

3. Public Transportation Technology Review

The following review of transit technologies is provided as a means to inventory potential transit applications for the Kendall area and to provide an educational overview of the various transit modes and technologies. Each technology is defined and the relevant strengths and weaknesses of each technology are described. The potential for application of each technology in the Kendall area and within each corridor is also presented.

The following section of this memorandum provides a review of transit modes. They are presented in two sections: ground transit and rail, fixed guideway and waterborne transit. Within these two groupings are a large number of transit technologies and service alternatives.

Based on the preliminary review of travel patterns and regional activity centers and a cursory review of existing transportation infrastructure in the Kendall area, there are three primary markets that require focused examination. The three primary markets under study in the Kendall area are:

- **Kendall Drive Corridor** – this corridor is defined as the area from SW 175th Avenue to the west east to US 1/Dixie Highway and bounded to the north by SW 72nd Street and to the south by SW 104th Street. The east-west corridor is centered on Kendall Drive.
- **HEFT Corridor** – this corridor is defined by the area along the Homestead Extension of the Florida Turnpike (HEFT) from SW 152nd Street to the south and north to SR 836. Improvements proposed in this corridor then would connect to transit services proposed to run east west along the SR 836 corridor between Florida International University (FIU) and the Miami Intermodal Center (MIC) east of the Miami International Airport.
- **SR 874/ SR 826/CSX Corridor** – this corridor is defined by the area along the CSX tracks and SR 874 from SW 152nd Street to SR 826 and north along the CSX tracks (Seaboard Coast Line) and/or SR 826 to SR 836/ Miami International Airport terminating at the Miami Intermodal Center (MIC), which is currently under construction.

The Alternatives Analysis will examine potential transportation technologies and services in each of these corridors and will develop a series of potential transportation strategies to improve mobility in the Kendall area based on specific recommendations addressing improvements in one or all of the corridors above.

3.1. Ground Transit

3.1.1 Conventional Bus (Fixed-Route)

Description

Fixed route or conventional bus involves a system of vehicles operated along prescribed routes according to a fixed schedule. Fixed route bus services can be operated as local, limited stop or express services. Local bus service stops to allow passengers to board or alight at all stops along the route. Limited stop service is typically operated in peak periods or along long corridors with high demand. Express bus service is a more restrictive form of limited stop service in which case the bus serves one to a few stops at the beginning of the route then operates directly to its destination. Traditionally, fixed-route systems are very effective in dense areas where there is nearly constant demand for services on the route corridor. Miami-Dade Transit operates fixed route bus services.

Potential Application

A variety of existing fixed route bus services are operated within the Kendall area and will continue to have application in the Kendall area for local trips. Additional potential fixed route applications in the study area could involve coordination with feeder services, park and ride lots and connecting bus services.

- **Kendall Drive Corridor** – current and future application potential to increase carrying capacity in the corridor. Add park and ride lots in key locations.
- **HEFT Corridor** – current and future application potential to increase carrying capacity in the corridor. Add park and ride lots in key locations. Express and limited stop bus services have a strong potential application for direct service along the HEFT to FIU or on to the MIC via SR 836. This type of bus service would also fit well in combination with development of managed lane concepts in the HEFT corridor.
- **SR 874/ SR 826/ CSX Corridor** – current and future application potential to increase carrying capacity in the corridor. Add park and ride lots in key locations. Express and limited stop bus services have a strong potential application for direct service along SR 874 to SR 826 and to the MIC. This type of bus service would also fit well in combination with development of managed lane concepts in the SR 874/SR 826/ CSX corridor.



System Characteristics

- 35- to 55-foot vehicles with seating for 35-55 passengers
- Operational Speed: 5-25 mph
- Kneeling or low-floor design
- Short-range service area

3.1.2 Commuter Bus (Express Bus)

Description

A commuter bus service is a fixed-route bus service characterized by operating service predominantly in one direction during peak periods and with limited stops and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service typically includes the use of multi-ride tickets for its passengers, and operates larger, long-haul coaches rather than traditional transit buses. Most transit operators in larger metropolitan areas operate commuter bus services into the regional central business district.

Potential Application

The commuter bus service concept may have application in the Kendall area for the longer haul trips. Commuter bus service is less applicable for short haul trips. Service is designed to coordinate with feeder services, park and ride lots and connecting bus services.

- **Kendall Drive Corridor** – no potential application in corridor.
- **HEFT Corridor** – potential application for direct service via the HEFT to the MIC, particularly in combination with HOV/HOT applications.
- **SR 874/ SR 826/ CSX Corridor**– potential application for direct service via SR 874/ SR 826/ CSX Corridor to the MIC, particularly in combination with HOV/HOT applications.



System Characteristics

- 40- to 60-foot vehicles with seating for 40-55 passengers
- Operational Speed: 30-45 mph
- Long-range, limited stop service

3.1.3 Bus Rapid Transit (BRT) / Busways

Description

Bus Rapid Transit / Busway facilities, vehicles, and related systems are intended to accommodate higher capacity, improve speed, provide greater passenger convenience and comfort, and improve reliability and predictability of service. BRT routing may occur in exclusive right-of-ways, reserved lanes in streets, or lanes shared with other traffic. The Miami area is home to one of the nation’s longest busway systems since 1997, the South Miami-Dade Busway. Currently operating for 13.5 miles along US Route 1, the South Miami-Dade Busway provides a fast, reliable and convenient travel alternative that links the communities and commercial centers located between SW 264th Street and the Dadeland South Metrorail Station in downtown Kendall. Busways have been proven successful or are anticipated to begin operations shortly outside of southeast Florida, in the San Fernando Valley, CA; Cleveland, OH; Boston, MA; Ottawa, ON and Eugene, OR. Collectively, BRT treatments are designed to approach the service quality of rail transit while still benefiting from the cost savings associated with bus transit. Within Florida, BRT treatments, such as signal prioritization and a separate travel lane have proven successful with the Lymmo Service of the Central Florida Regional Transit Authority, serving the Orlando area. Other successful BRT treatments have been administered in Los Angeles, Las Vegas, Denver, and Pittsburgh.

Potential Application

Bus lanes have potential in the Kendall area particularly when paired with the concept of managed lanes. Bus lane concepts have potential in the following corridors:

- **Kendall Drive Corridor**– potential application for access to Dadeland South station but limited right-of-way is problematic. Potential application to combine with managed lane concept to expand capacity and provide a source of funding.
- **HEFT Corridor** – potential application to connect with proposed east-west transit service in the SR 836 corridor.
- **SR 874/ SR 826/CSX Corridor** – potential application to access the MIC. Potential application to combine with a managed lane concept to expand capacity and provide a source of funding.



System Characteristics

- Exclusive/limited mixed-use lane
- Operational Speed: 25-40 mph
- Lane width is the same or wider than traditional roadways to accommodate buses
- Signal prioritization for bus lane is not required but increases system efficiency
- Uses existing traditional bus vehicles and/or private buses, van and automobiles

3.1.4 Managed Lanes (HOV Lanes, HOT Lanes, Carpool Lanes)

Description

Managed lanes are exclusive road or travel lanes limited to buses, vanpools, and/or vehicles with two or more individuals. Conventionally, HOV lanes are denoted with diamond markings, and are separated from their corresponding general use lanes typically with the use of roadway stripping. However, it is not uncommon to see HOV lanes separated by concrete barrier or even grade-separations. In recent years, an alternative use for HOV lanes called high-occupancy toll or HOT lanes have been implemented. HOT lanes is an HOV lane that charge an increased toll on vehicles which have less than the specified number of required passengers or are charged higher tolls during periods of increased congestion. Examples of successful HOV lanes can be observed in Miami, Houston, Los Angeles, Washington, DC, and Seattle. Examples of successful integration of HOT lanes can be seen in San Diego, Houston, Minneapolis, and Orange County, California.

Potential Application

HOT lane concepts, combined with BRT or LRT applications, have potential in the Kendall area. Through this combination, HOT concepts would create additional capacity while BRT or LRT would provide high volume transport. In this configuration, HOT would fill remaining capacity plus add a revenue stream to assure optimal facility utilization.

- **Kendall Drive Corridor** – there is limited right-of-way along the Kendall Drive corridor for at grade HOT lanes. However, the concept of integrating a HOT lane with a BRT application has potential.
- **HEFT Corridor** – application of HOT lanes on the HEFT has potential. This would provide a fast connection to activity centers north and east. The combination of HOT and LRT to FIU along the HEFT has potential
- **SR 874/ SR 826/ CSX Corridor** – application of HOT lanes and express bus service along SR 874/ SR 826/ CSX corridor has potential especially combined with DMU service on the CSX line. This would provide fast connections to the MIC.



System Characteristics

- Dedicated road eight-of-way
- Can be used by public or private vehicles, including buses, van and automobiles
- Can be used for short-or long-range trips

3.1.5 Circulator Bus (Dial-a-Ride, Flex-routes, Feeder Buses)

Description

A bus or shuttle-bus serving an area confined to a specific locale, such as a downtown area or suburban neighborhood, with connections to major traffic corridors, regional bus routes and BRT or rail systems. Circulator bus service is used to provide short localized trips such as from home to the shopping center or home to a nearby activity center. When providing connections to regional bus routes, BRT or rail services, circulator buses are supporting these services as a feeder and distributor service. Circulator bus services generally employ smaller vehicles that are better able to penetrate neighborhoods, office complexes and shopping centers. Additionally, circulator bus services may also be operated as general public demand responsive service (also called "dial-a-ride") or as deviated fixed-route service (also known as flex-routes). Successful circulator bus programs of varying sizes and organization have been implemented in Prince William County, VA, Madison, WI, and Middlesex County, NJ.

Potential Application

The circulator bus services are applicable in the Kendall area and will be considered a part of other transport investments recommended for the area as follows.

- **Kendall Drive Corridor** – potential for use of circulator bus services to increase mobility in the Kendall Drive corridor and to augment existing regional and shuttle bus services (such as the Kendall KAT).
- **HEFT Corridor** – potential for use of circulator bus services to increase mobility in the area and to provide connections to higher capacity transport services developed in the HEFT corridor.
- **SR 874/ SR 826/ CSX Corridor**– potential for use of circulator bus services to increase mobility in the area and to provide connections to higher capacity transport services developed in the SR 874/ SR 826/ CSX corridor.



System Characteristics

- 30- to 40-foot length vehicles with seating for 25-40 passengers
- Operational Speed: 10-35 mph
- Short-range service area
- Operated in conjunction with Automatic Vehicle Locator (AVL) and Geographic Information Systems (GIS) technologies

3.1.7 Jitneys

Description

Passenger vans or smaller buses operating with fixed routes but no fixed schedules. Jitneys are a privately owned and operated mass transit service which is market-oriented and free of government assistance, but is regulated through a public service commission, state or local government. Jitneys generally are operated under franchise agreements, fares are regulated by route and there are special insurance requirements. Vehicle capacity varies from eight people to 30 people or more, and the vehicles may be owned or leased by the operator. Jitneys are also known in some locations as a publico.

Potential Application

The jitney is not an application for the Kendall area.

- **Kendall Drive Corridor** –no potential application in corridor.
- **HEFT Corridor** – no potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor** – no potential application in corridor.



System Characteristics

- 25-35 foot length vehicles with seating for 19-28 passengers
- Operational Speed: 5-25 mph
- Kneeling or low-floor design
- Short-range service area

3.2 Rail, Fixed Guideway and Waterborne Transit

3.2.1 Commuter Rail (includes Diesel Multiple Units)

Description

Commuter rail utilizes passenger trains which operate between a central city, its suburbs and/or another central city. It may be locomotive-hauled (like Tri-Rail or VRE) or self-propelled like diesel multiple units (DMUs), and it is characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, and usually only one or two stations in the central business district(s). Additionally, commuter rail trains are built to Federal Railroad Administration (FRA) standards, and often share track or right-of-way with intercity or freight trains. The ability to connect suburban communities with the central business districts of metropolitan areas has solidified commuter rail service as a popular transportation alternative. Within southeastern Florida, the South Florida Regional Transportation Authority operates the 72-mile, 18 stations commuter rail service known as Tri-Rail, which links Miami, Fort Lauderdale and West Palm Beach along the Southeast Florida coastline.

Potential Application

The commuter rail concept (including use of DMUs) has potential applicability in the Kendall area, particularly for longer haul trips. Commuter rail could be coordinated with feeder services, park and ride lots and connecting bus services.

- **Kendall Drive Corridor** – no potential application in corridor.
- **HEFT Corridor** – no potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor**– potential application for direct service along SR 874/ SR 826/ CSX Corridor to the MIC.



System Characteristics

- Capacity: 80 – 110 passengers for single-level cars and 145-170 for double-level cars
- Operational Speed: 30-100 mph
- Service Frequency: 15-60 minute headways
- Operate on standard gauge track which can be shared with freight and/or other passenger trains
- Power Supply : diesel or electric

3.2.2 High-Speed Rail

Description

High speed rail is the application of rail technologies on specially design tracks for high speed operation greater than 110 mph. This type of rail transport operates at an interregional level, with stops at large rail stations located in major metropolitan areas. An example of high speed rail in the United States is the Amtrak Acela service between Washington DC, New York and Boston. Magnetic levitation (Maglev) is a type of high speed rail with exclusive right-of-way, which is propelled along a fixed guideway system by the attraction or repulsion of magnets on the rails and under the rail cars. The world's first commercial maglev line is in Shanghai, China. The route from downtown to the airport travels the 18.6 mile distance in just 7 minutes 20 seconds with a top speed of 268 mph.

Potential Application

High speed rail is not an application suited for the Kendall area.

- **Kendall Drive Corridor** – no potential application in corridor.
- **HEFT Corridor** – no potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor** – no potential application in corridor.



System Characteristics

- Capacity: 145-170 passengers per car, 4-10 cars per train
- Operational Speed: 110+ mph
- Exclusive or shared right-of-way

3.2.3 Heavy Rail

Description

Rapid transit is an electric railway with the capacity for a heavy volume of traffic and characterized by exclusive rights-of-way, multi-car trains, high speed and rapid acceleration, sophisticated signaling and high-platform loading. Also, high-speed, passenger rail cars operating singly or in trains of two or more cars on fixed rails in separate rights-of-way from which all other vehicular and pedestrian traffic is excluded.

Rapid transit service uses rail cars powered by electricity which is drawn from a third rail. It generally uses longer trains and has longer spacing between stations than light rail. It can be operated on an elevated railway is a form or heavy rail commuter service that travels on tracks which are elevated or bridged through an urban area (such as in Chicago). Examples of heavy or rapid rail include the Metro in Washington, DC; MARTA in Atlanta, GA; New York City Transit and Metrorail in Miami. Currently, Metrorail operates on a 22.4 mile elevated rail and services 22 stops between the Dadeland South and Palmetto stations.

Potential Application

Heavy rail already serves the eastern Kendall area in the form of Metrorail at the Dadeland South station. Extension of Metrorail at grade or elevated and either as heavy rail or light rail has potential applicability in the Kendall area.

- **Kendall Drive Corridor** – potential for extension of metrorail service west from Dadeland area.
- **HEFT Corridor** – application of heavy or rapid rail along the HEFT has potential especially if the east-west connection to FIU is built.
- **SR 874/ SR 826/ CSX Corridor** – application of heavy rail is not likely along the SR 874/ SR 826/ CSX corridor.



System Characteristics

- Capacity: 145-170 passengers per car, 4-10 cars per train
- Operational Speed: 25-60 mph
- Service Frequency: 3-10 minutes during peak and 10-20 minutes during other periods
- Exclusive grade-separated right-of-way, that is typically not shared with other freight or passenger trains
- Power Supply: typically electrified third rail



3.2.4 Light Rail Transit (LRT)

Description

Light rail transit utilizes light weight passenger rail cars to serve light volume traffic capacity, as compared to heavy rail. Light rail may use shared or exclusive rights-of-way, high or low platform loading and multi-car trains or single cars. This is also known as streetcar, trolley or tramway. Because of their light weight, light rail vehicles cannot operate on the same railroad tracks at the same time as freight or commuter rail trains, for safety reasons. Light rail vehicles are either electrically powered from an overhead electric line via a trolley or pantograph or utilize diesel fuel. LRT systems typically connect activity centers within an urbanized area. Though technically descended from the streetcars and interurban railways of an earlier era, modern LRT vehicles offer high levels of performance (acceleration, braking, speed) and passenger comfort. Passenger capacity is about 75 persons seated, with room for as many standees for vehicles in the typical vehicle. Examples currently are operating in Boston, Dallas, Portland, and in communities throughout New Jersey.

Potential Application

LRT has potential as an application for the Kendall area particularly if combined with HOT facility concepts.

- **Kendall Drive Corridor** – potential application along the Kendall.
- **HEFT Corridor** – potential application along the HEFT corridor to FIU and in combination with a HOT facility.
- **SR 874/ SR 826/ CSX Corridor** – no potential application in corridor.



System Characteristics

- Capacity: 130-170 passengers per car, 2-6 cars per train
- Operational Speed: 20-65 mph
- Service Frequency: 5-15 minutes during peak and 10-30 minutes during other periods
- Operates on tracks that run along the streets and share space with road traffic, or along exclusive right-of-way and separated from road traffic, or a combination of both alternatives
- Power Supply: electric motor power by overhead wires or diesel combustion engine

3.2.5 Automated Guideway Transit (AGT or People-mover)

Description

Automated Guideway Transit is a system of guided transit vehicles operating singly or in multi-car trains that are fully-automated and travel on a grade-separated rail network. Service may be on a fixed schedule or in response to a passenger-activated call button. Automated guideway transit includes personal rapid transit, group rapid transit and people-mover systems. These systems provide short-haul collection and distribution services for passengers, usually in a major activity center. AGT is typically found in airports and have been successfully integrated as a form of urban transit in cities such as Detroit, Jacksonville and Miami.

Potential Application

The AGT concept has applicability in support of higher capacity alternatives (such as Metrorail) to serve as a constant feeder from/to densely populated developments. The potential applicability of AGT in the Kendall area is limited to a possible connection to the Dadeland South Metrorail station.

- **Kendall Drive Corridor** – possible application to connect Dadeland Mall and the new development complex at Dadeland with the Dadeland Metrorail station.
- **HEFT Corridor** – limited potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor**– limited potential application in corridor.



System Characteristics

- Capacity: 80 passengers per car and up to 6 cars per train
- Operational Speed: 20-35 mph
- Elevated separate guideway
- Control System: automatic
- Power Supply: electric rail

3.2.6 Monorail

Description

An electrical railway in which a car or train of cars is suspended from or straddles a fixed guideway formed by a single beam or rail (or tube). Most monorails are either heavy rail systems or automated guideway systems. Monorails being used as public transport systems can be observed in Seattle, WA and Las Vegas, NV.

Potential Application

Monorail is not a recommended application for the Kendall area due to the longstanding elevated Metrorail system. Construction of a separate and incompatible elevated rail system would be neither cost effective or efficient for passengers.

- **Kendall Drive Corridor** – no potential application in corridor.
- **HEFT Corridor** – no potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor**– no potential application in corridor.



System Characteristics

- Capacity: 45 -65 passengers per car, 4-6 cars per train
- Operational Speed: 30-65 mph
- Service Frequency: 5-10 during peak and 10-20 minutes during other periods
- Elevated separate guideway
- Power Supply: electric rail

3.2.7 Ferryboat

Description

A fixed-route service across a body of water using a ferryboat or small watercraft that provides service between several points or docks located along the waterfront. Ferries form a part of the public transport systems for commuter and leisure passengers alike. Additionally, ferryboats provide connections between points at a capital cost much lower than bridges or tunnels. The Staten Island Ferry and NY Waterways, both serving New York City, are examples of successfully operated ferryboat services.

Potential Application

Several canal-based routes were proposed in the MPO’s 2004 report, *Development of a Service Plan for Waterborne Transit Services in Miami-Dade County*. The Kendall Area, however, is located a significant distance inland and potential right-of-way conflicts from bridges and other obstructions limit the applicability of ferry service here.



- **Kendall Drive Corridor** – no potential application in corridor.
- **HEFT Corridor** – no potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor**– no potential application in corridor.

3.2.8 Cable Drawn Systems

Description

An electric railway operating in mixed street traffic or along separate tracks or guideways with unpowered, individually controlled transit vehicles propelled by moving cables located below the street surface and powered by engines or motors not on board the vehicle. San Francisco maintains the most notable and extensive cable car system. Cable drawn applications exist in other forms as well however all are characterized by similar operating and infrastructural requirements. Other examples of cable drawn systems include San Francisco’s Powell-Mason, Powell-Hyde, and California Street lines, ski lifts, funiculars and overhead cable cars.

Potential Application The cable drawn systems are not particularly well suited to the Kendall area due to operating limitations and low carrying capacity.

- **Kendall Drive Corridor** – no potential application in corridor.
- **HEFT Corridor** – no potential application in corridor.
- **SR 874/ SR 826/ CSX Corridor**– no potential application in corridor.



System Characteristics

- Capacity: 25-40 passengers per car
- Operational Speed: 7-10 mph
- Street-level rails with a slot between the tracks where an underground cable runs
- Power Supply : centralized powerhouse pull the cables around the entire system at a constant speed

EVALUATION OF TRANSIT TECHNOLOGIES

The following tables present the long list of potential public transportation applications examined for each corridor in the Kendall area, the Kendall Drive Corridor, the HEFT Corridor and the SR 874/ SR 826/ CSX Corridor. Each of the three corridors has different travel, origin and destination, right-of-way and land use characteristics. The individual characteristic of each corridor influence which transit applications would be most appropriate. For each of the three corridors, the potential service applications were compared against the goals of the project established in the *Kendall Alternatives Analysis Goals, Objective and Purpose and Need Report*. Each technology was given a rating as an opportunity, neutral issue, or challenge/constraint for the corridor. The results of this analysis for each corridor are presented in Tables 3.1, 3.2 and 3.3.

Table 3.1: Evaluation of Transit Technologies in the Kendall Drive Corridor

Goal		Technology														
		Ground Transit							Rail, Fixed Guideway & Waterborne Transit							
		Bus Lanes/ Busways	Managed Lanes	Fixed Route/ Conventional Bus	Commuter Bus	Circulator Bus	Jitney	Bus Rapid Transit	Commuter Rail/ DMU	High Speed Rail	Rapid Transit	Light Rail Transit	Cable Drawn Systems	Automated Guideway Transit	Monorail	Ferryboat
	Enhance Regional Mobility	●	●	◐	●	◐	○	●	●	●	●	●	●	●	●	●
	Improve Accessibility to Work Destinations	●	●	●	●	◐	◐	●	◐	◐	●	●	◐	◐	◐	◐
	Enhance Existing Infrastructure	●	●	◐	◐	◐	○		○	○	●	●	○	○	○	○
	Promote Communities and the Environment	◐	◐	◐	◐	◐	◐	●	◐	◐	◐	●	◐	◐	◐	◐
	Enhance Existing Transportation Services	●	●	●	◐	●	●	●	◐	○	●	●	◐	◐	◐	○
	Promote Regional Development	◐	◐	◐	◐	◐	○	●	●	○	●	●	●	●	●	○
	Develop a Cost-Effective Solution	◐	●	●	●	●	●	●	○	○	◐	◐	○	○	○	○

Opportunity

Neutral Issue

Challenge/Constraint

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Table 3.2: Evaluation of Transit Technologies in the HEFT Corridor

Goal		Technology														
		Ground Transit							Rail, Fixed Guideway & Waterborne Transit							
		Bus Lanes/ Busways	Managed Lanes	Fixed Route/ Conventional Bus	Commuter Bus	Circulator Bus	Jitney	Bus Rapid Transit	Commuter Rail/ DMU	High Speed Rail	Rapid Transit	Light Rail Transit	Cable Drawn Systems	Automated Guideway Transit	Monorail	Ferryboat
	Enhance Regional Mobility	●	●	◐	●	◐	○	●	●	●	●	●	●	●	●	●
	Improve Accessibility to Work Destinations	●	●	●	●	◐	◐	●	◐	◐	●	●	◐	◐	◐	◐
	Enhance Existing Infrastructure	●	●	◐	◐	◐	○	◐	○	○	●	●	○	○	○	○
	Promote Communities and the Environment	◐	◐	◐	◐	◐	◐	●	◐	◐	◐	●	◐	◐	◐	◐
	Enhance Existing Transportation Services	●	●	●	◐	●	●	●	◐	○	●	●	◐	◐	◐	○
	Promote Regional Development	◐	◐	◐	◐	◐	○	●	●	○	●	●	●	●	●	○
	Develop a Cost-Effective Solution	◐	●	●	●	●	●	●	○	○	◐	◐	○	○	○	○

Opportunity

Neutral Issue

Challenge/Constraint

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Table 3.3: Evaluation of Transit Technologies in the SR 874/ SR 826/ CSX Corridor

Goal		Technology														
		Ground Transit							Rail, Fixed Guideway & Waterborne Transit							
		Bus Lanes/ Busways	Managed Lanes	Fixed Route/ Conventional Bus	Commuter Bus	Circulator Bus	Jitney	Bus Rapid Transit	Commuter Rail/ DMU	High Speed Rail	Rapid Transit	Light Rail Transit	Cable Drawn Systems	Automated Guideway Transit	Monorail	Ferryboat
	Enhance Regional Mobility	●	●	◐	●	◐	○	●	●	●	●	●	●	●	●	●
	Improve Accessibility to Work Destinations	●	●	●	●	◐	◐	●	◐	◐	●	●	◐	◐	◐	◐
	Enhance Existing Infrastructure	●	●	◐	◐	◐	○	◐	●	○	●	●	○	○	○	○
	Promote Communities and the Environment	◐	◐	◐	◐	◐	◐	●	◐	◐	◐	●	◐	◐	◐	◐
	Enhance Existing Transportation Services	●	●	●	◐	●	●	●	●	○	●	●	◐	◐	◐	○
	Promote Regional Development	◐	◐	◐	◐	◐	○	●	●	○	●	●	●	●	●	○
	Develop a Cost-Effective Solution	◐	●	●	●	●	●	●	●	○	◐	◐	○	○	○	○

Opportunity

Neutral Issue

Challenge/Constraint

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RECOMMENDATIONS

Based on the transit technology and service application review for each study corridor, technologies that have no significant challenges or constraints, and were found to have five or more opportunities based on the project goals, were identified in the previous section. The following transit applications are recommended to be further examined in more detail in the Tier 1 screening process:

Kendall Drive Corridor

- Bus rapid transit (with managed lanes)
- Heavy rail (extension of Metrorail)
- Light rail

HEFT Corridor

- Bus rapid transit (with managed lanes)
- Heavy rail (extension of Metrorail)
- Light rail

SR 874/SR 826/CSX Corridor

- Bus rapid transit (with managed lanes)
- Commuter rail/(DMU)
- Light rail

