



1.0 Executive Summary

1.1 Introduction

Hillsborough Area Regional Transit (HART) Authority is a regional transportation authority and special tax district charged with planning, financing, constructing, and operating public transit facilities and service within Hillsborough County, Florida. HART provides fixed route local and express bus services to most of Hillsborough County and provides service connections to the Pinellas Suncoast Transit Authority (PSTA) system.

Bus rapid transit (BRT) has been included in local and regional plans in the Tampa Bay Area as an element of regional congestion reduction strategy. Seven corridors have been identified in previous studies (*Transit Emphasis Corridor Study*, June 2005) as “transit emphasis corridors”, of which the subject BRT corridors emerged as priority corridors. The North / South BRT corridor was selected for implementation in a subsequent study (*Transit Emphasis Corridor Improvement Planning & Design Services*, January 2008) based on ridership projections and connectivity to other existing HART routes.

A themeing, known as “branding,” was chosen to separate the BRT system from the local service, and provide an enhanced ridership experience. This includes the choice of a system name, color scheme, logo and architectural style of the shelter and amenities. MetroRapid will be the name of this new BRT service. This unique name will be aid in the differentiation of the BRT service from the local service especially on the buses. All of these will differentiate the BRT station from being “just another bus stop” and invite more riders onto the system.

This Project Development and Environment (PD&E) Study has been commissioned by HART to consider alternative station locations, roadway improvements, signal improvements/enhancements, and transit-oriented enhancements to the existing facilities along the North / South BRT project corridor. These improvements would facilitate the successful operation, branding, and safety of the BRT passengers, pedestrians, and vehicles along the project corridor.

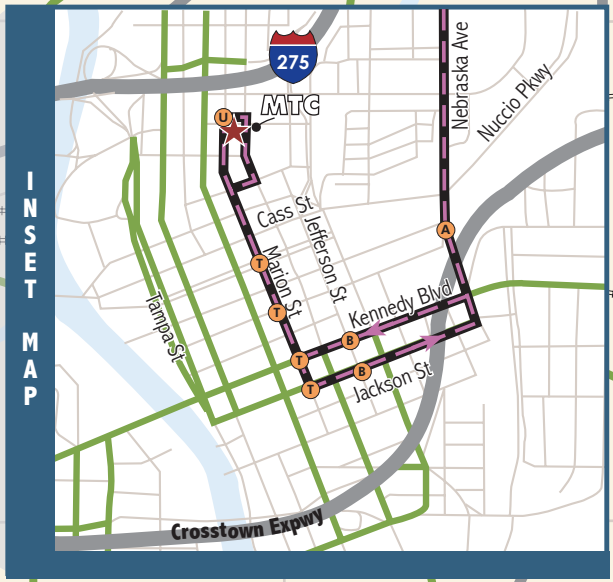
1.2 Preferred Alternative Description

1.2.1 Project Location

The North / South BRT corridor begins at the Marion Transit Center (MTC), travels south along the Marion Street Transit Parkway (MSTP), then turns east along the one-way pair of Kennedy Avenue and Jackson Avenue, then turns north on Nebraska Avenue, then turns east of Fletcher Avenue and terminates near the Fletcher Avenue and Interstate 75 interchange at a Park and Ride facility which is to be located under a separate study, shown on **Figure 1-1**. The BRT route will operate in mixed traffic, with the exception of the MSTP, and several existing HART routes will either share the proposed stations or will have stops in close proximity to a proposed station to facilitate transfers.

1.2.2 Preferred Stations

This study recommended 50 preferred station locations in both directions at 24 intersections (not including the transit centers, MSTP stops and Park and Ride) along the project corridor, shown on **Table 1-1** and **Figure 1-1**. The intersections chosen for proposed stations were previously identified in the *Transit Emphasis Corridor Improvement Planning & Design Services* (January



LEGEND: BRT Station Concept

- BRT
- Medium
- Existing Marion Street Transit Parkway Stops
- Small
- Large
- Existing Transit Center

Prepared for:





Table 1-1 Recommended Intersections for Stations

Station Location	Station Prototype		Station Location	Station Prototype
Marion Transit Center	U		Busch Boulevard	B
Jefferson Street	B		Linebaugh Avenue	A
Twiggs Street	A		109 th Avenue	A
Estelle Street	A		Fowler Avenue	C
Columbus Drive	A		131 st Avenue	A
Floribraska Avenue/ 21 st Avenue	B		Fletcher Avenue/ Nebraska Avenue	B
Lake Avenue	A		15 th Street	A
MLK Boulevard	C		22 nd Street	A
Hillsborough Avenue	C		University Area Transit Center	U
Hanna Avenue	A		Magnolia Drive	B
Sligh Avenue	A		Palm Drive	B
Broad Street	A		50 th Street	A
Waters Avenue	C		56 th Street	A

2008). The preferred station designs are unique to each location, but each station contains a certain level of amenities designed to enhance ridership, service identity (branding), and provide passenger, pedestrian, and vehicle safety. These amenities include a branded shelter, bicycle racks, BRT-branded totem with route information display, trash receptacles, news kiosks, benches, and additional advertising space at select stations. The shelter size is dependent upon the anticipated ridership at each station. Each station was designed to minimize impacts to adjacent properties, while allowing for BRT service to be accessible and visible as well as making accommodations to maintain or improve pedestrian access in the vicinity of the BRT station.

1.2.3 Roadway Improvements

The safety and accessibility for BRT passengers, pedestrians, and vehicles is paramount to the success of the BRT service. In many locations, additional roadway improvements are proposed to provide safe maneuvering of BRT vehicles, allow ancillary traffic to safely flow when BRT vehicles are engaged in boarding operations, and accommodate pedestrians arriving at or departing from proposed stations. These improvements include constructing eight proposed bus bays and using eight existing bus bays to allow BRT vehicles to exit the traffic flow during boardings and alightings, constructing two mid-block pedestrian crossings with pedestrian actuated flashing beacons, and upgrading pedestrian signals and markings at three existing signalized intersections.

1.2.4 Transit Signal Priority

The BRT system will utilize transit signal priority (TSP) to allow BRT vehicles to more effectively traverse the corridor in a timely manner. BRT vehicles will request to extend the green time or return early to green for a few seconds predefined by the operating agency. The existing signal controllers will grant TSP request only when predefined criteria are met by the BRT vehicles and the signal-timing plan. These green time extensions or early green times will allow the BRT vehicle to cross the intersection and reduce the travel time along the corridor, without sacrificing the level of service (LOS) of conflicting vehicles on the roadway network. Vehicles traveling in the direction of the BRT vehicle should experience lower delays. **Table 1-2** provides the intersections where the TSP equipment will be installed.



Table 1-2 TSP Intersections

Corridor Roadway	Signalized Intersection	Corridor Roadway	Signalized Intersection
Nebraska Avenue	Henderson Ave.	Nebraska Avenue	Linebaugh Ave.
	7 th Ave.		Bougainvillea Ave.
	Palm Ave.		109th Ave.
	Columbus Dr.		Fowler Ave.
	Floribraska Ave./21st Ave.		131st Ave.
	Lake Ave.		Fletcher Ave.
	MLK Blvd.	Fletcher Avenue	15th St.
	Chelsea St.		22nd St.
	Osborne Ave.		Livingston Ave.
	Hillsborough Ave.		Bruce B. Downs Blvd.
	Hanna Ave.		Magnolia Dr.
	Sligh Ave.		42nd St./Palm Dr.
	Broad St.		46 th St.
	Sitka St.		50th St.
	Bird St.		56th St.
	Waters Ave.		Telecom Dr.
Yukon St.	Telecom Pkwy.		
Busch Blvd.	Hidden River Pkwy. / Morris Bridge Rd.		

Note: Bold Indicates station location.

1.2.5 Operating / Service Plan

The BRT system is intended to provide service for a minimum of 14 hours per day (5:30 am to 7:30 pm, tentative), with service every 10 minutes during peak hours and 15 minutes at all other times and require 14 BRT vehicles in operation at any one time with three spare BRT vehicles. When the BRT system is implemented, HART would reduce service on Route 2, which overlaps the North / South Corridor on Nebraska Avenue.

1.3 Summary of Public Involvement

A Public Involvement Program (PIP) was developed and carried out as an integral part of this PD&E study. The purpose of this program was to establish and maintain communication with the general public, individuals and agencies concerned with the project and its potential impacts. For this project, the PIP focused on a public kick-off / alternatives information meeting, a preferred alternatives public information meeting, Agency Working Group, Community Working Group, small group meetings and a project newsletter. A summary of the public meetings conducted is provided in **Table 1-3**.



Table 1-3 Summary of Public Meetings

Meeting	Date	Attendees (No.)	Comments Received (No.)
Public Kick-off / Alternatives Meeting	November 18, 2008	36	14
Preferred Alternatives Public Information Meeting	May 12, 2009	28	7

In addition to the public meetings, the PIP included periodic newsletters, a project website, and small group meetings.

1.4 Summary of Impacts

Since the HART North / South BRT project involves the construction of individual stations, mostly within the existing right-of-way of existing roadway corridors, the environmental impacts are minimal. The preferred stations also minimize the required right-of-way and impacts to existing residential and business facilities. The proposed impacts are summarized in **Table 1-4**.

Table 1-4 Summary of Environmental Impacts

Environmental Impact	Quantity
Number of Affected Parcels	41
Impacted Community Services	1
Relocations	0
Floodplain Impacts (ac)	0.00
Wetlands (ac)	0.00
Number of T&E Species	0
Impacted Noise Sensitive Sites	0
Impacted Potential Contamination Sites	25

1.5 Project Costs

The costs associated with the preferred alternative for this project are provided in **Table 1-5** and further detail is provided in **Appendix E**. The Hillsborough County Transportation Task Force (TTF) is providing the funding for the design and construction of the civil and signal improvements. However, the funding for the vehicles to be used on the North / South BRT route will be acquired through HART's standard procurement procedures for buses using a separate funding source.

Table 1-5 Summary of Project Costs

Cost Component	Project Cost
Transit Signal Priority	\$1,688,000
Station Civil Construction	\$18,240,500
Other Roadway Improvements	\$317,000
Right-of-Way ⁽¹⁾	\$4,176,700
Engineering & Design Services ⁽²⁾	\$4,595,000
Subtotal Project Costs	\$29,017,200
Capital Equipment (Buses)	\$7,650,000
Total Project Costs	\$36,667,200

(1) R/W estimated by HDR

(2) Includes PD&E Services, Traffic & TSP analysis, Final Design Services and CEI.



1.6 Construction Sequence

Despite the distance between stations and the different characteristics of each station, the project is intended to be constructed by a single contractor and completed in a short duration. Each station would be constructed in a single construction phase to include the clearing and grubbing, station construction, and other necessary improvements (drainage structures, bus bays, etc.) and should follow a logical progression.