

City of Coral Gables

Parking Meter Study

Coral Gables, FL

Draft Report

October 1, 2014



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**RE: *Parking Meter Study – Draft Report
Coral Gables, FL***

Dear City of Coral Gables:

Timothy Haahs and Associates, Inc. (TimHaahs) is pleased to submit the Draft Report for your review and comments. Thank you for allowing us to work with you on this important project. Please don't hesitate to call with any questions.

Very truly yours,



Vicky Gagliano, MBA, LEED AP
Project Manager/Senior Parking Consultant



Michael D. Martindill
Vice President

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Introduction

The City of Coral Gables (City) retained Timothy Haahs and Associates, Inc. (TimHaahs) to review the existing on-street payment collection method and provide recommendations for future technological improvements which would improve user experience and provide additional revenue opportunities, specifically the City is interested in eliminating the single-space parking meters and replacing them with newer multi-space meters or paystations.

Scope of Services

The following tasks were part of our study:

1. Perform field observations to observe patron utilization of the existing single head meters and determine the preferred locations for siting pay stations that serve multiple spaces.
2. Create a plan to strategically locate pay stations/single-head meters and illustrate their respective areas of influence.
3. Develop a conceptual cost estimate of the anticipated capital and installation costs to replace any of the existing meters with multi-space meters. Provide an opinion on the payback period and the increase in NOI by converting to multi-space meters from single-space meters. Provide a listing of the suppliers of the various meter types.

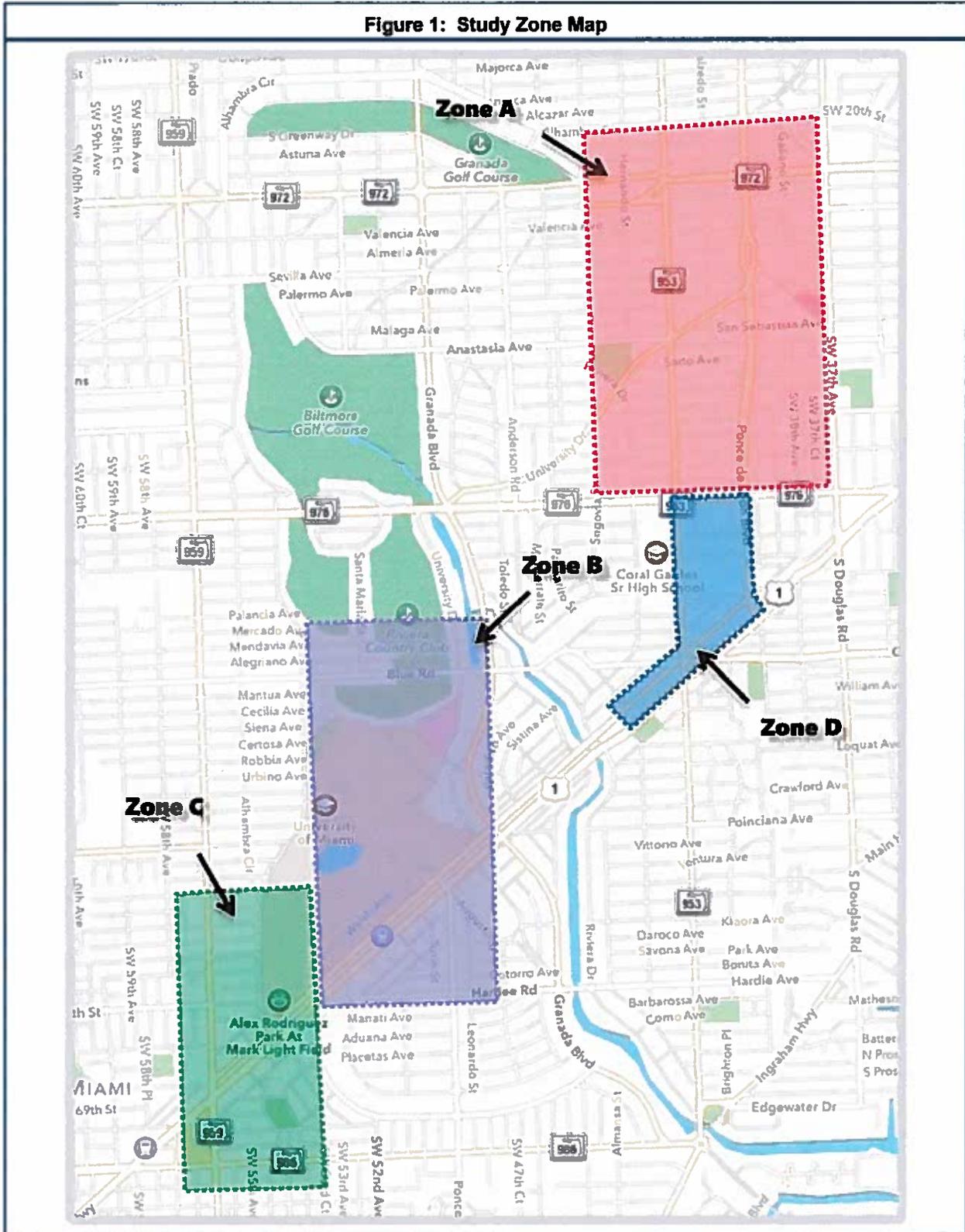
Study Area

The study area encompasses the entire city of Coral Gables as parking meters are currently in place in various locations throughout the city. The four zones examined as part of this study are as follows:

Zone A:	Downtown
Zone B:	University
Zone C:	Cobb Stadium/Riviera Park
Zone D:	Merrick Park

The overall study area and zones are illustrated below.

Figure 1: Study Zone Map



Source: Bing Maps and TimHaahs, 2014

Existing Conditions

Converting from single-space meters to multi-space meters (MSM's) provide several advantages both from a customer and operational perspective. The following are some benefits of performing a conversion.

- Customers are able to pay for parking using a credit card at the nearby MSM.
- The number of credit card versus cash transactions is increased.
- The quantity of meters for collection efforts are greatly reduced as a single MSM can replace 10 or more single space meters.
- In addition, due to the increase of credit card transactions, overall collection efforts and frequency are further reduced.
- Due to the increase of credit card transaction, funds are automatically deposited to the parking account and cash deposits are less frequent and for a lesser amount.
- Customers are not able to "piggy back" off of the meter time remaining from the previous vehicle resulting to increased revenue.
- Due to convenience, users will typically pay for more time than they actually stay resulting to increased revenue.
- Using a pay-by-plate operation, enforcement can be conducted using license plate recognition (LPR) which allows for an increase in officer productivity and/or frequency of enforcement routes.
- Repair and maintenance efforts are reduced as the number of devices is significantly fewer.
- Maintenance staff is notified of any necessary repairs using the MSM automated notification features eliminating the need to physically inspect all meters for operation.

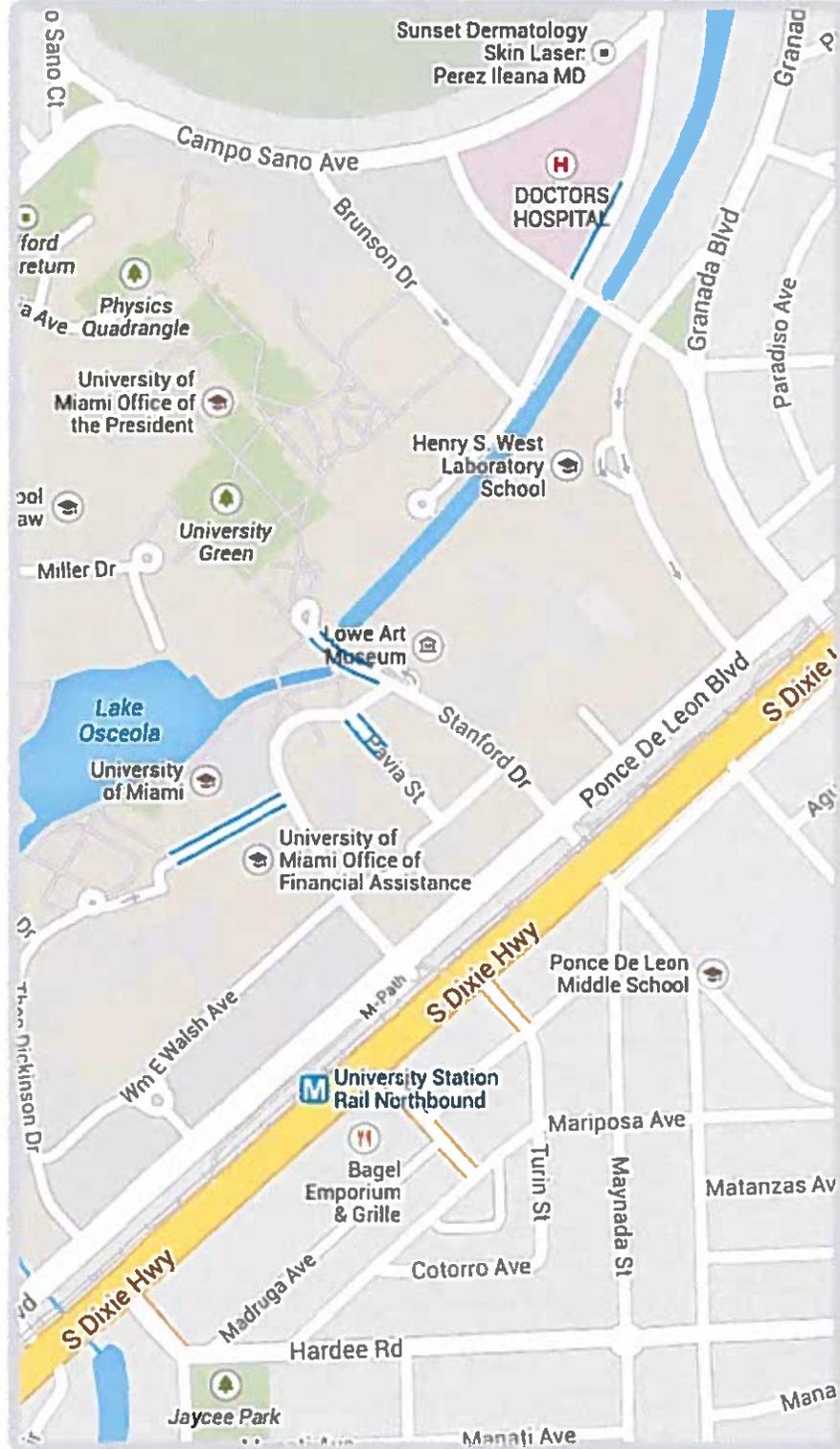
City representatives provided physical maps and highlighted the areas where meters are currently installed. Please note, Digital Luke and Parkeon Strada BNA multi-space paystations are currently in use in some areas. The maps illustrated the location of multi-space and single space meters which were color coded according to whether it was a high demand area or a low demand area. TimHaahs converted those maps into digital images using the same color coding shown in the physical maps as follows: existing multi-space meters (GREEN), single-space meters with a historical high occupancy and turnover (BLUE), and single-space meters with a lower occupancy and turnover (ORANGE). Maps depicting the existing conditions by zone are included on the following pages.

Figure 2: Zone A – Downtown Meter Map (Existing Conditions)



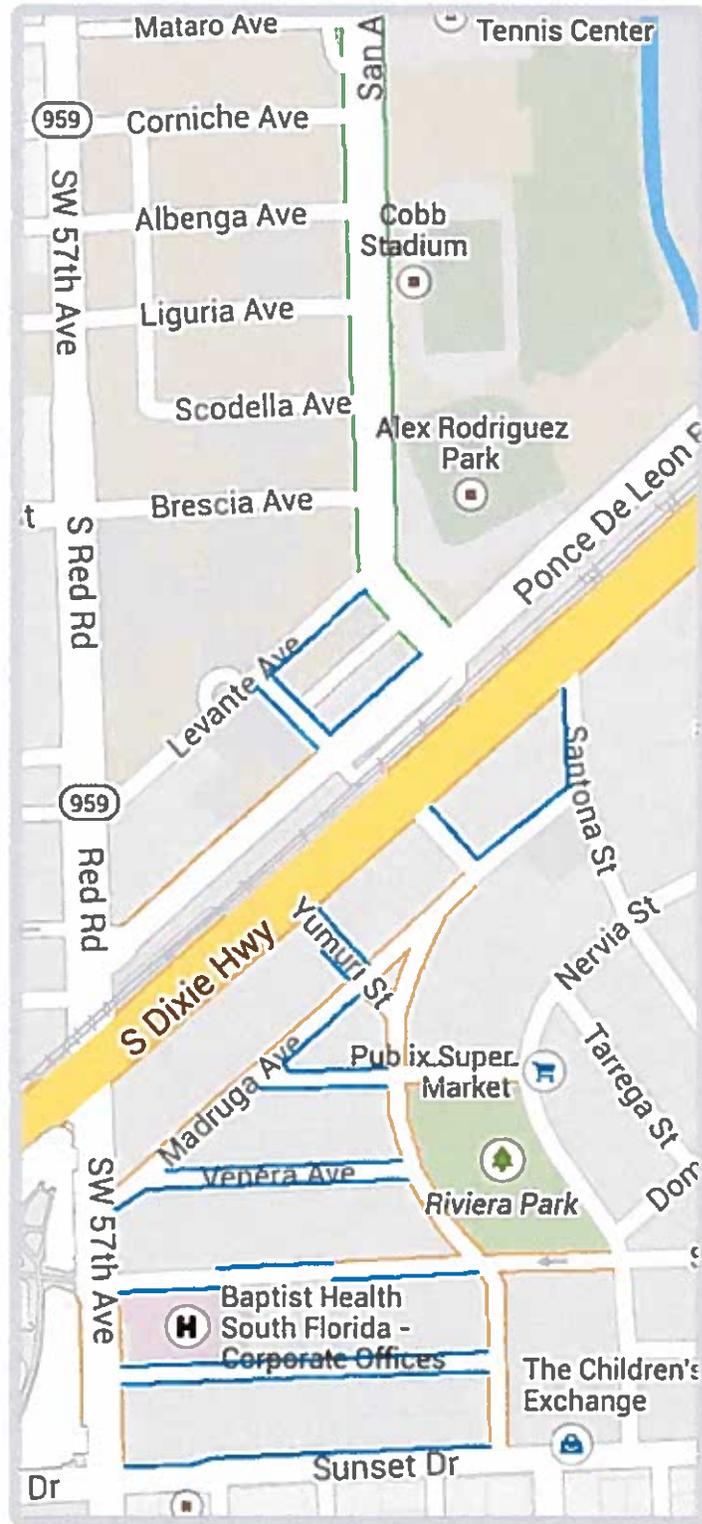
Source: Bing Maps and TimHaahs, 2014

Figure 3: Zone B – University Meter Map (Existing Conditions)



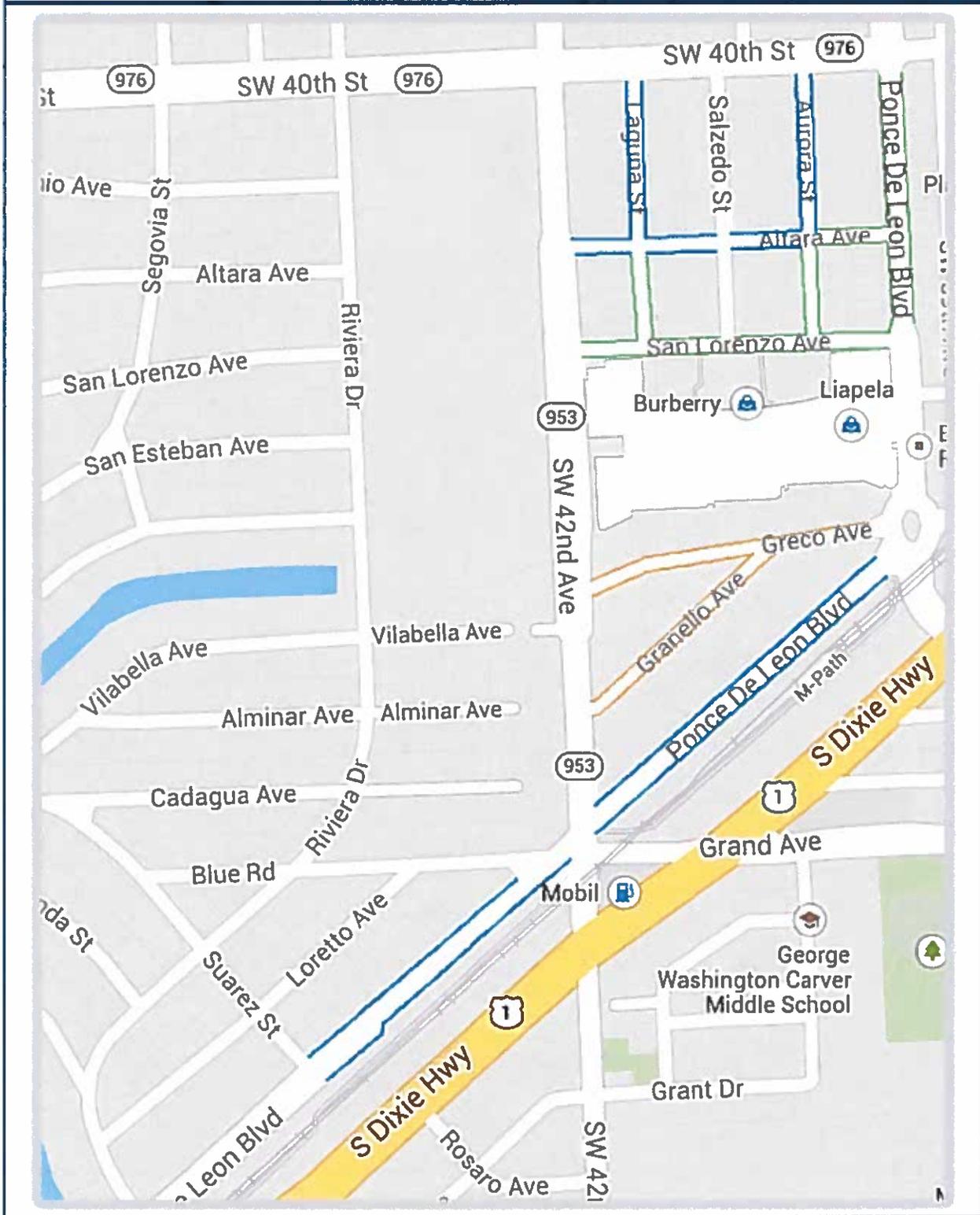
Source: Bing Maps and TimHaahs, 2014

Figure 4: Zone C – Riviera Meter Map (Existing Conditions)



Source: Bing Maps and TimHaahs, 2014

Figure 5: Zone D – Merrick Park Meter Map (Existing Conditions)



Source: Bing Maps and TimHaahs, 2014

Recommended Multi-Space Installations

The City provided a meter collection map which illustrated the areas serviced by each route. The following table summarizes the routes by zone including the time limits for the metered spaces in each, annual revenue and the average revenue per space for 2009 and 2010. Please note, route numbers 1B, 2A, and 3A all extend outside of the downtown zone boundaries and route 2B spans multiple zones. In addition, the figures below do not include revenue from the Pay by Phone system.

Table 1: Meter Collection Routes (by Zone)

ROUTE NUMBER	ZONE(S)	TIME RESTRICTIONS					TOTAL	METER REVENUE		REVENUE PER SPACE	
		12 min.	30 min.	2h	3h	10h		2009	2010	2009	2010
1A	Zone A - Downtown	5	15	237	0	114	371	\$498,448	\$576,039	\$1,344	\$1,553
1B	Zone A - Downtown	0	4	306	0	64	374	\$352,949	\$507,504	\$844	\$1,357
2A	Zone A - Downtown	0	0	77	0	135	212	\$150,455	\$158,833	\$710	\$749
2B	Zone B - University	5	9	188	13	372	587	\$515,327	\$697,762	\$876	\$1,189
	Zone C - Riviera Park										
	Zone D - Merrick Park										
3A	Zone A - Downtown	1	17	452	14	160	644	\$559,391	\$604,703	\$869	\$939
3B	Zone A - Downtown	9	6	325	0	7	347	\$637,221	\$817,757	\$1,836	\$2,357
4A	Parking Lots	0	0	81	243	156	480	\$409,500	\$587,608	\$853	\$1,183
4B	Zone D - Merrick Park	0	24	195	54	155	428	\$318,242	\$440,106	\$744	\$1,028
5A	Zone A - Downtown	4	19	174	89	28	292	\$332,629	\$390,159	\$1,139	\$1,336
5B	Zone A - Downtown	1	7	170	0	229	407	\$207,542	\$248,073	\$510	\$610
TOTAL		25	101	2,205	393	1,418	4,142	\$3,981,704	\$5,008,545	\$961	\$1,209

Source: City of Coral Gables and Timothy Haahs & Associates, 2014

Due to the nature of the meter collection routes, it is difficult to accurately quantify the meter revenue by Zone as outlined in the previous figures. Therefore, we have provided our recommendations based partially on the above data, our field observations, and the map illustrating the high demand areas which was provided by representatives from the Parking Department.

Based on the total revenue volume, we recommend conversion of the Downtown area as the highest priority. We have also provided our recommendations for meter placement in the other three zones. Ultimately, we recommend collaboration between the administration, collection, and enforcement staff in order to better understand the utilization of space, pedestrian movements in each zone, and identify areas where the number of adjacent meters will maximize use of a multi-space meter conversion, specifically where angled parking exists prior to developing the final plan.

The following section outlines and illustrates our initial recommendations for the four zones as follows:

Zone	Number of Multi-Space Meters
Zone A	82
Zone B	5
Zone C	24
Zone D	23
Total	134



Zone A – Downtown Recommendations

We identified the following areas (marked in RED) where the quantity of on-street meters in a consolidated area would maximize the return on investment from the conversion to multi-space meters. The following map of downtown depicts the location of approximately 82 multi-space meters that would replace the adjacent single-space meter devices. Please note, in the map shown, some single space meters would remain in areas where fewer than 5 meters are present. However, vehicles parked in those locations could also pay using their credit card at any meter (specifically using the pay by plate method of operation as recommended in this report) or via the Pay by Phone system.



Figure 6: Zone A - Downtown Multi-Space Conversion Map (Highest Priority)



Source: Bing Maps and Timothy Haahs and Associates, Inc., 2014

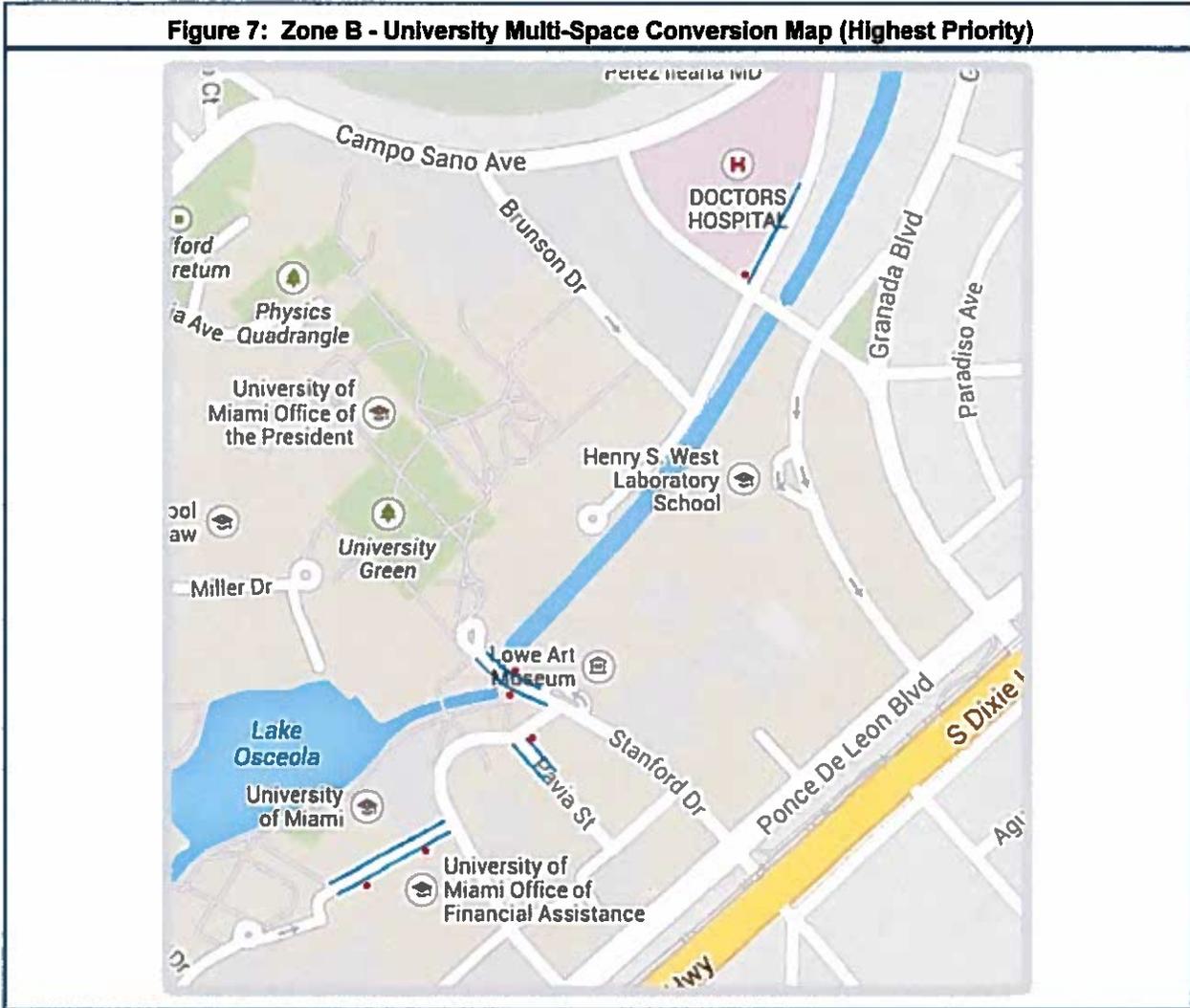
If the budget allows, the City may want to consider converting all metered areas within the downtown zone to create a unified system. A similar pattern as shown above could be implemented where meters are placed at the street corners and mid-block where appropriate. Meters should be offset where "No Parking" zones exist to minimize walking distances. In instances where less than 5 adjacent spaces exist, the City should evaluate if a multi-space meter is appropriate or if the use of single space meters should remain in effect. An additional 70± meters may be needed to convert the entire Downtown zone from single to multi-space meters.

Zone B – University Recommendations

The following map of Zone B, the area within the University of Miami and adjacent to Doctors Hospital, depicts the location of 5 multi-space meters that would replace the adjacent single-space meter devices. We understand some MSM's already exist on campus and given the demographics for the University, we anticipate a large portion of the users are already utilizing the Pay by Phone system and the City



Figure 7: Zone B - University Multi-Space Conversion Map (Highest Priority)



Source: Bing Maps and Timothy Haahs and Associates, Inc., 2014

We recommend tracking the utilization and revenue within this zone prior to conversion to determine the best location for meter placement and if other areas are suitable for the installation of MSM's.

Zone C – Riviera Park Recommendations



The following map of Zone C depicts 24 MSM locations. While some of the areas may have lower utilization (ORANGE) there may be a large enough number of vehicles located along those blocks that a MSM would still provide a benefit.

Figure 8: Zone C – Riviera Park Multi-Space Conversion Map (Highest Priority)



Source: Bing Maps and Timothy Haahs and Associates, Inc., 2014

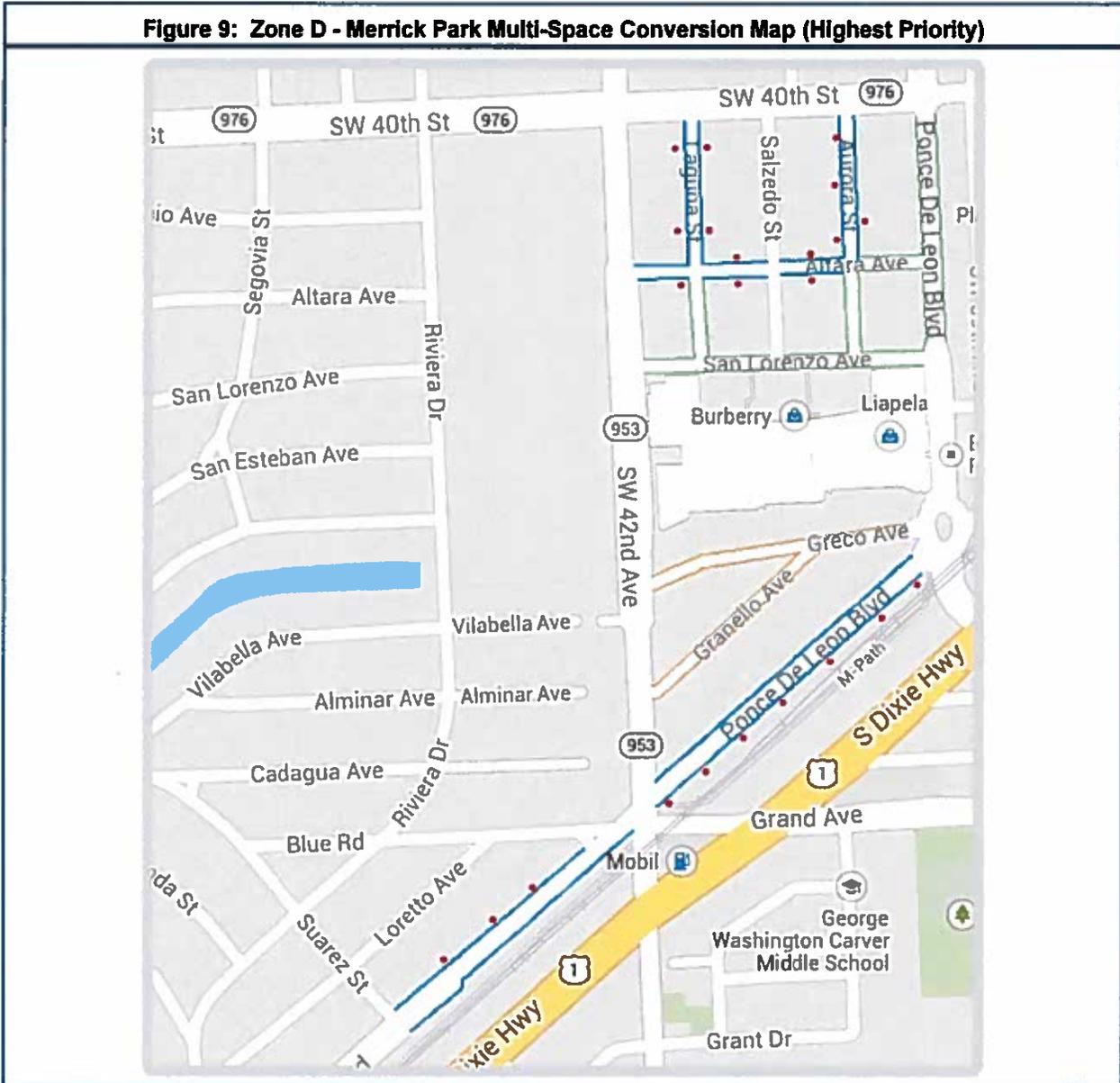
Again, we recommend tracking the utilization and revenue within this zone prior to conversion to determine the best location for meter placement and if other areas are suitable for the installation of MSM's.

Zone D – Merrick Park Recommendations

We identified potential locations for 23 new MSM's within the Village of Merrick Park shopping center and along Ponce De Leon Boulevard. This area is already operating with MSM's in several on-street parking areas so the users are already familiar with the technology making future transitions rather straight forward and simple.



Figure 9: Zone D - Merrick Park Multi-Space Conversion Map (Highest Priority)



Source: Bing Maps and Timothy Haahs and Associates, Inc., 2014

Installation

Ideally, MSM's are installed within 100 to 125 feet of the farthest parking stall served. In a parallel parking scenario, this equates to approximately 5 to 6 spaces in each direction or 10 to 12 spaces total per MSM. In an angled or perpendicular scenario, this equates to approximately 12 to 15 spaces in each direction or 24 to 30 spaces total per MSM. Some other installation considerations:

- Since the Pay by Phone system is popular and gaining users each year, the customers may tolerate a slightly farther walking distance than traditionally utilized.
- In areas such as Downtown it may be possible to extend the walking distance in high density areas such as along the Miracle Mile where customers are likely to walk past several MSM's prior to arriving at their destination.
- It may also be possible to utilize a street corner installation to allow a MSM to service vehicles located on both adjacent block faces.
- Understanding that there may be future streetscape improvements along the Mile, we recommend reviewing the proposed improvements prior to installation in order to minimize future complications and the relocation of equipment.
- In areas where a majority of the users are walking to a single destination (or direction), it may be possible to reduce the number of MSM's by positioning the meters closest to the primary pedestrian destination. In some cases, a few customers may need to walk a little farther to conduct their transaction.

Preliminary Cost Estimate

Multi-space parking meters have benefitted by cost efficiencies from technology over the past 10 years. In fact, it is not uncommon, especially when purchasing a minimum quantity (i.e. 100+ units) to see prices as low as \$6,000 to \$7,000 per unit pending features. Furthermore, per Florida statute, the City of Coral Gables may "Piggyback" off of another public/municipal contract for the purchase of multi-space parking meters given the product is identical.

Zone	Quantity	Per Unit		Estimated Total	
A- Downtown	82	\$6,000	to \$10,000	\$492,000	to \$820,000
B- University	5	\$6,000	to \$10,000	\$30,000	to \$50,000
C- Riviera Park	24	\$6,000	to \$10,000	\$144,000	to \$240,000
D- Merrick Park	23	\$6,000	to \$10,000	\$138,000	to \$230,000
Estimated Total	134			\$804,000	\$1,340,000

Source: Timothy Haahs & Associates, 2014

Based on a cost of \$6,000 to \$10,000 per unit, the total cost for the four zones is approximately \$800 to \$1.3MM for our initial 134 unit installation.

Payback Estimate

Based on data provided by City representatives, we understand meter revenue has historically increased by 40% after the conversion from a single-space meter to a MSM. Using an average meter cost of \$8,000 and 8 spaces per meter, we have calculated the estimated payback period. In order to demonstrate the impact of utilization, we have presented various payback estimates based on the average daily utilization each space.

Meter Type/ Time Limit	Current Hourly Rate	Payback in Years based on the following average daily utilization:			
		4hrs/day	6hrs/day	8hrs/day	10hrs/day
12-minute	\$1.25	1.4	0.9	0.7	0.5
30-minute	\$1.25	1.4	0.9	0.7	0.5
2-hour	\$1.25	1.4	0.9	0.7	0.5
3-hour	\$1.25	1.4	0.9	0.7	0.5
10-hour	\$1.00	1.7	1.1	0.9	0.7

Source: Timothy Haahs & Associates, 2014

Based on the above assumptions and the current meter rates, each MSM is anticipated to recoup the initial investment and generate a positive return on investment within 6 to 20 months. We anticipate many areas within the downtown area will benefit from the conversion and provide customers with an enhanced user experience.

Supplier Listing

The following table outlines the vendor and equipment included in Appendix A. We strongly recommend utilizing a pay by plate system in order to unify the system and allow for future license plate recognition (LPR) enforcement. Digital Luke and Parkeon Strada BNA multi-space paystations are currently used in Coral Gables and both of those devices and vendors can accommodate the recommendations in this report (with hardware/software updates).

Manufacturer	Model	Multi-Space Meters			Single Space Meter		Meter Specifications	Software
		PAD	PBS	PBP	Coin	CC		
Amano/Metric	Elite LS	X	X	X			X	
Digital	Iris							X
Digital	Luke II	X	X	X			X	
Duncan	Liberty				X	X	X	
Duncan	MX	X					X	
Duncan	VM		X				X	
IPS	Model M5 147				X	X		
IPS	MS1 PayStation	X	X	X				
MacKay	Decorative SSM Pole						X	
MacKay	Guardian Elite	X	X	X			X	
MacKay	Guardian Solo HD & LD				X	X	X	
Parkeon	Strada Evolution	X	X	X				
Parkeon	StradaPAL	X	X	X				
Parkeon	T-PAL Module	X	X	X				
Ventek	VenStation ATB	X	X					
Ventek	VenStation	X	X					

Source: Timothy Haahs & Associates, 2014