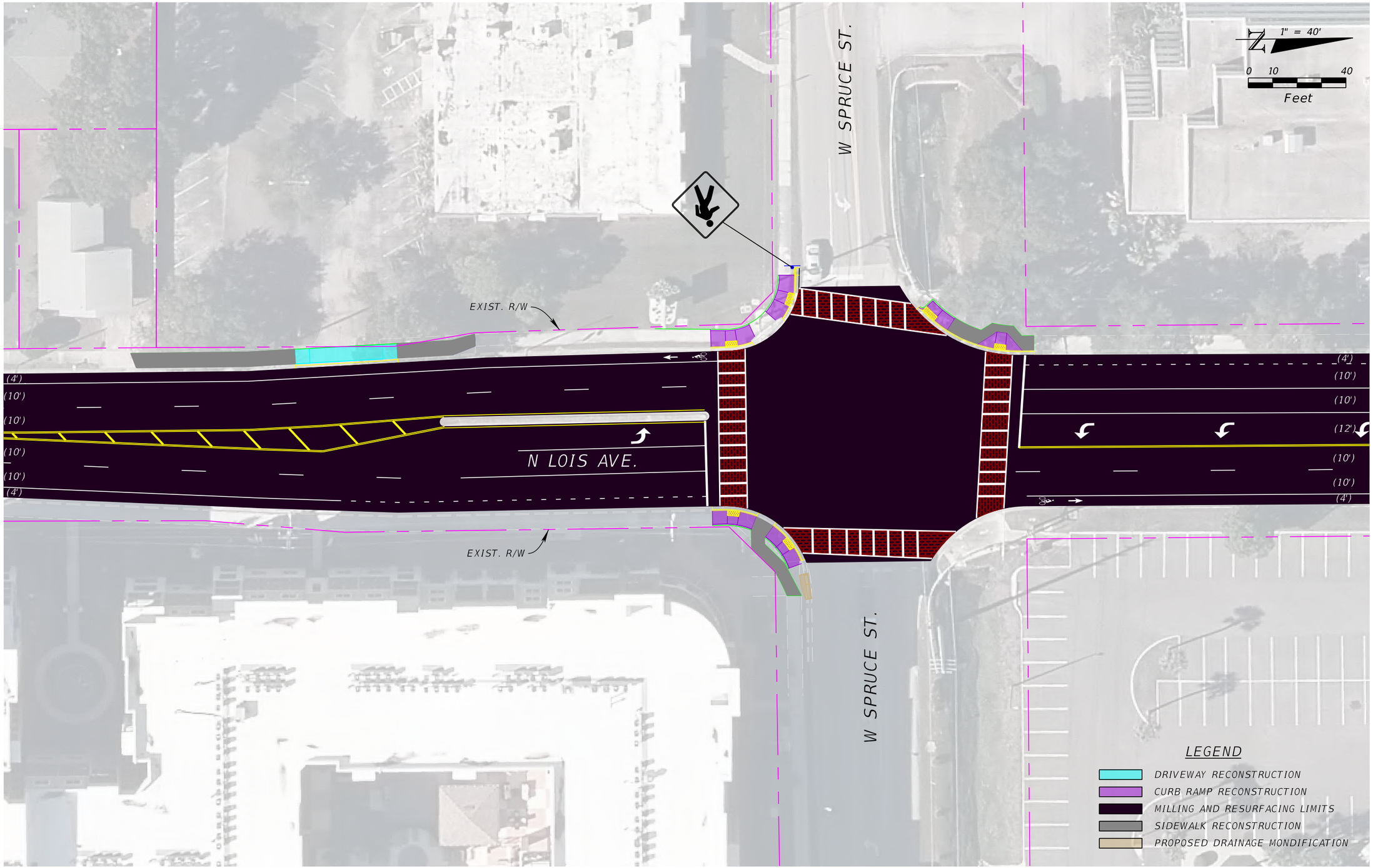
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (9)

SHEET NO.
9



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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CERTIFICATE OF AUTHORIZATION: 00000696

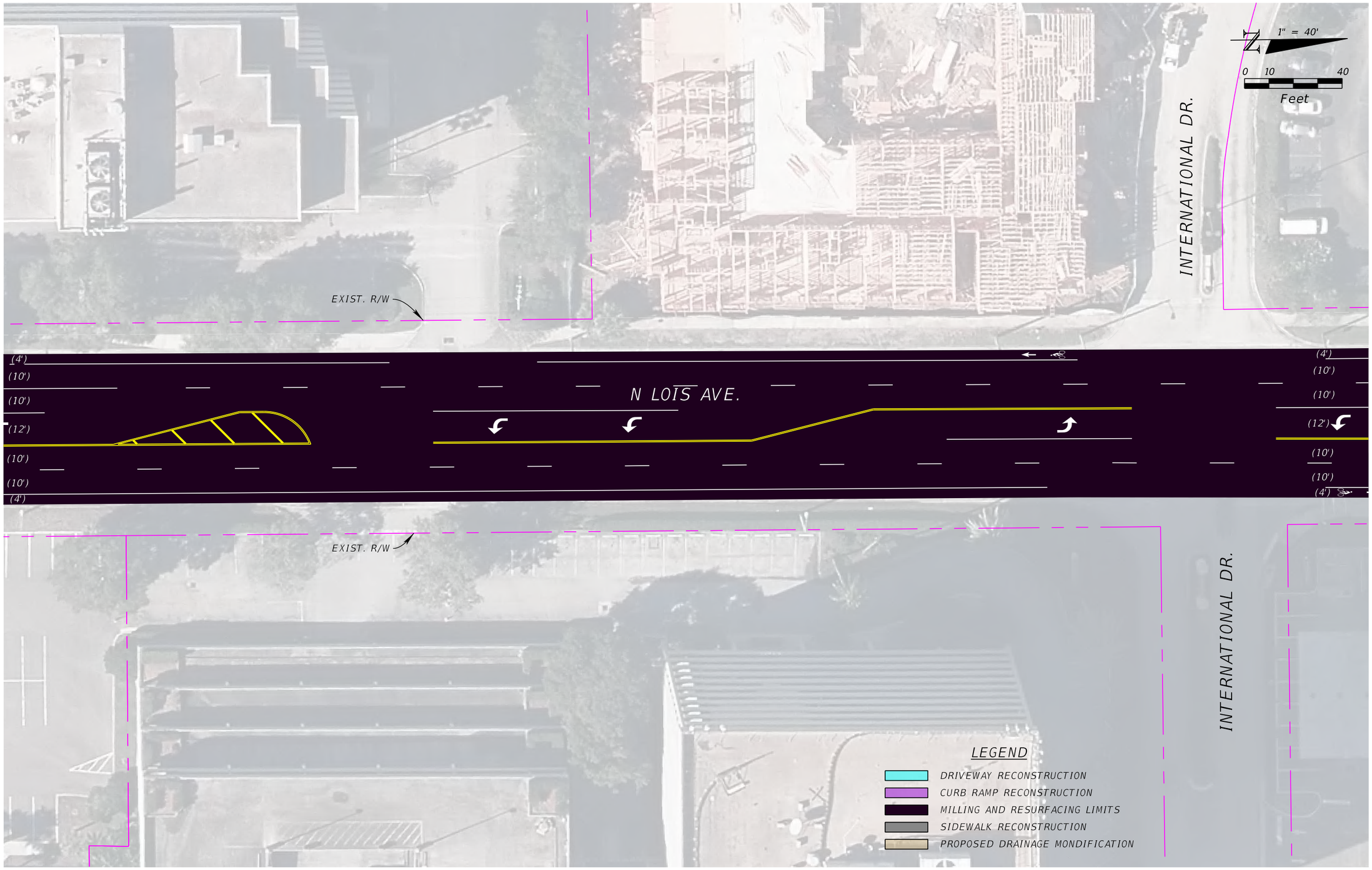
CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (10)

SHEET NO.

10



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
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CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (11)

SHEET NO. 11

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn

JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76302
1777 MAIN STREET, SUITE 200
SARASOTA, FLORIDA 34236
PHONE (941) 379-7600
CERTIFICATE OF AUTHORIZATION: 00000696

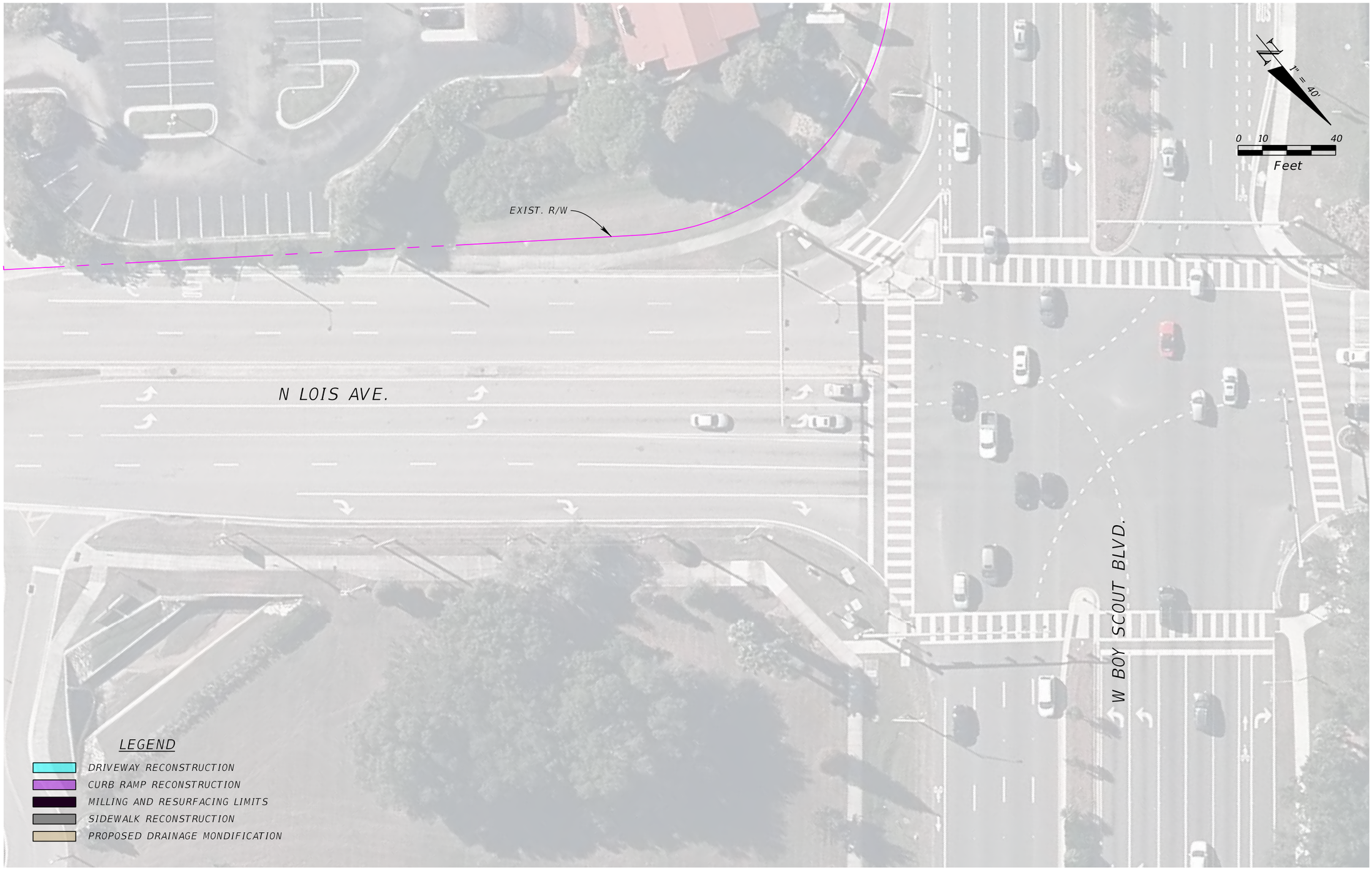
CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (12)

SHEET NO. 12

Everett.Loving 12/20/2016 4:46:14 PM K:\SAR_Roadway\048769010_Lois Ave Concept\0487690100\roadway\PLANRD012.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Kimley»Horn
JORDAN E. LEEP, P.E.
P.E. LICENSE NUMBER: 76102
1777 MAIN STREET, SUITE 200
SARASOTA, FLORIDA 34236
PHONE (941) 379-7600
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF TAMPA

LOIS AVENUE WALK-BIKE IMPROVEMENTS CONCEPT

PLAN SHEET (13)

SHEET NO. 13