One of the longer term goals of the Bus Transit to Workplace study is to identify specific strategies that will help improve the accessibility of employment. In particular, the study has taken a case study approach to look at the current availability and utilization of multi-modal transportation networks at different clusters of job sites in Shelby County.
INTRODUCTION

One of the longer term goals of the Bus Transit to Workplace (“Bus Transit”) study is to identify specific strategies that will help improve access to regional employment. The study has taken a case study approach to look at the current availability and utilization of multi-modal transportation networks at different clusters of job sites in Shelby County.

Although the information is static, patterns are expected to remain broadly constant, so that lessons identified will be valid for the near future. These case studies can serve as illustrations of both the challenges and opportunities associated with retrofitting an automobile oriented development pattern to multi-modal transportation choices.

The image below shows the five focus areas for case studies. They include the suburban town of Collierville, the industrial developments on President’s Island, the agglomeration of hospitals in the Medical District, the rapidly changing Aerotropolis, and the growing developments in Southaven, Mississippi. Together, these five areas provide a snapshot of the variety of transportation challenges and opportunities in Shelby County. This case study focuses on President’s Island.
This page intentionally left blank.
Located just west of Memphis, close to the Arkansas state line, President’s Island is an almost exclusively industrial area.

President’s Island is one of Memphis’ most unique, unusual and rarely visited parts of the city, especially for the general public. Located just west of downtown Memphis, the “island” is really a peninsula surrounded by the Mississippi River and connected by sliver of land. Although it is not one of Memphis’ tourist attractions or main urban streets, this industrial area is a growing employment center for thousands of workers who spend nearly 50,000 hours daily on or commuting to and from the island.

**Case Study Focus Area**

President’s Island has remained the same for many years. Therefore, its few thousand day and night shift workers have become used to roads with high truck traffic, lack of retail and dining amenities, and lack of sidewalks.

The lack of retail or food service, or other businesses mean workers need to leave President’s Island to run errands or buy food in the middle of their work day. This combined with very limited transit service means many workers feel compelled to drive to their jobs on President’s Island.
EXISTING CONDITIONS

Vehicular Access

Interstate Roads
I-55 provides interstate access to President’s Island.

Major Roads
There is only one access point onto President’s Island by road. West of the causeway, the road diverges into two parallel roadways, Harbor Avenue to the north and Channel Avenue to the south. Both run for about four miles southwest from the Jack Carley Causeway that provides access onto the island from Memphis. As shown on the map to the right, the Causeway carries about 14,000 cars per day.

There are no traffic signals on President’s Island. At the intersection of Harbor Avenue and Channel Avenue, northbound traffic from Harbor Avenue is metered by a stop sign before the two roads merge. Southbound traffic from Memphis going across the Jack Carley Causeway to Harbor and Channel Avenues is not required to stop (i.e. no stop signs or traffic signals).

Channel Avenue
Channel Avenue provides two vehicular lanes in each direction, each about 11' wide. The road is somewhat worn; striping is faded in some areas. There are no sidewalks along this road, and the speed limit is 40 mph. Note that although no formal counts exist in the TDOT database, traffic on Channel Avenue is likely about half of the 15,000 cars that come over the Jack Carley Causeway, based on existing Harbor Avenue counts.

Harbor Avenue
Harbor Avenue also has two vehicular lanes, each about 12.5’, in each direction with a shoulder on the western side. In comparison to Channel Avenue, the road is relatively newer and the striping is in better condition. There are no sidewalks on Harbor Avenue.

As shown on the map to the right, Harbor Avenue carries about 8,000 cars and trucks per day. Comparing this number to the traffic on the Causeway shows that traffic is fairly evenly split between Harbor Avenue and Channel Avenue.

Beyond Buoy Street, Harbor Avenue is limited-access only for Sonoco.

Minor Roads
Pier, Wharf and Dock Streets run perpendicular to these arterials and provide intermediate access across the island. These are wide roads with no sidewalks.

Parking
There is no designated or signed on-street parking on President’s Island. Instead, most facilities provide ample parking areas for their employees.

Key Findings
- Traffic is evenly split between Harbor Avenue and Channel Road.
- There are no traffic signals on President’s Island, thus all turns are yield-only.
- Speed limits and vehicular travel speeds are relatively high along Harbor and Channel Avenue, but volumes are relatively low.
- Employers provide ample off-street parking for employees.
- There is no public access to Harbor Avenue beyond Buoy Street, thus the area west of Buoy Street could not be served with direct bus service.
- No sidewalks or pedestrian infrastructure on any roadways.
Transit

MATA Route 15 operates on weekdays, linking downtown Memphis (the North End Terminal (NET)) with President’s Island, southwest of downtown (see Figure 1). From downtown, Route 15 travels along Front Street to Central Station and then heads east on G E Patterson Avenue, to Third Street, and McLemore Avenue. From the intersection of Third Street and McLemore Avenue, Route 15 turns west to the Jack Carley Causeway to President’s Island. Once on the island, Route 15 travels along Harbor and Channel Avenues to serve the southern coast of the island.

On President’s Island, Route 15 travels in a loop, with bus stops located only on the inner edges of the two roadways. The long route means that most potential riders would have front-door service. However, the distance and multiple stops can slow service overall.

There is one inbound trip to President’s Island in the evenings, and two outbound trips, one in the morning and one in the evening (see table below).

<table>
<thead>
<tr>
<th>ROUTE 15 SCHEDULE</th>
<th>One-Way Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span of Service</td>
<td>Inbound</td>
</tr>
<tr>
<td>Weekdays Only</td>
<td>Outbound</td>
</tr>
<tr>
<td>AM 6:20 AM - 6:51 AM</td>
<td>0</td>
</tr>
<tr>
<td>PM 4:41 PM - 5:44 PM</td>
<td>1</td>
</tr>
<tr>
<td>All Day 6:20 AM - 5:44 PM</td>
<td>1</td>
</tr>
</tbody>
</table>

MATA’s Route 15 has been the subject of some debate in recent years. The route used to travel more frequently, but with very low ridership. Thus, MATA’s Short Range Planning effort determined that the route should be eliminated. However, the City felt it was important to continue service to President’s Island and so has kept the route running. The result is a “lifeline” service that does not correspond to shift times and therefore carries few riders.

Stop Amenities

MATA marks stops on President’s Island with its standard green bus stop sign, however there are otherwise almost no amenities available to passengers.

Although signs are highly visible, only a few, such as the image on the top right, have paved areas to stand on near the stop. Most are located in areas where there is space away from the busy roads to wait for the bus, however.

The map to the right shows very low ridership on President’s Island. There are many stops, meaning that most employers are not far from MATA service. However the low service levels and lack of pedestrian amenities make Route 15 and unattractive - or impossible - option.

Key Findings

- The political history of MATA Route 15 is such that despite low ridership, officials wanted to retain bus service to ensure access to employment. However, frequency is so low, the service is difficult to use.
- Route 15 has multiple stops on President’s Island, meaning walk times from stops to employers are relatively short.
- However, the lack of pedestrian infrastructure and safe bus stop waiting areas means that riders have no safe way to get to and from the bus.
Bicycle and Pedestrian Amenities

There are currently almost no pedestrian or bicycle amenities on President’s Island. A restaurant and mailing outlets are located at the split between Harbor and Channel Avenues, however there are no other retail developments on the island. There are also no outdoor areas for workers and/or visitors to use to congregate.

Bicycle

Although the roadways on the island may have room for bicyclists, there are several deterrents to bicycle access. The approximately 50’ of travelways on Harbor Avenue and 45’ on Channel Avenue could easily accommodate a bicycle lane, particularly the wider roadway on Harbor Avenue. However, the high percentage of trucks in addition to high-speed car traffic creates an environment that is not friendly to cyclists. There is no bicycle-related signage to warn drivers that cyclists may be present.

Current planning efforts do not include a bicycle link to President’s Island, although the proposed trail between Mallory Avenue and the Jack Carley Causeway provides direct access to the area.

Pedestrian

Despite the lack of facilities, individuals still walk around the area. However the wide roadways, large amounts of truck traffic, and an active train line along Channel Avenue make walking difficult and unsafe.

Key Findings

- There are no planned or current bicycle amenities on President’s Island, although a planned Greenprint trail will serve the Jack Carley Causeway.
- There are few pedestrian amenities. Those traveling on foot share roadways with trucks and fast-moving vehicular traffic.
- Wide roads could accommodate bicycle lanes or shoulders.
- The active train line along Channel Avenue acts as a barrier to all modes but in particular can make bicyclists and pedestrians feel unsafe.
**AREA EMPLOYMENT**

**Employment Density**

There are about **3,100 jobs** on President’s Island. Of these jobs, 40% are in the category of Transportation and Warehousing, while almost 30% are in Manufacturing.* Thus, much of the President’s Island employment is industrial in nature.

*US Census Longitudinal-Employer Household Dynamics Program, 2011

Because of the unique nature of the island, the only access point is the Jack Carley Causeway. Thus, although many of these workers may live relatively close, commutes are long from end to end.

As the map to the right shows, many employees on President’s Island live relatively close to the site, with concentrations in West Memphis, Marion and Sunset in Arkansas as well as the southwestern quadrant of Memphis. Because of the unique nature of the island, the only access point is the Jack Carley Causeway. Thus, although many of these workers may live relatively close, these commutes are long from end to end.

However, the data also shows a much broader distribution of workers living as far north as Millington and areas north of Millington, as far west as Arlington and Fayette County and as far south as Hernando in DeSoto County MS. Significant numbers of people working on President’s Island, therefore, have longer than average commutes with some people traveling as much as 40 miles (or more) one-way to get to work. These longer than average commutes reflect, in part, higher wage jobs. However, at the cost of $0.56 per mile, each day’s commute could be up to $40 or more**.

The long commutes also create opportunities for ridesharing and vanpooling, in part because workers will have a clear financial benefit and also because small inconveniences associated with carpooling or vanpooling (to wait for carpoolers or travel slightly off route to get them) represent a relatively small portion of the total trip. Additionally, more established carpools and vanpools make it easier for new hires to find options for getting to/from work.

**Income and Transportation**

President’s Island jobs are relatively well-paid compared to other case study areas. Over 50% of employees make more than $40,000. However, for the 1,200 employees making $40,000 or less, transportation likely is a financial burden. The lack of transit means that many employees must commute by other means. Meanwhile, the lack of bicycle and pedestrian facilities also makes more affordable transit options difficult. Thus, even those with lower income are forced to rely on cars as their main mode of transportation.

**Most President’s Island employers provide ample parking. However, the cost of driving may be a burden to a significant number of employees.**

*2014 Government Privately Owned Vehicle mileage reimbursement rate

**0% 20% 40% 60% 80% 100%**

Jobs with annual income

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$15,000</td>
<td></td>
</tr>
<tr>
<td>$15,000 - $40,000</td>
<td></td>
</tr>
<tr>
<td>$40,000+</td>
<td></td>
</tr>
</tbody>
</table>
Employer Locations and Shift Times

Compared to other areas such as the Medical District or the Aerotropolis, President’s Island top employers are medium sized for the region. There are, for example, several employers with between 50 and 100 workers. The largest employer is W. M. Barr & Company, with over 300 employees.

Shift Times

Because of the industrial nature of jobs on President’s Island, shift times likely play a large role in commuting patterns. The Bus Transit to Workplace study attempted to contact employers to determine shift times and received only a few responses. Respondent shift times are shown in the charts below.

Although more data is needed, shift times appear to cluster around traditional work start and end times with some notable exceptions such as the 3:00 a.m. to 11:00 a.m. shift at one employer. Other employers likely have off-peak shift times as well, eliminating the option of commuting by transit.

Employment Density Key Findings

- There is a concentration of employees commuting from the Marion area in West Arkansas and Whitehaven. While Marion is relatively high-income, Whitehaven is a lower income area.
- There is no significant resident population on President’s Island, therefore all employees must commute.
- All commutes include the Jack Carley Causeway.
- Most jobs on President’s Island are industrial in nature.
- Shift times are potentially quite diverse in the area.
- Although there are few single large employers, the area as a whole represents over 3,000 jobs.
Top Employer Locations and Concentrations

As the map below shows, the larger employers on President’s Island have between 200 and 300 employees. All together, the top ten employers represent about half (1,400) of all employment in the area. With the exception of Sonoco, most large employers are concentrated east of Wharf Street.

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>TYPE OF BUSINESS</th>
<th>TOTAL EMPLOYEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. M. Barr &amp; Company, Inc.</td>
<td>Industrial &amp; Mfg</td>
<td>335</td>
</tr>
<tr>
<td>GlaxoSmithKline</td>
<td>Industrial &amp; Mfg</td>
<td>325</td>
</tr>
<tr>
<td>Ledbetter Packing Company</td>
<td>Industrial &amp; Mfg</td>
<td>235</td>
</tr>
<tr>
<td>Sonoco Products</td>
<td>Manufacturing</td>
<td>220</td>
</tr>
<tr>
<td>Jones Fiber Products Inc.</td>
<td>Industrial &amp; Mfg</td>
<td>65</td>
</tr>
<tr>
<td>Bluff City Steel, LLC</td>
<td>Wholesale &amp; Dist</td>
<td>62</td>
</tr>
<tr>
<td>Ace Pump Corp.</td>
<td>Industrial &amp; Mfg</td>
<td>60</td>
</tr>
<tr>
<td>Miller Transporters, Inc.</td>
<td>Transportation &amp; Logistics</td>
<td>55</td>
</tr>
<tr>
<td>Ergon Marine &amp; Industrial Supply</td>
<td>Wholesale &amp; Dist</td>
<td>53</td>
</tr>
<tr>
<td>Quality Carriers</td>
<td>Transportation &amp; Logistics</td>
<td>50</td>
</tr>
</tbody>
</table>

Ergon Marine & Industrial Supply is the only company that does not fit within the Industrial & Manufacturing sector.
AREA CHALLENGES

In general, President’s Island faces multiple challenges related to both land use and infrastructure. Land use challenges include:

- Isolation from Memphis and surrounding development
- Singular land use
- Lack of food or other activity outlets

Infrastructure Issues:

- All commuters must enter the island via the Jack Carley Causeway.
- No formal bicycle amenities. Particularly on the entrance to the island that all must share, bicycle commuters would mix with truck and fast-moving vehicular traffic
- There are few crosswalks or other pedestrian-oriented facilities, which deters walking and creates unsafe and inaccessible conditions for those that must (or choose to) walk.
- Poor bus stop amenities Bus stop signs are the only designation or “promotion” of public transportation.
- Limited bus service Route 15 makes a few daily trips on President’s Island. Therefore the chances of these trips lining up with shift times are slim.

Opportunities:

- Upgrade pedestrian infrastructure, particularly at intersections. Intersection improvements cover less surface area and can therefore be much more cost efficient to introduce pedestrian facilities into an auto-oriented area. A lot can be accomplished with paint, such as striping crosswalks.
- Create a transit hub at the end of Jack Carley Causeway. Almost all employees commuting to President’s Island must pass over Jack Carley Causeway and past the parking lot at the intersection of Harbor and Channel Avenues. This location is a good opportunity to create a multi-modal hub to facilitate transit connections. For example pedestrian facilities focused on this hub could increase the reach of a truncated bus route to President’s Island.
- Terminate Route 15 at the Port Restaurant and create a 20 minute shuttle service. Service could loop as shown, or travel out and back along one side or the other. This would provide more trips at the same cost.
- Incorporate a bicycle loop into future planning efforts. Providing a link to the networks that are being developed in and around Memphis would allow local commuters to travel safely by bicycle instead of driving short distances. Harbor Avenue is a good candidate as it is wide, its surface is better repair and it does not have active train lines directly on the roadway. The streets between Harbor and Channel Avenue are good links to decrease trip distances for cyclists. Again, paint is an inexpensive first step to creating bicycle facilities.

Commute Perceptions

There is a public perception that President’s Island is a long way off and difficult to reach. The area is not considered a reasonably accessible employment location for prospective employees without their own reliable personal transportation. Part of this is potentially due to a lack of serious employer focus or effort to increase employment access to President’s Island.

The study team was only able to speak with one employer with a location on President’s Island. This employer felt that the majority of its employees drove, but also made the following observations about its employees’ commutes:

- Day shift workers more likely to take public transportation than night shift workers
- Many employees like to make stops after work before they get home
- A park-and-ride system could work in this area as long as transit times were frequent
- There is a bus stop within walking distance; some employees use it
- Employees who live farther away cannot take the bus

Although this employer does not provide any incentive to encourage alternative means of commuting, they were amenable to the idea of selling transit tickets on site and/or subsidizing fares.

The employer went on to say that transportation is an issue in the region as a whole. However, they saw the recent investment in bicycle paths as a positive development, and thought there was a potential market for increased transit use.
The open lot outside the Port Restaurant could become a transit hub to help with last-mile connections.
Large Employer Entrances

Despite the presence of a bus stop just outside the GlaxoSmithKline entrance, there are no pedestrian amenities to help guide people to the front door.

The train tracks act as a barrier to front-door access from the street at W.M. Barr on Harbor Avenue, and along much of the road.

Although the front door to the building does face the street, the only way to travel across the train tracks on level ground is through the parking lot.
POTENTIAL SOLUTIONS

There are several measures that President’s Island employers and/or regulatory bodies could undertake to increase the accessibility of jobs. The study team prioritized some examples to explain their applicability to the area. Please refer to the Transportation Demand Management Toolkit for more in-depth explanations of these concepts:

Overall Opportunities

The opportunity for increasing employment access to President’s Island may be part of a bigger solution that includes Rivergate Industrial Park and the larger surrounding area. The addition of jobs created by the nearby Electrolux and Mitsubishi plants has increased the number of jobs in the wider area by 40%.

This will likely require Transportation Demand Management to provide more focused, stronger and holistic solutions to transportation issues now affecting over 5,000 employees working in the area as well as residing in Germantown, Bartlett and Millington and southwest Memphis.

Transportation Demand Management

Transportation Management Association

A Transportation Management Association (TMA) could be created to represent the combined transportation needs of the employees/employers in the general area and create, advocate and promote alternative transportation services and programs.

A government entity or a collaborative of employers can create and fund a TMA. A coordinator could be hired to execute plans to help effectively move employees from various large concentrated areas of residences to President’s Island and other area employers.

A TMA could also advocate, coordinate and manage the accomplishment of the aforementioned opportunities as well as prioritize and execute additional ones. These might include bringing in other amenities such as food trucks.

One of the things a TMA could do is work more closely with MATA and local employers to design transit service. If employers do not want transit service, they should communicate this so that MATA can stop funding it. If they do want it, they should be partners in providing and supporting it. This includes:

- Helping MATA schedule the service
- Selling/providing/giving away bus passes
- Providing benefits/incentives to riders
- Creating pedestrian crossing and other infrastructure.

Vanpools

Vanpools are a type of ride-sharing, similar to carpooling, but typically involving more people and a shared vehicle. In most cases, vans are owned or leased by a sponsoring organization and riders share the cost of operating the vehicle to and from work. Vanpools have had the most success where employees travel longer distances along corridors with limited or no existing transit service.

Vanpools would also be an attractive option for those living farther away to cut down on commuting costs. The flexibility of a van would allow for employees whose residences are more spread out to share a ride and commuting costs.

Memphis has an active vanpool provider, vRide.

For more information visit www.vride.com/memphis

Employers and/or a TMA could work to create or shared ridership to President’s Island. This could work for employees who live closer to the site which are those who live in the southwestern quadrant of Memphis as well as those in West Memphis, Marion and Sunset, Arkansas. Vanpools would also be an attractive option for those living farther away to cut down on commuting costs. The flexibility of a van would allow for employees whose residences are more spread out to share a ride and commuting costs.
Carpooling, Rideshare and Ride Matching

One of the greatest impediments to carpool and vanpool formation can be finding suitable partners with similar commuting patterns. Facilitated rideshare programs can overcome this by matching interested commuters. Commuters enter their travel preferences into a database and receive a list of potential rideshare partners. Rideshare programs may be administered through individual employers, but are often most effective when coordinated through a TMA or other local or regional entity.

On President’s Island, the concentration of employees traveling from relatively local communities. Local carpools would not have to deviate far from traditional driving routes to gain passengers, which makes it a convenient option.

Guaranteed Ride Home

As one stakeholder mentioned, many employees like to drive on their own so that they can leave work to do things such as pick up a child. Whether a commute is made by bike, transit or vanpool, there will be an occasional need to work late, make unplanned trips home to take care of sick family members, or have an alternate plan due to inclement weather.

A Guaranteed Ride Home program allows for a taxi or other ride home under these circumstances, making the use of alternative travel arrangements on a daily basis more palatable and feasible. This program would not function on its own, rather it would help to support the use of alternative transportation options once they are available.

Infrastructure

Create a Mobility Hub at the Port Restaurant.

A mobility hub helps provide “first/last mile” connections. Often even a highly frequent transit route has trouble reaching beyond its direct catchment area, which is often called the “first/last mile problem.” A mobility hub integrates elements such as car share, bike share, ride share, and shuttle services with a well served transit hub to extend the reach of transit services. Implementing this will require a range of entities to work together, which could be under the supervision of a President’s Island TMA. Specific hub elements could include:

- Working with Bike/Ped Memphis and the City to include a bike share station at this location
- Using funds from a TMA or a particular employer to run a shuttle from the hub to one or multiple employment locations. In the short-term, this could be van.
- Creating a rideshare based at the hub, comprised of multiple transit riders and a driver or multiple transit riders using a shared vehicle.
- Working with a local or national car share company to locate a station at this location. For example, Zipcar currently has three Memphis locations

Providing these integrated mobility options will enhance the connectivity of the local transportation system, while reducing dependency on automobiles, traffic congestion, vehicle emissions, and demand for parking.
Pedestrian Facilities

To extend the reach of a potential shuttle and/or increased transit service, it will be important to facilitate pedestrian travel on President’s Island. Creating pedestrian links from MATA stops to the employers they serve will be vital to the success of transit in the area. Beyond that, creating pedestrian facilities that allow employees to walk for exercise or for lunch to the Port Restaurant would drastically improve quality of life.

Bicycle Facilities

As shown in the map on p.19, no planned bicycle facilities extend to President’s Island. Providing a link to the networks that are being developed in and around Memphis would allow local commuters to travel safely by bicycle instead of driving short distances.

On President’s Island, the wide roadways have ample room for a bicycle lane. In particular, Harbor Avenue is a good candidate as its surface is in better repair and it does not have active train lines directly on the roadway. The streets between Harbor and Channel Avenue are good links to decrease trip distances for cyclists.

Land Use Control

The built environment plays a large role in determining an individual’s travel choices. For example, a long walk to the front door of a business can deter potential walkers even if the environment is walk-friendly.

Memphis can adopt strong zoning ordinances for President’s Island where appropriate that encourage development patterns that support walking, bicycling and transit such as:

- Requiring direct street frontage by new business developments, including that surface parking be behind buildings.
- Implementing “Complete Streets” elements along key corridors such as Harbor Avenue. These could include bicycle lanes and traffic calming elements.
- Encouraging driveway access to incorporate pedestrian pathways.

Additional TDM Measures

Other options that may enhance transportation options on President’s Island include:

- Employer-Subsidized Transit Passes
- Increased transit funding