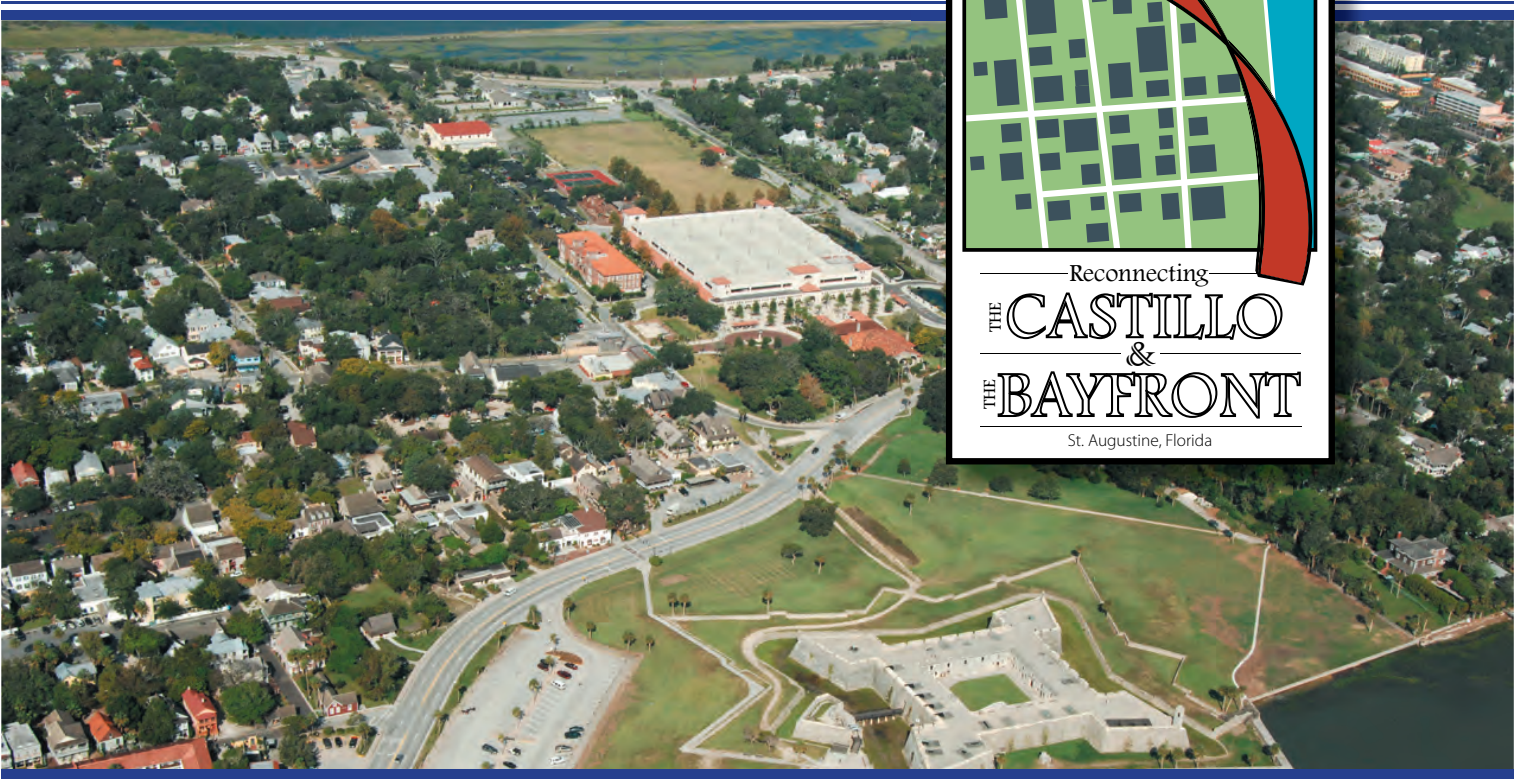
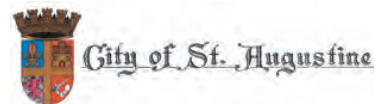


Executive Summary
450th Commemoration Transit System
FINAL | revised April 2, 2013



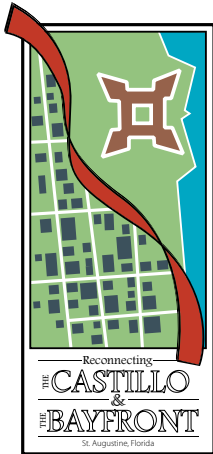
Reconnecting
THE CASTILLO
&
THE BAYFRONT
St. Augustine, Florida



Creating Compelling Environments to Live, Work, and Play



TRANSPORTATION PLANNING



450th Commemoration Proposed Transit System

The purpose of this report is to outline a proposed event oriented transit system for the 450th Commemoration events. This study is funded through the Federal Transit Administration's "Paul S. Sarbanes Transit in Parks" grant program. A synopsis of the program is below:

The Paul S. Sarbanes Transit in Parks Program was established to address the challenge of increasing vehicle congestion in and around our national parks and other federal lands. America's national parks, wildlife refuges, and national forests were created to protect unique environmental and cultural treasures, but are now facing traffic, pollution and crowding that diminishes the visitor experience and threatens the environment.

To address these concerns, this program provides funding for alternative transportation systems, such as shuttle buses, rail connections and even bicycle trails. The program seeks to conserve natural, historical, and cultural resources; reduce congestion and pollution; improve visitor mobility and accessibility; enhance visitor experience; and ensure access to all, including persons with disabilities. The program is administered by the U.S. Department of Transportation, together with the Department of the Interior and the U.S. Forest Service.

The proposed event oriented transit system for the 450th includes off-site satellite parking with an associated shuttle transit system transporting increased visitors to the Castillo and historic city within the urban core of St. Augustine during various levels of events.

1.0 Introduction

1.1 Study Area

For the purpose of this overview, the study area is **focused on supporting increased visitation to the historic downtown core, especially in relationship to the Castillo de San Marcos National Monument**, St. Augustine Visitor Center, and Francis Field. Generally, the study area for the transit shuttle system extends from SR 312 to the south, I-95 to the west, SR-16 to the north, and A1A / Anastasia Boulevard to the east.

1.2 Transportation Overview Outline

This report begins with a brief overview of the study assumptions, including the general attendance and parking requirements of the various proposed event levels. Subsequent sections outline an overview of the anticipated transportation management plan. This report concludes with an analysis of a preliminary off-site parking transit system for the anticipated St. Augustine 450th Commemoration events.

2.0 Project Assumptions

2.1 General Attendance / Parking Assumptions

The plan's purpose is twofold. There will be several events associated with the 450th that will bring addition visitors and guests into St. Augustine. First, a plan must be developed to ensure that the typical visitors to the existing historic venues are not displaced, or at minimum, not overly inconvenienced. Second, a plan must be developed that addresses the parking and circulation impacts of the additional guests generated by the special

...ensure that the typical visitors to the existing historic venues are not displaced...



450th events, **estimated to be a 20% increase over current visitation** numbers.

In order to develop a plan of action, the types of events that may be experienced during the 450th were delineated into three levels for parking and event management purposes. These are described below.

EVENT LEVEL 1 - Community Festivals & Fairs

Primarily community-oriented and hosted by a local organization, **Level 1 events are geared towards St. Johns County visitors and guests from immediately adjacent counties generally within a 50 mile radius.** Recent examples include Rhythm & Ribs, the Seafood Festival, Spring/Fall Arts Festivals, and the Cathedral Fair. These are specifically not professionally produced events, and have primarily a local flavor.

Currently there are five or six such events per year, and with the 450th there is a potential for two to four more like events. These **events occur during higher visitor periods**, and there is currently little parking and event management techniques utilized.

Event Attendance:	5,000 to 30,000 over three days
Peak Visitors:	10,000
Visitor Type:	Local (80% from St. Johns and immediately adjacent counties)
Length of event:	1 to 3 days, typically Friday afternoon to Sunday evening
Events per year:	6 to 10

LEVEL 1 events

Primarily community-oriented and hosted by a local organization...

EVENT LEVEL 2 - Professionally Produced Concerts and Events

Level 2 events are typically concerts or stage shows, produced by a professional company. Due to the size of the event, **these can only be accommodated at Francis Field**, which is located adjacent to the Downtown Multi-Modal Transportation Facility and the St. Augustine Visitor Center. An upcoming example includes the Mumford & Sons "Stopover" concert weekend and similar concerts and stage events.

It is envisioned that there may be one to two such events per year over the three year 450th celebration period. **It is important to note that all of these will be advance ticketed events.** Due to the characteristics of these events, this event level must occur during the **slower visitor periods**.

Event Attendance:	20,000 to 30,000, over two days
Peak Visitors:	25,000
Visitor Type:	Non-Local (80% visitors from outside of 50 mile radius)
Length of event:	1 to 2 days, typically Saturday and Sunday with one peak day
Events per year:	1 to 2

LEVEL 2 events

...typically concerts or stage shows, produced by a professional company...

EVENT LEVEL 3 - Large Community Event with Peak Exit

While similar to Level 1 in terms of being **community-oriented and hosted by a local organization**, Level 3 is distinct in that while the event experiences peaks much like Level 2, the event has a **rapid conclusion and associated mass exodus**. Examples include the 4th of July, "Light Up Night" for Nights of Lights, and 450th Kickoff celebrations.

LEVEL 3 events

...event has a rapid conclusion and associated mass exodus...

Currently, major traffic management techniques are not utilized, and little parking management occurs.

It is envisioned that there may be one or two additional Level 3 events over the 450th celebration period.

Event Attendance:	20,000 to 40,000, with heavy peak movement at conclusion / exit
Peak Visitors:	30,000
Visitor Type:	Local (80% from St. Johns and immediately adjacent counties)
Length of event:	1 day
Events per year:	2 to 4

2.2 Event Parking Assumptions

For the purpose of this analysis of the three event levels, the following existing parking supply quantity assumptions were developed for use in determining the required amount of off-site parking. It is **assumed that on-street parking in residential areas and along US-1 will be discouraged and enforced**, so no additional parking capacity within these neighborhood areas is included in the parking assumptions.

...on-street parking in residential areas and along US-1 will be discouraged...

- **Metered on-street parking** is assumed to be at 75% capacity for normal visitation (FY2012).

Total On-Street Parking:	386 spaces
Event Parking Available:	96 spaces (25% for all levels)

- **Parking garage** capacity at the Downtown Multi-Modal Transportation Facility has historically been assumed to be 2,400 (1,200 spaces, 2 car turnover per day). Utilization averaged over the entire year is 38% capacity (929 cars per day, FY2010). However, weekend average utilization is closer to 80% (1,912 on weekend peak day, averaging Saturday usage for FY2010 March, May and July).

Total Garage Parking:	2,400
Event Parking Available:	480 spaces - Level 1 Events (20%, 2 car turnover capacity) 240 spaces - Level 2 Events (20%, 1 car turnover capacity) 800 spaces - Level 3 Events (67% of garage capacity)

- Additional **public parking lots** are assumed to be at 60% capacity for normal visitation (FY2012, averaging all parking lot utilization rates).

Total Public Lots Parking:	520 spaces
Event Parking Available:	208 spaces (40% for all levels)

- Additional **private parking lots** are assumed to be at 60% capacity for normal visitation.

Total Private Lots Parking:	583 spaces
Event Parking Available:	233 spaces (40% for all levels)

- **Hotel and motel private parking** provides additional parking for visitors to all event Levels. This lodging parking is associated with the large number of hotel rooms within a 15 minute walking distance of the historic district and the venue locations. The parking assumptions are discussed below.

...lodging parking is associated with...hotel rooms within a 15 minute walking distance ...

Level 1 and Level 3 Events

For Level 1 and Level 3, these nearby hotel rooms are assumed to be at 63% occupancy (average occupancy for year) for normal visitation days. It is also assumed on weekends, when most events occur, this occupancy is 73%, of which 50% are assumed to attend a Level 1 or Level 3 event as part of the stay. Each hotel room is conservatively assumed at two visitors per room per one space, converted to the assumed event auto occupancy.

Total Hotel Rooms:	1,285 rooms
Total Rooms Occupied:	938 rooms (1,876 visitors)
Level 1 and Level 3 visitation:	938 visitors (50%)
Event Parking Equivalent:	312 spaces

Level 2 Events

Level 2 events are **professionally produced and are advertised far in advance**. Thus these events tend to bring hotel occupancy close to 100%. It is assumed that hotels are at **25% capacity when a Level 2 event is advertised**, so 75% of the rooms are available for the event.

...advertised far in advance...75% of the rooms are available for the event...

As an example, when a typical Level 2 event, Mumford & Sons, was announced in February 2013 for the following September, the advanced reservations for that event weekend was at 25%. Within a week of the announcement, 100% of the rooms were advance booked for that event weekend. For the purpose of this analysis, each hotel room is conservatively assumed at two visitors per room per one space, converted to the assumed event auto occupancy.

Total Hotel Rooms:	1,285 rooms
Total Available Rooms:	963 rooms (1,926 visitors)
Event Parking Equivalent:	642 spaces

- Additional **overflow event parking lots** are assumed at San Sebastian Harbor assumed to be at 0% capacity and Mission of Nombre de Dios assumed to be at 100% capacity for normal visitation. The San Sebastian Harbor lot could be utilized for a Level 1 event, and this lot and the Mission of Nombre de Dios could be utilized for Level 2 and Level 3 events for walking or trolley service. San Sebastian Harbor is less than one mile or at maximum a 20 minute walk to the historic and 450th venues.

San Sebastian Harbor (King Street):	457 spaces (level 1, 2, and 3)
Mission of Nombre de Dios (San Marco):	300 spaces (level 2 and 3 only)

2.3 Event Parking Availability

Based upon the above conservative assumptions, the following spaces are assumed to be available at or immediately adjacent to the historic sites and event venues.

Event Level 1:	1,786 spaces (5,358 visitors out of 10,000 peak guests)
Event Level 2:	2,176 spaces (6,528 visitors out of 25,000 peak guests)
Event Level 3:	2,406 spaces (7,218 visitors out of 30,000 peak guests)

2.4 Capacity Assumptions

In order to analyze the off-site parking requirements, and the corresponding level of transit service required for the three levels, the following capacity assumptions were utilized:

- The average vehicle occupancy for arriving attendees is **3 persons per vehicle**.
- **Private shuttle buses** can accommodate **40 seated attendees per bus**.
- **Charter buses** can accommodate **50 seated attendees per bus**. It is assumed that approximately 3% or 750 visitors would utilize charter buses for Level 2 events.
- **Local residents within and adjacent to downtown will walk** to all Level events, and will be 5% of Level 1 (500 visitors), 1% of Level 2 (250 visitors) and 10% of Level 3 (3,000).
- **Local public transit buses** can accommodate **16 attendees per bus** (assuming 1 wheelchair per bus).
- **Local private trolleys / trams** can accommodate **60 seats per trolley / tram**.

2.5 Off-Site Parking Requirements

The following visitor count and corresponding parking spaces are assumed to be needed as part of an off-site parking strategy which includes traffic management and a shuttle transit system to the historic sites and event venues during the 450th celebration.

Event Level 1:	1,380 spaces (4,142 visitors out of 10,000 peak guests)
Event Level 2:	5,824 spaces (17,472 visitors out of 25,000 peak guests)
Event Level 3:	6,594 spaces (19,782 visitors out of 30,000 peak guests)

3.0 Transportation Management Overview

The transportation mitigation measures for the 450th celebration events will consist of event site access modifications, and a Transportation Management Plan. The purpose of this section is to outline the major components of the Transportation Management Plan, or TMP, for review. **A more detailed TMP will be prepared as part of each individual Level event by local law enforcement and traffic engineering**, and will be developed in conjunction with the City of St. Augustine, St. Johns County and Florida Department of Transportation staff, with input from the police, sheriff, planning and engineering offices as well as the Florida Highway Patrol.

The following pages outline the major components of the TMP. The TMP outline is presented according to major subject area and includes the following items:

- Pre-Event Traffic Circulation
- Post-Event Traffic Circulation
- Transit Provisions
- Site Design
- Signage
- Implementation/Monitoring

...more detailed [plan] will be prepared as part of each individual Level event by local law enforcement and traffic engineering...

3.1 Pre-Event Traffic Circulation

Although the pre-event is not the most critical period for transportation analysis, it remains an important element in the TMP. The reason it is not the most critical period is that the **entering pre-event attendees will come in sporadically over the period of two to three hours, with the two hours prior to the main event being the most critical**. Depending on the Level event, the inbound flow may be metered in all day. However, at the **end of the event, the great majority of the spectators will desire to leave the site as soon as possible** thus creating a congested condition for a period up to approximately one to two (1-2) hours after the event.

The pre-event traffic circulation plan is divided into off-site, site access, parking, pedestrian and personnel sections

3.1.1 Off-Site Measures

The majority of traffic control will occur at the entrances to the individual off-site parking

lots and near the historic and event venue location. Traffic control will be needed closer to the event location to manage traffic as well as give preferential treatment to the shuttle and charter buses. A traffic control plan outline was developed that attempts to minimize traffic congestion and maximize existing transportation facilities and capacity.

The key to a successful pre-event traffic circulation plan is the strategic placing of traffic control officers and personnel. It is **assumed that the majority of the local streets in the vicinity of the historic and event venues will be barricaded along US 1 as well as along San Marcos to control traffic, prevent neighborhood cut through and prevent non resident neighborhood parking**. At present, it is envisioned that police control will be required at the following locations, **at minimum**:

...assumed that the majority of the local streets in the vicinity... will be barricaded...

Location

- A1A-South Castillo Drive/West Castillo Drive
- A1A-Avenida Menendez/Bridge of Lions
- West Castillo Drive/Bus Drop Off entrance and exit
- US 1-Ponce De Leon Boulevard/West Castillo Drive
- US 1-Ponce De Leon Boulevard/King Street
- US 1-Ponce De Leon Boulevard/West San Carlos
- US 1-Ponce De Leon Boulevard/SR 207
- US 1-Dixie Highway/Target Entrance
- US 1-Dixie Highway/North Commercial (Seabridge Square) Entrance
- US 1-Dixie Highway/South Commercial (Home Depot) Entrance
- US 1-Dixie Highway/SR 312
- All Off-Site Parking Entrances

These traffic control officers will direct traffic at critical points, and ensure the safety of the event as well as non-event traffic. The purpose of these traffic control officers is also to troubleshoot and to ensure the orderly progression of traffic. In addition, these locations will assist in allowing buses to jump the queue and continue proceeding through the subject intersection. That is, **these officers will allow the lane the shuttle buses are in to continuously flow when approaching an intersection.**

Manpower Intensive
...traffic control officers will direct traffic at critical points...

In order to allow for non-event traffic to travel relatively uninterrupted, it is important to separate event traffic as soon as possible. This can be achieved by a combination of **event signage** at the side of the road or overhead and **traffic control cones**. The event signage will direct the event patrons to utilize the appropriate lane, much like what is currently being used at major sporting events in Jacksonville and Orlando. Midpoint traffic control officers can assist in enforcing laneage use.

3.1.2 Site Access Measures - Parking

The location of the money collection personnel for the parking areas will be mobile to allow for vehicle queuing. In addition to the traffic control officers, traffic control personnel will be located along the parking access roads to troubleshoot and to assist in traffic operations. The traffic control officers at the parking site entrances as well as the traffic control personnel will assist the transit vehicles in accessing the parking location.

Manpower Intensive
...money collection personnel for the parking areas...

3.1.3 Parking Measures

An appropriate number of money collectors will be needed to minimize the extent of vehicle queuing. To minimize the potential for queuing, it is recommended that the following strategies be implemented:

- Provide **early parking incentives** - In order to diminish the impact of peak period parking and to lengthen the arrival rate of patrons, the event promoter or the City should encourage early arrivals by offering a **reduced parking rate for “early bird” patrons**.
- **Control bus access through permits** - In order to assure smooth operations at transit entrances and bus parking areas, pre-purchased parking passes should be made available to private charter and private shuttle buses.

Manpower Intensive

...appropriate number of money collectors...to minimize queuing...

3.1.4 Pedestrian Measures

As the event plans progress, an important objective is to minimize potential vehicle/pedestrian conflict points. As part of the TMP, it is recommended that the **vehicles be directed within the parking lots in an orderly manner that reduces this potential vehicle/pedestrian conflicts**. Vehicles should first be parked toward the venue or the shuttle bus staging area, and then proceed to fill the next row. In this manner, patrons walk across rows of vehicles already parked.

3.1.5 Personnel Measures

In order to minimize queuing and assure efficient traffic circulation as noted above, traffic and parking control personnel will be required prior to an event. **Police officers** are needed for traffic control; **auxiliary (non-police) traffic control personnel** are needed to assist the police officers; **money collectors** are needed for the parking entrances; and **parking lot spotters** are needed to manage parking within the parking lots. In addition, **road crews** will be required to set up and break down the traffic barricades which will be placed throughout the area on event day.

Manpower Intensive

Auxiliary traffic control personnel are needed to assist the police...

As the individual event plan progresses, the number of personnel required will be estimated, and their approximate location established. Traffic control personnel need to be in place approximately two hours prior to the event. A full staff of parking personnel will also be required at least two hours prior to the start of an event, depending on the Level and nature of the event.

3.2 Post-Event Traffic Circulation

The post-event is considered the **most critical period** of analysis. This is the time period where the majority of the patrons will desire to immediately leave the site. This critical period is estimated to last approximately one to two hours after the conclusion of the main event. The majority of the elements of the post-event mitigation measures closely resemble the pre-event measures. The post-event traffic circulation plan is also presented in terms of off-site, site access, parking, pedestrian and personnel sections.

3.2.1 Off-Site Measures

For the most part, the **same number of traffic control personnel** will be required in the post-event traffic condition at relatively the same locations. All pre-event intersection/interchange and midblock traffic control officers will be required to direct exiting traffic and to ensure relatively smooth traffic operations at these locations. Traffic control will be critical at key intersections, at the event access entrances and at the off site parking entrances. After

the event patron exits the site, there is no need to separate through trips and event trips. Directional signage will assist in vehicle dispersion.

3.2.2 Site Access Measures - Event

The event access points will be the most critical to the success of the pre-event as well as post-event situation. **In the pre-event situation, the background traffic volumes are higher, but the event traffic is more metered.** Thus the problem is to allow access to the event patron, while maintaining through trip capacity. In the post-event, the background traffic is practically non-existent, while the event patron and bus trips are heavy. In this case, the problem is to **allow as many project trips to exit the site as possible, while allowing background trips to mix into the stream of traffic.**

The events that are held on holidays and slower tourism weekends will not, for the most part, be a problem. Events that occur during weekday time periods may conflict with the afternoon (p.m.) peak hour work to home travel time. Special attention should be given to the scheduling of events to avoid this conflict to the greatest extent possible.

Pre-Event:

High Background + Metered Event Traffic

Post-Event:

Light Background + High Event Traffic

3.2.3 Parking Measures

During post-event, it is **recommended that on-site activities be provided that assist in metering out the event traffic.** These on-site activities could include live entertainment or any other post event programs or activities that will encourage the patron to stay on-site a little longer. This will assist in metering out the exiting patrons as well as give the patrons something to do during the post- event exiting time period. As mentioned below, traffic control personnel will be in place to assist the traffic flow within the lots. It is important to allow transit vehicles quick access to the external roads. Traffic control personnel will assist in this endeavor.

...on-site activities [live entertainment, etc.] be provided that assist in metering out event traffic

3.2.4 Pedestrian Measures

After the event, pedestrians will have access to parking lots with minimal vehicular conflicts. The ability to control pedestrian and vehicular movements within the parking lots after the event is somewhat limited. Given the nature of the traffic progression, pedestrian safety should not be as major of an issue after an event, though still important

...pedestrian safety should not be as major of an issue after the event, though still important

Parking lot monitors will be available to direct at critical points, and should serve to reinforce pedestrian safety.

3.2.5 Personnel Measures

Traffic control and parking personnel should be in place **one hour prior to the end of an event**, and remain in place until it is determined by a traffic control supervisor that traffic control is no longer warranted. It is anticipated that this will be approximately one and a half to two hours after an event.

Traffic control and parking personnel should be in place one hour to the end of an event...

3.3 Transit

In general, three types of transit usage are expected for major events. First, a number of **private shuttle buses** can be expected from outlying off-site parking area and major hotels. In addition to these private

shuttle buses, it is anticipated that **private charter service from outside the St. Augustine area** will provide service for patrons, typically as part of a package program. Finally, **the City, in conjunction with the event sponsor, will assist in providing shuttle or event day express service to the event from off-site locations.** The off-site parking and shuttle transit system will be described in detail in a subsequent section.

Transit Usage Type 1
private shuttle buses

Prior to an event, **informational flyers will be sent to chartered and private transit providers informing them of the preferred routes to and from the site,** as well as the preferred operational procedures. The City should work with event promoters and should act as a clearinghouse for information regarding bus access; inversely, the charter bus companies shall be required to contact this clearinghouse

Transit Usage Type 2
private charter service

Transit Usage Type 3
event day express service

in advance in order to prepare the event promoter and the City for the appropriate number of buses per event. **All buses will receive preferential treatment at the traffic control points.** Preferential treatment will occur for both the pre-event and post-event situations. In addition, for all Level events shuttle service may be provided from outlying areas. The off site parking /shuttle transit plan is considered an integral component of a successful Transportation Management Plan.

3.4 Signage

An important component of the proposed TMP is signage. **Not only are directional signs important, but the use of prohibitive signage is equally important.** At key locations, signs must be placed to encourage use of major facilities, while discouraging the use of local facilities. It is assumed that the **majority of the neighborhood streets in the vicinity of the event venues will be blocked from through and event traffic,** as well as from non-resident searching for parking. In some locations, as mentioned above, the prohibitive signs as well as select directional signs will require traffic control personnel to encourage and require adherence.

Directional signage should be placed along appropriate segments of all major highways, including but not limited to I-95, US 1, SR A1A, SR 16, SR 207 and SR 312. This directional signage shall indicate appropriate exits for the event parking, and then reinforce the event patron's travel path to the parking sites. The **City should work with County and FDOT to determine appropriate locations, size and format of these signs.**

City should work with County and FDOT to determine [locations for directional signage]...

3.5 Implementing / Monitoring

There are various benefits associated with the TMP for the area. The first component (signage, barricades and traffic control) is beneficial for it provides measures that may be immediately **beneficial to the event patrons, as well as to the adjacent and surrounding neighborhoods.** However, the potential drawback of this TMP component is that the implementation measure **may not be needed or always needed for a certain type of event.** Furthermore, once these measures are enacted, with or without need, **it is difficult if not impossible to eliminate or adjust them.** The traffic monitoring is beneficial for it develops a significant base of data. From this data base, an assessment of actual conditions can be made, and a revised transportation management strategy can be developed should the need arise, especially in the adjacent neighborhoods.

The transportation management program outlined in the preceding paragraphs provides a number of preliminary recommendations concerning on-site and off-site circulation, parking,

signage and traffic management. **These recommendations are based primarily on the assumptions made for the major critical events, and previous experience with special event management techniques.** As each event proceeds through the contract development and approval process and based upon the observation of actual traffic conditions, the plan may require modifications. In addition, the plan must also be staged for the various levels of parking utilization. However, the **plan must remain flexible and adaptable** to conform to the observed conditions. Actual traffic conditions may dictate changes in transportation and parking management measures.

These recommendations are based primarily on the assumptions made for major critical events...

It is **critical that measures contained in the TMP be well publicized to the general public, event sponsors, local residents, event patrons, and transit providers.** Prior to the event, the proposed traffic circulation and TMP should be presented in the newspaper, and flyers should be sent with promotional brochures and advance purchase ticket packages.

3.6 Event Site Configuration (FIGURE A)

Because of the planned transit service to the historic sites and Francis Field as the major event venue, it is recommended that **West Castillo Drive be utilized as a "Bus Only" facility** from

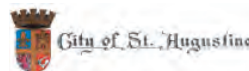
FIGURE A | Transit Schematic for Level 2 event at Francis Field



09.1.2 Transit in Parks - Planning Phase 2

Transit - Level 2 Schematic for Francis Field

March 5, 2013



US 1 to the Downtown Multi-Modal Transportation Facility entrance during major events. From South Castillo Drive to the Downtown Multi-Modal Transportation Facility entrance, the access on West Castillo Drive would be limited to Downtown Multi-Modal Transportation Facility parking traffic only. This would be controlled by traffic control officers at the major intersections. Figure A presents the Transit Schematic for this concept.

4.0 Preliminary Transit Analysis

The St. Augustine 450th **shuttle transit plan is considered an integral component** of a successful Transportation Management Plan for all Level events. As previously discussed, a shuttle bus system will be required that will service several off-site parking locations, depending on the Level of event. As described above, provisions will be made within the area surrounding the Multi-Modal Transportation Facility for on-site bus circulation and parking. The following paragraphs outline the private shuttle/charter bus service envisioned, as well as the off-site parking/shuttle transit system assumptions and characteristics.

4.1 Private Shuttle/Charter Bus Service

Preceding and following events, **especially Level 2 events, private shuttle and charter bus service can be provided from off-site locations.** It is envisioned that the off-site locations will consist of off-site parking areas and sponsors such as hotels, B&Bs and restaurants outside the study area, which would sell packages to event spectators that include travel to and from the event by private shuttle/charter bus. It is assumed that, **for the most part, each bus will only make one inbound trip and one outbound trip.** It is assumed that private bus companies would provide the majority of these trips and the capacity of the buses would be approximately 25 persons for a shuttle bus and 50 persons for a charter bus.

These shuttle and charter systems will be coordinated through the City and event promoters, and parking provisions will be made for the shuttle and charter buses at a near-by off-site location. This service will assist in making off-site parking an attractive alternative for event patrons due to the priority treatment. Traffic control personnel would give priority to these vehicles at each major off-site intersection and at the event transit site entrance. It is anticipated that the buses would layover at a nearby parking lot after the inbound trip to layover for the outbound trip.

The major difference between private shuttle and charter bus is that charter bus service is a longer haul service. That is, **the nature of the trip length is greater**, with a higher capacity. It is in the best interest for the City of St. Augustine to **encourage private shuttle** as well as charter service, in order to reduce temporary shuttle transit, traffic management and parking management costs. For the purposes of this report, it is assumed that private shuttle and charter services would accommodate approximately **3% of Level 2 visitors, or 750 guests.** This would require 30 private shuttles or 15 charters, or any combination thereof. For Level 1 and Level 3 events, the primary mode will be shuttle versus charter, with the utilization varying depending on the type of event. However, this type of private activity is not assumed for Level 1 and 3 events in the analysis in order to be conservative.

It is in the best interest for the City of St. Augustine to encourage private shuttle & charter service

4.2 Park-and-Ride Shuttle Transit Service

The park and ride shuttle transit service for the 450th events have been developed to be iterative; that is, **as each level of event is planned, the corresponding number of spaces and buses will be added to the program.** In addition, the program has been developed to be distance sensitive. This

...as each level of event is planned, the corresponding...spaces and buses will be added...

means that **parking areas closer to the historic and event venues will be utilized first**, to **minimize parking and bus costs** as well as **patron travel time and inconvenience**. As the anticipated attendance grows, additional parking areas away from the core with longer trip lengths will be necessary.

In order to develop the information required for the park and ride shuttle transit program, several assumptions were developed, in addition to those previously presented in Sections 2.4, 2.5 and 4.1. These assumptions include the following.

- **Travel times and distances were based on actual driving experience** from the proposed off-site parking locations to Frances Field.
- It is assumed that **25% of the event patrons will wish to use the shuttle system within two hours prior to the event (inbound)**. A higher utilization percentage or a reduced time period will increase the number of entering peak buses and estimated costs.
- It is assumed that **35% of the event patrons will wish to use the shuttle system within two hours after the event (outbound)**. A higher utilization percentage or a reduced time period will increase the number of exiting buses and estimated costs.
- In order to develop conservative costs, it is assumed the shuttle system will be **running all day (12 hours)** to and from the off-site parking locations, and this daily service will overlap with the peak inbound and outbound shuttle service.
- The estimated unit costs for the proposed services were developed from the year 2011 National Transit Database (NTD) information from the nearby Jacksonville Transportation Authority (JTA), adjusted to year 2013 costs.
- **Alternative parking locations were developed in case situations at the proposed sites change** such as development occurring, or identified locations cannot be secured for an event.

assume 25% of event patrons use system within 2 hours prior to the event (inbound)

Alternative parking locations were developed in case situations at the sites change...

The following paragraphs outline the proposed Park and Ride Shuttle Transit Service Program by Level event.

4.2.1 Level 1 Event (FIGURE B)

The Level 1 event will have approximately 10,000 peak guests, of which approximately 5,358 can be accommodated by existing public and private parking resources within a 15 minute walk of the historic and event venues. This equates to approximately 1,786 parking spaces; thus, there is a need to accommodate 4,142 visitors or 1,380 spaces. It is proposed that this be accomplished by utilizing the following parking locations and routes.

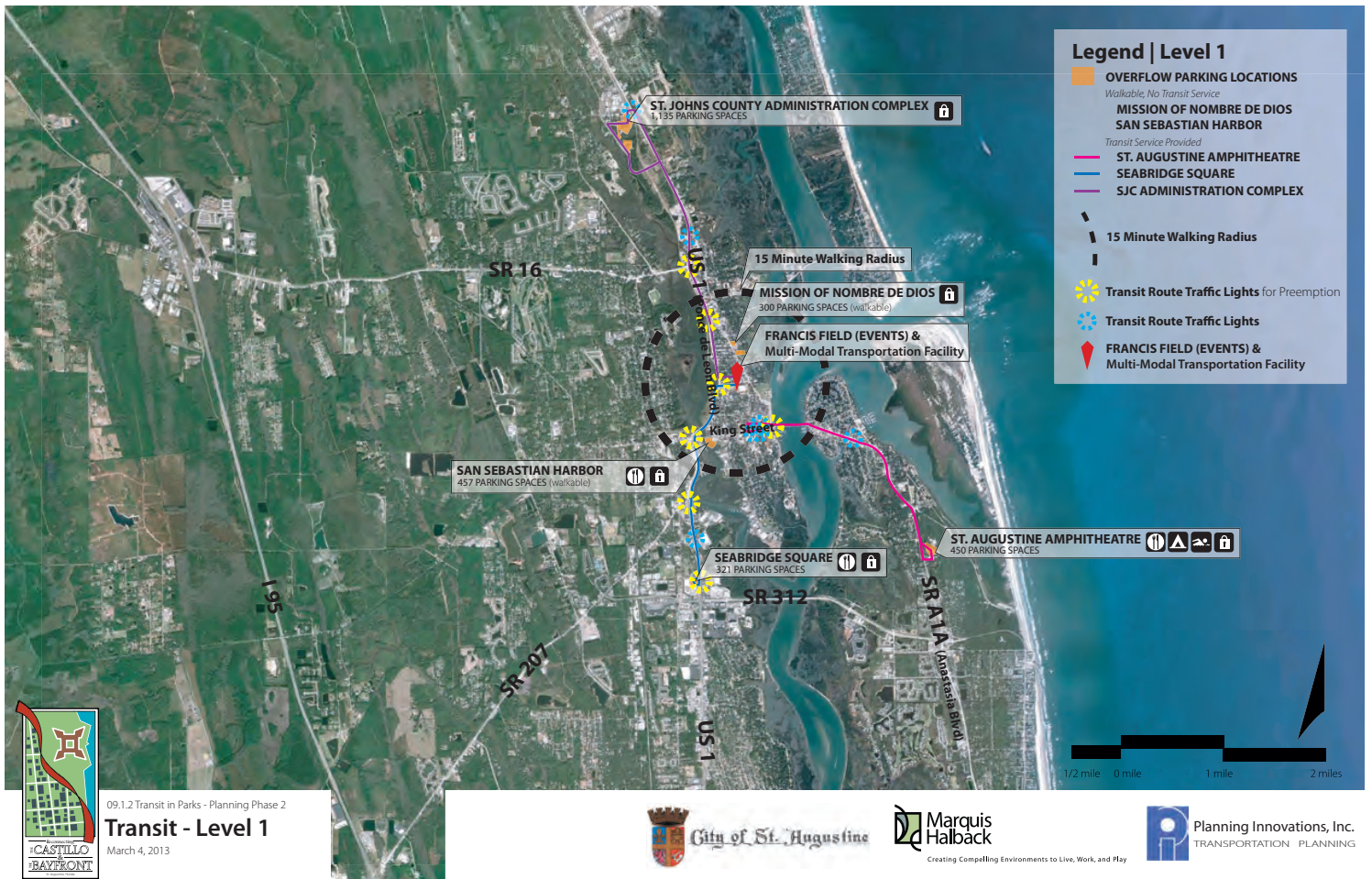
- **St. Augustine Amphitheatre - A1A / Anastasia Boulevard (South and East Parking)**
The existing Amphitheatre lot is a convenient place to collect patrons that are staying along or coming from the south along A1A, and for those residents who live in the vicinity of the Amphitheatre. This service will assist in alleviating the traffic congestion on the Bridge of Lions during Level 1 events. A summary of the characteristics of this parking location is presented below.

Parking Spaces:	450 spaces
Attendees Served:	1,350
Distance:	3.0 miles (one way, using A1A to Avenida Menendez to drop off)
Average MPH:	15 mph
Travel Time:	12 minutes

With regard to the proposed shuttle system, this location can be accessed by a standard bus, the local Sunshine Bus, or a tourist tram/trolley due to the nature of the route and the lower speeds. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the Amphitheatre along A1A over the Bridge of Lions to Avenida Menendez to South Castillo Drive to West Castillo Drive and the drop off area. As a downtown alternative, the route could do a circuit after coming off of the Bridge of Lions, drop off on Cathedral Place, then proceed to Cordova Street and King Street. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	15 minutes
Number of Traffic Signals:	6
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Peak Buses Required:	2 inbound / 2 outbound
Peak Bus Headway (Minutes):	20 inbound / 15 outbound
Bus Cost for Level 1 Event:	\$1,573-\$2,030

FIGURE B | Transit Schedmatic - Level 1 overflow parking



• **SeaBridge Square (Old K-Mart) Parking Lot** - US-1 (South and West Parking)

The existing SeaBridge Square lot is a convenient place to collect patrons that are coming from the south along US 1 or from the west from SR 207 to SR 312. This service will assist in alleviating the traffic congestion on the US 1 during Level 1 events. A summary of the characteristics of this location is presented below.

Parking Spaces:	321 (north parking only)
Attendees Served:	963
Distance:	2.5 miles (one way, using US 1 to West Castillo Drive)
Average MPH:	18 mph
Travel Time:	8 minutes 33 seconds

With regard to the shuttle system, this location can be accessed by a standard bus, the local Sunshine Bus, or a tourist tram/trolley due to the nature of the route and the lower speeds. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the Old K-Mart lot north along US 1 to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	11 minutes 33 seconds
Number of Traffic Signals:	5
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Peak Buses Required:	1 inbound/1 outbound
Peak Bus Headway (Minutes):	30 inbound/20 outbound
Bus Cost for Level 1 Event:	\$1,173-\$1,624

• **SJC County Complex** - SR16 / US-1 (North Parking) **PARTIAL LOT**

The existing series of lots at the St. Johns County Administration Complex are the most strategic place to collect patrons that are coming from the north along US 1. This location and corresponding service will assist in alleviating the traffic congestion on the US 1 during Level 1 events. A summary of the characteristics of this location is presented below.

Parking Spaces:	1135 (approximately 609 required for Level 1 events)
Attendees Served:	3,405 (approximately 1,827 served for Level 1 events)
Distance:	3.8 miles (one way, using US 1 to West Castillo Drive)
Average MPH:	22 mph
Travel Time:	10 minutes 36 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the SJC County Complex lot along San Sebastian View to US 1, where it would head south to West Castillo Drive and the drop off area. The return trip would travel north on US 1 to Lewis Speedway to the SJC County Complex parking. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	13 minutes 36 seconds
Number of Traffic Signals:	5
Number of Daily Buses Required:	1

Daily Bus Headway:	20 minutes
Number of Peak Buses Required:	2 inbound/2 outbound
Peak Bus Headway (Minutes):	15 inbound/12 outbound
Bus Cost for Level 1 Event:	\$2,030-\$2,832

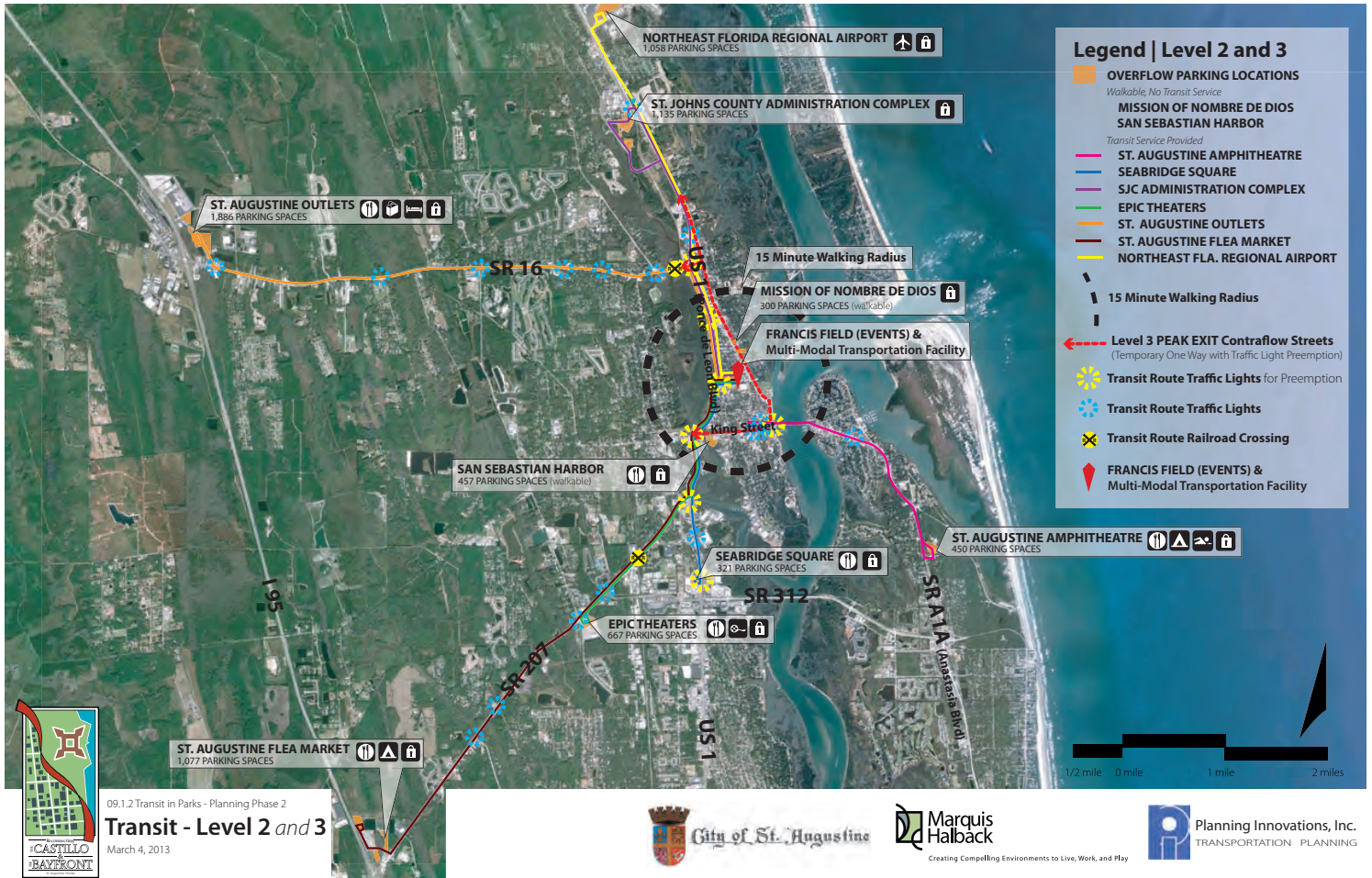
4.2.2 Level 2 Event (FIGURE C)

The Level 2 event will have approximately 25,000 peak guests, of which approximately 6,528 can be accommodated by existing public and private parking resources within a 15 minute walk of the historic and event venues. This equates to approximately 2,176 parking spaces; thus, there is a need to accommodate 17,472 visitors or 5,824 spaces. This will be accomplished by utilizing the following parking locations and routes.

- **St. Augustine Amphitheatre - A1A / Anastasia Boulevard (South and East Parking)**

As in Level 1, the existing Amphitheatre lot is a convenient place to collect patrons from the south and east. However, the distance from the site to the venue location changes between Level 1 and Level 2 because of the proposed routing. Due to the anticipated congestion on the Bridge of Lions, US 1 and around the historic and venue location, there may be a need to direct all buses via US 1 to West Castillo Drive for bus drop off. Thus, the number of

FIGURE C | Transit Schematic - Level 2 and 3 overflow parking



spaces and the attendees served is the same, but the distance and travel times are longer. Depending on the event, this location may allow a potential to park, camp and ride. The Level 2 characteristics are presented below.

Parking Spaces:	450 spaces
Attendees Served:	1,350
Distance:	6.4 miles (one way, using A1A to SR 312 to US 1)
Average MPH:	25 mph
Travel Time:	15 min 36 seconds

With regard to the shuttle system, this location can be accessed by a standard bus, or the local Sunshine Bus. A tourist tram/trolley would not be feasible due to the nature of the route and the higher speeds. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the Amphitheatre south along A1A to SR 312 west to US 1 north to the drop off area. As an alternative using the Bridge of Lions, the route could do the Cathedral Place, Cordova Street and King Street circuit. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	18 minutes, 36 seconds
Number of Traffic Signals:	11
Number of Daily Buses Required:	1
Daily Bus Headway:	25 minutes
Number of Peak Buses Required:	2 inbound/2 outbound
Peak Bus Headway (Minutes):	20 inbound/15 outbound
Bus Cost for Level 2 Event:	\$2,030-\$3,780

• **SeaBridge Square (Old K-Mart) Parking Lot** - US-1 (South and West Parking)

As in Level 1, the existing SeaBridge Square lot is a convenient place to collect patrons from the south along US 1 or from the west from SR 207 to SR 312. The parking characteristics and the transit service is the same as in Level 1.

Parking Spaces:	321 (north parking)
Attendees Served:	963
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Peak Buses Required:	1 inbound/1 outbound
Peak Bus Headway (Minutes):	30 inbound/20 outbound
Bus Cost for Level 2 Event:	\$1,173-\$1,624

• **SJC County Complex** - SR16/US-1 (North Parking)

Much like in the Level 1 events, the existing St. Johns County Administration Complex parking lots will collect patrons coming from the north along US 1. However, unlike in Level 1, Level 2 will require the entirety of the parking spaces at the complex. A summary of the new characteristics of this location is presented below.

Parking Spaces:	1135
Attendees Served:	3,405
Distance:	3.8 miles (via US 1)
Average MPH:	22 mph
Travel Time:	10 minutes 36 seconds

With regard to the shuttle system, the Level 2 routing would be the same as the Level 1. Due to the increased parking, some of the characteristics that impact the cost are different. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	13 minutes 36 seconds
Number of Traffic Signals:	5
Number of Daily Buses Required:	2
Daily Bus Headway:	11 minutes
Number of Peak Buses Required:	3 inbound/4 outbound
Peak Bus Headway (Minutes):	10 inbound/7 outbound
Bus Cost for Level 2 Event:	\$3,857-\$4,961

• **EPIC Theaters Outparcel Parking Lot** - SR207 (South and West Parking)

The existing EPIC Theater between Dobbs Road Cutoff and Rolling Hills Drive on SR 207 has large vacant outparcel lot that could collect local patrons or guests from the west off of SR 207. This location has more than adequate access to accommodate shuttle service. This service will assist in alleviating the traffic congestion caused by visitors from out of town arriving via I-95. A summary of the characteristics of this location is presented below.

Parking Spaces:	667
Attendees Served:	2,001
Distance:	3.44 miles (one way, using SR 207 to US 1 to W. Castillo)
Average MPH:	20 mph
Travel Time:	10 minutes 35 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the EPIC lot from SR 207 northeast to US 1 north to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	13 minutes 35 seconds
Number of Traffic Signals:	4
Number of Daily Buses Required:	1
Daily Bus Headway:	18 minutes
Number of Peak Buses Required:	2 inbound/2 outbound
Peak Bus Headway (Minutes):	15 inbound/12 outbound
Bus Cost for Level 2 Event:	\$2,030-\$2,761

• **St Augustine Outlets** - SR16 Vacant Land Parking (North and West Parking)

There are large vacant tracts of land in the St. Augustine Outlets area, east of I-95. The majority of these are located along Outlet Mall Boulevard. The unimproved parking areas are the most strategic place to collect patrons that are coming from the I-95 due to size, Level 2 patron composition and the visibility of the parking areas from the Interstate. In addition, this location has several hotels in the vicinity for patron convenience. A summary of the characteristics of this location is presented below.

Parking Spaces:	1,886
Attendees Served:	5,658

Distance: 6.9 miles (one way, using SR 16 to US 1)
 Average MPH: 27 mph
 Travel Time: 15 minutes 33 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from Outlet Mall Boulevard to SR 16, where it would head east to US 1 and south to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity: 40 seated patrons
 Efficiency Reduction: 10% (36 seated patrons)
 One Way Layover Time: 3 minutes
 One Way Total Travel Time: 18 minutes 33 seconds
 Number of Traffic Signals: 9
 Number of Daily Buses Required: 6
 Daily Bus Headway: 6.5 minutes
 Number of Peak Buses Required: 6 inbound/9 outbound
 Peak Bus Headway (Minutes): 6 inbound /4 outbound
 Bus Cost for Level 2 Event: \$10,353-\$15,308

• **SR 207 Flea Market** - *Vacant Land Parking (South and West Parking)*

Like the St. Augustine Outlet location, the St. Johns Flea Market presents an excellent location to intercept patron traffic exiting I-95. The parking area, which is located just off of SR 207 and partially visible to I-95, is a mixture of improved and unimproved surface. Depending on the event, this location may allow a potential to park, camp and ride. A summary of the characteristics of this location is presented below.

Parking Spaces: 1,077
 Attendees Served: 3,231
 Distance: 7.0 miles (one way, using SR 207 to US 1)
 Average MPH: 24 mph
 Travel Time: 17 minutes 50 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the entrance at Market Street to SR 207 northeast to US 1 north, where it would head to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity: 40 seated patrons
 Efficiency Reduction: 10% (36 seated patrons)
 One Way Layover Time: 3 minutes
 One Way Total Travel Time: 20 minutes 50 seconds
 Number of Traffic Signals: 9
 Number of Daily Buses Required: 4
 Daily Bus Headway: 11 minutes
 Number of Peak Buses Required: 4 inbound/6 outbound
 Peak Bus Headway (Minutes): 10 inbound/7 outbound
 Bus Cost for Level 2 Event: \$6,902-\$9,138

• **Northeast Florida Regional Airport** - *US-1 (North Parking)* **PARTIAL LOT**

In the past, the Airport has been utilized for park and ride as well as overflow parking for events within the area. For Level 2 events, there may be a need to utilize this location for the same reason. Much like the St. Johns County Complex one mile to the south, this

airport location is a strategic place to collect patrons that are coming from the north along US 1 A summary of the characteristics of this location is presented below.

Parking Spaces:	1,058 (approximately 288 required for Level 2 events)
Attendees Served:	3,174 (approximately 864 served for Level 2 events)
Distance:	4.8 miles (one way, using US 1 to West Castillo Drive)
Average MPH:	22 mph
Travel Time:	13 minutes 09 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the St. Augustine Airport to US 1, where it would head south to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	16 minutes 09 seconds
Number of Traffic Signals:	5
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Peak Buses Required:	1 inbound/2 outbound
Peak Bus Headway (Minutes):	30 inbound/20 outbound
Bus Cost for Level 2 Event:	\$1,827-\$2,252

4.2.3 Level 3 Event (FIGURE C - same as Level 2)

The Level 3 event will have approximately 30,000 peak guests, of which approximately 7,218 can be accommodated by existing public and private parking resources within a 15 minute walk of the historic and event venues. This equates to approximately 2,406 parking spaces; thus, there is a need to accommodate 19,782 visitors or 6,594 spaces. This will be accomplished by utilizing all of the previously listed parking locations and routes, with full utilization of the Northeast Florida Regional Airport location. A summary of the previous lots and the full utilization of the Airport location and route is described below.

• **St. Augustine Amphitheatre** - A1A / Anastasia Boulevard (South and East Parking)

Parking Spaces:	450 spaces
Attendees Served:	1,350
Number of Daily Buses Required:	1
Daily Bus Headway:	25 minutes
Number of Peak Buses Required:	2 inbound/2 outbound
Peak Bus Headway (Minutes):	20 inbound/15 outbound
Bus Cost for Level 3 Event:	\$2,030-\$3,780

• **SeaBridge Square (Old Kmart) Parking Lot** - US-1 (South and West Parking)

Parking Spaces:	321 (north parking)
Attendees Served:	963
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Peak Buses Required:	1 inbound/1 outbound
Peak Bus Headway (Minutes):	30 inbound/20 outbound
Bus Cost for Level 3 Event:	\$1,173-\$1,624

• **SJC County Complex** - SR16 / US-1 (North Parking)

Parking Spaces:	1,135
Attendees Served:	3,405
Number of Daily Buses Required:	2
Daily Bus Headway:	11 minutes
Number of Peak Buses Required:	3 inbound/4 outbound
Peak Bus Headway (Minutes):	10 inbound/7 outbound
Bus Cost for Level 3 Event:	\$3,857-\$4,961

• **EPIC Theaters Outparcel Parking Lot** - SR207 (South and West Parking)

Parking Spaces:	667
Attendees Served:	2,001
Number of Daily Buses Required:	1
Daily Bus Headway:	18 minutes
Number of Peak Buses Required:	2 inbound/2 outbound
Peak Bus Headway (Minutes):	15 inbound/12 outbound
Bus Cost for Level 3 Event:	\$2,030-\$2,761

• **St Augustine Outlets** - SR16 Vacant Land Parking (North and West Parking)

Parking Spaces:	1,886
Attendees Served:	5,658
Number of Daily Buses Required:	6
Daily Bus Headway:	6.5 minutes
Number of Peak Buses Required:	6 inbound/9 outbound
Peak Bus Headway (Minutes):	6 inbound/4 outbound
Bus Cost for Level 3 Event:	\$10,353-\$15,308

• **SR 207 Flea Market** - Vacant Land Parking (South and West Parking)

Parking Spaces:	1,077
Attendees Served:	3,231
Number of Daily Buses Required:	4
Daily Bus Headway:	11 minutes
Number of Peak Buses Required:	4 inbound/6 outbound
Peak Bus Headway (Minutes):	10 inbound/7 outbound
Bus Cost for Level 3 Event:	\$6,902-\$9,138

• **Northeast Florida Regional Airport** - US-1 (North Parking)

For Level 3 events, there will be a need to utilize this location. A summary of the characteristics of full utilization this location is presented below.

Parking Spaces:	1,058
Attendees Served:	3,174
Distance:	4.8 miles (one way, using US 1 to West Castillo Drive)
Average MPH:	22 mph
Travel Time:	13 min 09 seconds

The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	16 minutes 09 seconds
Number of Traffic Signals:	5

Number of Daily Buses Required:	3
Daily Bus Headway:	11 minutes
Number of Peak Buses Required:	3 inbound/5 outbound
Peak Bus Headway (Minutes):	10 inbound/7 outbound
Bus Cost for Level 3 Event:	\$5,278-\$6,266

4.2.4 Alternative Parking Locations

Alternative parking locations were developed for several reasons. Over the course of the next three years, the **situation at a particular location may change, and warrant the need for an alternative site.** An example would be development occurring at a vacant site, development of an outparcel, or a new anchor moving into a vacant commercial center. Another reason may be that a site is not available on a certain day. For example, on a Friday event, the SJC Complex may have county employees parked, and spaces will not be available for event patrons. Finally, there may be situations where an agreement cannot be entered into with the identified location’s property owner. Four alternative locations have been identified, and are described below.

situations may change
- site development
- availability
- no agreement

- **Old Luhr’s employee parking lot** - US-1 (South and West Parking)

This potential site is located along US 1, and is closer to the historic and event venues than the SeaBridge location, and convenient place to collect patrons that are coming from the south along US 1 or from the west from SR 207 to SR 312. This service will assist in alleviating the traffic congestion on the US 1 during events. A summary of the characteristics of this location is presented below.

Parking Spaces:	307 (old parking + grass to north)
Attendees Served:	921
Distance:	1.9 miles (one way, using US 1 to West Castillo Drive)
Average MPH:	18 mph
Travel Time:	6 minutes 20 seconds

With regard to the shuttle system, this location can be accessed by a standard bus, the local Sunshine Bus, or a tourist tram/trolley due to the nature of the route and the lower speeds. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from the lot north along US 1 to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	9 minutes 20 seconds
Number of Traffic Signals:	3
Number of Daily Buses Required:	1
Daily Bus Headway:	30 minutes
Number of Peak Buses Required:	1 inbound/1 outbound
Peak Bus Headway (Minutes):	30 inbound/25 outbound
Bus Cost for an Event:	\$860-\$1,624

- **Old Moultrie “DeLorenzo” site** - US-1 (South and West Parking)

This potential site is located off of US 1, and is farther from the historic and event venues than the SeaBridge location. It would have the same travelshed as either the SeaBridge location or the EPIC Theatre location. This service will assist in alleviating the traffic

congestion on the US 1 during events. A summary of the characteristics of this location is presented below.

Parking Spaces:	141 (development pad directly off of Old Moultrie Road)
Attendees Served:	423
Distance:	3.2 miles (one way, Southpark Blvd, then US 1 to W Castillo Drive)
Average MPH:	19 mph
Travel Time:	9 minutes 57 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from Southpark Boulevard to US 1 north to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	12 minutes 57 seconds
Number of Traffic Signals:	9
Number of Daily Buses Required:	1
Daily Bus Headway:	60 minutes
Number of Peak Buses Required:	1 inbound/1 outbound
Peak Bus Headway (Minutes):	50 inbound/50 outbound
Bus Cost for an Event:	\$848-\$1,624

• **St Johns River State College - SR16 (North Parking)**

This potential site is located off of SR 16, and is closer to the historic and event venues than the St. Augustine Outlet location. It would have the same travelshed as the Outlet location. This service will assist in alleviating the traffic congestion on the SR 16 during events. A summary of the characteristics of this location is presented below.

Parking Spaces:	1,706 total, breakdown below 775 (does not include grass parking) 84 (programmed grass spaces) 847 (grass development pads)
Attendees Served:	5,118
Distance:	4.4 miles (one way, Kenton Morrison to SR 16, then US-1, to W Castillo Drive)
Average MPH:	28 mph
Travel Time:	9 minutes 30 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from Kenton Morrison to SR 16 to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	12 minutes 30 seconds
Number of Traffic Signals:	7
Number of Daily Buses Required:	4
Daily Bus Headway:	7 minutes
Number of Peak Buses Required:	4 inbound/6 outbound

Peak Bus Headway (Minutes):	6 inbound/4.5 outbound
Bus Cost for an Event:	\$6,902-\$9,079

• **St. Johns County Fairgrounds - SR207 (South and West Parking)**

This potential site is located off of SR 207 approximately 7.5 miles west of I-95, and is the farthest away from the historic and event venues. Owned by St. Johns County, this site has abundant overflow parking areas and the potential for camping. This location may be used to augment parking for visitors traveling by interstate or from the west. It may be deemed appropriate when a large aggregated parking location is favored by the event promoter or when unique circumstances occur.

Parking Spaces:	4000+
Attendees Served:	12,000+
Distance:	14 miles (one way, using SR 207 to US 1)
Average MPH:	28 mph
Travel Time:	25 minutes 30 seconds

With regard to the shuttle system, this location can be accessed by a standard bus or the local Sunshine Bus. For the purpose of this analysis, a standard bus was assumed for capacity. The route would run from SR 207 to US 1 to West Castillo Drive and the drop off area. The details of the transit service are as follows:

Bus Capacity:	40 seated patrons
Efficiency Reduction:	10% (36 seated patrons)
One Way Layover Time:	3 minutes
One Way Total Travel Time:	28 minutes 30 seconds
Number of Traffic Signals:	11+
Number of Daily Buses Required:	19
Daily Bus Headway:	3 minutes
Number of Peak Buses Required:	19 inbound/28 outbound
Peak Bus Headway (Minutes):	3 inbound/2 outbound
Bus Cost for an Event:	\$32,683-\$65,688

4.3 Communications and Other Key Items

In order for the off-site parking program and corresponding shuttle transit system to be successful, there are several additional components that must be implemented by the City, Parks Service and the various project sponsors. These items are described in the following paragraphs.

4.3.1 Communications

The City of St. Augustine has been successfully sponsoring or permitting Level 1 and Level 3 events for years. **The only thing that is different between past Level 1 and 3 events and upcoming events is the increased patronage of the existing historic venues due to the 450th celebration.** This contributes to less on-site parking and the need for more parking options away from the traditional historic city center.

Level 2 events are those that will be pre-ticketed. Thus, these events are unusual in that the **organizer and possibly the City will have either an email address or phone number of every ticketholder.** Having this data will allow the organizer and the city to provide direct ticket holders information, including but not limited to parking options and locations, bus schedules and routes, and accommodation information before they arrive. Furthermore, the project sponsor and the

Level 2 events are...pre-ticketed...organizer will have an email address of every ticketholder...

City have the opportunity to offer visitors the option to receive **real-time updates** on items such as traffic, weather, and parking availability for all events.

The City should work to establish a **social media program** that includes a visitor website that includes current parking and traffic information and event information complete with parking locations, availability and transit service. This information should be made available and be a link of the event organizers website. Furthermore, this information should be made available in real time, with tweets and e-mail text broadcasts during the events. In this way, patrons will know items such as where they can park, which lots are full, when the next bus is coming, and updated news regarding the event.

4.3.2 Promotion

The City should investigate **opportunities for promoting different parking areas**. For example, the I-95/SR16 hub could be promoted as the place to **park and ride/sleep/eat/shop** as a way of capturing visitors and making most use of shuttle from that area. The St. Augustine Amphitheatre could be promoted jointly with the adjoining state park for a **camp and park program**. The SeaBridge and St. Johns County Complex parking areas could be **promoted as the location for St. Johns County residents**. The Flea Market parking area has some unique possibilities for **marketing the I-95/SR 207 area**. The EPIC theatre location could be the site of a **film festival**, where after parking; one sees a movie before or after going to the event. The City should explore these and other joint marketing/promotional possibilities.

The City should investigate opportunities for promoting different parking areas.

4.3.3 Before and After Events

Large events such as those during Level 2 and 3 events require massive resources at the end of the program, as everyone wants to leave immediately after the event. The City should explore the possibility of working with event sponsors/organizers as well as the Park Service, historic venues and downtown merchants to offer quality, named entertainment that would attract the same audience as the Level 2 or 3 entertainment before and after the event. In this way, before and after the main event, the **“other shows” would begin at the venue as well as throughout the downtown**, and inside established businesses.

“other shows” around downtown...would result in delayed arrival and dispersal

This would result in a **delayed arrival and dispersal** which would assist in mitigating the peak hour rush which taxes the shuttle transit system. For example, after the named artist plays, another act follows to finish the night, and the area merchants have special evening activities for event goers. Another example would include having a band play or have events occurring before and after the 4th of July fireworks to meter the arrival and dispersal of event patrons.

4.3.4 Extended Transit Hours/Guaranteed Ride

The transit shuttle system should start early enough that visitors will spend time in the City before the event and run late enough to accommodate those remaining well after the event. It is estimated that the shuttle system should run for at least **an hour before the “gates” open**, and for at least **two hours after the event ends**. In addition, the City should explore with the Sunshine Bus Company or other private providers, the possibility of a **guaranteed ride home program**. After the large high capacity buses stop running, the City or event organizer could contract with Sunshine Bus Company or other private providers to queue at the bus drop off area with reader boards indicating parking area destinations. When these small capacity (14 persons) buses fill, they will transport the patron to their respective parking area. This service would end approximately an hour after the downtown venues close.

4.3.5 Preferential Treatment Transit Route

The **shuttle transit system is predicated on preferential treatment at key intersections.**

Due to physical roadway configuration constraints and anticipated traffic volumes, separate lanes for transit are not possible except for the area immediately adjacent to Frances Field. Thus, at key intersections near the event site and at intersections in areas known for congestion, traffic management personnel should be made available to allow buses to pass through intersections, bypassing the typical signal. The traffic control personnel, once seeing a bus approaching, would wave that direction of traffic through the intersection until the bus passes through.

Due to the physical roadway...constraints, separate lanes for transit are not possible...

4.3.6 Bike Check-Bicycles

The City should work with local civic, church or special interests groups to provide **bicycle parking services**. As an example, a local high school booster club could provide park and bike services at their remote location for a fee, and the patron would ride their bike or a rented bike to the event. Then, the same or another local group could work with the city to provide a bike parking lot near the venue with a secure bike valet/bike check service. This would work for all Level events, but late evening events would require escort services back to the parking area.

4.3.7 Pedicab

Much like the above recommendation regarding bicycles, the City should encourage **pedicab activity**, especially in conjunction with a local civic, church or special interest group providing parking at a school or church location. This would work for all Level events, but late evening events would require escort services back to the parking area. Another option is to work with the Sunshine Bus Company and local private providers to provide guaranteed ride home services.

5.0 Next Steps

There are several immediate steps that the City should take to implement this proposed plan. These critical steps are summarized in the following paragraphs.

a. Decide on How Program is to be Managed

The City should decide early on how all Level of the events are to be managed, **either contracted out, within the city or a combination**. For example, the City may chose to elect or hire an event coordinator who would manage the overall program for traffic management, parking management and shuttle bus operations, but hire individual firms or firms to provide service for one or all of the items. Likewise, the City may chose to have individual department manage each subject area; that is, the police handle traffic management, finance/parking staff manage the parking system, and planning/traffic engineering staff handle the transit items. Regardless, the City should consider contracting out for provision of parking and transit shuttle services.

***Management Options
- City of St. Augustine
- Contracted
- Combination***

b. Meet with Parking Location Owners

It is imperative that the City begin to meet with the property owners/managers of the identified parking locations to secure the locations. Negotiations will include but not be limited to lease costs, terms and conditions, insurance and liability. In the event that the City cannot negotiate with one or more of the landowners

...Imperative that the City begin to meet with the property owners / managers...

or the conditions change for these locations (i.e., development occurs), it will become necessary to secure alternative locations.

c. Prepare and Publish Request for Proposals

The City should prepare and publish a **Request for Proposal (RFP) for the provision of Parking and Shuttle Transit services either individually or together**. The RFP for parking services would include personnel who would flag patrons into the lots, collect money, direct patrons to the parking spaces, and assist in getting them to the shuttle buses. Likewise, the RFP for shuttle bus services would be for the provision of buses and drivers for the proposed shuttle services. Many nearby transit agencies also provide such services. Many private companies provide both services. The RFP would include this preliminary plan, and ask for a proposed plan from the potential vendor, as well as a proposed cost on a per unit basis, that can be applied to each situation.

Request for Proposal (RFP) for the provision of the Parking and Shuttle Transit services...

d. Meet with State and County Law Enforcement Personnel

The conceptual transportation management plan should be **reviewed by the police and traffic engineering departments and refined to meet known conditions**. After this **refinement**, a meeting should be scheduled with the state and county law enforcements as well as emergency management personnel to detail coordination, process, personnel assignments and manpower requirement for each Level event. A process should be established for this coordination in advance of each event.

City Police Department should meet with other law enforcement for coordination

f. Establish Web Site and Social Media Program

As indicated previously, the City should work to establish a **social media program** that includes a visitor website that includes current parking and traffic information; event information complete with parking locations, availability and transit service. This information should be made available and be a link of the event organizers website. Furthermore, this information should be made available in **real time, with tweets, and e-mail text broadcasts during the events**. In this way, patrons will know items such as where they can park, which lots are full, when the next bus is coming, and updated news regarding the event.

information should be made available in real-time

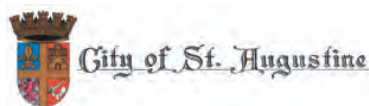
g. Establish a Monitoring Program

A monitoring program should be established to monitor each event to ensure that the vendors hired for parking and shuttle transit services are meeting the requirements of the contract and the needs of the patrons and events. This program should set targets that need to be achieved and establish the process to monitor and adjust the program based upon performance at each parking area, each shuttle routes and at each event.

h. Promote the Program

It is never too early to **promote the program**. The City should begin to work with the downtown merchants and the historic venues to develop a program to attract and retain event patrons in the downtown area in order to be less taxing on the transportation system. The City should also work with the media to get out the message that during events, the normal traffic patterns may not be the same, and that both visitors and residents will need to know about and utilize the parking/shuttle system.

It is never too early to promote the program...



for more information

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