



ADDENDUM NO. 1

Date: September 7, 2017
3:00 P.M. (Local Time)

Bid Date: October 3, 2017

Bid Name: Gainesville Autonomous Transit Shuttle (GAToRS) **Bid No.:** RTSX-180030-DS

NOTE: This Addendum has been issued to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

1. The question submittal deadline has passed. No additional questions will be answered
2. Questions/Answers:

Question1: The RFP includes an Attachment A which is the Executive Summary of the Gainesville Autonomous Transit Innovation Connector (GATrIC) Feasibility and Traffic Study dated June 8, 2017. The study was sponsored by the FDOT State Traffic Engineering and Operations Office. At the end of the document, a PowerPoint presentation is mentioned to be available and should be shared with prospective bidders on the current contract. The PowerPoint (and overall study document) includes pertinent data and alternatives analysis related to the upfront route and service planning for the shuttle and thus has an impact on a price proposal, and thus will this information be available to prospective bidders is assembling their proposals?

Answer1: “Attachment B - GATrIC Feasibility and Traffic Study Final” is included in this Addendum #1.

Question2: The RFP refers to “predefined stop locations” (page 16) but does not specify the number of stops to be served by the shuttle, and level of passenger amenities to be provided at stops. Assume this information is available through the GATrIC study, and thus obtaining that information critical in assembling our proposal. What specification on number of stops and passenger amenities should be assumed at this point?

Answer2: The proposer will recommend bus stop locations and amenities.

Question3: The RFP (page 17) mentions two locations where DSRC roadside units will be installed through a separate project along SW 13th Street at SW 4th Avenue and SW 2nd Avenue to allow transmission of SPaT and MAP messages. Will additional information be made available concerning this project, such as DSRC RSU vendor, SPaT/MAP broadcast methodology, timeline for installation, backhaul communications architecture, back-office data management, etc? Are additional locations planned for roadside unit installation in the identified transit AV shuttle service area? Is transit signal priority considered as part of the V2I “coordination” mentioned?

Answer3: RFP will be coming out this winter specific to SPaT and MaP. For more information on the Gainesville SpaT Trapezium project, please see: http://www.fdot.gov/traffic/its/projects_deploy/cv/MapLocations/Gains_Trapezium.sh tm). We have not determined a vendor or data provider yet. Backhaul communications will be TCP/IP over Ethernet/fiber. The City has all signalized intersections online in this area.

Question4: The RFP (page 19) mentions that roadway improvements could be a possibility. Again would like to know what the FDOT study had concluded with respect to this issue related to potential alternate routes, if that was addressed, given it will have price proposal implications and the need to obtain a roadway contractor. Can you provide any clarification on work already done related to roadway improvements?

Answer4: There is no work in relation to road improvements. If proposed route calls for road improvement, the proposer needs to specify what type of road improvements are needed.

Question5: The RFP (page 17) mentions the proposer will need to coordinate with the UF Testbed Project Team. Can the function of the testbed team be identified, and the type and level of coordination desired with the Transit AV shuttle project?

Answer5: Additional information regarding the UF Testbed, named I-STREET, is provided at its website: <http://www.transportation.institute.ufl.edu/istreet-about-us/>. Coordination will involve, for example, the following: exploring jointly the use of novel sensor applications which may be installed on the shuttle; the use of the shuttle as a probe in data collection; and the use of the shuttle’s communication capabilities in enhancing traffic signal control and other traffic management strategies.

Question6: The RFP indicates the need for a charging/storage facility for the transit AV shuttle vehicles to be included with the project, but use of the original RTS facility for such functions as an optional site. Will the old RTS site be made available for the AV vehicles? What about use of the new RTS facility?

Answer6: Yes, the old facility will be available for AV vehicles. RTS prefers the use of the old facility but will be open to the idea of using the new facility.

Question7: Throughout the RFP 49 C.F.R. part 26 is referenced, which based on our understanding suggests a 10% DBE requirement be considered. Does that mean this contract has a 10% DBE requirement or is it merely a suggestion?

Answer7: The Federal Transit Administration’s national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. This agency’s overall goal is 1.5% (refer to page 21), but there is no set goal for this project. Use of DBE businesses is encouraged.

Question8: The RFP identifies putting a 15 mph ceiling on speed for the transit AV shuttle, but the roads it will run on are 25 mph and higher, setting up a speed differential for mixed traffic and a potential safety hazard. Have previous traffic engineering studies considered this challenge and if so, can we gain access to their research? If not, is the City of Gainesville open to dedicating lanes specifically for this pilot?

Answer8: No, previous studies have not considered this challenge and proposer needs to consider it on the proposal. City will be open to the idea of dedicating lanes if feasible.

Question9: The RFP on page 8 suggests the shuttle will run along SW 2nd Ave and SW 4th Ave, while on page the RFP suggests the shuttle will run along SW 3rd Ave and SW 5th Ave. Which one is it?

Answer9: The project service area is SE 3rd St, SW 5th Ave (misabeled on map as Street instead of Avenue), Newell Drive and University Avenue based upon the map on page 18 of the bid document.

3. Portions of item **B. RFP Time Table** (refer to Section I – Request for Proposal Overview & Proposal Procedures) have been adjusted as follows (additions-underlined; deletions-~~striketrough~~). Note, this is still an estimated timeline.

Discussions/Oral Presentations (if conducted)	Week of October 23, 2017 <u>December 4, 2017</u>
Deadline for Best and Final Offer (if needed)	November 8, 2017 <u>January 8, 2018</u>
Projected award recommendation date	November 28, 2017 <u>February 1, 2018</u>
City Commission approval	January 4, 2018 <u>March 2018</u>
Projected contract start date	March 1, 2018 <u>May 1, 2018</u>

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 1 by his or her signature below, **and shall attach a copy of this Addendum to its proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 1 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: _____

BY: _____

DATE: _____

Feasibility and Traffic Study



Study Overview

- Purpose, Study Approach, and Project Corridor
- RTS Bus Routes and Stops
- GATrIC Corridor Traffic and Safety Analysis
- GATrIC Corridor Field Review Findings
- GATrIC Corridor Bus Driver Survey
- GATrIC Corridor Shuttle Operation Analysis
- Study Conclusions and Recommendations

Purpose, Study Approach, and Project Corridor

Purpose of Feasibility Overview

- Identify safety risks
- Identify risks for maintaining shuttle headways
- Identify corridor issues through field review and bus driver interviews
- Identify optimal number of bus service

Study Approach

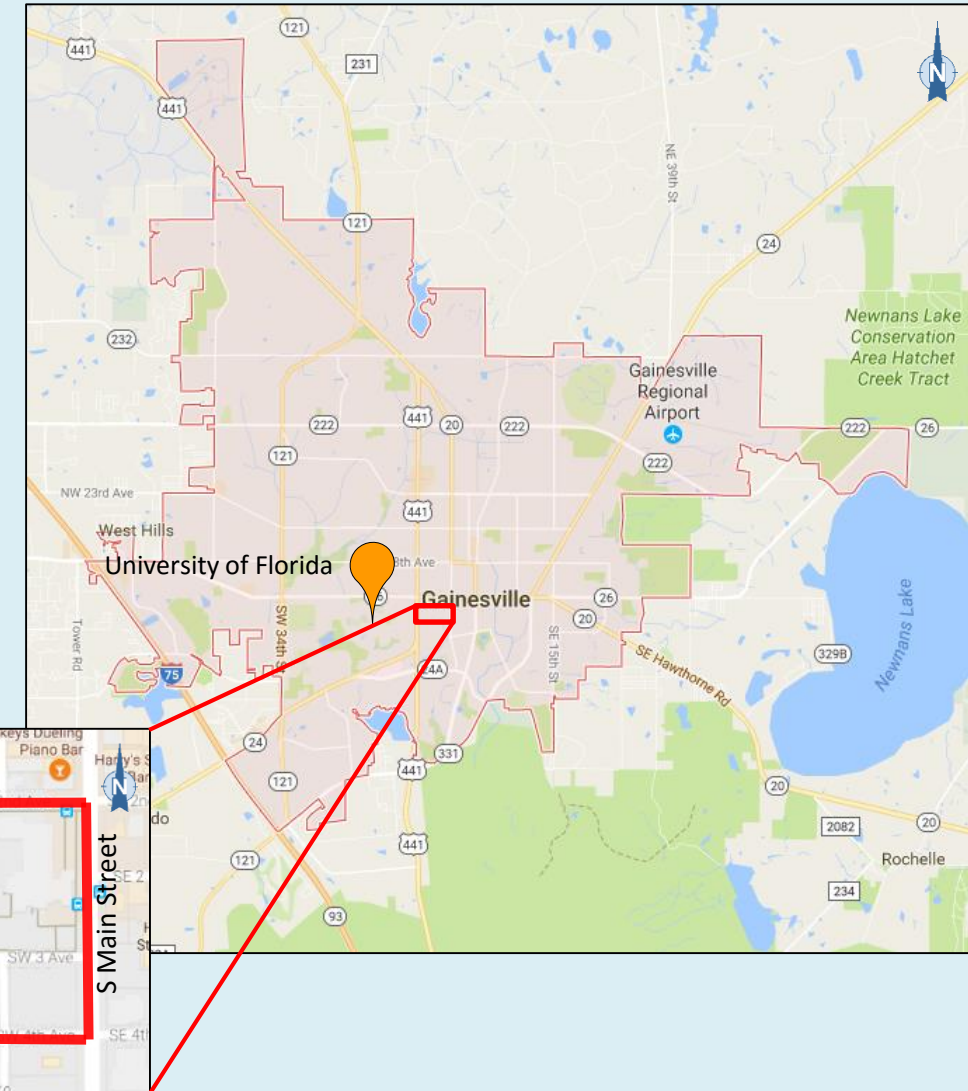
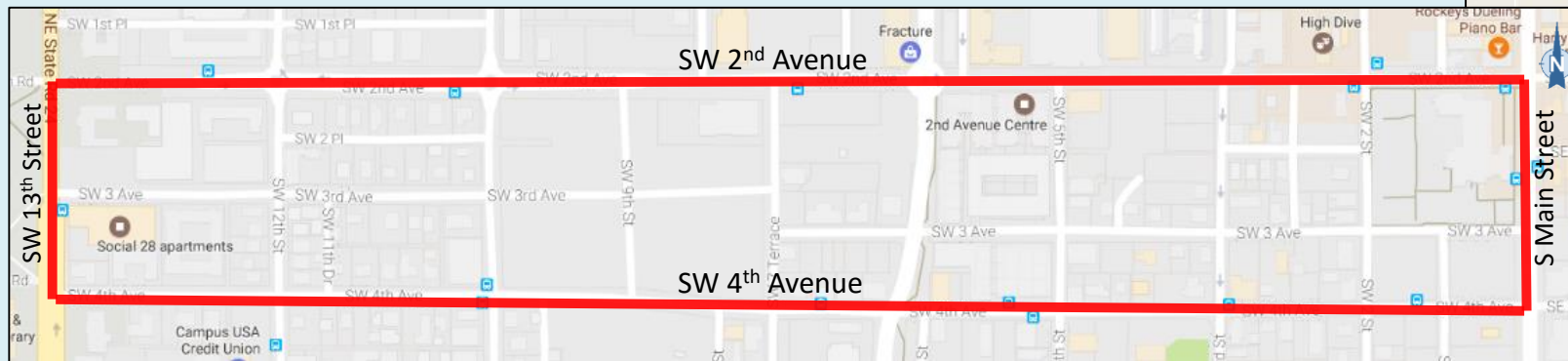
- Performed field reviews of the corridor on 4/21/2017
 - Multiple rounds of the project corridor
- Meetings with Regional Transit System (RTS) Director on corridor's issues and bus route and operation
- Interviewed seven bus drivers, at least two on each route, on 5/4/2017

Study Approach (continued)

- Performed the following analyses
 - Safety analysis
 - Safety field review analysis
 - Crash data analysis between years 2012 and 2016
 - Traffic data analysis
 - Bus RTS routes, ridership, and hours of operation analysis
 - Headway calculator for optimal bus count for a 10 min headway

Project Corridor

- Project located in City of Gainesville
 - Between University of Florida and Main Street
- Phase I route shown in red below
 - SW 2nd Avenue from SR 24 (SW 13th Street) to S Main Street
 - S Main Street from SW 2nd Avenue to SW 4th Avenue
 - SW 4th Avenue from S Main Street to SW 13th Street
 - SW 13th Street from SW 4th Avenue to SW 2nd Avenue



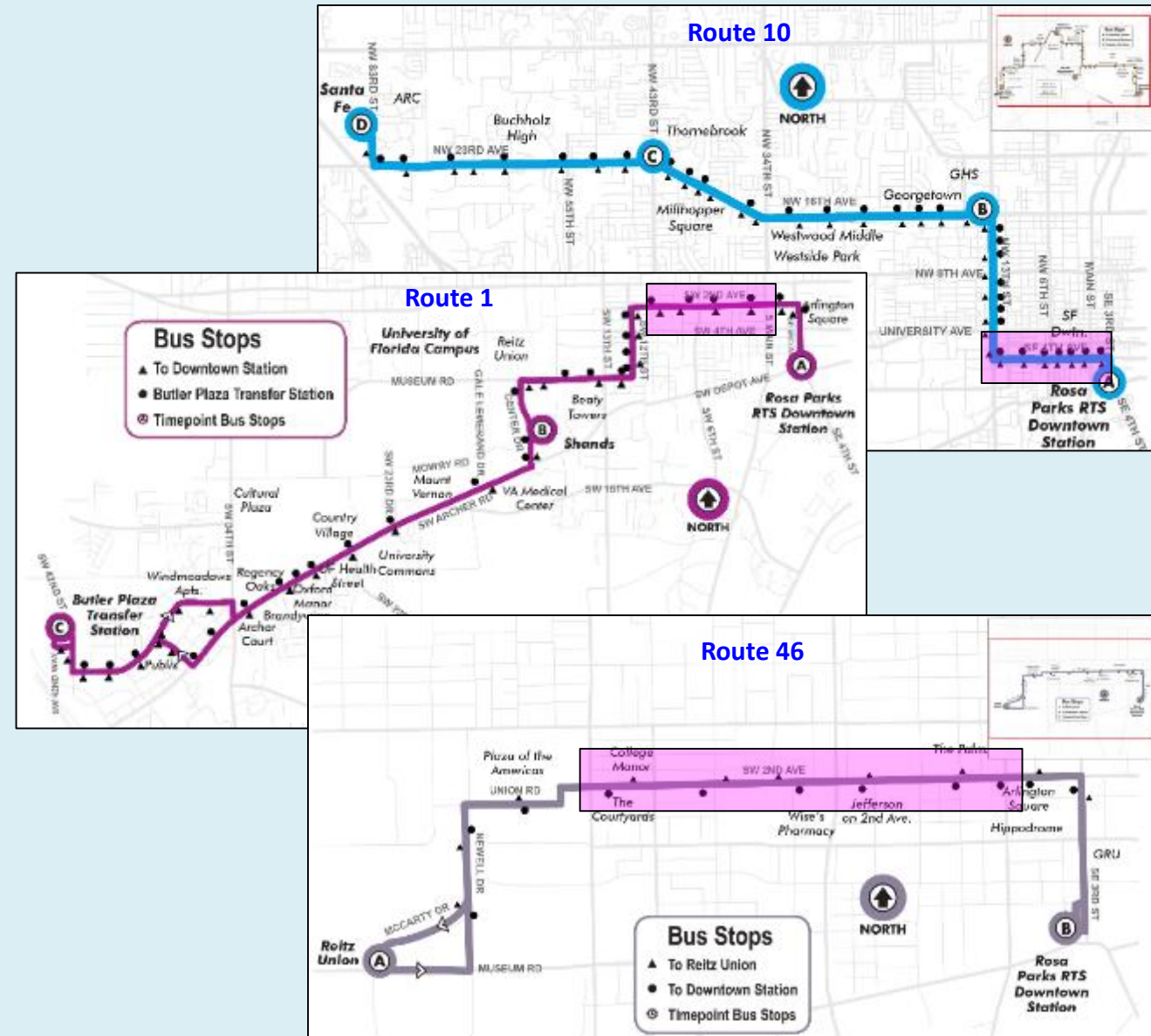
- Phase II route shown in blue



RTS Bus Routes and Stops

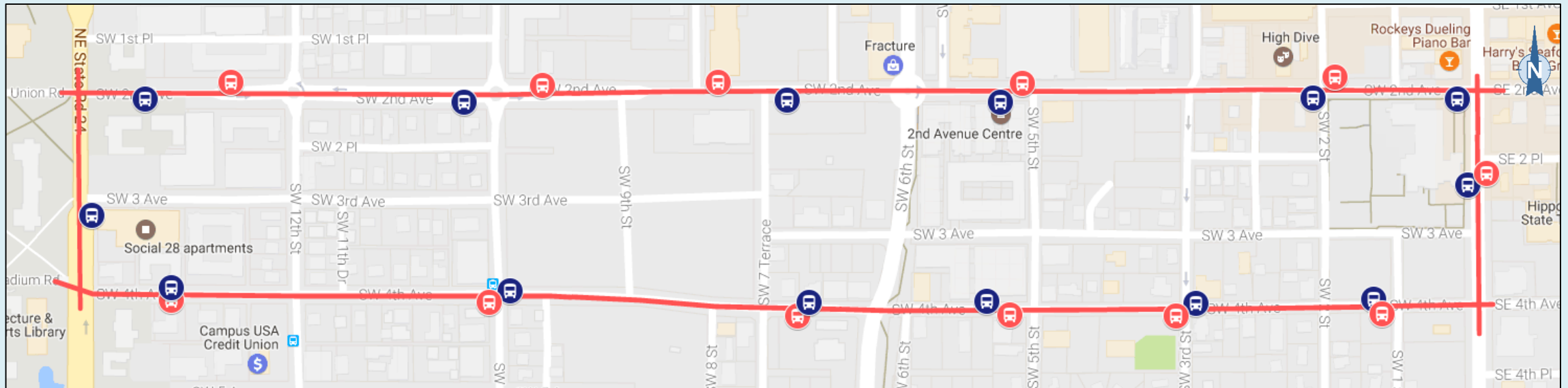
RTS Bus Routes

- RTS is Gainesville's only transit service
- RTS runs three routes that covers the project area (shown in violet boxes)
 - Routes 1, 10, and 46
- FDOT and RTS partnering for autonomous shuttle service
- 2016 annual ridership
 - Route 1 – 651,637 passengers
 - Route 10 – 113,046 passengers
 - Route 46 – 140,704 passengers
- Hours of operation per week
 - Route 1 – 99 hours (weekdays, Sat, and Sun)
 - Route 10 – 70 hours (weekdays and Sat)
 - Route 46 – 45 hours (weekdays only)



Bus Stop Locations

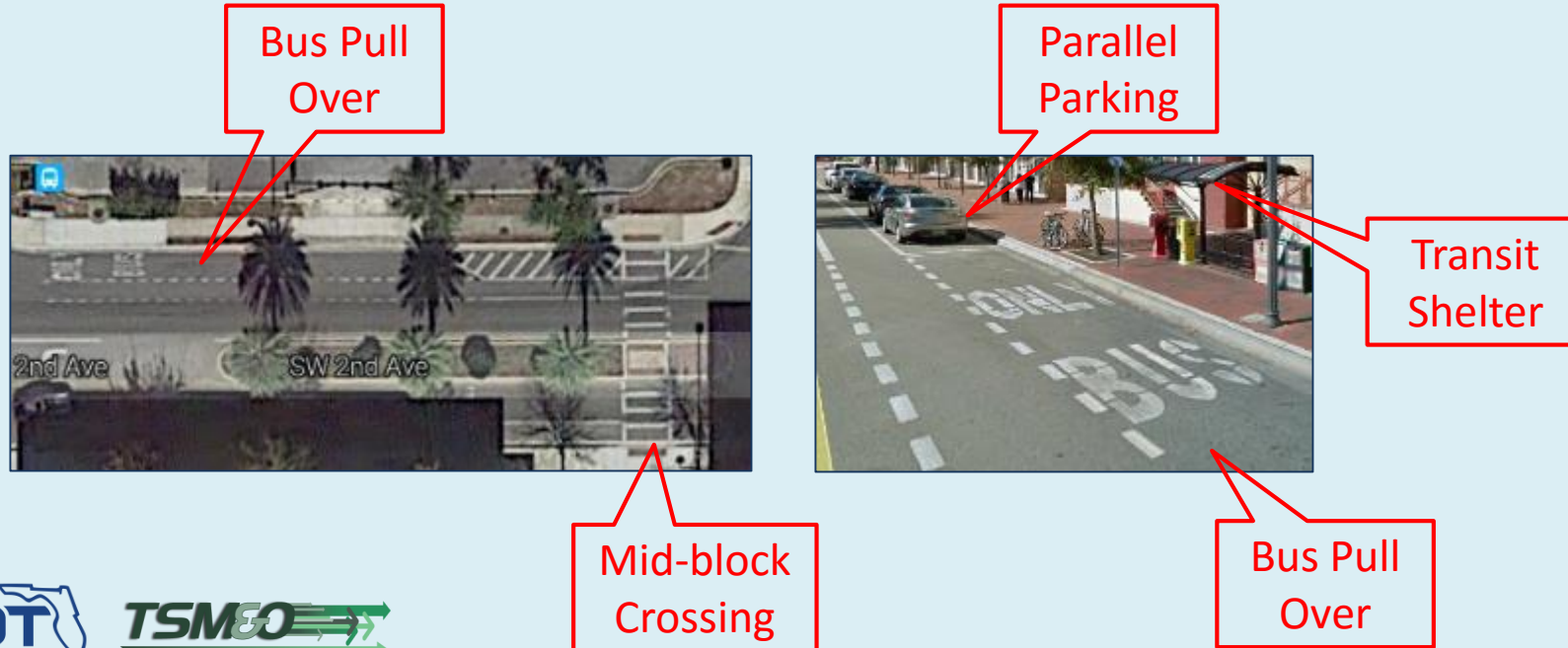
- Bus Stops
 - 14 Bus Stops in clockwise direction
 - 12 Bus Stops in counter-clockwise direction



Legend:  Bus Stop (clockwise loop)  Bus Stop (counter-clockwise loop)  Project Corridor

Bus Stop Pull Overs

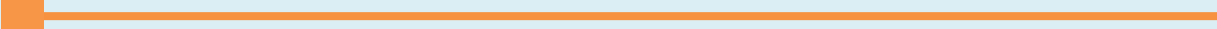
- Several parallel pull overs for bus stops
- Several nearby pedestrian crossings
- Parallel parking in front of bus pull overs
- No separate bus bay along the study corridor



Existing Transit

- RTS has Automatic Vehicle Location (AVL) which tracks vehicles in near real time
- Closely spaced stops
- Several transit shelters

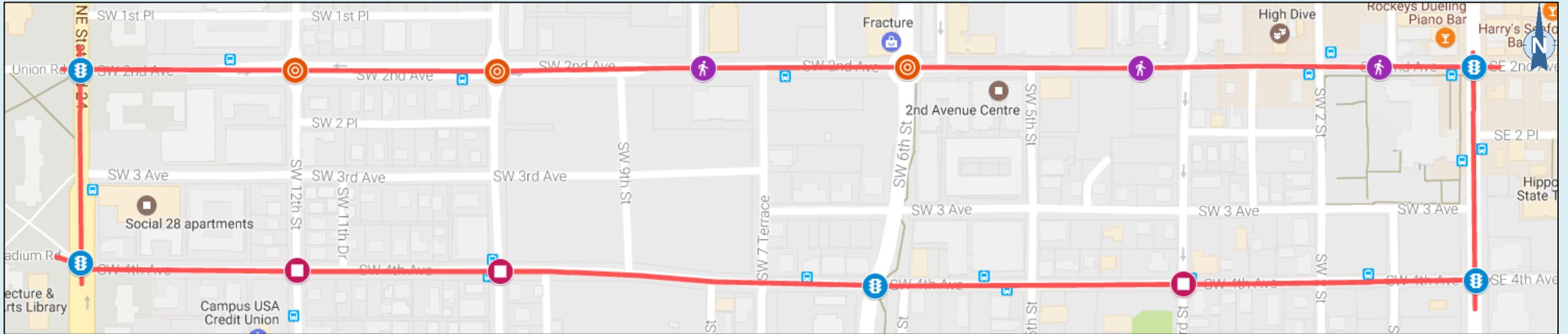




GATrIC Project Corridor Traffic and Safety Analysis

Existing Traffic Control

- Map of corridor with traffic control



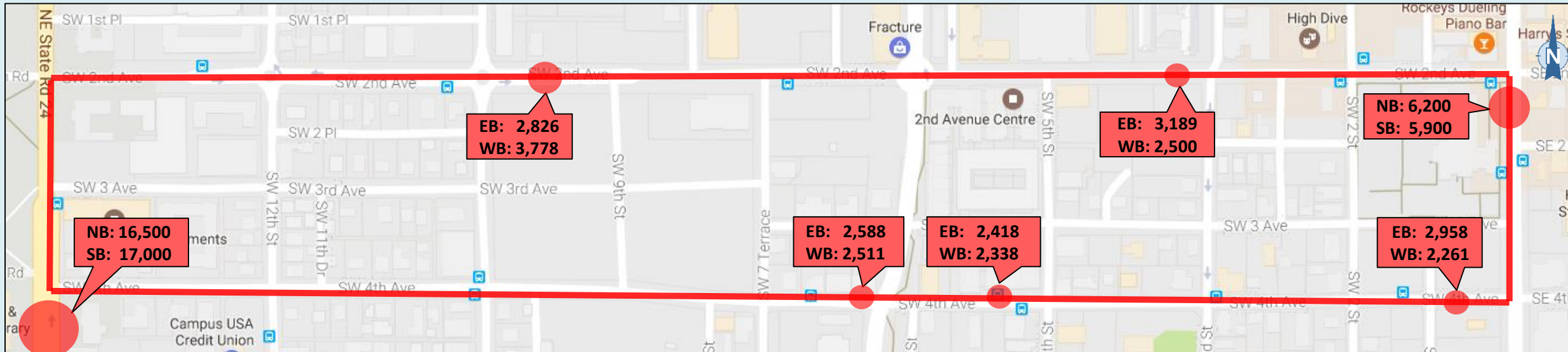
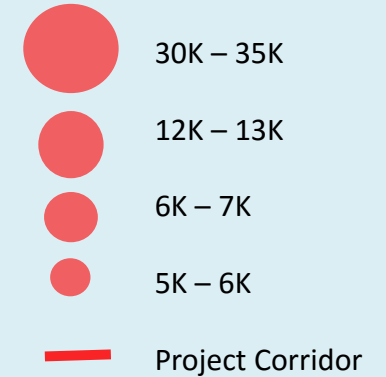
Legend:  Traffic Signals (5)  Roundabout (3)  Four-way Stops (3)  Mid-block Pedestrian Crossing (3)  Project Corridor

Traffic Counts

• Average Annual Daily Traffic (AADT)

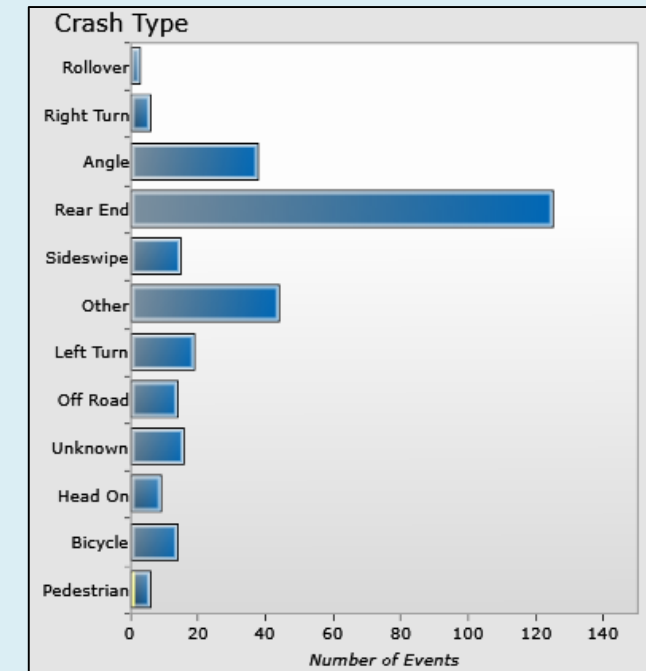
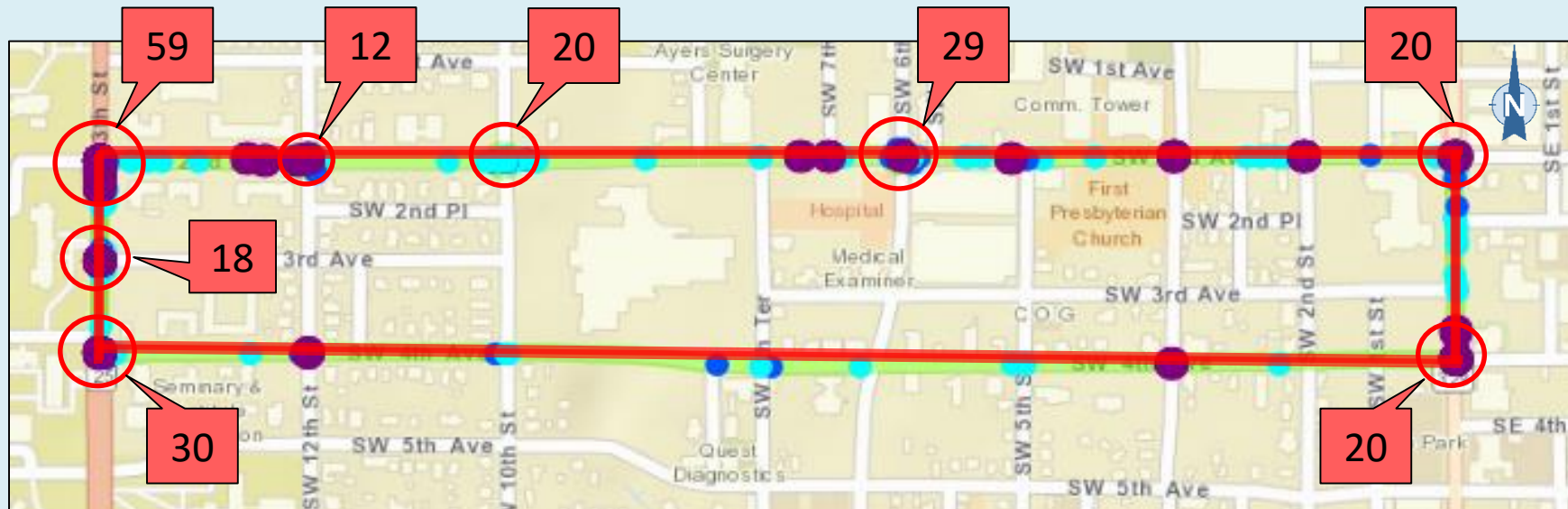
- SW 13th Street ~ AADT 33,500
- N Main Street ~ AADT 12,000
- SW 4th Avenue ~ AADT 4,000
- SW 2nd Avenue ~ AADT 5,500

AADT



Safety Risks Crash Locations and Crash Types

- Map showing crash locations, type and frequencies
 - Total 309 crashes between 2012 and 2016
 - 202 property damage only, 107 injury, and no fatal crashes
 - Total 20 Bicycle and Pedestrian Crashes
- High crash locations at
 - SW 2nd Avenue roundabouts
 - SW 13th Street and Main Street Signals with SW 2nd, SW 3rd, and SW 4th Avenues

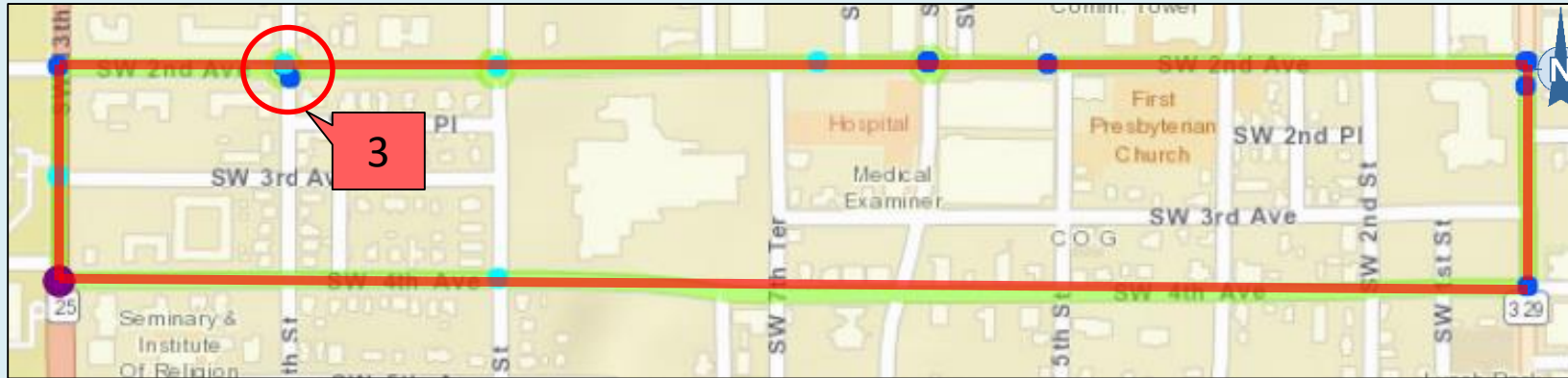


Legend

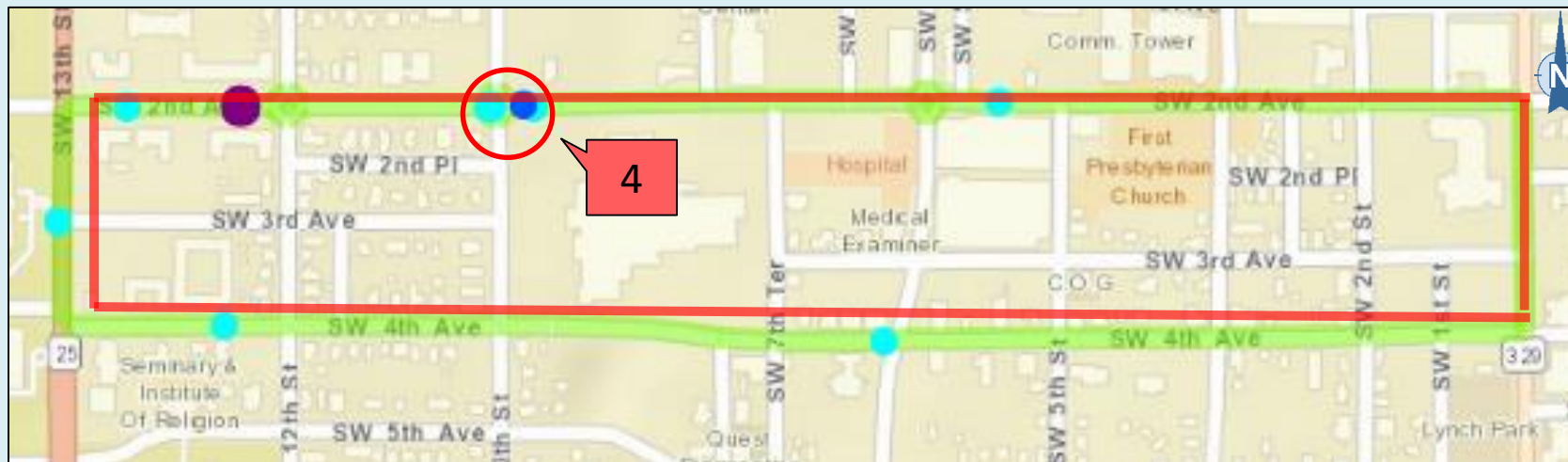
- Non-injury Crashes
- 2 or More Crashes
- Injury Crashes
- High Crash Location
- Project Corridor

Parked Vehicle and Pedestrians/Bicyclists Crashes

- 20 Pedestrians/Bicyclists Crashes



- 11 Parked Vehicle Crashes



Legend

- Non-injury Crashes
- 2 or More Crashes
- Injury Crashes
- High Crash Location
- Project Corridor

DRAFT

Detour Route Options

- Incident Detour Route Options
 - Recommended Detour Routes
 - More than 22 feet wide Two-way street
 - Streets with pavement markings
 - Avoid left turn maneuvers from and to minor streets
 - Streets without parking
 - Wide roadway with parking and pavement markings
 - Not-recommended Routes
 - One-way street
 - Streets with no pavement markings
 - Narrow Alleys
 - Major street with Left turn maneuvers
 - Streets with parking resulting in narrow street



Detour Route Options

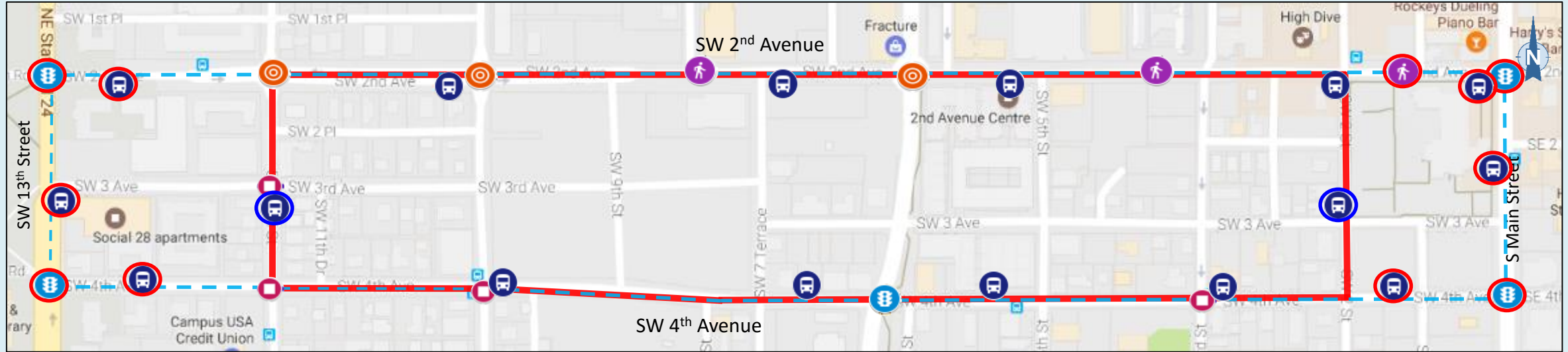


Detour Route Map

Legend:

- GATrIC Corridor
- Recommended Detour Routes
- Roadways not recommended for detours
- Area not recommended for detours

Alternate Route Options



Legend:

- Traffic Signals (1)
- Roundabout (3)
- Four-way Stops (3)
- Mid-block Pedestrian Crossing (2)
- Bus Stop (clockwise loop) (8)
- GATrIC Corridor
- Traffic Signal Avoided (4)
- Mid-Block Pedestrian Crossing Avoided (1)
- Bus Stop Missed (6)
- Added Bus Stops (2)
- Alternative GATrIC Corridor

Advantages

- Avoids 5 high crash segments
- Avoids 4 traffic signals
- Avoids 1 mid-block pedestrian crossing
- SW 12th Street has dedicated bike lanes

Disadvantages

- 6 Bus stops are missed out of original 14 Bus stops
- Recommend adding 2 new Bus stops for missed stops
- Introduces 1 four-way stop intersection
- Additional bicycle and pedestrian conflicts

GATrIC Project Corridor Field Review Findings

Pedestrians

- Jay walkers
- Mid-block crossings
- Intersections with marked crosswalks
- Signalized intersections with pedestrian signals



Motor Scooters, Bicycles, and Skateboards

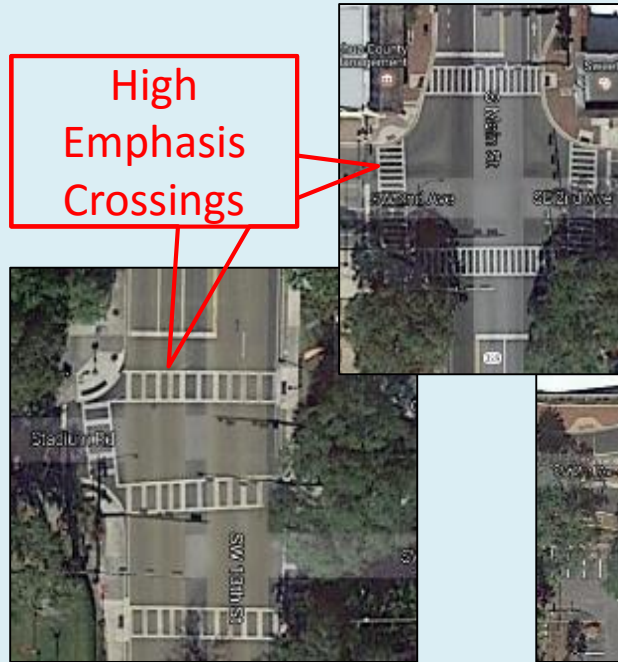
- Bikes use bike lanes
- Bikes use traffic lanes
- Bikes use crosswalks
- Scooters use traffic lanes
- Perpendicular scooter parking



Pedestrian Pavement Markings/Signs

- Variety of pedestrian crossings pavement markings or pavement color
- “Stop For Pedestrian” signs on delineators and regular MUTCD
- Peak periods for pedestrian traffic: 7 AM to 9 AM; Lunch Hour; 3 PM to 5 PM
- Pedestrians are often on cell phones and may stop in the middle of the road

High
Emphasis
Crossings



Mid-block
Crossing

Brick
Pavers



Regular
Crossings



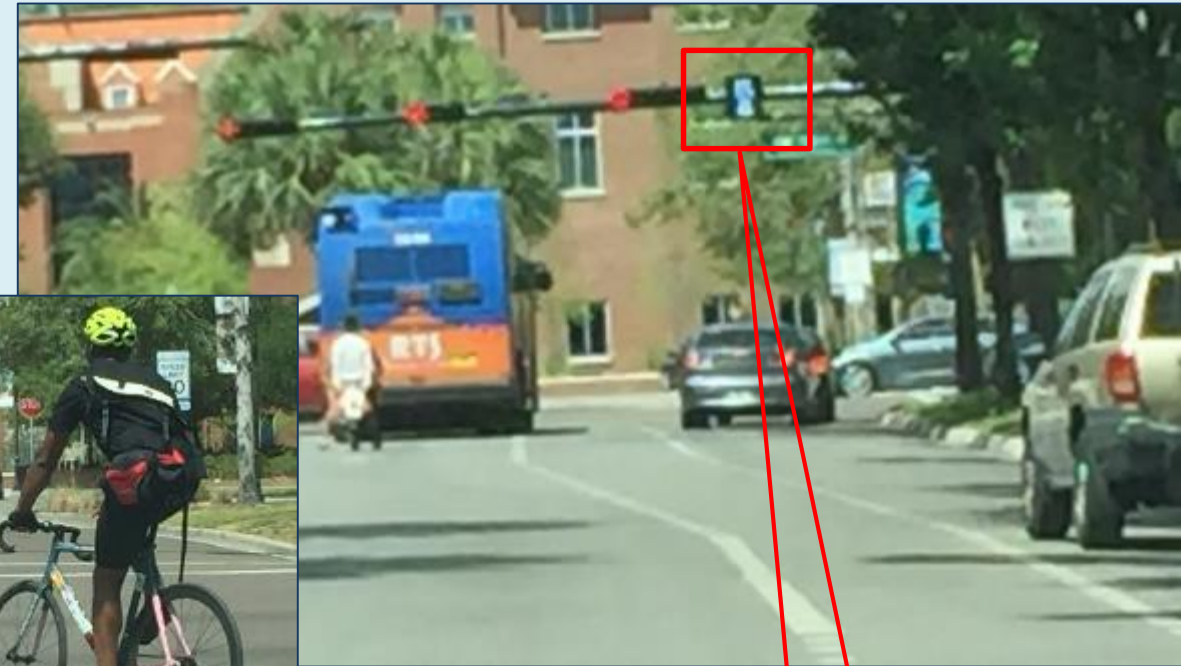
MUTCD
Signs



Stop for
Ped Sign

Bike Lanes

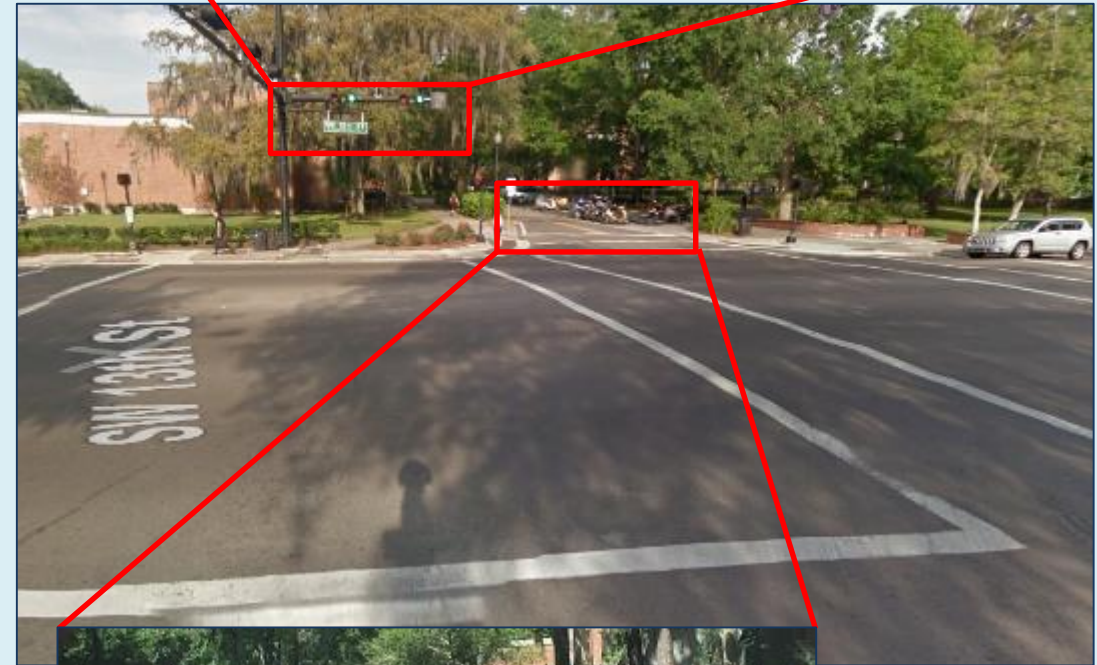
- Parallel bike lanes
- Parallel parking – opening car doors could cause biker to swerve into through lane.
- Possible right turn adjacent to bike lane
- Bikes in crosswalks
- Bikes and scooters may not stop at stop signs
- Skateboards hitch rides on back of bus



SE 4th Ave at SW 13th St

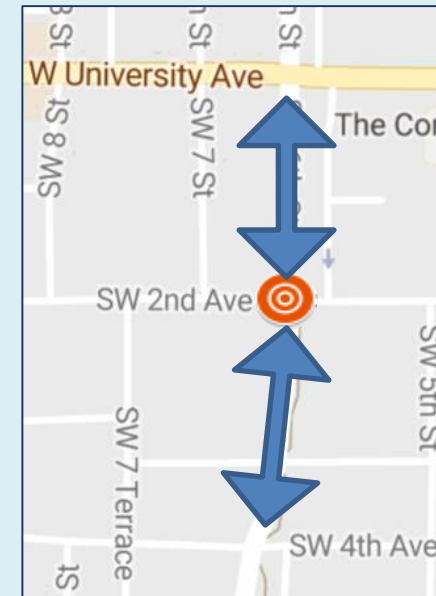
Non-Symmetrical Intersection

- Field review performed – 4/20/2017
- Opposing left turn traffic may hinder GATrIC vehicle from making right turn
- Offset intersection creates operational challenges if this intersection is used for UF connectivity
- “NO TURN ON RED” blank-out sign was on continuously
- Motor scooters parked along street close to intersection cause potential safety concerns
- Roadway into UF campus is two-way but narrow
- No clear route for circulation through campus and return to GATrIC route
- Heavy pedestrian traffic in this intersection

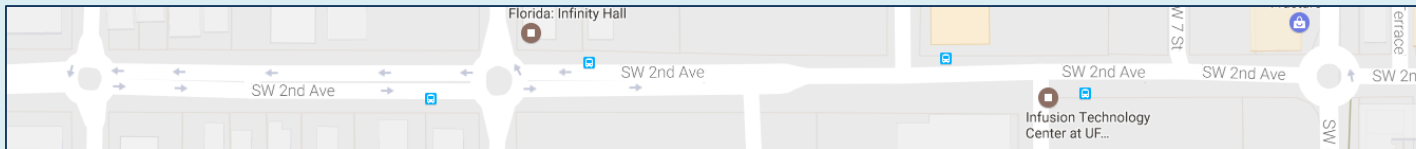


Roundabouts on SW 2nd Avenue

- SW 6th Street; SW 10th Street; SW 12th Street
- Conflicts for transit
 - Other cars do not yield to buses
 - Pedestrians and bicycles do not watch for buses
 - Entering and exiting crosswalks
- Signals on SW 6th Street can cause traffic to backup into the roundabout at SW 6th Street and SW 2nd Avenue.



#170258B



Heavy Traffic on SW 13th Street (SR 24)

- Left turn from SW 13th Street to SW 4th Avenue was very difficult.
- Left turn arrow changed to flashing yellow, but there were few gaps in traffic to make left turn on flashing yellow arrow.
- Multiple pedestrian crossing in same direction for left turn
- **Recommendation**: GATrIC vehicles travel the loop in a clockwise direction to avoid left turning movements.



Stop Signs, Driveways, Parallel Parking

- Some stop signs are 2-way and some 4-way
- Some areas with closely spaced driveways
- Parallel parking, cars parking, doors opening, jay walking to car or between cars



Land Development

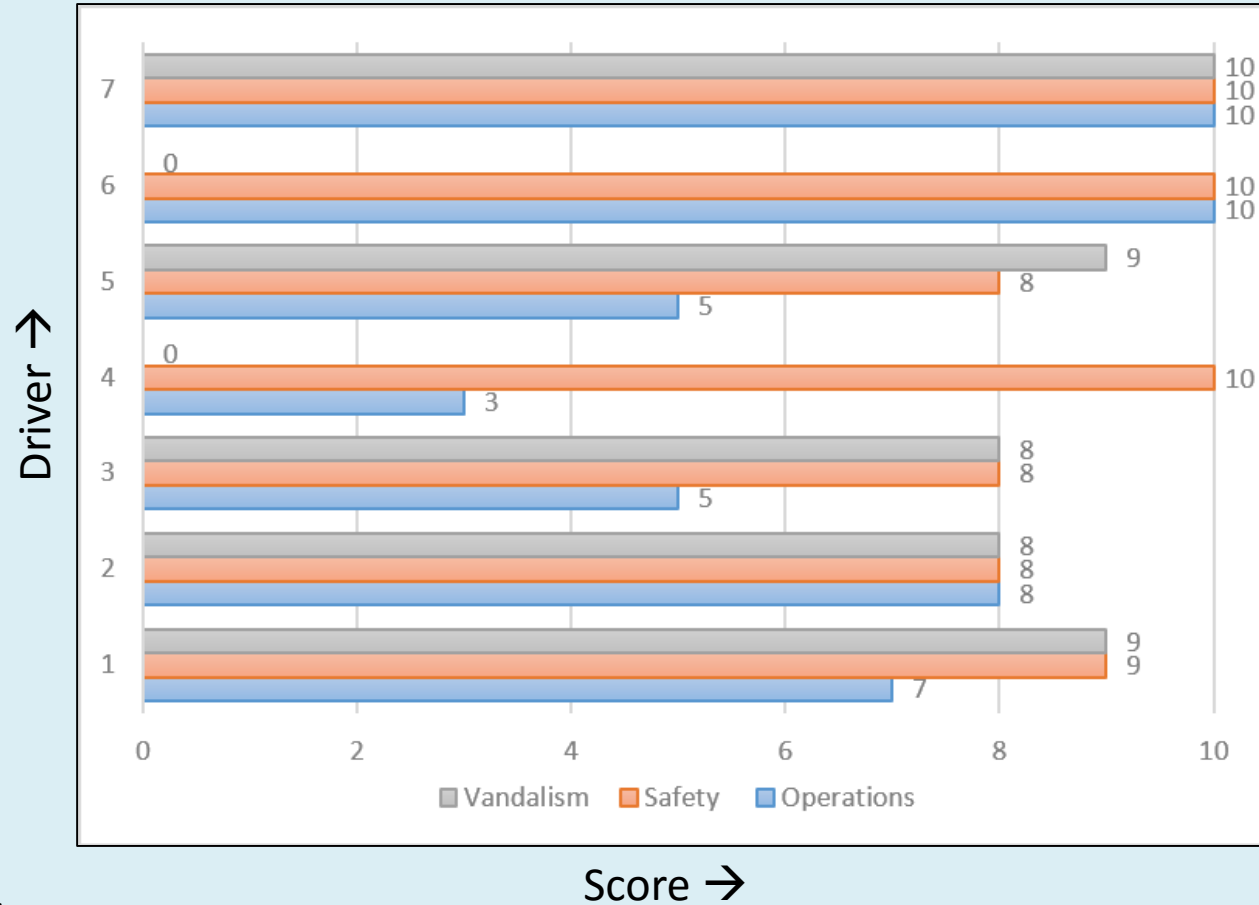
- New construction evident
- Will change traffic characteristics
- Will change pedestrian and biking characteristics
- Will change transit demand



GATrIC Project Corridor Bus Driver Survey

Summary of Drivers' Survey

- Survey interview conducted on 5/4/2017
- Seven bus drivers interviewed
 - 2 drivers from Route 1
 - 3 drivers from Route 10
 - 2 drivers from Route 46
- Interview question categories
 - Operations
 - Safety
 - Vandalism
- Average score (on scale of 10)
 - Operations – score 7
 - Safety – score 9
 - Vandalism – score 9
- Note: two drivers did not respond to vandalism question



Summary of Driver Surveys

- Drivers' operations assessments
 - 1 = significant problem; 10 = few problems
 - Operations ratings: 3 to 10
 - Cars block roundabouts, cars don't yield to buses
 - Pedestrians
 - Bike lanes
 - Other buses and commercial vehicles block the roadway
 - Backup from signals on SW 6th Street block the Roundabout on SW 2nd Avenue
 - Cars block SW 2nd Avenue near SW 6th Street (near Continuum student housing)
 - Traffic signals cause delays
 - Main and SW 2nd Ave; SW 13th Street and SW 2nd Ave

Summary of Driver Surveys

- Drivers' safety assessments
 - 1 = significant problem; 10 = few problems
 - Safety ratings: 8 to 10
 - Pedestrian crosswalks
 - Pedestrians in crosswalks don't pay attention and often stop in the street
 - Crosswalks too closely spaced in some areas
 - Other cars
 - Students cut off the buses in roundabouts
 - Cars passing buses when loading/unloading
 - Bikes and scooters do not stop at stop signs
 - Skateboarders hitch rides to back of the bus

Summary of Driver Surveys

- Drivers' vandalism assessments
 - 1 = significant problem; 10 = few problems
 - Vandalism ratings: 8 to 10
 - Stolen bus stop signs
 - Garbage cans tipped into street
- Other Comments
 - Locations requiring ADA accommodation on SW 2nd Avenue
 - Between 10th and 12th Streets near doctors' offices
 - Between 6th and 7th (Community Ministries, Wise's)
 - Between 3rd and 4th
 - Portions of the roadway are bumpy, requires close speed monitoring

GATrIC Project Corridor Shuttle Operation Analysis

GATrIC Shuttle Operation Assumptions

- **Bus:** autonomous (driver-less) transit service
- **Route:** runs on city streets and state roads (2 miles)
- **Speed:** 15 Miles Per Hour (MPH)
- **Stops:** uses existing transit stops (14 clockwise stops)
- **Headway:** not to exceed 10 minutes
- **Serving** mainly University of Florida riders
- Bus operation **delay factors** and **time** assumptions
 - Passenger stops (15-30 seconds)
 - Mid-block cross walks (10-15 seconds)
 - Stop signs (10-15 seconds)
 - Major signalized intersection (30-45 seconds)
 - Minor signalized intersection (10-15 seconds)
 - Jay walkers (5-10 seconds)
 - Roundabouts (5-10 seconds)

Transit Headway Calculator

- Calculator to determine minimum number of transit required
- Assumptions
 - Route miles: 2 miles
 - Maximum speed: 15 MPH
- Delay events and assumptions on Table 1
- Estimated three (3) buses to maintain less than 10 min headway

Delay Factors	Unit	Quantity	Minimum		Maximum	
			Delay (Sec)	Total Delay	Delay (Sec)	Total Delay
Mid-block Cross Walks	Each	3	10	30	15	45
Stop Signs	Each	3	10	30	15	45
Major Signalized Intersections	Each	4	30	120	45	180
Minor Signalized Intersections	Each	1	10	10	15	15
Jay Walkers	Each	10	5	50	10	100
Roundabouts	Each	3	5	15	10	30
Passenger Stops	Each	14	15	210	30	420
Total				465		835

Parameters	Units	Minimum	Maximum
Total Delay	Seconds	465	835
Total Delay	Minutes	8	14
Total Estimated Travel Time	Minutes	16	22
Bus Number Needed for 10 min Headway	Buses	2	3
Average Headway	Minutes	8	8

Min and
Max Bus
Numbers

Study Conclusions and Recommendations

Conclusion – GATrIC Route Travel Time Impact Factors

- Length of bus travel route
- Operating speed of buses
- Loading and unloading time
- Friction due to:
 - Higher speed traffic, particularly on SW 13th Street and Main Street
 - Pedestrians not conforming to signs and marking (jay walking)
 - Parallel parking
 - Mid-block crossings
 - Other traffic in and backing up into Roundabouts
 - Major and minor signalized intersections

Conclusion – Challenges

- Challenges to GATrIC operations and maintaining headways
 - Inconsistent compliance with pedestrian signs and markings
 - Inconsistent pedestrian crossing signing and pavement markings
 - Bicyclists in traffic lanes, in bike lanes, in crosswalks
 - GATrIC right turns across bike lanes
 - Parking along route, parallel for cars, perpendicular for scooters
 - Blank-out signs conformity
- Safety challenges
 - Pedestrians and bicyclists
 - Parallel and perpendicular parking

Conclusion – Recommendations

- Consider measures to maintain consistent headways due to travel time variability
- Consider provisions for incident management detour routes
- Consider provisions for passenger security and vandalism
- Consider GATrIC vehicles to travel the loop in a clockwise direction to avoid left turning movements
- Consider provisions for signal priority
 - In absence of priority, the vehicle should have provision to recognize the blank out sign “no turn on red” messages



Thank you.



**ADDENDUM NO. 2**

Date: September 8, 2017
3:00 P.M. (Local Time)

Bid Date: October 3, 2017

Bid Name: Gainesville Autonomous Transit Shuttle (GAToRS) **Bid No.:** RTSX-180030-DS

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The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

1. The question submittal deadline is September 14th; it was erroneously stated in Addendum #1 that the deadline had passed.

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CERTIFICATION BY PROPOSER

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BY: _____

DATE: _____



ADDENDUM NO. 3

Date: September 19, 2017
3:00 P.M. (Local Time)

Bid Date: October 3, 2017

Bid Name: Gainesville Autonomous Transit Shuttle (GAToRS) **Bid No.:** RTSX-180030-DS

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2. Questions/Answers:

Question1: Page 2-Timeframe - Is it correct that operations should begin March 1, 2018? If correct, this means the supplier has about 3 months to go through the entire engineering life cycle, determine safe routing, deliver a safety case, produce vehicles and test and install the system. Do you feel this time frame is realistic?

Answer1: **The RFP Time Table was updated in Addendum #1 with a projected contract start date of May 1, 2018. That start date is still subject to change based upon the length of our various internal processes. The first six months of the contract are for the start-up period.**

Question2: Safety - What is the required safety target for safe operations? Can you express this in a number? How will this requirement be tested?

Answer2: **There is no a safety target but the proposer needs to implement a System Safety Program Plan (SSPP) in accordance to FDOT regulations. RTS will assist in the development of the SSPP and monitor compliance.**

Question3: Performance - Is there a maximum downtime allowed? Especially taking into account the time it would take to recharge a battery?

Answer3: **No downtime allowed. Proposer needs to be able to have additional vehicles if needed to avoid downtime.**

Question4: Page 8-Intent - Is the city of Gainesville looking for an autonomous shuttle or an autonomous system that contains shuttles but also includes all ICT hardware, software, supervisory systems, etc.? Could you elaborate on this?

Answer4: **Minimum requirement is to have an autonomous shuttle with capabilities to integrate with an autonomous system.**

Question5: Page 8-requirements (a) - Could you please explain what is meant with 'able to continuously transport'? What are the required peak capacities per hour per direction (PPHPD) and how are they divided over the day? And what are the operational hours?

Answer5: Continuously transport means to provide regular scheduled service. No required peak capacities but frequency as displayed on RFP. Operational hours are minimum 10 hours per day and proposer needs to explain how they are going to provide it.

Question6: Page 8-requirements (a) - Could you explain why the speed limit is set to 15 mph? Is the impact on the transportation value of the proposed service known at these speeds? If a supplier can prove safety at higher speeds, is this allowed?

Answer6: We consider 15 mph is the maximum speed for safe operations of the shuttle. If the proposer can prove safety at higher speed, this would be acceptable. UF campus has a maximum speed limit of 20 mph.

Question7: Page 8-requirements (b) - Is there also a requirement to have the possibility to 'call' a vehicle and select a destination?

Answer7: Not required but desired and acceptable.

Question8: Page 8-Requirements - What is the required system availability? In other words, how does the city compare different suppliers on this matter?

Answer8: City will not compare suppliers, only proposals. Suppliers' performance and references as part of the team submitting the proposal will be reviewed.

Question9: Page 8-requirements (e) - What is the required reliability of the proposed wireless connectivity?

Answer9: One and a half nines (95%) high availability system characteristic is acceptable, within the proposed route. Three-nine (99.9%) high availability system characteristic is desirable, within the proposed route.

Question10: Page 8-requirements (f) - What is the required safety target and how will this be tested? In requirement (f), test on public roads is also mentioned. Is the scope of this RFP to test a shuttle service or to install a permanent, reliable and safety certified system? If the scope is to test, has the testing plan been defined? Who will conduct the tests? How will tests be evaluated? What are the criteria?

Answer10: There is no a safety target but the proposer needs to implement a System Safety Program Plan (SSPP) in accordance to FDOT regulations. The scope is to test and then install a reliable system. No test plan identified but it will be evaluated compared to the provision of a regular shuttle service. RTS will assist in the development of the SSPP and monitor compliance.

Question11: Page 8-requirements (f) - 'Proposer shall prove certification of their vehicle...' Is this correct or should the safety of the entire system be certified? Can you provide the regulations the system has to comply with?"(1) If a proposer cannot certify, an exemption for the National Highway Traffic safety Administration (NHTSA) must be obtained in order to test n public roads." At what point would this occur? Is there a specific process associated with this requests? What would be the time period associated with this process?

Answer11: To date, the NHTSA AV policies are only guidelines and not requirements, so we're still in this grey area where the local laws impact the ability of the vehicle to operate without a driver on the local roads (Florida State Law governs) and NHTSA mandates the details associated with the vehicle. NHTSA can allow a limited number of exemptions to their rules for individual vehicles.

There also isn't a certification process in place. The AV guidelines require that vehicle manufacturers "self-certify" but that is not clearly defined either, so there is no formal NHTSA certification process for the vehicles. I'm also not entirely sure how FTA fits in the mix. If anyone will "certify" the system, it would be NHTSA. Please see <https://one.nhtsa.gov/nhtsa/av/av-policy.html> for further reference.

Question12: Page 8-requirements (g) - This requirement would normally be part of our system design and based on proven technology. How can the safety of a system be calculated if it relies on applications that are not yet available? Or is the scope of this requirement to test new applications on proven and safety certified technology?

Answer12: Test new applications on proven and safety certified technology.

Question13: Page 19-Price - Should the price include all operations cost for 36 months? Who will be responsible for operations of the system/shuttle? Why is the proposed solution only intended for 36 months?

Answer13: The price proposal is to include all startup costs, the 36-month monthly service costs, and additional hours of service by the hour. The successful proposer will be responsible for the operations of the shuttle. The project is funded for 36-months. New dedicated funding must be identified for continuation of the project, i.e. extension of contract.

Question14: Page 19-Price - At (i) you ask for a price proposal of all start-up costs. Why is a storage and charging facility not included (iii)? Should the proposal for (iii) also include chargers and other equipment or should this be included in (i)?

Answer14: Storage and charging facility costs and all other equipment have to be included in the proposal. These costs are requested to be provided separately within the proposal per Section VII – Price Proposal on page 36.

Question15: Page 19-Price - Do the 36 months of service start after design and construction necessary (i.e., start up) to make system operational?

Answer15: Yes, the first six months of the contract are for the start-up period. The 36-months of service begin after the startup period ends. New dedicated funding must be identified for continuation of the project, i.e. extension of contract.

Question16: Page 19-Price - If road improvements on proposed project route are needed, will this have to be provided in "Section 6 - Price" of the Proposal under item (i) startup cost, as a separate line item? Also, will this need to be done by the Proposer before the 36 months of service may start?

Answer16: Road improvements, if proposed, need to be a separate line item on the cost proposal. Proposer will be responsible for any work construction and it must occur within the initial six month time frame before the 36-month service period begins

Question17: Page 19-Price - Based on "Section 6 - Price" under Section III - Price Proposal Format/A. Format and Contents of Proposal, it seems like there will be a design and construction (startup) phase plus 36 months of service. However, project term is only 3 years. Will the 3-year project term include the startup time? Or is this referring just to the 36-month service period? If it is the 36 months of service, how will the startup cost and time will accounted for? Please clarify.

Answer17: Yes, there is an initial six month startup period. The 36-month project term begins after the initial six month startup period ends.

Question18: Page 16-Operating requirements - 1.1: What is the required system availability and what is the required capacity (PPHPD)? Are their maximum waiting times defined?

Answer18: System availability would be measured by the provision of services as specified (10 min headways during peak and 20 minutes off peak), No capacity requirements, no maximum waiting times.

Question19: Page 16-Operating requirements - 1.1: How is the access to the corridor controlled? Are pedestrians and bicycles on the same lane or is there room to pass them in a safe way?

Answer19: It is up to the proposer to determine what type of access control will be implemented.

Question20: Page 16-Operating requirements - 1.2: What is the intended planning for this operating plan? Should there be an operational safety case?

Answer20: Proposer's operating and safety plan needs to be approved by the Project team prior to implementation of service.

Question21: Page 16-Operating requirements - There is a safe boarding and alighting operational request stated. What are the expectations in this regard? Can you provide examples?

Answer21: Safe boarding and alighting as a regular shuttle service.

Question22: Page 16 - Is Proposer responsible for recording public attitudes towards automation in transportation and documenting the safety benefits of such a service?

Answer22: Yes, there is a project funded by UF administration to evaluate the public's attitudes toward automation. Additional evaluations may also be conducted throughout the life of the project.

Question23: Page 16-Operating requirements - There is a Level 4 Autonomy operational request preferred. Level 4 is typically associated with no steering wheel and no supervision (on board). Could you explain what the expectations are? What does this mean in relation to having a safety steward on-board during operations? How should the level of Autonomy be proven by the suppliers?

Answer23: Proposer will determine how they will operate. No steering wheel or supervision would be acceptable as well as having safety steward on board.

Question24: Page 16-System requirements - 1.6: Should this be part of a design safety case? If so, what is the minimum requirement?

Answer24: Yes, should be part of the safety case.

Question25: Page 17-System requirements - 1.7: Should the vehicle, the system, a combination or both separately be certified? You mention 'their vehicle'. Does this mean you are looking for a system with one vehicle or more? Could you please elaborate?

Answer25: The number of vehicles would be up to the proposer.

To date, the NHTSA AV policies are only guidelines and not requirements, so we're still in this grey area where the local laws impact the ability of the vehicle to operate without a driver on the local roads (Florida State Law governs) and NHTSA mandates the details associated with the vehicle. NHTSA can allow a limited number of exemptions to their rules for individual vehicles.

There also isn't a certification process in place. The AV guidelines require that vehicle manufacturers "self-certify" but that is not clearly defined either, so there is no formal NHTSA certification process for the vehicles. I'm also not entirely sure how FTA fits in the mix. If anyone will "certify" the system, it would be NHTSA. Please see <https://one.nhtsa.gov/nhtsa/av/av-policy.html> for further reference.

Question26: Page 17-System requirements - 3.0 Proposer shall coordinate with the UF Testbed Project team. Could you explain what the scope and goals of this coordination will be?

Answer26: Additional information regarding the UF Testbed, named I-STREET, is provided at its website: <http://www.transportation.institute.ufl.edu/istreet-about-us/>. Coordination will involve, for example, the following: exploring jointly the use of novel sensor applications which may be installed on the shuttle; the use of the shuttle as a probe in data collection; and the use of the shuttle's communication capabilities in enhancing traffic signal control and other traffic management strategies.

Question27: Page 17-Testing plan - 1.3: As a system supplier we deliver a turn-key system that has already been tested before operations. Is the testing plan you are referring to meant for the period prior or during operations? How should the supplier keep the cost for testing during operations into account if it is not known what will be tested?

Answer27: If there is a supplier with a system that has already been tested, the proposer needs to provide proof of similar operations and its performance. Proposer needs to consider cost for testing in their proposals.

Question28: Page 17-Key performance measures - What Key Performance measures are you referring to? Could you give an example?

Answer28: Key performance measures may include comparison with other regular shuttle services, for instance, passenger per hour, ridership, service breakdowns, etc. Collaboration and data sharing capabilities will also be key performance factors.

Question29: Page 17-Ownership - Could you confirm that you will not be the owner of the system, including the vehicles? If not, is there an operator appointed by the city for public transport services?

Answer29: City will not be the owner of system or the vehicles. Successful proposer will operate the service. Not operator appointed by the City but will coordinate efforts to assist the proposer.

Question30: Page 17 - Who will develop and carry out the Evaluation Plan?

Answer30: Project team will develop an Evaluation plan with input from selected vendor. Proposer can submit a proposed plan to be approved by the evaluation team.

Question31: Page 17 - Are the "certain key performance measures" defined?

Answer31: Not defined key performances but may include comparison with other regular shuttle services, for instance, passenger per hour, ridership, service breakdowns, collaboration and data sharing capabilities, etc.

Question32: Page 18-Traffic conditions - From what we understand, the suggested project area is very busy during rush hours. How will the suggested service have added value if the shuttles are stuck in traffic? Is a dedicated lane an option for the city?

Answer32: Proposer needs to consider all these factors and how to mitigate traffic in the proposal. Dedicated lane would be considered depending on the proposal.

Question33: Page 19-Operating requirements - Could you elaborate on what the peak- and off peak hours are? What is the requested capacity during those hours? It makes a huge difference if, for example, a single shuttle with a capacity of 4 passengers meets the requested frequency requirements or a 24 passenger vehicle.

Answer33: Proposer will determine their peak and off-peak hours. In this area is normally 7:30 to 10:30 am and 3:30 to 6:30 pm. No peak capacity requested. It is up to the proposer to analyze the area and propose the level of service for the shuttle, including vehicle size.

Question34: Page 19-Operating requirements - What are the requested operational hours per day?

Answer34: 10 hours per day.

Question35: Page 19-Demonstration period - What will be the demonstration period? Is that the entire project term of 3 years? Could you please explain if you are looking for a demonstration, a test/trial or a permanent transit service?

Answer35: The 36-month project term is the demonstration period. If the project is successful and funding is identified beyond the 36 month term, then it may become permanent and the contract would be extended.

Question36: Page 19-Route - Our engineers need to assess the route options in order to ensure safe and reliable service. The route of course affects system pricing. Is a supplier expected to determine the route before responding to this RFP? What information about traffic densities and passenger flows on the different routes is available? Is there an Origin to Destination Matrix available to determine station locations?

Answer36: The route is part of the proposal. Some traffic information is on the GATRIC report. No Origin-Destination information available.

Question37: Page 19-Gainesville Autonomous Transit Shuttle (GAToRS) - If charging and storage is done at Original RTS facility at 100 SE 10th Avenue, Gainesville FL 32627, will the Proposer have to pay for electricity and included this is the 36 months service period?

Answer37: Proposer will be responsible for all operating costs including utility costs.

Question38: General - Are there systems engineering documents available for project? Will Project have to comply with the FHWA 23 Code of Federal Regulations (CFR) Rule 940 requirements?

Answer38: The Systems Engineering rule mainly applies to the federally funded projects.

Question39: Liability Insurance – Please confirm that all required liability limits can be met by any combination of primary and excess insurance.

Answer39: Yes.

Question40: Performance/Bid Bond – Please confirm no bid bond or performance bond is required.

Answer40: No performance or bid bond is required for this project.

Question41: Performance/Bid Bond – As opposed to terminating the contract for breach for the failure of a vehicle to perform, or otherwise seeking damages, would the City consider liquidated damages/disincentives for key performance metrics within a defined tolerance?

Answer41: The City would not agree to liquidated damages/disincentives for key performance metrics within a defined tolerance, in lieu of otherwise available remedies such as specific performance, or termination and damages for breach.

Question42: Performance/Bid Bond – To the extent waived by F.S. 768.28, will the municipality contribute to any loss for which it is liable (in whole or in part)?

Answer42: No.

Question43: Funding – Will this project receive any federal funds? If so, and in the event the autonomous shuttle leads to the displacement of public transit, traditional fixed route employees (perhaps due to decrease in service needs, (who will be responsible for any “13(c)” liabilities?

Answer43: No Federal funds, only FDOT funds during the demonstration period. This is considered a City project and City will coordinate with Amalgamated Transit Union (ATU) during the demonstration period and address any potential 13c issue.

Question44: Vehicle – Upon cessation of the project, will the Contractor retain the vehicles it has supplied?

Answer44: Vendor will retain ownership of vehicles.

Question45: Vehicle – In order to ensure a competitive range, would the City consider identifying a certain number of vehicles it would like supplied?

Answer45: No. The City wants to encourage creativity and innovation on proposals and would not consider number of vehicles.

Question46: Operations – Traffic patterns and studies are often difficult to predict and model in practice. Would the City consider a six-month test period for establishing realistic scheduling goals?

Answer46: The City will consider a three-month test period, but it must be part of the 36-month service period.

Question47: Operations – How are fares to be collected (if at all)?

Answer47: No fare collection during the demonstration period.

Question48: Operations – In the event of disruption to service, will there be a scheduled detour route or will some other alternative service be required?

Answer48: City will coordinate with vendor on a potential detour of route or service disruption. Proposer is encouraged to address potential service disruptions and how to address them.

Question49: Route/Facilities – Will Contractor be responsible for establishing and maintaining the designated stops, including E-hailing infrastructure?

Answer49: Contractor will establish the bus stop locations and coordinate facilities that will be maintained by the City or UF.

Question50: Route/Facilities – In the event the City’s facility is used, will Contractor be responsible for utilities?

Answer50: Yes.

Question51: Route/Facilities – Will the City consider conducting in-person site tours for potential contractors?

Answer51: Proposer can coordinate site visits like any other agency but will not be in contact with staff that will be associated with the project.

Question52: In reference to: Section V. B. General Terms and Conditions 5. Insurance; Public Liability Insurance (other than automobile) consisting of broad form comprehensive general liability insurance including contractual coverage \$1,000,000 per occurrence (combined single limit for bodily injury and property damage). Please confirm the City is seeking Commercial General Liability coverage with \$1,000,000 limit per occurrence and in the aggregate, that includes bodily injury and property damage.

Answer52: Yes.

Question53: In reference to: Section V. B. General Terms and Conditions 5. Insurance; Automobile Liability Insurance. Property Damage \$500,000 per occurrence (combined single limit for bodily injury and property damage). Please confirm the City is seeking Auto Liability with \$500,000 combined single limit for bodily injury and property damage.

Answer53: Yes.

Question54: In reference to: Section V. B. General Terms and Conditions 5. Insurance; The City requires a certificate of insurance in a form acceptable to the City for the insurance required. Such certificate or an endorsement provided by the Contractor must state that the City will be given thirty (30) days’ written notice (except the City will accept ten (10) days written notice for non-payment) prior to cancellation or material change in coverage. The standard is to provide Notice of Cancellation 30 days, 10 day for Non-payment. Please confirm that the City will amend this requirement to industry standard.

Answer54: Okay.

3. Clarifications requested to Questions/Answers in Addendum #1:

Question2: The RFP refers to “predefined stop locations” (page 16) but does not specify the number of stops to be served by the shuttle, and level of passenger amenities to be provided at

stops. Assume this information is available through the GATRIC study, and thus obtaining that information critical in assembling our proposal. What specification on number of stops and passenger amenities should be assumed at this point?

Answer2: The proposer will recommend bus stop locations and amenities.

Requested Clarification: Does the City want a certain type and number of passenger amenities at stops? Any construction or installation requirement will necessitate adding a contractor to the project team, and hence impact one's price proposal.

City's Clarification: For pricing purposes, the proposer will recommend bus stop locations and can coordinate with the City for proposed amenities along the route.

Question3: The RFP (page 17) mentions two locations where DSRC roadside units will be installed through a separate project along SW 13th Street at SW 4th Avenue and SW 2nd Avenue to allow transmission of SPaT and MAP messages. Will additional information be made available concerning this project, such as DSRC RSU vendor, SPaT/MAP broadcast methodology, timeline for installation, backhaul communications architecture, back-office data management, etc? Are additional locations planned for roadside unit installation in the identified transit AV shuttle service area? Is transit signal priority considered as part of the V2I "coordination" mentioned?

Answer3: RFP will be coming out this winter specific to SPaT and MaP. For more information on the Gainesville SpaT Trapezium project, please see: http://www.fdot.gov/traffic/its/projects_deploy/cv/MapLocations/Gains_Trapezium.shtml). We have not determined a vendor or data provider yet. Backhaul communications will be TCP/IP over Ethernet/fiber. The City has all signalized intersections online in this area.

Requested Clarification: The City's answer to the question was to send us a link to a map that shows where the DSRC units on 13th Street will be located and how it fits into a bigger project. It's not clear if (a) the City will want us to add more DSRC along OUR route selected for the shuttle, and (b) will the City want us to do Transit Signal Priority for the shuttle and if so using what CV application bundle (i.e., MMITSS or an alternative)?

City's Clarification: No additional DSRC RSEs (Road side units) will be required as part of this project. A DSRC OBU (On Board Unit) capable of receiving/sending data within the autonomous shuttle should be planned for. Transit Signal priority will NOT be required as part of this project.

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 3 by his or her signature below, **and shall attach a copy of this Addendum to its proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 3 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: _____

BY: _____

DATE: _____