Parking Consulting Services

City of Richmond

Richmond, Virginia

Final Report
November 6, 2009

TimHaahs ENGINEERS ARCHITECTS
www.timhaahs.com
500 Interstate N. Parkway
Suite 130
Atlanta, GA 30328
T. 770.850.3065
F. 770.850.3066

TimHaahs
ENGINEERS ARCHITECTS

www.timhaahs.com
TIMOTHY HAAHS & ASSOCIATES, INC.
10305 NW 41st STREET, SUITE 201
MIAMI, FL 33178
T. 305.592.7123 F. 305.592.7113

November 6, 2009
Mr. Garland Curtis
Deputy Director for Community Revitalization
Richmond Redevelopment & Housing Authority
901 Chamberlayne Parkway
Richmond, Virginia 23220

RE: Downtown Parking Study
Richmond, Virginia

Dear Garland:

Timothy Haahs and Associates (TimHaahs) has completed the final report for our parking study. We would be happy to provide further assistance as the city looks to implement parking-related improvements.

Thank you for allowing us to work with you on this important project as Richmond grows and changes over the coming years. Please don't hesitate to call myself, Vicky Gagliano, or Mike Martindill with any questions.

Very truly yours,

Vicky Gagliano, MBA
Parking Specialist

Chris Walls, CPP
Parking Specialist

Mike Martindill
Vice President

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Executive Summary

The Richmond Redevelopment and Housing Authority (RRHA), acting on behalf of the City of Richmond, retained Timothy Haahs & Associates to conduct a comprehensive parking study of the downtown parking system. It is our understanding that Richmond wishes to have a vibrant downtown containing active streets, pedestrian life, and occupied storefronts with the stated goal of being a "successful downtown". The current administration understands parking can play an important role in achieving their goals.

Some of the key issues the overall downtown parking system labors under are the frequently heard public perceptions that:

- There are not enough downtown parking spaces.
- The parking system is subject to unfair pricing practices by private operators.
- The parking system location supply is rapidly being developed into non-parking facilities while parking demand continues to grow at a rapid pace.

The initial task of the parking the study was to quantify the supply of publicly available parking spaces within our defined study area. The supply includes both on- and off-street spaces. Based on our data collection efforts, we determined the study area contained a total public parking supply of 24,017 spaces. The on-street parking accounted for 4,339 spaces while the remaining parking supply was comprised of both surface lot spaces (6,293 spaces) and spaces within parking garages (13,385).

We performed extensive occupancy counts to identify the peak parking demand within each sub-area. In agreement with RRHA representatives, we selected days/hours of data collection for occupancy counts based on the characteristics of each sub-area. Office areas (City Center, Biotech, Capitol District, and Central Office) peak during the weekday in either late morning or early afternoon. Areas with high residential uses (Jackson and Monroe Ward) peak during the evening hours when people have returned home from school or work. Entertainment and restaurant areas (Shockoe Slip, Shockoe Bottom) peak on Friday or Saturday during the evening hours. The combined peak demand (occupancy) in these spaces was determined to be 17,000. Therefore, the current parking system contains a surplus of approximately 7,000 spaces (total supply of 24,018 spaces less peak demand of 17,000). This overall surplus seems to be in direct contradiction to the public perception of inadequate parking in downtown Richmond.

However, there are areas where deficits do currently exist. The current on-street parking supply reached occupancy levels above 100% in 5 of our sub-areas including Biotech, Capitol District, Central Office, Shockoe Slip, and Shockoe Bottom (during peak counts). As addressed later in the report, we believe the on-street occupancy in these high-demand areas may be more effectively managed through pricing strategies. The Capitol District, during the peak count, also experienced the highest off-street occupancy of any sub-area at 94%. In the coming years, as growth continues in these high demand areas, they should be closely monitored and managed to ensure adequate supply remains.

We were then tasked to project the future parking adequacy based on our understanding of the future supply and demand. The future public parking supply will contain 23,888 spaces – or 129 fewer spaces than the current supply. Based on housing increases, population growth, and commercial and retail development, coupled with our knowledge of the area and the information provided by the City of Richmond, we projected the new parking demand. We then added this new demand to the existing conditions to project demand and adequacy statistics at 5, 10, and 15- year horizons. We project the study area as a whole will still have an overall parking surplus in 15-years. However, our projected 5-year adequacy numbers show the Capitol District to experience a deficit of 90 spaces. This deficit increases to 160 spaces in 10 years and 233 spaces in 15-years. The Biotech Park is the only other sub-area projected to have a parking deficit. Here, the 15-year deficit is projected to be 24 spaces. It is likely that through the sharing of private and public parking assets and by more effectively managing the parking system the deficits in these two areas will be negated.

One of the biggest issues facing Richmond is that is operates its parking assets under the control of various entities working independently from one another. From a management standpoint this is not the most efficient system to manage parking. We strongly believe it is imperative for the City to take the proper steps towards developing a centralized parking operation in which all the assets are controlled and managed under one entity. This is one of the most logical and necessary steps to take for the City to improve the operation of its public parking assets.

A number of different parking management methods could be employed in Richmond. One consideration was forming a parking department. However, with few employee and ideological changes from the existing conditions, the type of significant improvements and consolidation of assets needed in Richmond would unlikely be achieved through the formation of a parking department. Establishing a Parking Authority would provide Richmond with the most empowered entity. It is the strongest and most inclusive option. On the other hand, the political steps necessary to form the authority, coupled with the City's desire to maintain some oversight over the parking favors the formation of an Enterprise Fund. A parking enterprise fund yields nearly the same capabilities as an authority. Forming either management entity (Parking Authority or Enterprise Fund) would allow the city to complete some of the most important goals for the parking system including:

- Bring all of the assets under one roof with a singular focus on delivering parking.
- Provide a clear mission statement.
- Create financial unity among assets.
- Provide strong leadership.
- May be formed with bonding capacity for future parking initiatives (construction and renovation).

Regardless of the final choice for a new management entity, the support of the mayor, senior administration, and the city council will be extremely helpful for both the political process and public opinion.

Richmond has adequate parking to meet the current and future demand. However, more effectively managing those assets and partnering with private and state-owned parking facilities would greatly enhance the amount and location of parking available throughout the downtown area. This should be one of the top goals once the new management entity is fully operational.

Study Area

The study area encompasses the heart of downtown Richmond, Virginia. The area contains over 200 blocks bound geographically by:

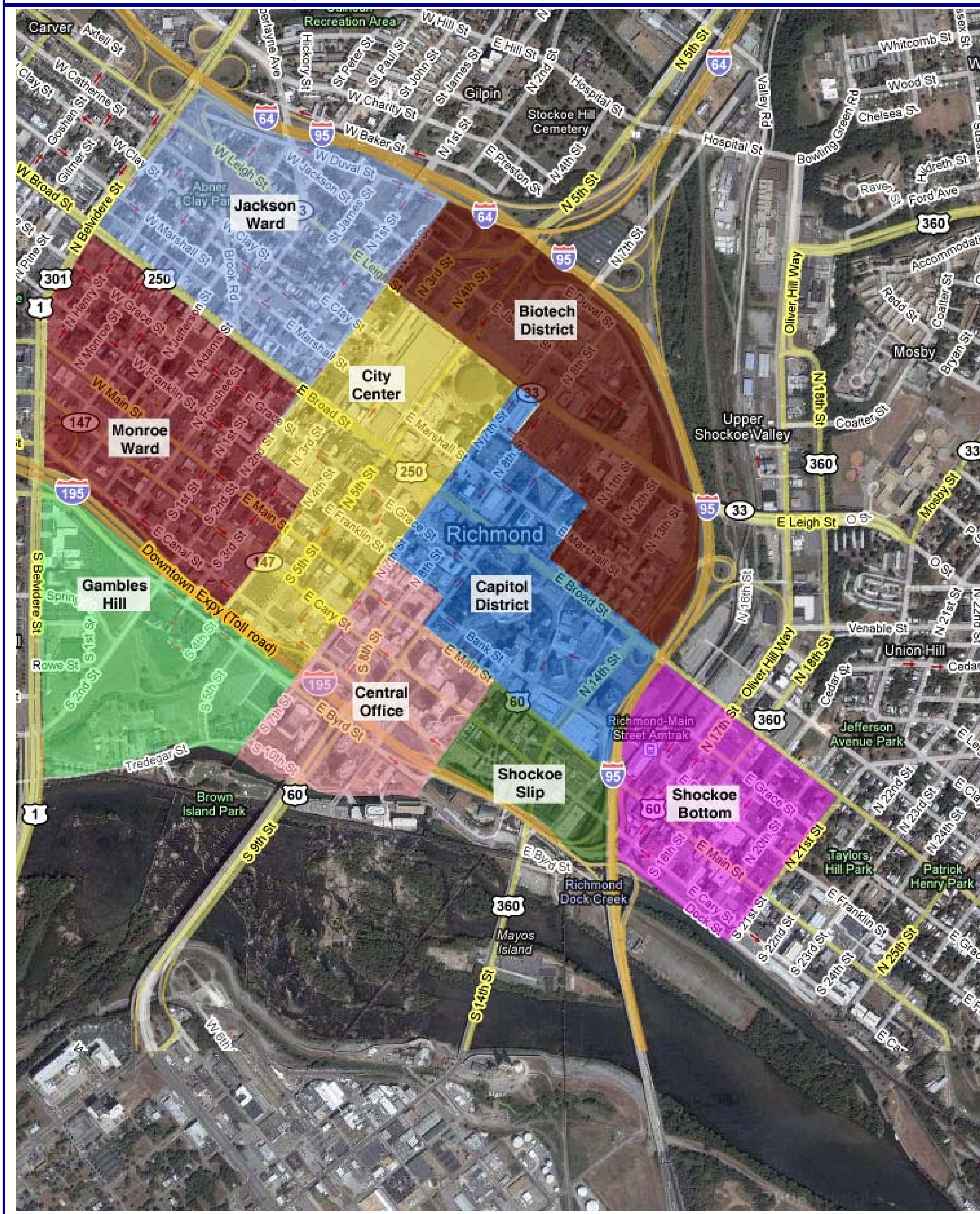
- On the south by the James River
- On the west by Belvidere Street
- On the north by I-64/I-95 highway and then I-95 when they split
- On the east by I-95 (south) to Broad Street, then south on 21st to the James River

This study area contains nine (9) distinct areas or boroughs. With such a large study area, identifying smaller areas with distinct boundaries and characteristics makes observations and data collection easier to assimilate. These smaller sub-areas include the following:

1. Jackson Ward
2. Monroe Ward
3. Gambles Hill
4. City Center
5. Biotech/MCV
6. Capitol District
7. Central Office
8. Shockoe Slip
9. Shockoe Bottom

The following map shows the entire study area along with identifying each of the sub-areas.

Figure 1: Study Area with Highlighted Sub-Areas



Source: Google Maps, and Timothy Haahs & Associates, 2009

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Each of these sub-areas contains unique and identifiable characteristics. These characteristics create "personalities" that impact the parking environment. For example, an area which has high concentration of businesses may see higher parking occupancy during the day, while an area dominated by residential use will experience higher parking demand in the evening hours, as well as during the weekend. We have highlighted some of the key factors and history for each area, as well as identifying the boundaries we used to define each district.

Jackson Ward (34 blocks)

This area is bound by I-95 to the north, Belvidere Street to the west, Broad Street to the south, and 2nd Street to the east. Jackson Ward is a historic neighborhood that was known at one time as the "Harlem of the south". In the early to mid-1900's it became a thriving business community also known as the "Black Wall Street of America". Early residents included Maggie L. Walker, the first woman to charter and serve as president of an American Bank. The Maggie L. Walker National Historic site is located in her former Jackson Ward home.

The area began to decline in the 1950's as residents moved to different areas and it was cut in half by the construction of the Richmond-Petersburg Turnpike. Many homes became rundown and in disrepair. However, the neighborhood is listed on the National Register of Historic Places and has seen a renewal of interest in the area. Many homes have been renovated and the area has greatly improved in recent years. In addition, the area has been helped by new restaurants and businesses that have opened along Broad Street. Each first Friday of the month (throughout the year), the "1st Fridays Artwalk" is held at night on Broad Street. Art Galleries open their doors to an outdoor party that featuring live music, including jazz and salsa. Local restaurants, bars and coffee shops serve customers who come to the First Fridays Art Walk. Our team experienced the event and the Broad Street area did see a significant spike in pedestrian activity as well as an increase in both on-street and off-street parking demand for this unique event.

Jackson Ward is primarily a residential area located in close proximity to Virginia Commonwealth University. In addition, a significant number of churches reside in the area. The public parking supply contains over 1,000 spaces with the vast majority coming in the form of on-street parking. With no structured parking, and few surface lots, the on-street parking near the residential core is highly utilized throughout the day and evening.

Monroe Ward (43 blocks)

The district west of the Capitol District and south of Broad Street once contained some of the finest residential streets in Richmond. The remaining mansions along Franklin, Grace and Main Streets are evidence of the former grand neighborhood. Monroe Ward is now the target of a renovation and revitalization campaign headed by Historic Richmond Foundation. The area is home to many historic buildings, such as the Jefferson Hotel (pictured at right).

Bound by Belvidere to the west, Broad Street to the north, 4th Street to the east, and the downtown expressway to the south, Monroe Ward is a district located in very close proximity to VCU. As a result of this location, many on-street spaces and surface lots are heavily utilized by

VCU faculty, staff, and visitors alike. Many students also live in the nearby housing and walk to campus.

A wide mix of parking options exist in the area including a large, single parking structure (Jefferson Street Parking Deck) owned and operated by VCU, many on-street spaces, and a plethora of small and large surface lots. Monroe Ward is still far enough away from the central business district (CBD) that it doesn't draw many people frequenting the heart of the city. However, the mix of residential, campus and business demands makes this a popular area with a relatively high and consistent parking demand.

Gambles Hill (7 blocks)

Bound by Belvidere to the west, the downtown expressway to the north, 7th Street to the east, and the James River to the south, Gambles Hill is an area that contains several prominent landmarks including Tredegar Iron Works, Belle Isle, and Brown's Island. It also houses many private parking facilities for major employers such as the Federal Reserve and Ethyl Corporation. In addition, The American Civil War Center at Tredegar Iron Works, commemorating the vital role Richmond played during the Civil War, is located in this district. Only small pockets of public parking exist to serve the Virginia War Memorial and other attractions in the area, including those seeking to enjoy outdoor activities along the James River.

This area doesn't have high levels of demand for public parking. Again, most of the demand in the area is generated by the large employers that provide private parking opportunities. Furthermore, security measures and road restrictions related to both the Federal Reserve and Ethyl Corporation reduce vehicular and public parking activity in the area. During this period of increased construction related to the Federal Reserve, several temporary lots have been set-up. While this creates traffic congestion and potential confusion, this is a temporary issue.

Based on the location of Gambles Hill, and the fact that it is relatively land-locked and surrounded by the James River to the south and the downtown expressway to the north, it does not have significant public parking ramifications for the rest of the city.

City Center (30 blocks)

The City Center area of Richmond generally consists of various businesses including a large concentration of medium-sized office buildings. In addition, the Greater Richmond Convention Center (GRCC) is located in this district. The 700,000 square foot center occupies 5½ blocks and sits adjacent to the downtown Marriott and the newly opened Hilton Garden Inn. The convention center is an integral part of the efforts to restore and revitalize the Broad Street corridor while bringing local, regional, and national visitors and events to downtown Richmond.

This area also contains the largest inventory of public parking in the study area and the highest number of

parking garages. Broad Street bisects this area and separates the office buildings to the south from the convention center and coliseum to the north.

It is bound by 4th Street/2nd Street to the west, Leigh Street to the north, 7th Street to the east, and Canal Street to the South.

Biotech/MCV Campus (22 blocks)

The Virginia Biotechnology Research Park is a partnership between VCU, the City, and the Commonwealth of Virginia to facilitate technology transfer and business development. With plans for continuing growth in this area, along with the parking demand generated by VCU's medicals campus, parking demand will likely increase in the coming years.

Multiple parking structures are present in the area and serve the many user groups, including the J. Sargeant Reynolds Community College and VCU. A few large-scale surface lots are present in the heart of the district. However, additional surface parking was lost when the Phillip Morris Center for Research and Technology was built. With over 600 employees they have their own dedicated parking structure. The United Network for Organ Sharing (UNOS) is located in the Biotech Park and also has its own dedicated parking structure. With its sustained growth plans the Biotech Park is considering adding structured parking to serve their growing parking needs.

The RRHA owns a parcel of land on the northwest edge of the Biotech district near the intersection of Jackson and 2nd Streets (photo shown). This undeveloped piece of land is being utilized as a free surface parking area and is heavily utilized. The parcel is unpaved and is not monitored. This may put the RRHA in a legally precarious situation (especially with vehicular damage) and should either be paved and converted to a fee-based surface parking lot or parking should not be allowed. Recently, this area has been considered as a potential parcel for a mixed-use development. However, given the state of the economy the future use of this parcel remains uncertain.

Bound by 2nd Street to the west, I-95 to the north/east, and Broad Street, Clay Street, and Leigh Street to the south, this is a unique area with many campus-type users that create a dynamic, pedestrian friendly area.

Capitol District (23 blocks)

The boundaries of this district include 7th Street to the west, Clay Street to the north, 11th Street and I-95 to the east, and Main Street to the south.

As the name would suggest, the large Capitol building and related government facilities dominate the center of this area. In addition, Richmond's City Hall, the John Marshall Courts Building, and a new federal building exist in the area. Furthermore, a new performing arts complex, Richmond CenterStage, is scheduled to open this fall. This exciting new project will add bring increased parking demand to this centrally located facility.

Many state-owned parking structures are in this district but are restricted for use only by state employees. The RRHA owned garage, the Coliseum, located in the northern area of the Capitol District is open for public parking and is heavy utilized.

Central Office (16 blocks)

The central office district contains a number of prominent office facilities including the James Center (pictured below), Riverfront Plaza, and Dominion Power. Parking demand and pedestrian activity is high during traditional business hours but drops dramatically in the evening and weekends. This is exacerbated by the absence of retail and restaurant options in the central office area. Without evening and weekend events, the majority of the available parking sits vacant.

Many parking structures are present in this area and most are open for use by the public, including the RMA Expressway Deck. In addition, several large surface lots serve the area. The supply of on-street parking spaces is comparatively limited in the central office district as one-way, high traffic flow characterizes most of the streets.

The boundaries of this district include 7th Street to the west, Main and Franklin Streets to the north, 12th Street to the east, and the James River to the south.

Shockoe Slip (14 blocks)

Shockoe Slip is a historic area founded as a small trading post by William Byrd in the early 1600's and was the commercial center of Richmond and most of the Western part of the State. Shockoe Slip literally rose out of the ashes after retreating Confederate troops burned most of downtown. Railroads and highways in the next century replaced the canals and waterways as major routes of commercial transportation.

In the early 1970's an eclectic group of entrepreneurs and architects sparked the area's second rejuvenation. Shockoe Slip's neighborhood has become a prime example of urban restoration and historic preservation. The slip continues to be a very popular pedestrian area featuring a number of restaurants/bars, small boutiques, and unique shops. With its historical appeal and cobblestone-lined streets it maintains a high level of parking demand throughout the day and evening hours. Surprisingly, parking meters are not present in this area and this may hurt the areas restaurants and shops by minimizing parking turnover rates and eliminating potential parking revenue. Public parking in the Slip consists of three (3) parking garages and eight (8) surface lots

Shockoe Slip boundaries include 12th Street to the west, Main Street to the north, I-95 to east, and the downtown expressway/canal to the south.

Shockoe Bottom (23 blocks)

Shockoe Valley's deep economic roots are seen in its huge tobacco warehouses, factories, shop fronts and the old Market Square (now known as 17th Street Farmer's Market). This area is bound by Broad Street on the north, 21st Street to the east, I-95 to the west, and the James River to the south. The Bottom sits in a "valley" between downtown and Church Hill. Coupled with its close proximity to the James River, it is an area that has been the prone to flooding over the years. However, the flood wall completed in 1995 has minimized the potential for future flooding.

The old train station (Main Street Station) near the western edge of the Bottom is a beautiful, historic building and could potentially be used in future parking and multi-modal transportation initiatives. Recently, the possibility of building a mixed-use complex that would potentially house a stadium for the newly acquired baseball team has created some excitement and interest in the area. The team is slated to begin play in 2010 at the Diamond.

Shockoe Bottom is known for its many restaurants and bars on and around Main Street and continues to be a popular place for all age groups. As a result, pedestrian and parking demand is moderate during the day, but is greatest during the evenings and weekends. The parking supply includes surface lots and on-street spaces. Currently no structured parking exists in the area.

The eastern and southern edges of the Shockoe Bottom are dominated by residential development including condominiums and lofts.

Current Conditions

Current Parking Supply

The 210-block study area contained a vast amount of public parking spaces (lots, structures, and on-street). In addition, private supply both in surface lots and structures exist throughout the area. However, early in the process, through discussions with the RRHA, we limited our focus to identifying only those spaces available as public supply. The public supply can be defined as those spaces available to all patrons regardless of reason or location. Private spaces are restricted to specific user groups (i.e. residential only parking areas, state employee parking facilities, etc). Since our focus for this study is to determine the supply and usage of those spaces available to the public the following information pertains only to that supply.

Our collection of the inventory was determined by our team physically collecting the data during our site visits. However, in a few of the larger garages, the space-count information was provided by the operator of the facility. The following section provides a more detailed breakdown of the off-street parking supply, on-street parking supply, and the consolidated supply.

Off-Street Public Parking Supply

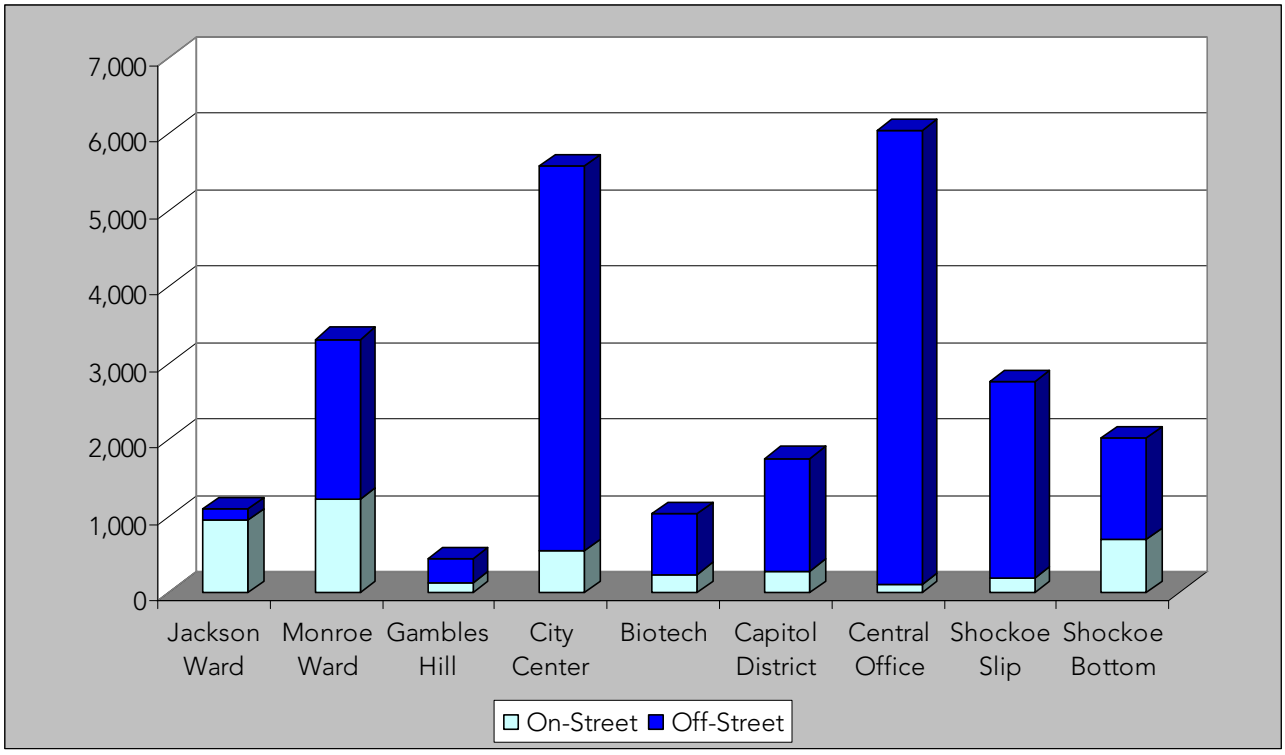
The off-street parking supply for each sub-area is broken down between surface and structured spaces and is summarized in the following table and figure.

Table 1: Off-Street Parking Supply

Sub-District	Off-Street Supply		
	Surface Lot	Structure	Totals
Jackson Ward	150	0	150
Monroe Ward	1,404	690	2,094
Gambles Hill	320	0	320
City Center	1,110	3,916	5,026
Biotech	786	0	786
Capitol District	73	1,401	1,474
Central Office	603	5,326	5,929
Shockoe Slip	524	2,052	2,576
Shockoe Bottom	1,323	0	1,323
Totals	6,293	13,385	19,678

Source: Timothy Haahs & Associates, 2009

Figure 2: Supply



Source: Timothy Haahs & Associates, 2009

The area containing the largest inventory of supply is the central office district with nearly 6,000 spaces. This is not surprising given the higher demand and space requirements associated with office buildings. Furthermore, the greatest number of structured spaces is also located in the capitol district where a higher density typical of a CBD area exists. The Monroe Ward, which is a less dense area, with many smaller office

buildings and residences, contains the highest number of surface lot spaces. The off-street parking supply represents 82% of the total supply in our study area.

On-Street Public Parking Supply

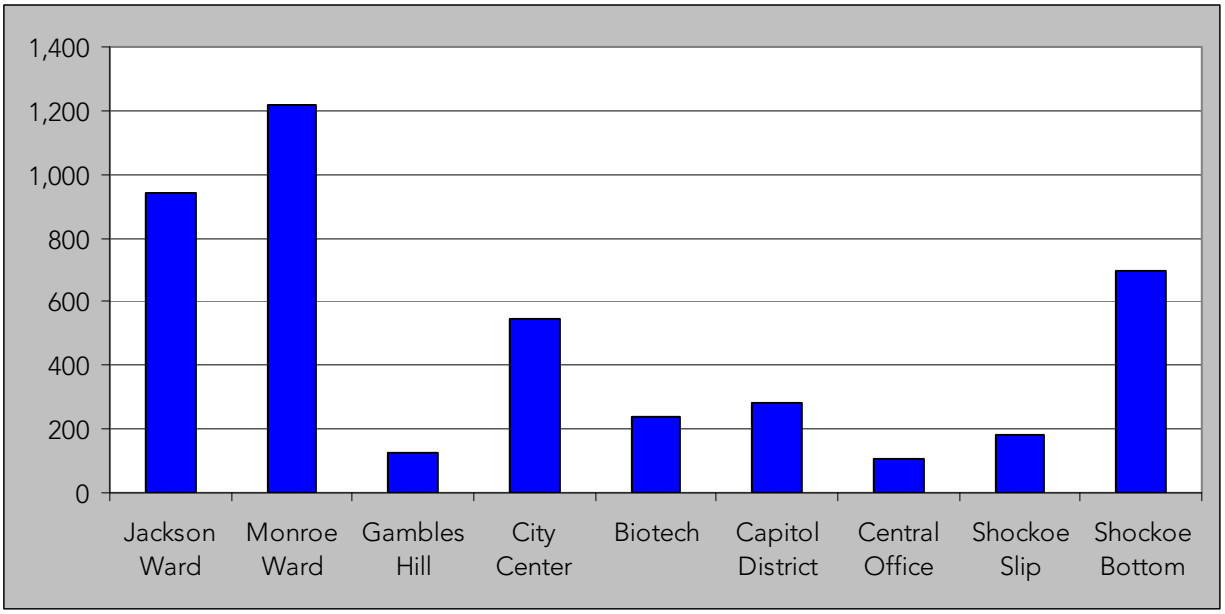
While the on-street supply is extensive, it only represents 18% of the supply within the study area. The total number of on-street spaces (4,339) includes both metered and non-metered public spaces. The spaces marked as reserved for emergency vehicles, loading zones, taxi waiting areas, or other temporary uses, were not considered as part of the public supply. The following table and figure illustrates the on-street supply for each district.

Table 2: On-Street Parking Supply

District	On-Street Parking Supply
Jackson Ward	942
Monroe Ward	1,218
Gambles Hill	123
City Center	549
Biotech	241
Capitol District	283
Central Office	105
Shockoe Slip	184
Shockoe Bottom	694
Totals	4,339

Source: Timothy Haahs & Associates, 2009

Figure 3: On-Street Supply



Source: Timothy Haahs & Associates, 2009

The areas with the highest number of on-street spaces include Jackson and Monroe Wards, and Shockoe Bottom. These areas, once again, all have a significant residential demand component and are less dense

than the areas in the heart of the CBD. It is not uncommon for the residential parking demand in a downtown area to utilize on-street parking spaces to serve the demand, as is the case in Richmond.

Total Parking Supply

The total parking supply is determined by combining the number of both on- and off-street spaces. Based on our data collection, the study area contained a total public parking supply of 24,017 spaces. The breakdown of the supply is shown in the following table.

Table 3: Total Public Parking Supply

Number of Blocks	Sub-Area	Parking Supply On-Street	Parking Supply Off-Street	Totals
34	Jackson Ward	942	150	1,092
44	Monroe Ward	1,218	2,094	3,312
7	Gambles Hill	123	320	443
27	City Center	549	5,026	5,575
22	Biotech	241	786	1,027
23	Capitol District	283	1,474	1,757
16	Central Office	105	5,929	6,034
14	Shockoe Slip	184	2,576	2,760
23	Shockoe Bottom	694	1,323	2,017
210	Totals	4,339	19,678	24,017

Source: Timothy Haahs & Associates, 2009

State Parking Assets

The State owns and controls a significant amount of parking[1] in the study area – most of which is contained in the Capitol District where the vast majority of state employees are located. These garages and surface lots are heavily utilized by state employees during the day but often sit vacant during the evening and weekends once the employees leave for the day. Currently, none of this parking is available for public use[2]. Understandably one of the primary reasons the state prohibits public parking is directly related to security concerns as many of the facilities are located adjacent to or below government buildings. The pictures below show an exterior street view of the 14th and Main Street garage that houses 1,468 spaces. The picture on the right was taken in the evening when we estimated less than 5% of the spaces were occupied. Please note this facility is one of the few state parking facilities that is not directly connected to a government office building.

[1] A map showing the location of these parking facilities is contained in the attached appendix.
[2] Initially the state did have an agreement with the City for public use of a portion of the spaces in the 14th & Main Street garage. However, to date, these spaces and the associated contract have not been enacted.

The following tables summarized the state-owned facilities.

Table 4: State Owned Parking

Lot Number	Type	DGS Owned and Managed Parking Facilities	Total Physical Spaces
1A	Surface	Darden Memorial Garden (Between GAB Bldg & Old City Hall)	34
1B	Surface	Governor Street (east side next to PHB)	9
03	Structure	Bank Street Deck (1201 Bank Street)	221
04	Surface	Closed Portion of Old 14th Street and Grace Street	67
05	Structure	James Monroe Deck (101 N. 14th Street)	624
07	Surface	Governor Street (south end between Grace and Franklin Streets)	32
7B	Surface	Behind Morson Row buildings (215-217 Governor Street)	32
08	Structure	John Tyler Deck (State Corporation Commission)1300 E. Main Street	916
13	Structure	14th and Main Street- 1 North 14th Street	1,468
14	Surface	VDOT- Rear of 1221 E Broad Street, East Side	33
15	Surface	Zincke Building Rear if 1221 E. Broad Street, East Side	101
16	Surface	VDOT- Rear of Transportaition Annex (14th & Broad)	95
17	Structure	James Madison Deck/Lot (119 Governor Street)	365
18	Structure	Supreme Court Garage 100 North 9th Street	30
19	Surface	400 East Cary Street	70
20	Structure	Main Street Center - 600 East Main Street	329
21	Stucture	9th and Franklin- 801 E. Franklin Street	505
22	Structure	7th & Marshall Street Deck-311 North 7th Street	638
25	Structure	Zachary Taylor Deck at Library of Virginia - 900 E. Broad	216
26	Surface*	6th, 7th and Franklin Streets	130
28	Structure	DCLS deck at 4th and Leigh Streets	240
		Total Spaces in Capitol Area Complex	**6,155**

*Surface lot slated to have a new structure with a minimum of 1,000 spaces built.

Source: Department of General Services, 2009

Once the new structure is completed (6th, 7th, and Franklin Streets) they will own and control more than 7,000 spaces. We met on more than one occasion with the Department of General Services that controls these parking assets. They indicated that they may be able to share some of these spaces in the evening if the appropriate guidelines are in place. An example of this cooperative arrangement exists with the CDA for parking spaces to serve the CenterStage complex. The new parking facility planned for 7th & Franklin will allow CenterStage patrons to use a portion of the facility for certain performances. An additional cooperative

agreement at the 14th Street & Main Street garage may be reached if a baseball stadium or other mixed-use development in Shockoe Bottom comes to fruition in future years.

It is our hope that once a new management entity is created they will be able to work in cooperation with the state to share some of the parking assets. However, the State's tax-exempt status and their ability to collect revenue must be carefully reviewed before any such agreement could be reached.

(Note: The State charges $42/month for employee parking. Their stated revenue goals are merely to break even.)

Current Parking Demand/Occupancy

In order to determine the peak demand for each sub-area we performed multiple counts at various times to capture the parking demand based on the unique characteristics of each area. The following table describes the times and dates counts were performed in each area.

Table 5: Occupancy Count Dates and Times

Sub-District	Calendar Date	Day of the Week	Time of Day
Jackson Ward	November 5, 2008	Wednesday	7pm, 10pm
Monroe Ward	November 10, 2008	Monday	10am, 9pm
Gambles Hill	November 10, 2008	Monday	12pm
City Center	November 12, 2008	Wednesday	9am, 1pm
Biotech	January 21, 2009	Wednesday	10am, 2pm
Capitol District	January 21, 2009	Wednesday	10am, 2pm
Central Office	January 21, 2009	Wednesday	10am, 2pm
Shockoe Slip	November 7th and 8th, 2008	Friday, Saturday	2:30pm, 8pm
Shockoe Bottom	November 7th and 8th, 2008	Friday, Saturday	3pm, 8pm

Source: Timothy Haahs & Associates, 2009

Note: In three areas (Biotech, Capitol District, and Central Office) we initially scheduled and performed counts on November 11th, not realizing it was Veteran's Day. These three areas contain high numbers of state, federal, and bank employees not present during a holiday. As a result, we performed additional data collection in January to capture occupancy counts in those areas. The original counts were skewed from the slow holiday traffic and therefore are not included in our occupancy statistics. Additional evening and weekend observations were conducted throughout the study area to further understand parking patterns.

In agreement with RRHA representatives, we selected days/hours of data collection for occupancy counts based on the characteristics of each area and our professional experience. Office areas (City Center, Biotech, Capitol District, and Central Office) peak during the weekday in either late morning or early afternoon. Areas with high residential uses (Jackson and Monroe Ward) peak during the evening hours when people have returned home from school or work. Entertainment and restaurant areas (Shockoe Slip, Shockoe Bottom) peak on Friday or Saturday during the evening hours.

The following information provides the occupancy data collected. Once again, we have broken down the information to show off-street, on-street, and total occupancy statistics[3].

[3] Complete occupancy statistics are contained in the attached appendix.

Off-Street Parking Occupancy

The peak off-street occupancy observed during out counts is summarized in following table.

Table 6: Off-Street Occupancy

District	Total Supply	Peak Occupancy	Percentage Occupied
Jackson Ward	150	9	6%
Monroe Ward	2,094	1,329	63%
Gambles Hill	320	90	28%
City Center	5,026	3,292	66%
Biotech	786	630	80%
Capitol District	1,474	1,392	94%
Central Office	5,929	4,919	83%
Shockoe Slip	2,576	1,025	40%
Shockoe Bottom	1,323	301	23%
Totals	19,678	12,988	66%

Source: Timothy Haahs & Associates, 2009

The peak occupancy averaged just 66%. However, the Central Office, Biotech, and Capitol Districts all experienced high off-street parking demand of greater than 80%.

- The Jackson Ward occupancy percentage (6%) is somewhat misleading. There is only one off-street public parking lot located in Jackson Ward and it is a paid parking lot. Since on-street parking is free, most users opt to park on the streets which have a higher utilization. Further, the peak hour is during the evening when most residents are present. Most, if not all of those users park along the street.

- Gambles Hill is isolated from the downtown core demand and thus has lower off-street occupancy levels (28%). Also, the two primary demand generators, the Federal Reserve and Ethyl Corporation, have their own private parking facilities. We also included in our counts the parking available for the "Virginia War Memorial's Shrine of Memory" which was not heavily utilized during our daytime counts.

- Shockoe Slip is also a bit misleading with a low occupancy percentage. The on-street parking (shown in the following section) was completely full with illegally parked vehicles pushing the occupancy above 100%. The structured parking was where the majority of vacancies existed bringing the occupancy percentage down. Field observations performed at 11pm on Friday, November 7th saw increasing occupancy in both the surface lots and the garages.

- The Shockoe Bottom has off-street parking facilities that charge a fee so users overfill the free on-street spaces first. The 23% occupancy for off-street spaces is further skewed because of the large, 519-space VCU parking lot that isn't utilized by students and faculty in the evening. The off-street occupancy number increases from 23% to 44% when we omit this lot from the occupancy statistics. Furthermore, we performed additional field observations at 10pm and 12am on Friday, November 7th. During these observations the core lots near the demand generators were fully occupied while the outer lots were still sparsely occupied. The total off-street occupancy in these later hour observations were estimated to be at 50 – 60%. The parking dynamics in Shockoe Bottom would inevitably change if a baseball stadium or mixed-use development is ever built. The supply would certainly change with diminished surface parking and parking demand would likely increase, especially on game days. Any development in the Bottom is merely speculative and structured parking may be built in conjunction with any new development.

On-Street Parking Occupancy

The on-street parking occupancy included all metered and non-metered parking available to the public and is illustrated in the following table.

Table 7: On-Street Occupancy

District	Total Supply	Peak Occupancy	Percentage Occupied
Jackson Ward	942	588	62%
Monroe Ward	1,218	1,075	88%
Gambles Hill	123	122	99%
City Center	549	489	89%
Biotech	241	275	114%
Capitol District	283	387	137%
Central Office	105	135	129%
Shockoe Slip	184	220	120%
Shockoe Bottom	694	721	104%
Totals	4,339	4,012	92%

Source: Timothy Haahs & Associates, 2009

Note: The sub-areas that experienced peak on-street occupancy of greater than 100% represent illegally parked vehicles.

As evidenced by the total average occupancy (92%), the on-street parking had a much higher utilization rate than the off-street facilities. This can be attributed to several key factors:

1. In many areas, on-street parking is free.
2. Enforcement, even in metered areas, is sporadic. As evidenced by our first-hand examples: we parked in different parts of the city for periods between 30-60 minutes (or longer) without receiving a ticket. In one instance it took over 5 hours to receive a ticket in an on-street spot with a 2-hour maximum time limit. This space was located in a highly active area in the Shockoe Slip.
3. On-street parking is intended to provide short-term parking conveniently located adjacent to a place of business or residence and is therefore preferred over off-street parking options.

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Total Parking Occupancy

The total parking occupancy includes the combined peak parking for on- and off-street parking throughout the study area. The summary of the occupancy percentage including the peak time is contained in the following table.

Table 8: Parking Occupancy

District	Total Supply	Peak Occupancy	Percentage Occupied	Peak Time of Day
Jackson Ward	1,092	597	55%	7pm
Monroe Ward	3,312	2,404	73%	10am
Gambles Hill	443	212	48%	12pm
City Center	5,575	3,781	68%	10am
Biotech	1,027	905	88%	10am
Capitol District	1,757	1,779	101%	10am
Central Office	6,034	5,054	84%	10am
Shockoe Slip	2,760	1,245	45%	8pm
Shockoe Bottom	2,017	1,022	51%	8pm
Totals	24,017	17,000	71%	---

Source: Timothy Haahs & Associates, 2009

Key Points Regarding Occupancy:

- Overall, the Capitol District had the highest combined occupancy percentage at 101% peaking at 10am. This percentage indicated illegally parked vehicles in on-street spaces.

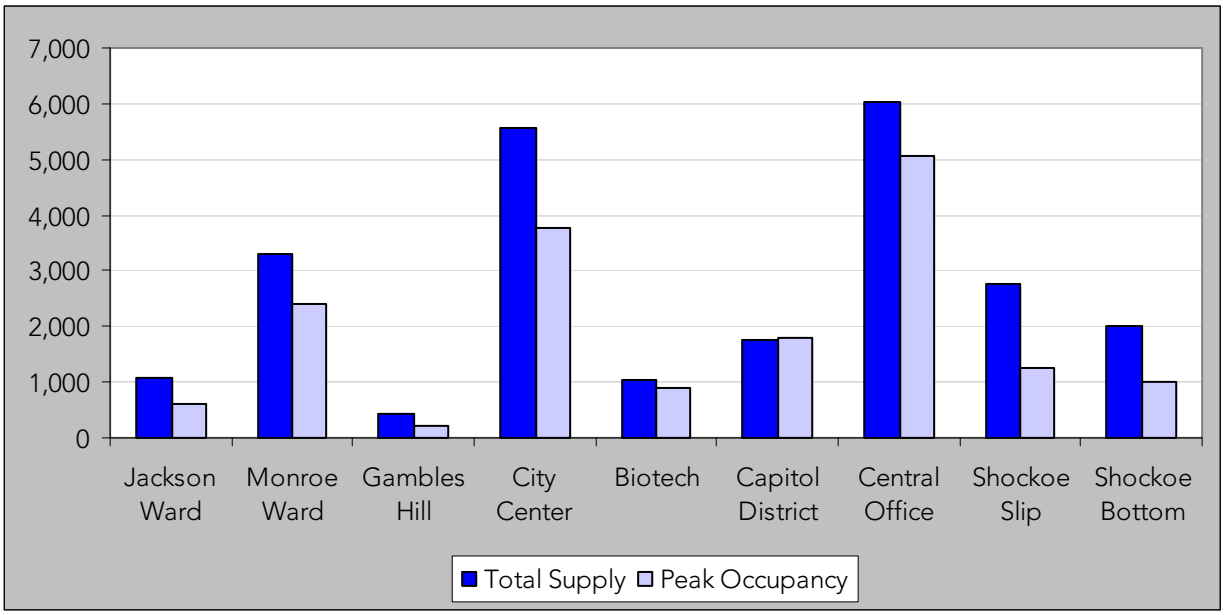
- Shockoe Slip surprisingly had the lowest occupancy at peak; just 45% of the total supply was occupied. However, this is reflective of the tendency to first seek a free on-street space. The on-street occupancy percentage was 120%. The overwhelming majority of vacant spaces were found in the three garages located in the Slip. At 8pm on Saturday night, the three garages had a combined occupancy of just 39% (806 of the 2,052 spaces). It is logical to assume occupancy increased in the later evening hours on both Friday and Saturday evenings. Regardless, several public parking structures are within a block of this area and never reached full occupancy. Please note, while there may be sufficient vacant supply available, the parking management practices in place (free parking) encourage on-street use and discourage motorists from parking in off-street locations. As a result, the perception of the parking conditions in this area are much worse than they actually are as many vehicles circle the district's one-way streets to find a free on-street parking space. Drivers who search for on-street parking spaces increase pollution, traffic congestion, and the potential for pedestrian/vehicular conflicts.

- The occupancy in the Shockoe Bottom generally followed the same pattern as the Slip. The on-street supply was completely full (free parking), but the surface lots, especially those located further from the core of the Bottom (lots near Broad Street) were poorly utilized.

- The Central Office area, where several of the largest office complexes are located, had 84% of its supply occupied at peak.

Graphically, the supply and demand is shown in the following figure.

Figure 4: Supply & Demand Summary



Source: Timothy Haahs & Associates, 2009

Current Parking Adequacy

The study area contains 24,017 public parking spaces. The combined peak demand (occupancy) in these spaces was determined to be 17,000. The current parking adequacy results in a surplus of approximately 7,000 spaces. The only sub-area experiencing a current parking shortage is the Capitol District with a 22-space shortage. The current parking adequacy is summarized in the following table.

Table 9: Parking Adequacy

Sub-Area	Total Parking Supply	Peak Observed Demand	Surplus/Deficit
Jackson Ward	1,092	597	495
Monroe Ward	3,312	2,404	908
Gambles Hill	443	212	231
City Center	5,575	3,781	1,794
Biotech	1,027	905	122
Capitol District	1,757	1,779	(22)
Central Office	6,034	5,054	980
Shockoe Slip	2,760	1,245	1,515
Shockoe Bottom	2,017	1,022	995
Totals	24,017	17,000	**7,017**

Source: Timothy Haahs & Associates, 2009

As indicated in the table above, the entire study area contains a surplus of 7,017 public parking spaces. Though pockets of heightened demand exist, this is generally a problem only in small areas during peak daytime hours. Plenty of parking is available in the evening and with a better plan to share parking assets among private and public operators this could be even more efficiently utilized. We can conclude, based on

current conditions, that construction of new parking is not required. Moreover, the pedestrian friendly, dense, urban feel the City desires would not be served by adding more parking.

Based on present conditions, including supply, demand, and adequacy, there currently is not a need to add new parking facilities in the study area. There is however, a strong need to more effectively manage and unify the public parking assets while improving mass transit options. This will be examined more closely in later sections.

Metered Parking

The on-street supply is fragmented with numerous areas of free, non-metered spaces along with areas where meters are present. In addition, there are many areas where meter heads have been removed but the old single-space meter poles still remain. At the very least this is unsightly and shows the uncertainty of the strategies used in recent years with regards to properly managing, pricing, and locating metered parking.

Meter Rates

It is important to charge rates commensurate with other similar cities. For this exercise we selected a random sampling of 10 cities around the country. To accurately compare rates, our research focused on the meter rates located within the CBD of each municipality. The following table summarizes the rates and is sorted by population. These rates are current as of May, 2009. *(Note: the population is reflective of the city-proper and may not reflect the population of the surrounding suburbs.)*

Table 10: Meter Rate Comparison

Municipality	Hourly Rate	Population*
Columbia, South Carolina	$0.50	124,818
Norfolk, Virginia	$1.40	234,220
Buffalo, New York	$1.00	272,632
Pittsburgh, Pennsylvania	$2.00	311,218
St. Louis, Missouri	$1.00	354,361
Raleigh, North Carolina	$0.50	375,806
Minneapolis, Minnesota	$2.00	377,392
Cleveland, Ohio	$0.75	438,042
Baltimore, Maryland	$0.75	636,919
Charlotte, North Carolina	$1.00	671,588
Average (exluding Richmond)	**$1.09**	**379,700**
Richmond	**$0.50**	**202,002**

*Population based on U.S. Census Bureau 2007/2008 Estimates.

Source: Timothy Haahs & Associates, 200t

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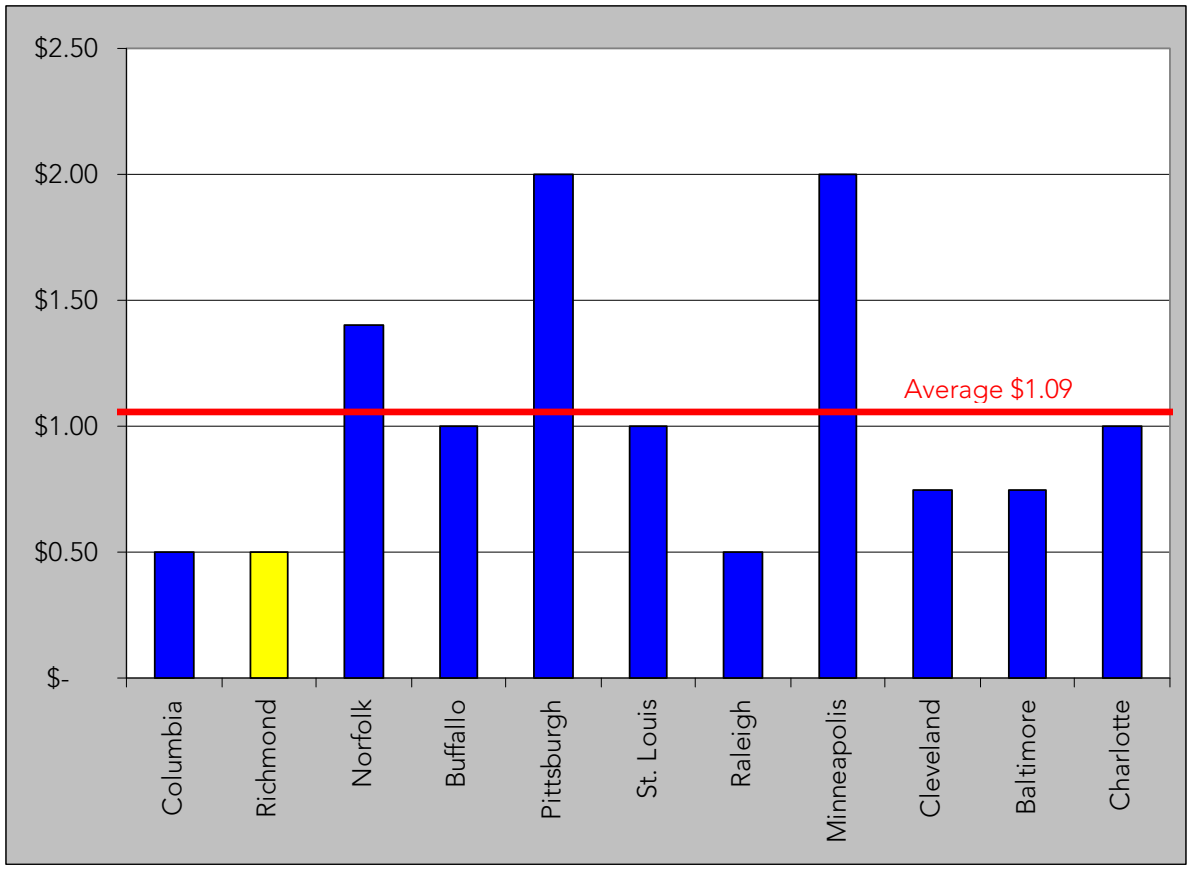
Figure 5: Population and Meter Rates



Source: Timothy Haahs & Associates, 2009

The Richmond meter prices, averaging $0.50 per hour in the CBD, are lower than the average ($1.09) of the 10 sample cities we contacted. This raises the possibility of considering a rate increase for the meters in the CBD. The ideal rate is reached when the occupancy consistently hovers around 85%. Based on the occupancy[4] of the meters in Richmond's CBD further bolsters the argument to raise rates. The parking occupancy in on-street spaces during our peak counts were well over 100%. An increase in price would help reduce the high occupancy percentage while promoting turnover.

However, one unfortunate consequence of raising rates is the potential need to improve the meter technology to accept more than just coins. It isn't reasonable or practical to assume most motorists who may park on-street will have a pocket full of coins. In fact, our team experienced this first hand on more than one occasion. We parked at a vacant metered space, had credit cards and bills, but did not have the necessary fee in coins to pay the required amount for the duration of our stay. Further, there were not any nearby change machines or other places to get change. As a result, we parked illegally (for at least a portion of our stay) and only received one citation. Unfortunately, during our numerous visits and data collection efforts,

[4] Complete on-street occupancy statistics are shown in later sections of the report.

many vehicles were noted as not paid, expired, or illegally parked without any form of citation. As non-residents we were fairly confident that we would not receive a citation during our stay. It is our understanding that many residents and regular users of the downtown on-street parking spaces may also be aware of the enforcement practices.

Recommendations for Metered Parking

- Properly locating metered parking near areas of high demand is critical to ensure available spaces, promote turnover, and to improve the parking revenue for the City. A perfect example of where meters should be present is the Shockoe Slip. The Slip has highly utilized on-street parking that is currently devoid of meters. This popular dining and shopping neighborhood presents an ideal example of where metered parking should be installed to encourage frequent turnover of parking[5]. Merchants may initially be opposed to metered parking based on the thought that charging for parking will deter customers. However, this is a flawed thought process. Installing meters and charging the appropriate price can encourage turnover and help create vacancies for customers. Currently, employees, construction vehicles, or others can utilize the on-street spaces in the area for free and without time limits. We recommend that Shockoe Slip be outfitted with meters. Further, the cost to enforce time restrictions without any time or fee requirement is labor intensive. Any revenue generated by the addition of meters would help off-set those enforcement costs which are currently being subsidized. Since this area is highly active on weekdays and weekends, we recommend 7 day paid parking. Similarly, this area is heavily utilized all hours and should have a fee for all hours.

- Shockoe Bottom is another area where we recommend installing meters. The peak on-street demand in the Bottom (shown in later sections) exceeded 100%. Installing meters in the Bottom would once again create more turnover, free up space, and generate revenue that would help pay for the upfront equipment expense. Like Shockoe Slip, the hours for enforcement should correspond with peak demand hours in this area. In particular, evening and weekends when the restaurants and clubs are open. Should the City eventually go forth with the construction of a new baseball stadium, the hours of enforcement should also correspond with game times in order to maximize revenues and off-set enforcement costs.

- An effective strategy to encourage merchant and residential support for parking meters is by creating parking districts. The revenues generated from the meters go directly back into the district or neighborhood to beautify streetscapes, improve sidewalk conditions and lighting, support the cost to regularly enforce parking rules and regulations, and to maintain and plant new landscaping.

- If and when new meters are installed the two primary technologies we would likely recommend include: pay-and-display or multi-space meters (pictured at right). Either option can be fitted to accept coins, dollar bills, and/or credit & debit cards. Pay & Display Meters are a single unit that replaces multiple meters and is generally best used for on-street parking so issues such as lining and numbering of spaces is unnecessary. The customer may park their vehicle and proceed to the pay station. The customer pays for parking at the pay station and receives a receipt to be placed face-up on the dash of their vehicle. This receipt indicates the start and end of the time purchased. Time limits are enforced by checking the receipt on the dash. Multi-space meters are most appropriate in surface lots with limited points of exit/entry. Either option would provide a cleaner

[5] Please see attached article "Turning Small Change Into Big Changes" by Douglas Kolozsvari and Donald Shoup, in the Appendix.

appearance and are easier to implement. On-street parking revenues typically increase 30 - 40% after the installation of such devices while decreasing the instances of costly and time consuming meter repairs[6].

As part of this study, and related to potential interest in new on-street parking equipment and technology, we were asked by the mayor's advisors to provide information and feedback from municipalities that have implemented some form of new parking meter technology (preferably pay-and-display) by replacing older technology. We identified and spoke with representatives from the following municipalities:

1. Clearwater, Florida – The city installed pay-and-display machines in their off-street lots in June 2008. The following are key points from Clearwater:

    a. The ability to accept multiple forms of payment including coin, currency, and credit/debit cards has been very well received and is very convenient.
    b. The have an all day option which is preferred over having to return to the meter and keep filling up a meter every couple of hours.
    c. The units are solar-powered which saves electricity.
    d. Revenues are up though an exact percentage was not identified.
    e. They have saved over $500,000/year in labor expenses by reducing the enforcement and maintenance hours. These savings helped to off-set the initial equipment costs.
    f. They did not do as much advanced marketing or advertising of the new equipment as they should have and this caught some people off-guard. However, they did use "ambassadors" to patrol the lots and help people understand the new technology. They were also more lenient in the first few weeks with decreased enforcement efforts and fewer citations were issued as they transitioned to the new technology. They felt this was extremely beneficial for public support of the new equipment.
    g. The only complaint early on was from people paying for parking, but forgetting to properly display the tag on their dashboard. They had to develop a refund process for users who were ticketed during a time when they had a valid receipt and supporting documentation.
    h. Overall they have been very pleased with the equipment and public reaction

2. Boulder, Colorado – The city installed pay-and-display machines for the on-street spaces in their 110-block CBD in 2007. The following are key points from Boulder:

    a. Convenience, not to increase revenue, was the primary reason for making the switch to pay-and-display technology. Like Clearwater, they realized the ability to accept credit cards was necessary for most customers.
    b. They used ambassadors throughout downtown to help inform and use the new equipment. They did find some users over the age of 45 struggled with the technology.
    c. They purchased approximately 200 machines. This was more than the minimum number recommended by their vendor but they felt purchasing more machines (and less walking distance) proved to be the proper decision.
    d. They have been pleased with the equipment and vendor.

3. Lake Placid, New York – The city installed pay-and-display machines for both on- and off-street spaces in the center village area (see attached article in the appendix). The following are key points from Lake Placid:

    a. Convenience of multiple forms of payment, especially credit/debit cards.
    b. Revenue increase of 19% thus far.
    c. Increased revenue partially due to fewer maintenance related issues.

[6] Please see attached articles discussing Lake Placid.

d. They did experience some service related issues in the early stages with the lack of proper signage and the need to improve the meter backlighting.

It seems the primary reason these municipalities made the switch to pay-and-display technology was the ability to accept multiple forms of payment, including credit cards. In addition, while these example cities appear to be pleased with the new technology, they admit there were some initial issues related to negative public reaction. It stands to reason that a properly designed marketing campaign, leniency during the initial introduction period, and properly staffing the areas where new equipment is installed are keys to minimizing the negative reaction. The end goals of introducing this type of on-street parking equipment are generally focused on greater payment convenience for users, increased revenues, and decreased maintenance issues.

- Richmond does have some meters that allow payment via cell phone. However, the system is not friendly for infrequent users. In attempting to utilize the technology we were required to set up an account online with a $5.95 annual fee and a 10% surcharge to any phoned-in meter charges. As computer access is required to set up the account, it is not practical for visitors. Further, the additional charges discourage cost sensitive customers from utilizing the service.

- The ideal on-street occupancy in a metered area is 85%. This ensures high utilization (turnover) while also ensuring vacant spaces are available for customers. This occupancy percentage can be reached through various pricing strategies. Once the price point helps attain this 85% occupancy percentage then the price is correctly poised for the market. Based on this concept, rates should be increased throughout the Richmond CBD until the desired occupancy is reached. If and when rates are increased, a diligent effort to monitor occupancy percentages should be performed. It is important to understand that obtaining and maintaining the optimal occupancy will require regular monitoring. While this may require some additional effort, the time required to actively manage the optimization process can be significantly reduced using modern equipment (pay and display/pay by space) as both technologies provide reporting for utilization. Further, if desired, the parking meter equipment can also be programmed to automatically adjust parking rates for various days and times (variable pricing) according to demand. Variable pricing is a relatively new strategy for parking pricing despite being used in other common businesses (i.e. the cost of movies during peak hour versus matinee, toll road fees during rush hour versus non-peak hours, even home energy costs during peak versus non-peak hours). While variable pricing may be a newer concept to parking, it should not be ruled out as it is a highly effective way to efficiently manage parking resources.

- Areas with high demand, such as the west end of Monroe Ward (closest to Belvidere), near the VCU campus, should be metered and properly enforced. Again, this improves on-street parking revenues in these traditionally high demand areas that currently provide free parking but require parking enforcement. Based on our conversations with VCU officials, the student parking that overflows into the surrounding neighborhood is an issue. Student parking on the VCU campus is not free so the tendency to seek out nearby free parking is logical, especially for students with little income. Converting these streets to metered parking with appropriate enforcement levels will increase parking revenue for the City, reduce student parking abuse in Monroe Ward, and improve parking revenue for VCU as more students will be more likely to use campus parking facilities.

- Areas where empty poles remain exist sporadically throughout the study area. The picture at the right is near 5th & Main Street in the City Center district. In discussing this with City officials, we were told the meters have been removed, installed, and sometimes removed again in various areas of the study area. If the meter heads have been removed permanently due to roadway and/or safety issues the poles should be removed and the holes filled in. If it was just the meter head that was

removed and it is a high demand area, the head should be replaced. If it has a low demand, it should be monitored – and can be left for now (if standing erect and not knocked down). These empty poles further augment the case for considering multi-space meters. As future changes to the downtown area occur, demand may increase or decrease in pockets where rates, time limits, or even the need for meters could change. Multi-spaces meters reduce the number of poles required and make necessary changes much easier to implement.

- On-street ADA/Handicapped spaces are currently free and without time limit in Richmond. However, according to the ADA there are no federal laws or requirements pertaining to on-street spaces. We recommend that all such spaces have a time limit to ensure these spaces turnover more frequently and are available for all disabled or handicapped drivers. The current system provides the opportunity for misuse. According to Steve Bergin, Acting Operations Manager, this time-limit change is already being reviewed.

- This study did not include a meter enforcement survey that would determine capture rates, but based on our observations of the on-street metered parking throughout the study area, capture rates appear very low. Additional enforcement officers and/or the implementation of newer technology would improve the capture rate for citations[7]. Capture rate refers to the percentage of illegally parked vehicles that are cited for parking violations including expired time, violating a maximum parking time, parking in a handicap space, etc. The long held industry standards for capture rates include the following:

  - Average capture rate: Mid-to-high 20th percentile
  - High capture rate: Mid-to-high 30th percentile
  - Low capture rate: Rates in the teens

Again, based on our experiences parking in the study area, Richmond is not realizing a high capture rate. The one citation we received allowed on-line payment. Allowing such payment options is an excellent way to increase timely and full payments by allowing credit card payments. Our experience with the payment system was user friendly.

Contract Meter Enforcement Information

The City of Richmond contracted Lanier Parking Meter Services, LLC to "provide Parking Enforcement, Meter Collections, Maintenance, Replacement, and General Parking Management Services" commencing July 29, 2005 and expiring on June 30, 2006. The contract stipulated the City had an option to renew the contract for up to four (4) one-year renewal terms. Key points of the contract include the following:

- The contract may be terminated by either party with ninety (90) days written notice by certified or registered mail.

- The City may terminate the contract for the vendor's failure to perform its obligation, following a reasonable period to time to cure the alleged problem, not to exceed sixty (60) days during the initial term or thirty (30) days in any renewal term.

- Capital equipment purchased shall remain the property of the vendor until June 30, 2009, at which time it shall become the property of the City. Given the date indicated in the contact the City now owns the equipment listed in exhibit G of the contract.

- Any defective meter must be repaired or replaced within twenty-four (24) hours of a report of failure.

- The contract stipulates "all monies collected from parking meters and/or pay stations will be deposited daily into an account authorized by the CITY". Also, a daily cash report (DCR) summarizing all meter

[7] Staffing information contained in a later section.

collections by 11:00am the day following the collection and deposit. Based on these stipulations within the contract, an audit should be conducted to ensure the deposits are being made on a daily basis and to confirm the daily cash report is being received each day following the deposit. These reports would be helpful in identifying any irregularities or issues as well as to ensure appropriate accounting procedures are being followed. Conversely, these reports may also confirm Lanier Parking is properly performing its contractual obligations at the time when renewal is being considered.

- Staffing was estimated to include the following:

  - On-Street Manger: 1
  - Assistant On-Street Manager: 1
  - Maintenance Technicians: 2
  - Collections Specialists: 2
  - Enforcement Officers: 18
  - Dispatcher 1

  It's important to note these are only estimated numbers. The City may want to revise future contracts by requiring specific staffing minimums to ensure proper & consistent enforcement is being administered throughout the city. Furthermore, all staffing should be reviewed if additional meters are added (as recommended in this report) to ensure proper collection levels are being achieved. It is logical to assume additional enforcement officers would be necessary if a significant number of new meters (and longer collection hours) are installed. However, improved meter technology such as pay-and-display may allow the same number of enforcement officers to patrol a much larger area.

- Payment terms of the contract include reimbursing all reasonable expenses incurred in providing services and a monthly management fee of 3.0% of all on-street parking revenue collected.

The following table provides a breakdown of the financial performance of on-street parking[8] in Richmond. *(Note: The 2009 financial statistics shown in Tables 11 and 12 do not include revenues from the entire fiscal year. The information reflecting the entire year has been requested and may be included in a future revised report.)*

Table 11: On-Street Parking Information

	Annual Revenues		
Fiscal Year	Meters	Paystation	Total
FY 2005	$ 411,768.57	$ -	$ 411,768.57
FY 2006	$ 412,801.86	$ 29,853.88	$ 442,655.74
FY 2007	$ 459,598.70	$ 93,433.13	$ 553,031.83
FY 2008	$ 608,947.08	$ 95,728.61	$ 704,675.69
FY 2009	$ 570,802.00	$ 76,197.95	$ 646,999.95
Total	$ 2,463,918.21	$ 295,213.57	$ 2,759,131.78
Average	$ 492,783.64	$ 59,042.71	$ 551,826.36

Source: City of Richmond, 2009

While the table above represents actual revenue from the meters, it does not include statistical and financial information pertaining to citations. Along with Lanier, the Richmond Police Department also writes parking citations. Citation collection rates for municipalities average between 70 – 80%. According to Lanier, since 2/26/2006, their collection rate has consistently been towards the high end of the range at a reported 80%. TimHaahs did not audit the reported collection rate, although the information contained in the following table appears to confirm the collection rate.

[8] Information obtained from the City of Richmond and may include portions of the city not in our study area.

The following table provides an overview of the citation production and value.

Table 12: Citation Overview

Period	Number Lanier Issued Citations	Number RPD Issued Citations	Total Number of Citations Issued	Total Amount of Citations Issued	Total Number of Citations Paid	Total Amount of Citations Paid
FY 2005	84,893	18,807	103,700	$ 3,309,342.00	85,539	$ 3,220,319.00
FY 2006	88,767	18,862	107,629	$ 3,441,037.00	89,088	$ 3,079,567.00
FY 2007	77,485	18,936	96,421	$ 3,118,441.00	80,663	$ 2,901,552.70
FY 2008	78,515	20,680	99,195	$ 3,272,653.00	81,882	$ 2,814,458.00
FY 2009*	68,530	15,116	83,646	$ 2,826,631.00	66,499	$ 2,401,703.00
Total	398,190	92,401	490,591	$ 15,968,104.00	403,671	$ 14,417,599.70

*FY2009 contains only 10 months of information-May and June were not provided at the time of this report.

Source: City of Richmond, 2009

The City may also wish to thoroughly investigate new technologies already available for improving the ease and effectiveness of on-street enforcement programs. One such technology utilizes a drive-by digital chalking enforcement system perfect for time-zone parking management. The system mounts on parking enforcement vehicles and can detect parked vehicles at speeds up to 30 mph without the need to capture license plate information. It utilizes GPS technology, along with vehicle shape and color to record parking duration. The system can be costly, but increases productivity, cuts down on manpower, and is not impacted by weather-related issues. Additional systems utilize license plate recognition (LPR) to quickly identify vehicles and time violations. Some systems also have the potential to electronically issue parking tickets and mail it to the address associated with the registered license plate without the parking enforcement officer ever leaving the vehicle.

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Future Conditions

The future parking conditions of supply, demand and adequacy will be examined in the following sections. This study will include projections for 5, 10, and 15-year horizon periods.

Future Parking Supply

Based on our understanding of future conditions related to the public parking supply there will be few significant changes over the next several years. One change is the elimination of two surface lots containing 129 spaces near the intersection of 7th & Franklin. These spaces were recently removed from the public supply as part of the plans for the new State garage slated for this area. While numerous other changes are inevitable, these are the only confirmed and identifiable losses in the public parking supply within our study area. The following table provides a summary of the future parking supply by sub-area.

Table 13: Future Parking Supply

Number of Blocks	Sub-Area	Current Supply	Future Supply	Difference
34	Jackson Ward	1,092	1,092	0
44	Monroe Ward	3,312	3,312	0
7	Gambles Hill	443	443	0
27	City Center	5,575	5,446	(129)
22	Biotech	1,027	1,027	0
23	Capitol District	1,757	1,757	0
16	Central Office	6,034	6,034	0
14	Shockoe Slip	2,760	2,760	0
23	Shockoe Bottom	2,017	2,017	0
210	Totals	24,017	23,888	(129)

Source: Timothy Haahs & Associates, 2009

Other developments such as the potential baseball field and associated development in the Shockoe Slip could have the potential to significantly impact future conditions. However, we are only stating the known changes at this time. Based on our understanding, the future supply of public spaces in the study area would include 23,888 spaces. Other changes are likely and the list of developments should be regularly reviewed and monitored.

Future Parking Demand

The recently updated *Downtown Master Plan (October 2008)* provided useful information[9] to help us gain a better understanding of the vision cast for the future of Downtown Richmond. One of the primary goals of the Plan is to attain a pedestrian friendly, walkable, dense downtown. Additionally, a desire to reduce vehicular activity and to eliminate or minimize the need for constructing additional parking is also a key part of the plan. If and when parking is built, the desire is to either build below-grade parking or to wrap the street level area with retail, restaurant, or other mixed uses to avoid the blank exterior walls so frequently associated with parking structures. The Master Plan also provided projections for key factors that will have a direct impact on parking and transportation. Included in the master plan was projected growth statistics in

[9] We confirmed the validity of the information contained in the Master Plan with Rachel Flynn, Director of Community Development.

important categories such as population and housing, along with projected office & retail construction and development within the downtown study area.

The first growth area we examined was population and housing. In addition to the Master Plan, we collected information from the U.S. Census Bureau to establish baseline population statistics and to understand growth estimates for the Greater Richmond Metro area. According to the Census Bureau, Richmond experienced a reduction in population between the 2000 count and the estimated count in 2006. However, they estimated a rebound of nearly 5% per the estimated 2008 count. The following table highlights these key statistics.

Table 14: Population Statistical Information

2000 Population	2006 Population (estimated)	Total 6-Year % Change	2008 Population (Estimated)	Total 2-Year % Change
197,790	192,913	-2.47%	202,002	4.71%

Source: U.S. Census Bureau

The Master Plan confirmed that the same population trends expected for the "Greater Richmond area" were commensurate with the trends for the downtown study area in particular. Per the Master Plan, during the 1990's, downtown lost 7% of its population. However, a projected of growth 19% is anticipated to occur in the five years (between 2007 and 2012); an annual average increase of 3.8%. This growth would represent an estimated downtown population of 16,550. Furthermore, over the next 10 years, the report forecasts an additional 4,000 – 6,000 new "dwelling units" are to be constructed in the downtown area. The type of new housing will have a varying effect on parking demand. Condo and loft housing, already popular in the Shockoe Bottom, frequently has dedicated parking available for residents and guests. However, in areas such as Jackson Ward, where row-style homes are popular, a significant portion of the parking demand is met through on-street spaces. In these areas where on-street spaces are needed to meet the demand, residential permit programs should be implemented to ensure adequate parking is available.

Student population, specifically enrollments at Virginia Commonwealth University (VCU), is also on the rise. The MCV campus sits squarely within our study area and though the Monroe Park campus technically sits just outside of our study area, it still impacts parking as a number of students rent apartments and houses in and around the study area. A continued rise in VCU enrollments will likely impact parking demand and occupancy near the areas where the greatest concentration of student housing exist (i.e. western end of Monroe Ward).

The following table summarizes the sustained pattern of growth at VCU for fall enrollments from 2000 – 2008.

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Table 15: VCU Fall Enrollment Statistics

Semester	Campus Monroe Park	Campus MCV	Total	% Change
Fall 2000	20,474	3,447	23,921	---
Fall 2001	21,509	3,406	24,915	3.99%
Fall 2002	22,334	3,511	25,845	3.60%
Fall 2003	23,009	3,676	26,685	3.15%
Fall 2004	24,786	3,783	28,569	6.59%
Fall 2005	25,510	3,886	29,396	2.81%
Fall 2006	26,350	4,102	30,452	3.47%
Fall 2007	27,629	4,278	31,907	4.56%
Fall 2008	27,937	4,347	32,284	1.17%

Source: Virginia Commonwealth University, 2009

Again, the majority of student housing is located outside of the study area (west of Belvidere), but a portion of this continuing pattern of growth (3.67% average annual increase) will invariably impact parking conditions both in and outside of the study area.

Commercial development is another key element that will significantly influence parking demand. While the current state of the economy will likely have a negative influence on new commercial and residential developments in the short-term, our future projections include 5, 10, and 15 year horizons projections. The Master Plan includes the following projections through 2017:

- General office space will increase by 2.2 million square feet
- Retail space will increase by 580,000 – 660,000 square feet

However, it should be noted these projections do include portions of downtown that aren't part of our study area. Specifically, Manchester, an area directly across the James River from downtown, and Hull Street, extending south from Manchester, are included in the projections. In addition, the report extends the Shockoe area an additional 10 blocks to the east of our study area. These areas, outside of our study area, are projected to accommodate 575,000sf (26%) of the new office development. This is summarized in the following table.

Table 16: Projected Office Development through 2017

Area	Projected Office Growth (SF)	Percentage
Central Office District	1,000,000	45%
Shockoe District	450,000	20%
Broad St. Corridor/City Center	175,000	8%
Manchester District	450,000	20%
Hull Street Development	125,000	6%
Projected Office Growth	2,200,000	100%

Source: City of Richmond Downtown Plan Commercial Market Analysis

The retail space projections included in the master plan use "trade areas" that do not accurately reflect our sub-areas and therefore we cannot accurately breakdown the retail development by sub-area.

The Department of Community Development also provided the following information for new residential projects with ground floor retail slated to occur in the next 2 – 5 years[10] within the confines of the study area:

[10] One additional project (called Cold Storage) is to be located outside of our study area between 17th & 19th and Marshall & Clay Streets just north of Shockoe Bottom.

Table 17: Planned Developments (2-5 Years)

Project	Location	Units	Retail
John Marshall Hotel	5th & E. Franklin	238 Condo Units	6,000 sf
Residential Project	E. Broad & Cedar St.	204 Rental Units	8,000 sf
Residental Project	E. Broad & 20th Street	75 Rental Units	4,000 sf
First Freedom Hotel	E. Cary & 14th Street	150 Hotel Rooms	3,000sf

Source: City of Richmond, Department of Community Development

In regards to these four projects, it is our understanding that all but one will have new parking built specifically for its use. The exception is the John Marshall Hotel project which is a rehabilitation project slated to convert the hotel into condominium units. At this time it is unclear if this new project will provide parking. The hotel does have a basement which may be converted to parking as well as an alley that could be utilized for additional parking.

Based on housing increases, population growth, and commercial development, coupled with our knowledge of the area and the information provided by the City of Richmond, the percentages shown in the following table were used to estimate future parking demand increases for each sub-area. These projections growth figures were reviewed by the City of Richmond's Department of Community Development and confirmed as appropriate estimates at the time of this report.

Table 18: Annual Parking Growth Percentages

Sub-Area	Annual Growth Rate
Jackson Ward	0.25%
Monroe Ward	0.50%
Gambles Hill	0.25%
City Center	1.00%
Biotech	1.00%
Capitol District	0.75%
Central Office	1.00%
Shockoe Slip	0.50%
Shockoe Bottom	0.50%

Source: Timothy Haahs & Associates, 2009

- Jackson Ward is a relatively mature area largely comprised of a stabilized residential base. The projected annual increase is attributed to the student growth related to VCU and the continuing revitalization of the housing market in this area.

- Monroe Ward has a relatively stabilized residential base but also has a larger business component than Jackson Ward. In addition, Monroe Ward's proximity to VCU make it a prime area for overflow student parking, especially if the on-street parking in the area remains free (we recommend installing meters in the area adjacent to VCU).

- Gambles Hill doesn't have a residential component and is largely comprised of private office buildings occupying large parcels of land. This is a modest increase that is not expected to have a significant impact on the demand in this area or in the nearby CBD.

- The City Center has several new buildings that have recently opened that are likely to increase the parking demand in this area including the new Hilton Garden Inn and the recent opening of CenterStage.

- The Biotechnology Park/MCV is an area that will likely experience parking demand increases from both patients and students of MCV and J. Sargeant Reynolds Community College. In addition, the Biotech

Park has modest growth plans that will continue to produce an increased demand for parking in the area. The large corporations located in this area (Philip Morris, UNOS) have dedicated parking to help minimize their needs for publicly available parking.

- The Capitol District is a mature business/government area that will likely see most of its growth in additional governmental office uses. The construction of the new state garage may help alleviate some of the projected increases.

- The Central Office sub-area has seen the majority of new office absorption occur as a result of lateral moves by businesses from Class B to Class A office space. However, additional new office growth and absorption is anticipated over the coming years.

- The Shockoe Slip is a fairly mature retail, restaurant, and office area that could see a modest growth pattern for the coming years. Fortunately the Slip has several parking structures that still should be able to accommodate the majority of increased parking needs. We recommend the addition of on-street metered spaces to increase the availability of on-street spaces as fewer motorists may opt to utilize less expensive off-street facilities.

- Shockoe Bottom has seen increased development activity especially with the popularity of warehouse conversions and loft-style living. However, much of this increased parking demand has been met with private supply. The projected parking demand could potentially increase significantly if the baseball stadium or related mixed-use developments come to fruition.

This section will quantify the projected new demand and add it to the existing conditions to develop demand statistics at 5, 10, and 15- year horizons.

Table 19: 5-Year Parking Demand Projections

Sub-Area	Current Peak Demand	Annual Projected Growth Rate	Projected Parking Demand
Jackson Ward	597	0.25%	604
Monroe Ward	2,404	0.50%	2,465
Gambles Hill	212	0.25%	215
City Center	3,781	1.00%	3,974
Biotech	905	1.00%	951
Capitol District	1,779	0.75%	1,847
Central Office	5,054	1.00%	5,312
Shockoe Slip	1,245	0.50%	1,276
Shockoe Bottom	1,022	0.50%	1,048
Totals	17,000	---	17,692

Source: Timothy Haahs & Associates, 2009

We project a 5-year peak demand of 17,692 vehicles for the study area. The projected 10-year demand is shown in the following table.

Table 20: 10-Year Parking Demand Projections

Sub-Area	5-Year Demand	Annual Projected Growth Rate	Projected Parking Demand
Jackson Ward	604	0.25%	612
Monroe Ward	2,465	0.50%	2,527
Gambles Hill	215	0.25%	217
City Center	3,974	1.00%	4,177
Biotech	951	1.00%	1,000
Capitol District	1,847	0.75%	1,917
Central Office	5,312	1.00%	5,583
Shockoe Slip	1,276	0.50%	1,309
Shockoe Bottom	1,048	0.50%	1,074
Totals	17,692	---	18,416

Source: Timothy Haahs & Associates, 2009

We project a 10-year peak parking demand of 18,416 vehicles. The following table summarizes the projected 15-year demand.

Table 21: 15-Year Parking Demand Projections

Sub-Area	10=Year Demand	Annual Projected Growth Rate	Projected Parking Demand
Jackson Ward	612	0.25%	620
Monroe Ward	2,527	0.50%	2,591
Gambles Hill	217	0.25%	220
City Center	4,177	1.00%	4,390
Biotech	1,000	1.00%	1,051
Capitol District	1,917	0.75%	1,990
Central Office	5,583	1.00%	5,868
Shockoe Slip	1,309	0.50%	1,342
Shockoe Bottom	1,074	0.50%	1,101
Totals	18,416	---	19,172

Source: Timothy Haahs & Associates, 2009

We project a 15-year peak parking demand of 19,172 vehicles.

Future Parking Adequacy

The future parking adequacy can be determined by comparing the future parking supply against the future parking demand. The following tables summarize the adequacy of each sub-area as well as providing an aggregate view of adequacy for 5, 10, and 15 years.

Table 22: 5-Year Projected Parking Adequacy

Sub-Area	Total Parking Supply	Current Peak Demand	Annual Projected Growth Rate	Projected 5-Year Demand	Surplus/Deficit
Jackson Ward	1,092	597	0.25%	604	488
Monroe Ward	3,312	2,404	0.50%	2,465	847
Gambles Hill	443	212	0.25%	215	228
City Center	5,446	3,781	1.00%	3,974	1,472
Biotech	1,027	905	1.00%	951	76
Capitol District	1,757	1,779	0.75%	1,847	(90)
Central Office	6,034	5,054	1.00%	5,312	722
Shockoe Slip	2,760	1,245	0.50%	1,276	1,484
Shockoe Bottom	2,017	1,022	0.50%	1,048	969
Totals	23,888	17,000	---	17,692	6,196

Source: Timothy Haahs & Associates, 2009

Based on the adequacy shown in the above table, the entire study area is projected to have a surplus of over 6,196 spaces. However, the Capitol District is estimated to have a small 90-space deficit that may be absorbed through effective transportation and parking management strategies. Furthermore, the new state parking structure planned for the area near 7th & Franklin may be able to absorb some of this demand as employees are shifted from the Capitol District to the City Center sub-area.

Table 23: 10-Year Projected Parking Adequacy

Sub-Area	Total Parking Supply	5-Year Projected Demand	Projected Growth Rate	Projected 10-Year Demand	Surplus/Deficit
Jackson Ward	1,092	604	0.25%	612	480
Monroe Ward	3,312	2,465	0.50%	2,527	785
Gambles Hill	443	215	0.25%	217	226
City Center	5,446	3,974	1.00%	4,177	1,269
Biotech	1,027	951	1.00%	1,000	27
Capitol District	1,757	1,847	0.75%	1,917	(160)
Central Office	6,034	5,312	1.00%	5,583	451
Shockoe Slip	2,760	1,276	0.50%	1,309	1,451
Shockoe Bottom	2,017	1,048	0.50%	1,074	943
Totals	23,888	17,692	---	18,416	5,472

Source: Timothy Haahs & Associates, 2009

The study area is projected to have an overall surplus of nearly 5,472 spaces as shown in the 10-year adequacy projections. Once again, the only deficit remains confined to the Capitol District sub-area.

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Table 24: 15-Year Projected Parking Adequacy

Sub-Area	Total Parking Supply	10-Year Projected Demand	Projected Growth Rate	Projected 15-Year Demand	Surplus/Deficit
Jackson Ward	1,092	612	0.25%	620	472
Monroe Ward	3,312	2,527	0.50%	2,591	721
Gambles Hill	443	217	0.25%	220	223
City Center	5,446	4,177	1.00%	4,390	1,056
Biotech	1,027	1,000	1.00%	1,051	(24)
Capitol District	1,757	1,917	0.75%	1,990	(233)
Central Office	6,034	5,583	1.00%	5,868	166
Shockoe Slip	2,760	1,309	0.50%	1,342	1,418
Shockoe Bottom	2,017	1,074	0.50%	1,101	916
Totals	23,888	18,416	---	19,172	4,716

Source: Timothy Haahs & Associates, 2009

The study area as a whole is projected to have a parking surplus of over 4,716 spaces based on the 15-year adequacy estimates. The small deficit projected for the Biotech area (-24) does not account for any new parking supply being added. During our discussions with Biotech Park C.E.O. Robert Skunda, he indicated the Park would seek to add additional parking supply if and when it becomes a critical issue.

With our understanding of future conditions, the projected adequacy indicates Richmond will likely not be required to construct new parking facilities. These projections could vary if significant development or other factors unforeseen at this juncture occur in our study area.

Transportation Initiatives

The City is considering several promising transportation demand initiatives. These initiatives include a bus rapid transit (BRT) system along the Broad Street corridor, downtown circulator, a multi-modal transportation hub located in the Main Street Station in Shockoe Bottom, and a potential return to electric street cars. These initiatives all seek to reduce vehicular traffic and congestion while providing a more convenient mass transit system for residents and visitors.

The BRT would eliminate the numerous bus stops along Broad Street allowing for more on-street spaces. Specific information about the proposed BRT was found on the GRTC's (Greater Richmond Transit Company) website:

"This service concept is the culmination of past studies in a phased approach to providing efficient, high capacity transit in the Broad Street corridor. The project is conceived in two phases, with the first phase concentrated on the more urban portion of the Broad Street corridor between Rocketts Landing and Willow Lawn. The second phase is intended to consider the westward extension of the BRT corridor to the Short Pump area of Henrico County".

Under this initiative, the current Broad Street median would be converted to serve as a dedicated transit lane for the BRT to quickly move riders along the route. Additionally, an upgraded system to provide real-time arrival and other information has been considered as part of this system.

The current bus system does not provide a circulation route within the downtown area. During this study we met with Shockoe Slip business owners and employees who expressed frustration over the lack of such a

service. They specifically cited the difficulty conventioneers (without use of vehicle) have to move within the fabric of downtown. A circulator could also be utilized by employees and residents of downtown while potentially minimizing personal vehicular use.

A potential return to electric streetcars has long been a popular idea, and in 2002, GRTC helped fund a feasibility study to determine projected costs and potential routes for the downtown area. A follow-up study was performed in 2004 to further refine the original routing plans and to develop funding strategies. Richmond used to have street cars and some of the infrastructure, including portions of the underlying rail systems, is still in place. GRTC may potentially be eligible to receive federal transit funds to help off-set the associated costs[11]. Regardless, the high costs for returning to a streetcar system should be carefully weighed against all of the positive aspects of such a transit system. A street car not only provides transportation options but could minimize vehicular use and provide character and charm to the downtown area.

A multi-modal transportation hub could potentially serve a variety of entities including cab service, light rail, bus transfer, BRT, heavy rail, rental vehicles, streetcars, and others. This facility could become the transportation focal point to serve Richmond. The Main Street Station (and shed) is ideally located in the Shockoe Bottom adjacent to downtown.

Each of these transportation initiatives could help to activate the streets and help the city become a more pedestrian friendly downtown – some of the key goals of the Master Plan.

Parking System Strategic Management Plan

The City of Richmond currently operates its parking assets under the control of various entities. By all definitions these entities are operated independently from one another. First, it is important to understand and clarify what each of these entities are; what directives they were originally created to perform; and what assets they manage. The entities which hold a partial stake in the operation of parking assets include: Richmond Metropolitan Authority (RMA), Richmond Redevelopment & Housing Authority (RRHA), Broad Street Community Development Authority (CDA), Economic Development Authority (EDA) and the City of Richmond itself.

Richmond Metropolitan Authority (RMA)

The Metropolitan Authority was officially formed by an act of the General Assembly in 1966. The purpose of the RMA was to construct and manage a downtown expressway(s). The expressways would provide an option to the narrow, congested city streets while making commuting to the downtown area more attractive from the suburban areas of Greater Richmond. The increased accessibility to downtown provided by the expressways created additional parking demand in the downtown area. As a result, the original legislation creating the RMA was amended to allow them to provide parking facilities for the metro area. In 1975, the Second Street parking deck opened under the umbrella of the RMA to provide additional parking supply to the downtown area.

[11] Capital costs for the initial streetcar line estimated at $51,000,000 (in 2007 dollars).

In 1984 another legislative amendment allowed the RMA to construct and own a baseball stadium. The $8 million "Diamond" opened and was the new home to the AAA baseball team, the Richmond Braves. The Braves departed Richmond in 2008. However, the City just recently announced the AA Connecticut Defenders will be relocating to Richmond in time for the 2010 season. It is our understanding this team will once again be playing at the Diamond.

In 1991 two additional parking decks were constructed by the RMA in the Carytown area to help address the lack of parking in this popular shopping/boutique district. Each of these decks houses 110 spaces and they still continue to provide free parking to the Carytown area. While these facilities provide no revenue stream they have begun to deteriorate and could potentially create a financial concern as they require restoration.

The final parking asset operated by the RMA was developed to serve the projected growing need for parking in the heart of downtown. In 1992, the 1,000-space Expressway Parking Deck opened (pictured at right). This facility is conveniently located near key entry and exit points from the downtown expressway.

RMA Asset Overview:

1. Downtown Expressway & user tolls
2. Powhite Parkway & user tolls
3. Boulevard Bridge & user tolls
4. Second Street Parking Deck (350 spaces)
5. Expressway Parking Deck (1,000 spaces)
6. The Diamond (future home of the AA baseball team)
7. Carytown Deck (2-110 space decks; free parking)

During our meeting with Jim Kennedy, the RMA director of operations, he commented on the lack of a centralized parking entity in Richmond and was strongly in favor for the formation of such an organization. *A Board of Directors governs the RMA and consists of 11 members. Six are appointed by the mayor of the City of Richmond, with the approval of the Richmond City Council. The Boards of Supervisors of Chesterfield and Henrico Counties each appoint two members, and one ex-officio member is appointed by the Commonwealth of Virginia Transportation Commissioner. (Source: RMA Website).*

It seems as though the RMA was initially created from a need for highway-type infrastructure and, as an afterthought, parking was introduced into the mix. Because of the RMA's heavy interaction with multiple counties, including Henrico and Chesterfield, we do not feel that they are well suited to be in charge of City of Richmond parking.

Richmond Redevelopment & Housing Authority (RRHA)

The Authority was established by the Richmond City Council in 1940. Since that time the RRHA has focused on its primary mission statement "to be the catalyst for quality affordable housing and community revitalization". Based on this mission statement alone it may seem odd that revenue producing parking assets would fall under this definition. However, the RRHA does own several parking assets in the downtown study area. These assets include the Coliseum Garage, Shockoe Plaza Garage. In addition, they own land in the Biotech area, near 2nd and Jackson Streets, which is being used as free, surface parking. This free, unmanaged "parking" is a liability and fiscal concern.

RRHA Assets Overview:

1. Coliseum Garage (921 spaces; picture inset)
2. Shockoe Plaza Garage (550 spaces)

It seems as though the RRHA, which was formed primarily to serve as an engine to provide affordable housing, had parking introduced under its purview as an afterthought.

Broad Street Community Development Authority (CDA)

The Broad Street Community Development Authority (CDA) was formed in 2002 with the unanimous support of the City Council. The primary reason for the CDA was a need to provide positive infrastructure improvements in and around the Broad Street corridor. With the newly created convention center and plans for additional development it was critical to provide additional funding to make necessary changes. The CDA was initially formed with several primary tasking including:

- Construct surface parking near Broad Street
- Renovate three existing parking decks (listed as assets below)
- Construct two surface parking lots
- Demolish the 6th Street Marketplace
- Upgrade public utilities
- Improve and increase landscaping and streetscaping

Bonds were issued to fund the above changes with the intention of parking revenue being the primary source to pay off the debt. These bonds are currently in poor financial shape as we will examined in more detial later in the report.

The boundaries of the CDA district are defined as follows:

- Broad Street between 5th and 7th Streets;
- Grace Street between 5th and 7th Streets;
- 5th Street between Marshall and Grace Streets;
- 6th Street between Marshall and Grace Streets;
- Marshall Street between 5th and 7th Streets.

CDA Assets Overview:

1. 5th & Marshall Deck (969 spaces)
2. 7th & Marshall Deck (620 spaces)
3. 6th & Franklin Deck (94 spaces)
4. 7th & Grace (surface lot)
5. 5th & Broad (surface lot)

The CDA is the only entity formed with parking as part of the original structure. However, the boundaries for the CDA do not encompass all areas of downtown Richmond.

Economic Development Authority

The entity now known as the EDA was originally formed as the Industrial Development Authority (IDA) through legislation adopted by the city council in 1972. The initial stated goal of the IDA was to promote industry and develop trade. Legislation later changed the IDA into the Economic Development Authority (EDA). The current mission statement of the EDA is to "stimulate and support economic development with the City of Richmond for businesses and citizens".

The EDA owns a small parking lot at the corner of 2nd Street and Marshall Street in Jackson Ward. Recently, the EDA issued an RFQ seeking development opportunities for this site. This lot is believed to be the only parking-based entity currently controlled by the EDA.

City of Richmond

The City has a large, revenue producing parking asset in on-street parking. Presently this asset is outsourced and managed by Lanier Parking. Unfortunately some negative media attention has recently focused on the enforcement officers allegedly accepting food and beverages from vendors in turn for not citing parking infractions.

In conclusion, each of these present day entities were formed for specific reasons OTHER than parking. Over time the inclusion of parking assets has become a detriment to the proper management and financial vitality of these assets. We understand and realize each entity has proprietary feelings towards their assets. However, it was interesting that during our meetings, everyone agreed about the need for, and potential benefits of, a centralized management entity.

Management Options

A considerable number of parking assets exist in the downtown study area. However, the numerous entities controlling these assets create a bureaucratic nightmare in which no single person or group is the "go-to-person". From a management standpoint this is not the most efficient system to manage parking. We strongly believe it is imperative for the City to take the proper steps towards developing a centralized parking operation in which all the assets are controlled and managed by one agency. This is one of the most logical and necessary steps to take for the City to improve the operation of its public parking assets.

A number of different parking management methods could be employed in Richmond. During our meetings with Richmond officials, we identified three primary options. To assist the City with the decision making process and to determine which option would best serve the City of Richmond; the following section outlines these options.

Parking Department

A parking department or agency is a municipal entity under the umbrella of city government. It is formed as either a separate department or as a division of an existing department such as Public Works, Transportation, General Services, or even the Police Department.

One advantage of a parking department is the minimal administrative changes needed to consolidate activities from multiple entities into an existing department. Additionally, few changes are needed from a

personnel standpoint as the majority of employees retain their job functions, titles, and benefits, with little impact where unions are involved. Also, the revenue streams can continue to flow to either the General Fund or other designated City fund.

One key disadvantage with a parking department is the proper allocation of adequate funding for the parking needs. Since parking departments generally direct all revenues to the general fund these funds are often allocated to other projects that parking would be competing with. Frequently parking does not receive the proper attention or funds under this option to either build new facilities or to restore existing assets. With few employee and ideological changes from the existing conditions, the type of significant improvements and consolidation of assets needed in Richmond would unlikely be achieved through the formation of a parking department. The formation of a parking department may also lead to political agendas that don't necessarily focus on parking best practices and sound business decisions.

Examples of municipalities that operate a parking department include:

1. Tampa, FL
2. San Francisco, CA
3. Orlando, FL
4. Gatlinburg, TN
5. Coral Gables, FL

Parking Authority

A parking authority is generally created with a singular focus on parking. However, in most municipalities, the formation of a parking authority requires state and sometimes city-based legislation. However, once this process has been completed, an authority would yield the type of significant control over parking assets that is needed in Richmond with the following key advantages and characteristics:

- A Board of Directors governs the authority with a recommended 5 members serving to provide guidance to the staff, maintain fiscal responsibility, and set policy (including rates).
- Self appointed members normally come from within the business community and those with vested interest in the vitality of the city. Unfortunately the appointment process may become political and without regard for the individuals with the most experience and knowledge.
- An Executive Director is appointed ideally with extensive parking or related management experience. This individual would report to the board.
- May either keep all of the revenue generated or may give a set amount back to the general fund (as done by the Miami Parking Authority, where after operating expenses and capital work expenditures the remainder goes to the City of Miami's general fund).
- City council and/or the Mayor's office approve the budget after the Parking Authority board has approved it.
- The required time to create an authority depends entirely on the legislative process. It can be quite long and require extensive lobbying efforts.
- After the authority is established it can work independently from the political process and therefore make swift changes if and when needed (i.e. to purchase equipment, make staffing changes, change pricing strategies, etc.).
- An authority has the power to issue bonds to finance projects. However, a City may be required to guarantee the bond and may also have better bond rates.
- Hiring is much quicker for an authority than for a municipal body and salary scales can normally be set differently from municipal government scales.

- Can work with City officials to meet long-term goals such as redevelopment, increased development, connectivity with transportation initiatives, and to encourage pedestrian activity.

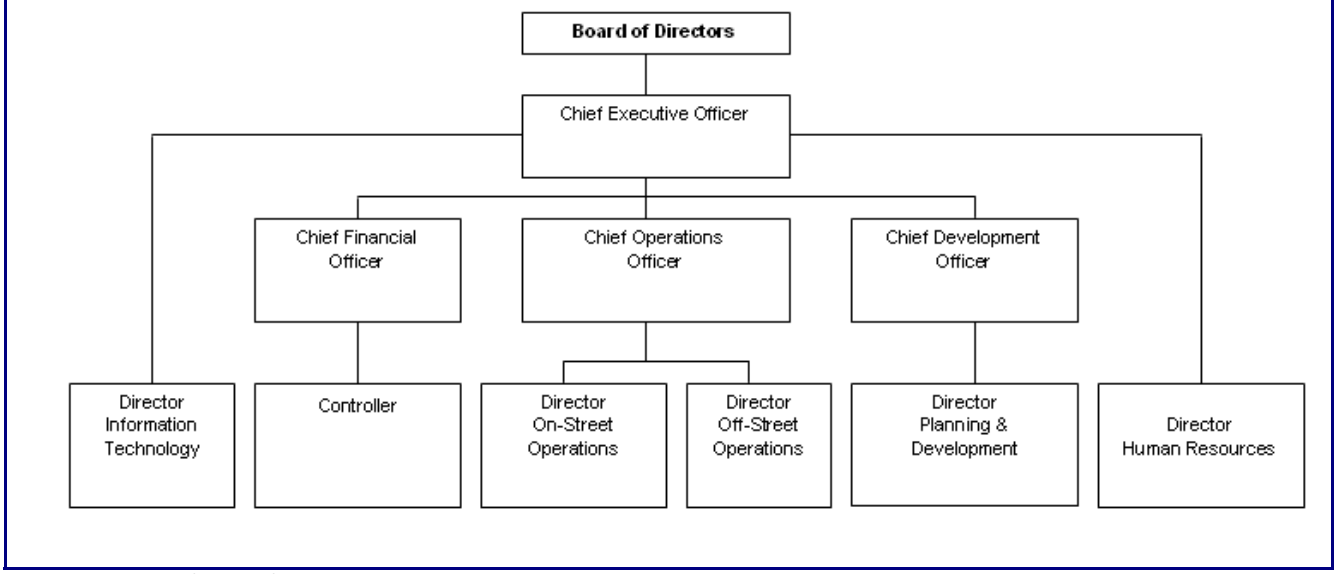
Establishing a Parking Authority in Richmond would provide an excellent opportunity to combine the parking under one house where revenues, expenses, and parking assets can be properly managed.

Examples of municipalities that operate a parking authority include:

1. Miami, FL
2. Baltimore, MD
3. Philadelphia, PA
4. Pittsburgh, PA
5. Albany, NY

The following figure shows the current organizational chart for the senior administration of the Miami Parking Authority (MPA). This is typical structure with the Board of Directors (consisting of five individuals) at the top.

Figure 6: MPA Organization Chart



Source: Miami Parking Authority, 2009

Enterprise Fund

An enterprise fund possesses nearly all of the same characteristics of a parking authority. An enterprise fund is defined as a government service that is self-supporting through the collection of fees associated with operating its assets - in this case, parking. However, since as enterprise fund is not independent from the city it may become slightly more bureaucratic and possess the following key characteristics:

- Reports directly to Mayor.
- May have bonding power depending on how it is originally formed.
- Can keep all the revenues in house, contribute excesses to the general fund, or may loan money to the general fund in an interest bearing loan agreement.
- More saddled with political red tape than an authority

Two of the largest differences that separate an enterprise fund from a parking authority are the inability to approve its own budget and setting/changing parking rates. To accomplish these tasks requires approval from the city council.

Examples of municipalities that operate a parking enterprise fund include:

1. Norfolk, VA
2. Ft. Lauderdale, FL
3. Sacramento, CA
4. Virginia Beach, VA
5. Ft. Worth, TX

Management Option Recommendation

Establishing a Parking Authority would provide Richmond with the most empowered entity. It is the strongest and most inclusive option. However, the political steps necessary to form the authority, coupled with the City's desire to maintain some oversight over the parking favors the formation of an Enterprise Fund.

As shown in the previous sections, a parking enterprise fund yields nearly the same capabilities as an authority. Forming either management entity (Parking Authority or Enterprise Fund) would allow the city to complete some of the most important goals for the parking system including:

- Allows for a centralized organization.
- Creates financial unity among assets.
- Provides a clear mission statement with a singular focus on delivering parking.
- Providing strong leadership.
- Potentially formed with bonding capacity power for future parking initiatives (construction and renovation).

Regardless of the final choice for a new management entity, the support of the mayor, senior administration, and the city council will be extremely helpful for both the political process and public opinion. *(Note: A one-page summary of the management options is contained in the attached appendix.)*

Parking Initiatives

Obviously creating a parking management entity will be a critical issue the City of Richmond must consider. However, there are a couple of additional key initiatives the City of Richmond may consider to help fuel economic development while still providing the necessary parking infrastructure for both current and future demand. Among the initiatives to consider are forming parking districts and utilizing payment-in-lieu-of parking programs. Each of these is designed to improve infrastructure, create new parking supply, and gain developer and business owner support.

As discussed earlier in the report, an effective strategy to encourage merchant and residential support for parking meters is by creating parking districts. The revenues from parking generated in the area would go directly back into the district or neighborhood to improve parking enforcement technology, beautify streetscapes, improve sidewalk conditions and lighting, support the cost to regularly enforce parking rules and regulations, and to maintain and plant new landscaping. Two ideal areas where parking districts would be feasible are the Shockoe Slip and the Shockoe Bottom. These are already defined and popular areas where we have recommended the installation of parking meters. The installation of meters would provide an avenue to generate the necessary revenue to make some of these proposed improvements.

Payment in lieu of parking programs (PILOP) provide an avenue to earmark revenue for future parking supply[12]. Most municipalities have requirements dictating the amount of parking spaces required to serve new businesses. If a new development is being considered in an area with an existing parking surplus, the developer may bypass constructing the required number of parking spaces by paying a specific amount into a fund. This payment allows the developer to pay a set amount without the need to create potentially expensive parking spaces. The fee is generally based on the type of parking in the surrounding area and the type of use. We have seen fees range from $500 per space to $20,000 per space.

If Richmond creates a new parking management entity, a payment in lieu fund could be created and any funds received through this initiative would be managed by the parking entity. Establishing a fund and properly managing when variances are granted would provide a potential funding source to create new surface or structured supply when and where it is most needed. PILOP's can be an excellent tool that may help both the municipality and the developer.

Wayfinding/Signage

A proper wayfinding and signage program can greatly improve all aspects of a coordinated parking program. While our study area primarily consists of the CBD, the program can and should extend to areas outside of the core downtown. Once a new parking management entity is in place a key goal should be to focus on improving the present wayfinding and signage system. During our meeting with Venture Richmond, we were informed that uniform signage specifications have already been created. A uniform signage program with consistent font, wording, and color scheme is critical in directing motorists to parking assets.

An integral part of the wayfinding system would be to create a more information, intuitive website that has detailed information on key items such as rates, location, hours of operation, and type of facility (structured vs. surface). The need for a comprehensive website is apparent upon a search for general parking information. Some useful does exist on the city's website (found at www.richmondgov.com) but finding maps, rates, and other parking related information requires some searching and it is not completely intuitive nor user friendly.

During initial discussions and meetings with City officials it became apparent a strong perception exists that the downtown lacks adequate parking. We have shown throughout this report that adequate parking does exist. This perception discourages residents and visitors alike from spending more time in the downtown area for shopping, dining, and for attending special events. A well developed wayfinding and signage system will help direct both vehicles and pedestrians to parking facilities and aid in dispelling the notion of inadequate parking in and around downtown Richmond.

Residential Programs

According to Steve Bergin, the Acting Operations Manager, Department of Facilities, indicated the City of Richmond does have a residential parking program. However, the program does not exist within our study area. Maps of the residential parking permit zone for the Fan & Carver Districts are contained in the attached appendices.

The heavily residential Jackson Ward sub-area should consider implementing a residential parking permit program to ensure VCU students are not utilizing the parking spaces intended for the Jackson Ward area residents and their visitors. This is especially important during the late afternoon and evening hours when residents are returning home from work and school.

[12] An article written appearing in Parking Magazine and written by Chris Walls is contained in the attached appendix.

A residential parking permit should be a paid program and the fees associated with the program should help off-set any expenses. The current price for a permit is reasonably priced at $25.00. Any newly implemented areas should require the same fee.

Valuation of Selected Parking Assets

As part of this study we were tasked to quantify the City of Richmond's financial standing regarding the annual net gain or loss attributable to current city owned or controlled parking assets. In this section we will show the most recent full year operating revenues, expenses, and net operating income, as reported by each. In addition, an overview of the bond standing (if applicable) related to each facility will be addressed. This information will help determine whether each asset is self-supporting.

RMA Facilities

Within the study area the Richmond Metropolitan Authority (RMA) operates two parking facilities:

1. Expressway Parking Deck
2. Second Street Parking Deck.

We will examine the financial performance of each. The RMA's most recent fiscal year ended June 30, 2009. However, at the time of this report we have not been provided with complete information covering the 2009 fiscal year. If the city receives this information we may update the financial analysis of the RMA facilities to reflect the two year period covering fiscal years 2008 and 2009. For now, the following information is based on the fiscal year ending June 30, 2008.

Expressway Parking Deck

Table 25: Financial Performance (Expressway Deck)

Operating Revenue	$	1,258,186.00
Operating Expenses	$	883,469.00
Operating Income	$	374,717.00
Long Term Debt Information (Payable to City of Richmond)		
Unpaid Principal	$	18,875,000.00
Unpaid Interest	$	10,376,487.00
Total Bond Indentures	$	29,251,487.00
Annual Principal Payment	$	590,000.00
Annual Interest Payment	$	1,073,233.00
Total Annual Payment	$	1,663,233.00

Source: RMA Annual Report & Timothy Haahs & Associates, 2009

The operating expenses shown in the above table includes a $419,000 payment to the Second Street Deck to help cover a scheduled bond payment. Without the fund transfer the net operating income would have been nearly $800,000. Therefore, based on the positive net operating income, the Expressway Deck appears to be self-supporting. However, once the debt service payment information is considered, the Expressway Deck is not self-supporting and requires payment assistance from the City of Richmond. The bonds have been

refinanced over the years and do have a considerable remaining balance. Under the 1990 and 1998 bond indentures, the Authority is not in a default status[13].

Second Street Parking Deck

Table 26: Financial Performance (Second Street Deck)

Operating Revenue	$	123,334.00
Operating Expenses	$	137,606.00
Net Operating Income	$	(14,272.00)
Long Term Debt Information		
Payable to City of Richmond	$	1,267,206.00
1974 Revenue Bond Balance	$	625,000.00
Total Bond Indentures	$	1,892,206.00
Annual Principal Payment	$	425,000.00
Annual Interest Payment	$	40,283.00
Total Annual Payment	$	465,283.00

Source: RMA Annual Report & Timothy Haahs & Associates, 2009

The Second Street Parking Deck, according to text in their annual report (available on the RMA website), produced sufficient income to cover operating expenses and the interest payment on the 1974 Parking Garage Revenue Bonds. However, based on the financial information provided by the same report and summarized in the above table, it did not have sufficient revenue to cover operating expenses. The inclusion of the required bond payments confirms the Second Street Deck is not self-supporting. It required a cash transfer from the Expressway Deck to make the most recent principal bond payment. Presumably such a transfer and/or City-based assistance will be required in coming years to cover these required payments.

CDA Facilities

The Broad Street Community Development Authority (CDA) operates three parking garages and two surface parking lots in the study area with names based on their locations:

1. 5th & Marshall
2. 7th & Marshall
3. 6th & Franklin
4. 7th & Grace
5. 5th & Broad.

The following summarizes the revenues and expenses of these five facilities for the two fiscal years covering: July 2007 – June 2008; July 2008 – June 2009.

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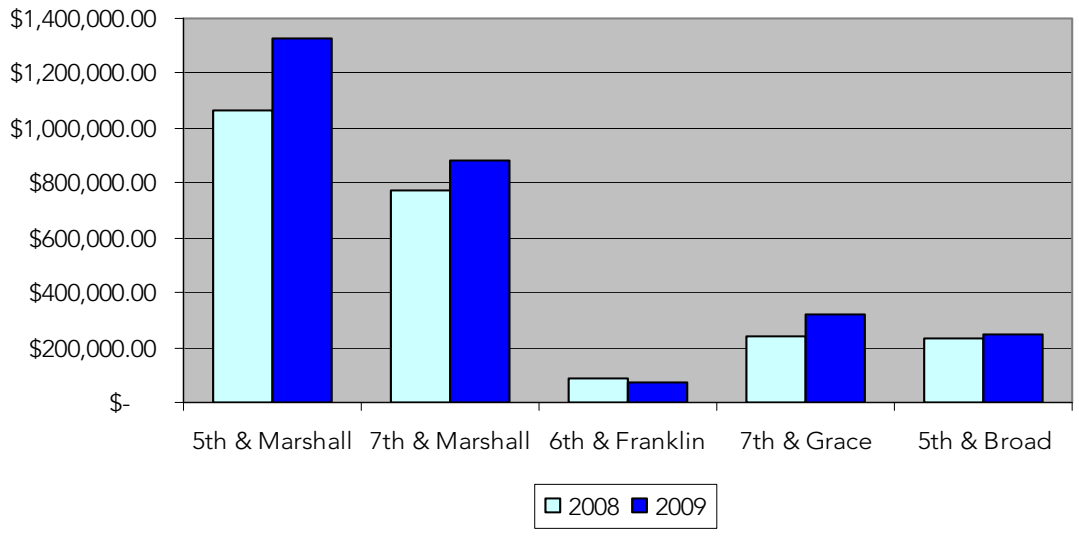
[13] Information found in the RMA Comprehensive Annual Financial Report for the Year Ending June 30, 2008.

Table 27: Financial Performance of CDA Facilities

Period July 1, 2007 - June 30, 2008		Period July 1, 2008 - June 30, 2009	
5th & Marshall		**5th & Marshall**	
Operating Revenue	$ 1,355,777.00	Operating Revenue	$ 1,634,123.00
Operating Expenses	$ 293,882.00	Operating Expenses	$ 306,498.00
Net Operating Income	$ 1,061,895.00	Net Operating Income	$ 1,327,625.00
7th & Marshall		**7th & Marshall**	
Operating Revenue	$ 955,300.00	Operating Revenue	$ 1,110,927.00
Operating Expenses	$ 180,318.00	Operating Expenses	$ 226,138.00
Net Operating Income	$ 774,982.00	Net Operating Income	$ 884,789.00
6th & Franklin		**6th & Franklin**	
Operating Revenue	$ 109,405.00	Operating Revenue	$ 104,275.00
Operating Expenses	$ 25,511.00	Operating Expenses	$ 29,215.00
Net Operating Income	$ 83,894.00	Net Operating Income	$ 75,060.00
7th & Grace		**7th & Grace**	
Operating Revenue	$ 282,146.00	Operating Revenue	$ 362,675.00
Operating Expenses	$ 40,785.00	Operating Expenses	$ 43,568.00
Net Operating Income	$ 241,361.00	Net Operating Income	$ 319,107.00
5th & Broad		**5th & Broad**	
Operating Revenue	$ 274,055.00	Operating Revenue	$ 294,225.00
Operating Expenses	$ 39,845.00	Operating Expenses	$ 43,895.00
Net Operating Income	$ 234,210.00	Net Operating Income	$ 250,330.00

Source: CDA & Timothy Haahs & Associates, 2009

Figure 7: Graphical Comparison of Two-Year Performance



Source: CDA & Timothy Haahs & Associates, 2009

With the entire country experiencing some negative effects of the economy and decreases in revenues, it is encouraging to note that 4 of the 5 CDA parking facilities experienced gains in net operating income over the two years shown above.

Table 28: Consolidated Performance of CDA Parking Facilities

Period July 1, 2007 - June 30, 2008		Period July 1, 2008 - June 30, 2009	
Total Operating Revenue	$ 2,976,683.00	Total Operating Revenue	$ 3,506,225.00
Total Operating Expenses	$ 580,341.00	Total Operating Expenses	$ 649,314.00
Net Operating Income	$ 2,396,342.00	Net Operating Income	$ 2,856,911.00

Source: CDA & Timothy Haahs & Associates, 2009

In 2003, the CDA issued $66.7 million of unrated 30-year revenue bonds, using approximately $45 million of the proceeds to acquire, improve, and build the 5 parking assets. The remaining funds were utilized for the other purposes (as indicated in the CDA description listed in a previous section). Today, the entire $66.7 million principal remains outstanding based on the bond provisions requiring interest only payment for a set number of years. Revenues to support these bonds comes from a variety of sources including a CDA Special Tax District, the revenues of the five parking facilities, as well as a Payment in Lieu of Tax (PILOT) payment from the City. The annual debt service grows to $6.1 million per year with the final maturity in 2033. The City has provided a moral obligation to replenish up to $3 million per year of any required drawing on the debt service reserve fund. In summation, the CDA has been able to make the interest-only payment thus far required, but they presumably will be unable to make the principal payments[14] when those become necessary and therefore, the CDA-owned parking facilities are not self-supporting of the entire debt obligation.

RRHA Facilities

The RRHA owns two parking structures located in the study area referred to as:

1. Coliseum Parking Deck
2. Shockoe Parking Garage.

The following information provides an overview of the finances for these assets over a two year period.

Coliseum Parking Garage

Table 29: Financial Performance (Coliseum Parking Garage)

Period July 1, 2007 - June 30, 2008		Period July 1, 2008 - June 30, 2009	
Operating Revenue	$ 1,287,045.00	Operating Revenue	$ 1,142,758.00
Operating Expenses	$ 306,301.00	Operating Expenses	$ 359,106.00
Management Fee	$ 25,180.00	Management Fee	$ 26,157.00
Net Operating Income	$ 955,564.00	Net Operating Income	$ 757,495.00
Long Term Debt Information		Long Term Debt Information	
Payable to City of Richmond	$ 5,758,000.00	Payable to City of Richmond	$ 5,437,000.00
Total Bond Indentures	$ 5,758,000.00	Total Bond Indentures	$ 5,437,000.00

Source: Standard Parking, City of Richmond, & Timothy Haahs & Associates, 2009

[14] Based on our discussion with the City we understand they may seek to refinance these bonds at a lower interest rate to off-set a portion of the rising costs associated with these bonds.

In 1992 the City issued 30-year General Obligation bonds to provide financing to construct both the Theater Row building and the Coliseum Parking Garage. The RRHA was the developer of these two projects and approximately 1/3 (about $8.4 million) went towards constructing the garage. Today the remaining principal balance is $16,314,597 (approximately $5,437,000 allocated to the Coliseum Garage) with the annual debt service payable semi-annually through 2021. The portion allocated to the parking requires a payment ranging between $560,000 and $693,000 per year. Based on the operating income of this facility it is self-supporting.

Shockoe Parking Garage

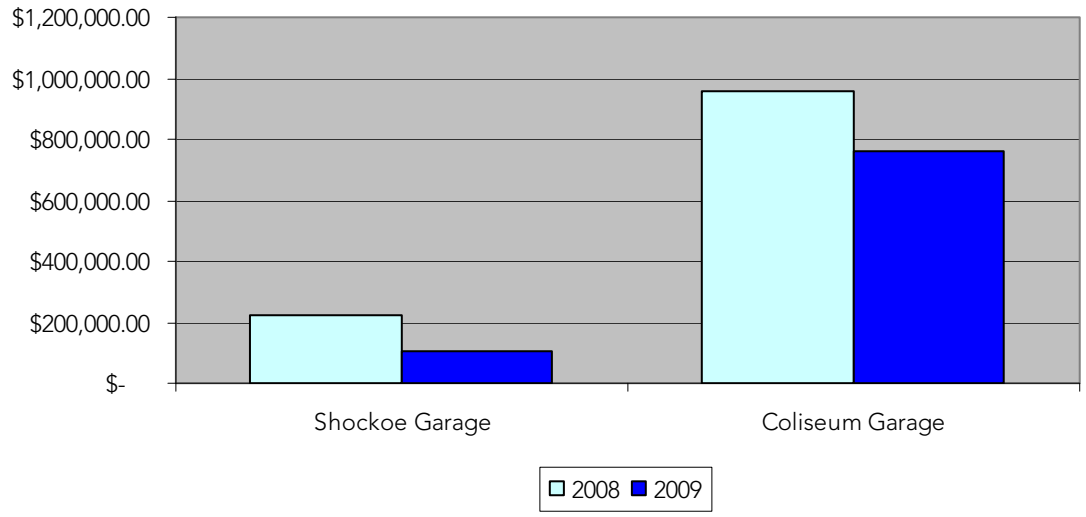
Table 30: Financial Performance (Shockoe Parking Garage)

Period July 1, 2007 - June 30, 2008			Period July 1, 2008 - June 30, 2009		
Operating Revenue	$	651,437.00	Operating Revenue	$	611,527.00
Operating Expenses	$	429,449.00	Operating Expenses	$	506,724.00
Net Operating Income	$	221,988.00	Net Operating Income	$	104,803.00
Long Term Debt Information			Long Term Debt Information		
n/a	$	-	n/a	$	-
Total Bond Indentures	$	-	Total Bond Indentures	$	-

Source: Central Parking System, City of Richmond, & Timothy Haahs & Associates,

As shown in the above figure there is no debt service associated with the Shockoe Garage and with positive net operating income it can be considered self-supporting.

Figure 8: Graphical Comparison of Two-Year Performance of Shockoe and Coliseum Garages



Source: Standard Parking, City of Richmond, & Timothy Haahs & Associates, 2009

Based on the above figure, it is apparent that significant decreases in net operating income for both RRHA garages occurred over the past two years. It is our understanding the Coliseum Garage saw decreased revenues in part due to a recently completed VCU parking garage. The Shockoe Garage also experienced a decrease in revenues (and increase in expenses) over the same two year period. RRHA officials believe the economic downturn played a critical role in the decreasing revenues at the Shockoe Garage as it serves the popular Shockoe Slip entertainment district.

Combining the revenues and expenses of the RRHA parking facilities produces the results shown in the following table.

Table 31: Consolidated Revenues and Expenses

Period July 1, 2007 - June 30, 2008		Period July 1, 2008 - June 30, 2009	
Operating Revenue	$ 1,938,482.00	Operating Revenue	$ 1,754,285.00
Operating Expenses	$ 760,930.00	Operating Expenses	$ 891,987.00
Net Operating Income	$ 1,177,552.00	Net Operating Income	$ 862,298.00

Source: RRHA & Timothy Haahs & Associates, 2009

EDA Facilities

At the time of this report we are waiting to receive a two-year financial history for the EDA parking asset(s). It is our understanding this information has been requested by the RRHA. Upon receipt we will update this section of the report.

Current Conditions of Public Parking Facilities

We performed an on-site appraisal of each publicly owned parking structure noting such key items as general condition, cleanliness, signage, visibility, etc. The following contains the summary of existing conditions for each facility beginning with the RMA facilities.

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Figure 9: Facility Evaluation for the RMA Expressway Parking Deck

Number of Spaces:	1,000
Hours of Operation:	7am - 7pm to the Public Monthly parkers have 24/7 access
Visibility:	Average
Signage:	Poor
Underground:	Yes
Cleanliness:	Good
Number of Entrances:	2
Number of Entry Lanes:	2
Number of Exit Lanes:	3
Number of Levels:	9
Number of Elevators:	2
Payment System:	Cashier
Lighting:	Average
Equipment Manufacturer:	Federal APD
Security:	Good
Perimeter:	Wall
General Condition:	Good
Rates:	Monthly - varies from $90 - $95 Hourly Rate - $2.00 per hour $10.00 daily max
Notes:	Ongoing construction for the new Williams Mullen law office may impact some spaces.

Source: Timothy Haahs & Associates, 2009

Figure 10: Facility Evaluation for the RMA Second Street Deck

Number of Spaces:	350
Hours of Operation:	7am - 7pm to the Public Monthly parkers have 24/7 access
Visibility:	Average
Signage:	Average
Underground:	No
Cleanliness:	Average
Number of Entrances:	3
Number of Entry Lanes:	3
Number of Exit Lanes:	2
Number of Levels:	4
Number of Elevators:	1
Payment System:	Honor Box
Lighting:	Average
Equipment Manufacturer:	Honor Box
Security:	Poor - dark spots throughout
Perimeter:	Wall - not secure
General Condition:	Older deck
Rates:	Monthly - $55.00 $0.60 per hour $5.00 maximum per day
Notes:	Public spaces on ground floor only Monthly spaces are separately gated Deck is showing its age (built 1975)

Figure 11: Facility Evaluation for the CDA 5th & Marshall Parking Deck

Number of Spaces:	969
Hours of Operation:	Facilty is open 24/7
Visibility:	Good
Signage:	Good
Underground:	No
Cleanliness:	Average
Number of Entrances:	2
Number of Entry Lanes:	3
Number of Exit Lanes:	3
Number of Levels:	4
Number of Elevators:	3
Payment System:	Automated Pay Stations/Cashiers
Lighting:	Average
Equipment Manufacturer:	Federal APD
Security:	Fair
Perimeter:	Wall - not secure
General Condition:	Good overall condition
Rates:	Monthly - $95.00 Hourly - $4.00 with daily max of $16.00 Event Parking - $5.00
Notes:	Additional dedicated monthly exit lane from level 3 Nested area on roof (gated separately) Recommend to upgrade lighting Walkways to Marriott and the convention center

Source: Timothy Haahs & Associates, 2009

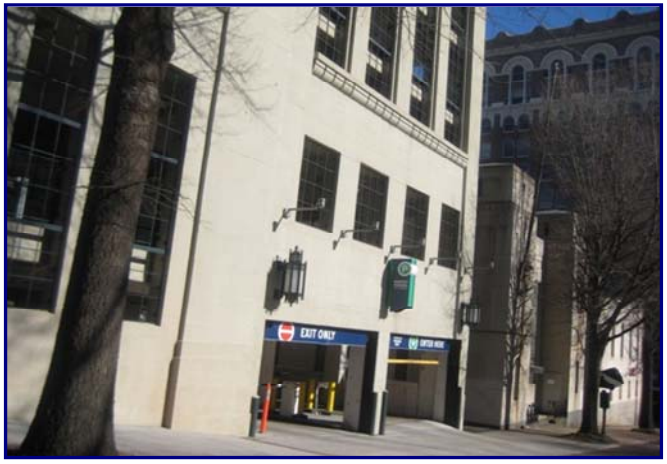
Figure 12: Facility Evaluation for the CDA 7th & Marshall Parking Deck

Number of Spaces:	620
Hours of Operation:	Facilty is open 24/7
Visibility:	Good
Signage:	Good
Underground:	No
Cleanliness:	Good
Number of Entrances:	3
Number of Entry Lanes:	3
Number of Exit Lanes:	3
Number of Levels:	7
Number of Elevators:	3
Payment System:	Automated Pay Stations/Cashiers
Lighting:	Good
Equipment Manufacturer:	Federal APD
Security:	Good
Perimeter:	Gated - secure
General Condition:	Some areas of delamination/Helix is wearing
Rates:	Monthly - $95/unreserved; $110/reserved Hourly - $4.00 with daily max of $16.00 Event Parking - $5.00
Notes:	Double-threaded design Ramp with helix for exiting vehicles Seems to have higher occcupancy from cars entering from the 7th Street side

Source: Timothy Haahs & Associates, 2009

Figure 13: Facility Evaluation for the CDA 6th & Franklin Parking Deck

Number of Spaces:	94
Hours of Operation:	Facilty is open 24/7
Visibility:	Average
Signage:	Poor exterior signage/Good interior
Underground:	No
Cleanliness:	Average
Number of Entrances:	2
Number of Entry Lanes:	2
Number of Exit Lanes:	2
Number of Levels:	2
Number of Elevators:	Not in service
Payment System:	Monthly Only/Proximity readers
Lighting:	Average
Equipment Manufacturer:	Federal APD
Security:	Average (vagrants on upper levels possible)
Perimeter:	Wall - not secure
General Condition:	Average
Rates:	Monthly - $120.00/unreserved; $135/reserved
Notes:	Monthly parking only Upper levels not in service Stairwells should be secured - they were open during our visit



Source: Timothy Haahs & Associates, 2009

Figure 14: Facility Evaluation for the RRHA Coliseum Parking Garage

Number of Spaces:	921
Hours of Operation:	6am - 7pm Monday - Friday
Visibility:	Good
Signage:	Average
Underground:	No
Cleanliness:	Poor
Number of Entrances:	2
Number of Entry Lanes:	3
Number of Exit Lanes:	4
Number of Levels:	5
Number of Elevators:	3
Payment System:	Cashier
Lighting:	Poor
Equipment Manufacturer:	Federal
Security:	Poor with dark areas/Roof elevator towers dark
Perimeter:	Wall & gate - secure
General Condition:	Needs cleaning
Rates:	Monthly - $80.00 Hourly - $4.00/first hour with $13.00 daily max
Notes:	Speed bumps throughout *Speed bumps can create excessive vibrations that can have a negative impact of parking structures by affecting connections and cause potential cracking. They are also a potential trip hazard.

Source: Timothy Haahs & Associates, 2009

Figure 15: Facility Evaluation for the RRHA Shockoe Parking Garage

Number of Spaces:	550
Hours of Operation:	7am - 11pm Monday - Friday 3pm - 2am Saturday; 3pm - 11pm Sunday
Visibility:	Poor
Signage:	Poor
Underground:	Yes
Cleanliness:	Good
Number of Entrances:	1
Number of Entry Lanes:	1
Number of Exit Lanes:	1
Number of Levels:	5
Number of Elevators:	2
Payment System:	Cashier
Lighting:	Average
Equipment Manufacturer:	Federal APD
Security:	Good
Perimeter:	Wall & Gate - secure
General Condition:	Fair
Rates:	Monthly - $95.00/unreserved; $125/reserved Hourly - $3.00 with $15.00 max; flat $3.00 weekend and evening rate
Notes:	Stacked spaces on bottom level ($75.00/month) Tight turns with poor visibility

Source: Timothy Haahs & Associates, 2009

Two of the parking garages are beginning show their age. We recommend a conditions appraisal of both the 2nd Street Parking Deck (RMA) and the 7th & Marshall Parking Garage (CDA). This will point out where necessary repairs are needed and also provide information to develop a proactive management plan for future repairs.

A separate supply and demand analysis was desired as part of the valuation of city-owned assets. The following table summarizes the supply and peak demand of these assets.

Table 32: Supply/Demand Summary

Asset	Supply	Peak Occupancy	Peak Time	Occupancy Percentage
RMA - Expressway Deck	1,000	952	10:00 am	95%
RMA - Second Street Deck	350	125	10:00 am	36%
CDA - 5th & Marshall	969	475	10:00 am	49%
CDA - 7th & Marshall	620	569	10:00 am	92%
CDA - 6th & Franklin	94	54	10:00 am	57%
RRHA - Coliseum Parking Garage	921	887	10:00 am	96%
RRHA - Shockoe Garage	550	248	8:00 pm	45%
Totals	4,504	3,310	---	73%

Source: Timothy Haahs & Associates, 2009

All of the city-owned assets reached peak occupancy during the 10am count with the exception of the Shockoe Garage which is located in the entertainment and restaurant district of Shockoe Slip. A 10am peak time is frequently the peak in and around downtown areas as office workers are normally present during this time. Late evening and weekend peak are typical of entertainment districts suck as Shockoe Slip and Bottom.

It is worth noting that three of these city-owned properties (Expressway Deck, 7th & Marshall, and Coliseum) were nearly full and experienced occupancy levels above 92%. City owned properties are well positioned in our study area to provide public parking facilities and meet demand, especially with the inclusion of on-street parking spaces.

Construction Cost Considerations

Based on the current adequacy of the parking system and the projected future adequacy, new parking supply will not necessary. However, as part of our study, we were asked to include parking construction cost information. This section will provide parking costs for surface parking, above grade structured parking, and below grade structured parking.

Surface parking typically includes asphalt, striping, lighting, drainage, and landscaping costs. The approximate per space estimate for the Richmond area is $6,000 per space. This estimate does not reflect land acquisition cots.

A stand alone, above-grade parking structure, assuming it was efficiently designed (in the range of 320 sf/space), costs approximately $16,000 per space for a basic facade. However, depending on the integration of other uses and the architectural detail of the façade, costs could increase to $18,000 - $20,000 per space. This estimate again does not reflect land acquisition costs.

A below-grade parking structure has many variables to consider. Many of these factors may impact cost.

- Enhanced durability design due to subsurface conditions such as a high water table.
- Increased cost in excavation due to subsurface conditions potentially having rock.

- Enhanced lighting levels due to not having natural lighting from exterior. Typically garages have 5-6 foot candles, 30" AFF, but we would recommend 8-10 foot candles below grade or use a combination of painting the underside of the structure and increased lighting levels.
- Depending on the number of levels below grade and if the perimeter wall is supporting elevated levels, then the walls shall be designed as cantilever retaining walls vs. a basement type walls which increases costs.
- Structural system may be of filigree or cast-in-place if there are multiple levels below grade due to the limitations of precast erection in below-grade conditions.
- Per code, a closed structure must have either mechanical ventilation (intake/exhaust) or areas around the perimeter to gain the natural openness for air flow. In addition, there are specific requirements for an automatic sprinkler system vs. the manual dry standpipe system.
- Below grade structures do not have any "passive" security measures such as views from the outside, glass at the stairwells, or glass back elevators. Therefore, increased "active" security measures such as CCTV strategically located throughout must be considered.
- If the structure is completely underground with a plaza on top then the structural top level needs to be increased to accept assembly load (1000 PSF), enhanced durability measures, and the cost of landscape.
- Considerations should be made for long-term maintenance of underground garages in the annual operating costs.
- Finally, there is a perception of underground garages being unsafe.

<u>Below-grade parking costs as compared to above-grade:</u>

a. For the 1st level below grade figure a 25% increase from the above grade cost per space or approximately $20,000 per space.
b. For the 2nd level below grade figure a 50-75% increase from the above grade cost per space or approximately $24,000-$28,000 per space.
c. Subsequent levels below grade may be up to 100% higher depending on the conditions for an approximately cost of $32,000 per space.
d. If there is a plaza on top, figure the supporting supporting structural level is $100-$125/SF (typically $50-55/SF for above-grade) not including the costs associated with landscape costs.

We understand the desire to minimize the visual impact a traditional above grade structure can create. However, our company typically designs parking with creative architectural details with the ability to add retail and other shops to the ground floor. Smart parking design can be used as a tool to provide an essential infrastructure need (parking) while increasing pedestrian activity in the surrounding area.

APPENDIX I – Peak Parking Occupancy

The following information provides detailed occupancy count information broken down by sub-area. This information summarizes our peak occupancy figures with the peak being highlighted in yellow.

Table 33: Jackson Ward Occupancy Statistics

Area 1 Block No.	Occupancy - Wednesday, 11/05/08, 7pm Off-Street Areas A	B	C	D	Total Off-Street	Total On-Street	Total Parking	Occupancy - 11/05/08, 10pm Off-Street Areas A	B	C	D	Total Off-Street	Total On-Street	Total Parking
1					0	10	10						11	11
2					0	23	23						32	32
3					0	27	27						32	32
4					0	0	0						0	0
5					0	0	0						3	3
6					0	18	18						25	25
7					0	34	34						36	36
8					0	25	25						33	33
9					0	0	0						0	0
10					0	13	13						13	13
11					0	30	30						29	29
12					0	37	37						32	32
13					0	12	12						17	17
14					0	13	13						8	8
15					0	44	44						39	39
16					0	31	31						27	27
17					0	21	21						27	27
18					0	6	6						10	10
19					0	6	6						6	6
20					0	11	11						21	21
21					0	32	32						27	27
22					0	27	27						11	11
23					0	17	17						20	20
24					0	13	13						13	13
25					0	0	0						2	2
26					0	11	11						2	2
27					0	35	35						34	34
28					0	14	14						12	12
29					0	11	11						15	15
30					0	17	17						4	4
31	9				9	16	25	4				4	13	17
32					0	19	19						21	21
33					0	12	12						8	8
34					0	3	3						1	1
Total					9	588	597					4	584	588

Source: Timothy Haahs & Associates, 2009

Table 34: Monroe Ward Occupancy Statistics

Area 2 Block No.	Occupancy - Monday, 11/10/08, 10am							Occupancy 11/10/08, 9pm						
	Off-Street Areas				Total Off-Street	Total On-Street	Total Parking	Off-Street Areas				Total Off-Street	Total On-Street	Total Parking
	A	B	C	D				A	B	C	D			
1					0	5	5					0	4	4
2					0	6	6					0	14	14
3					0	0	0					0	0	0
4					0	44	44					0	32	32
5					0	35	35					0	21	21
6					0	35	35					0	49	49
7					0	24	24					0	22	22
8	464				464	31	495	230				230	26	256
9					0	30	30					0	19	19
10					0	27	27					0	36	36
11					0	40	40					0	29	29
12					0	32	32					0	20	20
13					0	23	23					0	14	14
14	8				8	14	22	7				7	12	19
15					0	17	17					0	14	14
16					0	27	27					0	22	22
17					0	29	29					0	15	15
18					0	14	14					0	11	11
19	16				16	23	39	7				7	27	34
20		120	23		143	20	163		59	14		73	22	95
21					0	40	40					0	7	7
22					0	27	27					0	9	9
23					0	16	16					0	11	11
24					0	30	30					0	31	31
25	44				44	28	72	19				19	25	44
26					0	41	41					0	3	3
27	100		6		106	29	135	2		3		5	9	14
28					0	34	34					0	19	19
29	44				44	35	79	3				3	34	37
30		83			83	22	105		55			55	27	82
31	40				40	20	60	27				27	0	27
32					0	32	32					0	10	10
33					0	24	24					0	6	6
34					0	32	32					0	21	21
35					0	21	21					0	15	15
36					0	31	31					0	0	0
37					0	21	21					0	1	1
38		27		19	46	17	63		2		1	3	4	7
39					0	25	25					0	4	4
40					0	13	13					0	8	8
41	172				172	24	196	11				11	0	11
42	61	91	1		153	12	165	0	1	1		2	0	2
43	10				10	25	35	3				3	10	13
Total	959	321	30	19	1329	1075	2404	309	117	18	1	445	663	1108

Source: Timothy Haahs & Associates, 2009

Table 35: Gambles Hill Occupancy Statistics

Area 3 Block No.	Occupancy - Monday, 11/10/08, 12pm Off-Street Areas A	B	C	D	E	Total Off-Street	Total On-Street	Total Parking
1						0	0	0
2	9					9	8	17
3						0	0	0
4	3		57		2	62	79	141
5	19					19	35	54
6						0	0	0
7						0	0	0
Total						90	122	212

Source: Timothy Haahs & Associates, 2009

Table 36: City Center Occupancy Statistics

Area 4 Block No.	Occupancy - Wednesday, 11/12/08, 9:00am Off-Street Areas A	B	C	Total Off-Street	Total On-Street	Total Parking	Occupancy - Wednesday, 11/12/08, 1:00pm Off-Street Areas A	B	C	Total Off-Street	Total On-Street	Total Parking
1	125			125	24	149	116			116	23	139
2				0	20	20				0	20	20
3	28			28	16	44	27			27	17	44
4	54			54	16	70	48			48	17	65
5				0	21	21				0	20	20
6				0	35	35				0	37	37
7				0	16	16				0	15	15
8	35			35	0	35	34			34	0	34
9				0	8	8				0	18	18
10				0	15	15				0	15	15
11	268			268	28	296	247			247	34	281
12				0	21	21				0	25	25
13				0	32	32				0	22	22
14	75			75	21	96	45			45	20	65
15	101			101	7	108	82			82	12	94
16				0	0	0				0	0	0
17	317			317	7	324	307			307	4	311
18	43	30	66	139	6	145	49	32	66	147	9	156
19				0	24	24				0	27	27
20	344			344	24	368	329			329	25	354
21				0	20	20				0	23	23
22				0	10	10				0	7	7
23				0	9	9				0	4	4
24	475			475	21	496	456			456	21	477
25				0	21	21				0	30	30
26			378	378	26	404			374	374	29	403
27	0	4	185	189	24	213	0	0	177	177	20	197
28	141	54		195	14	209	107	52		159	13	172
29				0	0	0				0	0	0
30	569			569	3	572	499			499	12	511
Total				3292	489	3781				3047	519	3566

Source: Timothy Haahs & Associates, 2009

Table 37: Biotech Occupancy Statistics

Area 5 Block No.	Occupancy - Wednesday, 11/21/08, 10am Off-Street Areas A	B	C	Total Off-Street	Total On-Street	Total Parking	Occupancy, 11/21/08, 2pm Off-Street Areas A	B	C	Total Off-Street	Total On-Street	Total Parking
1				0	1	1				0	5	5
2	142	60	43	245	18	263	129	59	38	226	18	244
3	85			85	0	85	63			63	0	63
4				0	0	0				0	0	0
5				0	10	10				0	0	0
6				0	17	17				0	4	4
7				0	6	6				0	3	3
8				0	7	7				0	4	4
9				0	0	0				0	0	0
10		300		300	2	302		288		288	2	290
11				0	10	10				0	8	8
12				0	32	32				0	32	32
13				0	32	32				0	49	49
14				0	27	27				0	25	25
15				0	0	0				0	0	0
16				0	38	38				0	0	0
17				0	5	5				0	0	0
18				0	1	1				0	2	2
19				0	30	30				0	15	15
20				0	32	32				0	40	40
21				0	7	7				0	7	7
22				0	0	0				0	0	0
Total				630	275	905				577	214	791

Source: Timothy Haahs & Associates, 2009

Table 38: Capitol District Occupancy Statistics

Area 6 Block No.	Parking Demand, Wednesday, 1/21/09, 10am Off-Street Areas A	B	Total Off-Street	Total On-Street	Total Parking	Parking Demand, Wednesday, 1/21/09, 2pm Off-Street Areas A	B	Total Off-Street	Total On-Street	Total Parking
1	320		320	26	346	313		313	31	344
2			0	10	10			0	8	8
3		40	40	15	55	36		36	13	49
4			0	0	0			0	0	0
5	887		887	9	896	688		688	12	700
6	119		119	10	129	113		112.5	11	124
7			0	22	22			0	23	23
8			0	31	31			0	21	21
9			0	39	39			0	41	41
10			0	21	21			0	9	9
11			0	23	23			0	14	14
12			0	9	9			0	17	17
13			0	27	27			0	37	37
14			0	7	7			0	20	20
15			0	13	13			0	5	5
16			0	18	18			0	17	17
17	27		27	10	37			0	8	8
18			0	20	20			0	8	8
19			0	6	6			0	9	9
20			0	18	18			0	11	11
21			0	14	14			0	11	11
22			0	19	19			0	17	17
23			0	20	20			0	14	14
Total			1392	387	1779			1,150	357	1507

Source: Timothy Haahs & Associates, 2009

Table 39: Central Office Occupancy Statistics

Area 7 Block No.	Parking Demand, Wednesday, 1/21/09, 10:00am Off-Street Areas A	B	C	D	E	Total Off-Street	Total On-Street	Total Parking	Parking Demand, Wednesday, 1/21/09, 2:00pm Off-Street Areas A	B	C	D	E	Total Off-Street	Total On-Street	Total Parking
1						0	0	0						0	0	0
2						0	0	0						0	4	4
3						0	9	9						0	11	11
4		24				24	19	43		24				24	18	42
5			31		215	246	17	263			28		219	247	20	267
6		63	293			356	4	360		58	287			345	10	355
7			23			23	12	35			22			22	9	31
8						0	18	18						0	21	21
9	1742					1742	0	1742	1677					1677	0	1677
10	952					952	0	952	902					902	0	902
11						0	3	3						0	5	5
12	57					57	15	72	53					53	11	64
13						0	3	3						0	0	0
14	105					105	0	105	103					103	0	103
15	910					910	8	918	909					909	10	919
16		433	67	4		504	27	531		420	55	5		480	4	484
Total						4919	135	5054						4762	123	4885

Source: Timothy Haahs & Associates, 2009

Table 40: Shockoe Slip Occupancy Statistics

Area 8 Block No.	Occupancy - Saturday, 11/08/08, 2:30pm							Occupancy - Saturday, 11/08/08, 8pm						
	Off-Street Areas				Total Off-Street	Total On-Street	Total Parking	Off-Street Areas				Total Off-Street	Total On-Street	Total Parking
	A	B	C	D				A	B	C	D			
1	98				98	69	167	336				336	59	395
2					0	31	31					0	22	22
3	19				19	13	32	17				17	14	31
4	38				38	23	61	222				222	24	246
5	31				31	19	50	33				33	16	49
6	15				15	20	35	13				13	9	22
7					0	0	0					0	0	0
8					0	12	12					0	12	12
9	60				60	0	60	0				0	0	0
10					0	3	3					0	4	4
11					0	15	15					0	20	20
12	140				140	6	146	248				248	13	261
13	123				123	29	152	156				156	27	183
14					0		0					0		0
Total					524	240	764					1025	220	1245

Source: Timothy Haahs & Associates, 2009

Table 41: Shockoe Bottom Occupancy Statistics

Area 9 Block No.	Occupancy - Friday, 11/07/08, 3:00pm							Occupancy - Saturday, 11/08/08, 8:00pm						
	Off-Street Areas				Total Off-Street	Total On-Street	Total Parking	Off-Street Areas				Total Off-Street	Total On-Street	Total Parking
	A	B	C	D				A	B	C	D			
1	15		15	64	94	36	130	17		45	59	121	40	161
2	21	223	14	8	266	25	291	1	1	27	5	34	36	70
3	4				4	33	37	14				14	42	56
4	19	4			23	3	26	0	3			3	4	7
5					0	0	0					0	4	4
6					0	38	38					0	36	36
7					0	20	20					0	30	30
8					0	19	19					0	25	25
9		7			7	38	45		17			17	47	64
10	6				6	13	19	12				12	15	27
11					0	20	20					0	29	29
12		3			3	34	37		80			80	38	118
13					0	30	30					0	44	44
14					0	29	29					0	45	45
15		4			4	15	19		16			16	25	41
16					0	29	29					0	33	33
17					0	32	32					0	47	47
18					0	31	31					0	51	51
19					0	31	31					0	34	34
20					0	15	15					0	22	22
21	7				7	14	21	4				4	16	20
22					0	26	26					0	31	31
23					0	18	18					0	27	27
Total					414	549	963					301	721	1,022

Source: Timothy Haahs & Associates, 2009

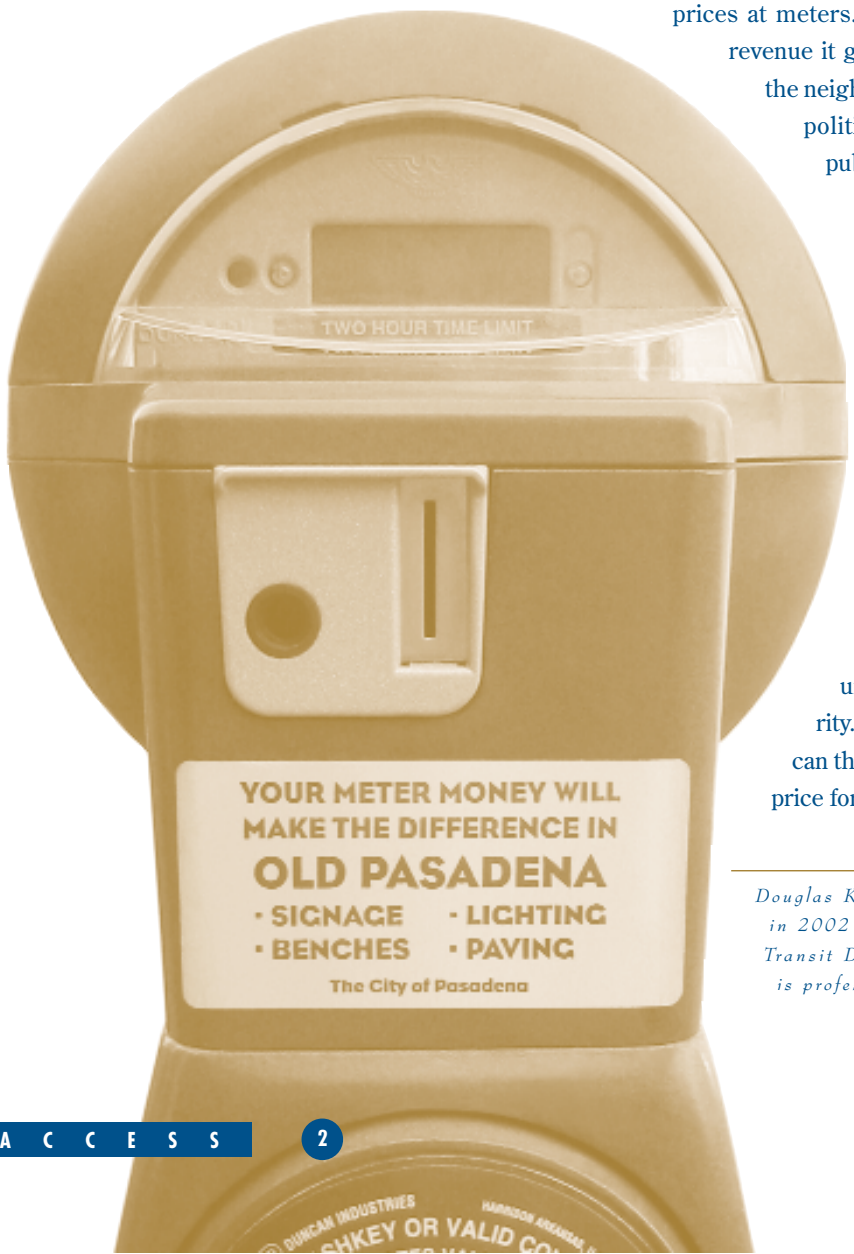
APPENDIX II – Articles of Interest

Turning Small Change Into Big Changes

BY DOUGLAS KOLOZSVARI AND DONALD SHOUP

THE MONEY YOU PUT INTO a parking meter seems to vanish into thin air. No one knows where the money goes, and everyone would rather park free, so politicians find it easier to require ample off-street parking than to charge market prices at meters. But if each neighborhood could keep all the parking revenue it generates, a powerful new constituency would emerge—the neighborhoods that receive the revenue. Cities can change the politics of parking if they earmark parking revenue for public improvements in the metered neighborhoods.

Consider an older business district where few stores have off-street parking, and vacant curb spaces are hard to find. Cruising for curb parking congests the streets, and everyone complains about a parking shortage. Parking meters would create a few curb vacancies, and these vacancies would attract customers willing to pay for parking if they don't have to spend time hunting for it. Nevertheless, merchants fear that charging for parking would keep some customers away. Suppose in this case the city promises to use all the district's meter revenue to pay for public amenities that can attract customers, such as cleaning the sidewalks, planting street trees, putting overhead utility wires underground, improving store facades, and ensuring security. Using curb parking revenue to improve the metered area can therefore create a strong local interest in charging the right price for curb parking.



Douglas Kolozsvari received the MA in urban planning from UCLA in 2002 and is now associate planner at the San Mateo County Transit District (kolozsvarid@samtrans.com), and Donald Shoup is professor of urban planning at the University of California, Los Angeles (shoup@ucla.edu).

Right Prices

The right price for curb parking is the lowest price that keeps a few spaces available to allow convenient access. If no curb spaces are available, reducing their price cannot attract more customers, just as reducing the price of anything else in short supply cannot increase its sales. A below-market price for curb parking simply leads to cruising and congestion. The goal of pricing is to produce a few vacant spaces so that drivers can find places to park near their destinations. Having a few parking spaces vacant is like having inventory in a store, and everyone understands that customers avoid stores that never have what they want in stock. The city should reduce the price of curb parking if there are too many vacancies (the inventory is excessive), and increase it if there are too few (the shelves are bare).

Underpricing curb parking cannot increase the number of cars parked at the curb because it cannot increase the number of spaces available. What underpricing can do, however, and what it *does* do, is create a parking shortage that keeps potential customers away. If it takes only five minutes to drive somewhere else, why spend fifteen cruising for parking? Short-term parkers are less sensitive to the price of parking than to the time it takes to find a vacant space. Therefore, charging enough to create a few curb vacancies can attract customers who would rather pay for parking than not be able to find it. And spending the meter revenue for public improvements can attract even more customers.

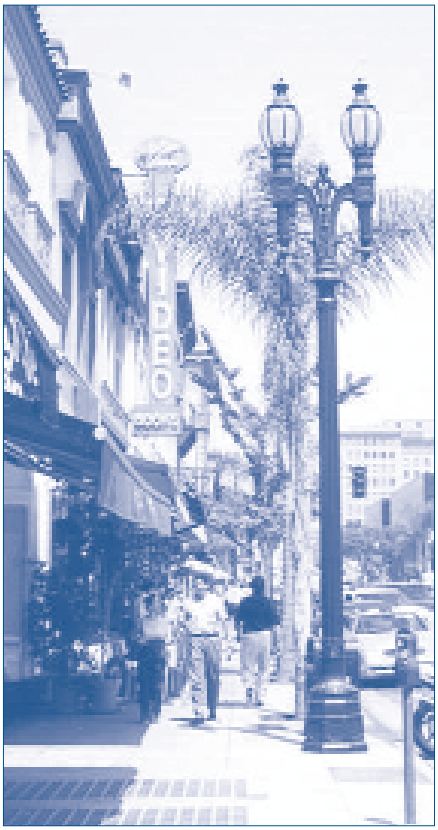
We can examine the effects of this charge-and-spend policy because Pasadena, California, charges market prices for curb parking and returns all of the meter revenue to the business districts that generate it. An evaluation of Pasadena's program shows it can help revitalize older business districts by improving their parking, transportation, and public infrastructure.

Old Pasadena

Pasadena's downtown declined between 1930 and 1980, but it has since been revived as "Old Pasadena," one of Southern California's most popular shopping and entertainment destinations. Dedicating parking meter revenue to finance public improvements in the area has played a major part in this revival.

Old Pasadena was the original commercial core of the city, and in the early 20th century it was an elegant shopping district. In 1929, Pasadena widened its main thoroughfare, Colorado Boulevard, by 28 feet, and this required moving the building facades on each side of the street back 14 feet. Owners removed the front 14 feet of their buildings, and most constructed new facades in the popular Spanish Colonial Revival or Art Deco styles. However, a few owners put back the original facades (an early example of historic preservation). The result is a handsome circa-1929 streetscape that is now the center of Old Pasadena.

The area sank into decline during the Depression. After the war the narrow storefronts and lack of parking led many merchants to seek larger retail spaces in more modern surroundings. Old Pasadena became the city's Skid Row, and by the 1970s much of it was slated for redevelopment. Pasadena's Redevelopment Agency demolished ➢



three historic blocks on Colorado Boulevard to make way for Plaza Pasadena, an enclosed mall with ample free parking whose construction the city assisted with $41 million in public subsidies. New buildings clad in then-fashionable black glass replaced other historic properties. The resulting "Corporate Pasadena" horrified many citizens, so the city reconsidered its plans for the area. The *Plan for Old Pasadena*, published in 1978, asserted "if the area can be revitalized, building on its special character, it will be unique to the region." In 1983, Old Pasadena was listed in the National Register of Historic Places. However, despite these planning efforts, commercial revival was slow to come, in part because lack of public investment and the parking shortage were intractable obstacles.

Parking Meters and Revenue Return

Pasadena devised a creative parking policy that has contributed greatly to Old Pasadena's revival: it uses Old Pasadena's parking meter revenue ($1.2 million in 2001) to finance additional public spending in the area.

Old Pasadena had no parking meters until 1993, and curb parking was restricted only by a two-hour time limit. Customers had difficulty finding places to park because employees took up the most convenient curb spaces, and moved their cars every two hours to avoid citations. The city's staff proposed installing meters to regulate curb parking, but the merchants and property owners opposed the idea. They feared that paid parking would discourage people from coming to the area at all. Customers and tenants, they assumed, would simply go to shopping centers like Plaza Pasadena that offered free parking. Meter proponents countered that employees rather than customers occupied many curb spaces, and making these spaces available for short-term parking would attract more customers. Any customers who left because they couldn't park free would also make room for others who were willing to pay if they could find a space, and who would probably spend more money in Old Pasadena if they could find a space.

Debates about the meters dragged on for two years before the city reached a compromise with the merchants and property owners. To defuse opposition, the city offered to spend all the meter revenue on public investments in Old Pasadena. The merchants and property owners quickly agreed to the proposal because they would directly benefit from it. The city also liked it because it wanted to improve Old Pasadena, and the meter revenue would pay for the project.

The desire for public improvements that would attract customers to Old Pasadena soon outweighed fear that paid parking would drive customers away. Businesses and property owners began to see the parking meters in a new light—as a source of revenue. They agreed to an unusually high rate of $1 an hour for curb parking, and to the unusual policy of operating the meters on Sundays and in the evenings when the area is still busy with visitors. The city also didn't *lose* anything in the process. Because there had been no parking meters anywhere in the city before, returning the revenue to Old Pasadena didn't create a loss to the city's general fund. Indeed, the city gained revenue from overtime fines. Both business and government thus had a stake in the meter money, and so the project went ahead.

Only the blocks with parking meters receive the added services financed by the meter revenue. The city worked with Old Pasadena's Business Improvement District (BID) to establish the boundaries of the Old Pasadena Parking Meter Zone (PMZ). The

city also established the Old Pasadena PMZ Advisory Board, consisting of business and property owners who recommend parking policies and set spending priorities for the zone's meter revenues. Connecting the meter revenue directly to added public services and keeping it under local control are largely responsible for the parking program's success. "The only reason meters went into Old Pasadena in the first place," said Marilyn Buchanan, chair of the Old Pasadena PMZ, "was because the city agreed all the money would stay in Old Pasadena."

The city installed the parking meters in 1993, and then borrowed $5 million to finance the "Old Pasadena Streetscape and Alleyways Project," with the meter revenue dedicated to repaying the debt. The bond proceeds paid for street furniture, trees, tree grates, and historic lighting fixtures throughout the area. Dilapidated alleys became safe, functional pedestrian spaces with access to shops and restaurants. To reassure businesses and property owners that the meter revenues stayed in Old Pasadena, the city mounted a marketing campaign to tell shoppers what their meter money was funding.

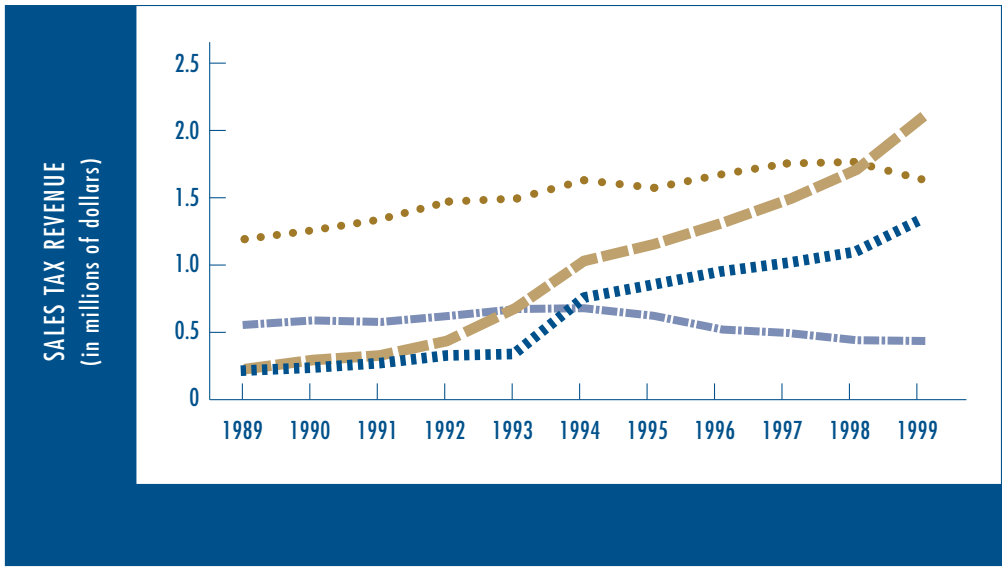
As the area attracted more pedestrian traffic, the sidewalks needed more maintenance. This would have posed a problem when Old Pasadena relied on the city for cleaning and maintenance, but now the BID has meter money to pay for the added services. The BID has arranged for daily sweeping of the streets and sidewalks, trash collection, removal of decals from street fixtures, and steam cleaning of Colorado Boulevard's sidewalks twice a month. Dedicating the parking meter revenue to Old Pasadena has thus created a "virtuous cycle" of continuing improvements. The meter revenue pays for public improvements, the public improvements attract more visitors who pay for curb parking, and more meter revenue is then available to pay for more public improvements.

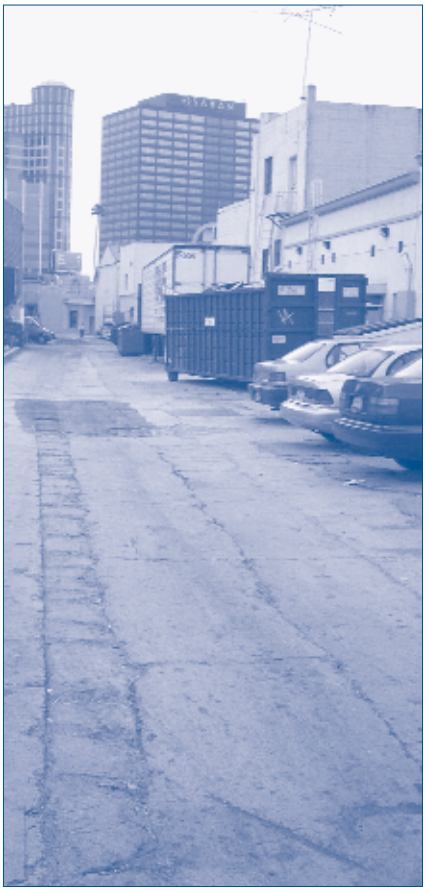
Old Pasadena's 690 parking meters yielded $1.2 million *net* parking revenue (after all collection costs) to fund additional public services in FY 2001. The revenue thus amounts to $1,712 per meter per year. The first claim on this revenue is the annual debt service of $448,000 that goes to repay the $5 million borrowed to improve the sidewalks and alleys. Of the remaining revenue, $694,000 was spent to increase public services in Old Pasadena, above the level provided in other commercial areas. The city provides some of these services directly; for example, the Police Department provides additional foot patrols, and two horseback officers on weekend evenings, at a cost of $248,000. The parking enforcement officers who monitor the meters until well into the night further increase security, at no additional charge. The city also allocated $426,000 of meter revenue for added sidewalk and street maintenance and for marketing (maps, brochures, and advertisements in local newspapers). Drivers who park in Old Pasadena finance all these public services, at no cost to the businesses, property owners, or taxpayers.

Old Pasadena has done well in comparison with the rest of Pasadena. Its sales tax revenue increased rapidly after parking meters were installed in 1993, and is now higher than in the other retail districts in the city. Old Pasadena's sales tax revenues quickly exceeded those of Plaza Pasadena, the nearby shopping mall that had free parking. With great fanfare, Plaza Pasadena was demolished in 2001 to make way for a new development—with storefronts that resemble the ones in Old Pasadena.

Would Old Pasadena be better off today with dirty sidewalks, dilapidated alleys, no street trees or historic street lights, and less security, but with free curb parking? Clearly, no. Old Pasadena is now a place where everyone wants to be, rather than merely another place where everyone can park free. ➢

Pasadena retail sales-tax revenue





Westwood Village

A Tale of Two Business Districts' Parking Policies

To see how parking policies affect urban outcomes, we can compare Old Pasadena with Westwood Village, a business district in Los Angeles that was once as popular as Old Pasadena is now. In 1980, anyone who predicted that Old Pasadena would soon become hip and Westwood would fade would have been judged insane. However, since then the Village has declined as Old Pasadena thrived. Why?

Except for their parking policies, Westwood Village and Old Pasadena are similar. Both are about the same size, both are historic areas, both have design review boards, and both have BIDS. Westwood Village also has a few advantages that Old Pasadena lacks. It is surrounded by extremely high-income neighborhoods (Bel Air, Holmby Hills, and Westwood) and is located between UCLA and the high-rise corridor of Wilshire Boulevard, which are both sources of many potential customers. Old Pasadena, by contrast, is surrounded by moderate-income housing and low-rise office buildings. Tellingly, although Westwood Village has about the same number of parking spaces as Old Pasadena, merchants typically blame a parking shortage for the Village's decline. In Old Pasadena, parking is no longer a big issue. A study in 2001 found that the average curb-space occupancy rate in Old Pasadena was 83 percent, which is about the ideal rate to assure available space for shoppers. The meter revenue has financed substantial public investment in sidewalk and alley improvements that attract visitors to the stores, restaurants, and movie theaters. Because all the meter revenue stays in Old Pasadena, the merchants and property owners understand that paid parking helps business.

In contrast, Westwood's curb parking is underpriced and overcrowded. A 1994 parking study found that the curb-space occupancy rate was 96 percent during peak hours, making it necessary for visitors to search for vacant spaces. The city nevertheless reduced

Westwood Village

meter rates from $1 to 50¢ an hour in 1994, in response to merchants' and property owners' argument that cheaper curb parking would stimulate business. Off-street parking in any of the nineteen private lots or garages in Westwood costs at least $2 for the first hour, so drivers have an incentive to hunt for cheaper curb parking. The result is a shortage of curb spaces, and underuse of the off-street ones. The 1994 study found that only 68 percent of the Village's 3,900 off-street parking spaces were occupied at the peak daytime hour (2 p.m.). Nevertheless, the shortage of curb spaces (which are only 14 percent of the total parking supply) creates the illusion of an overall parking shortage. In contrast to Old Pasadena, Westwood's sidewalks and alleys are crumbling because there is no source of revenue for repairing them—the meter revenue disappears into the city's general fund.

The Old Pasadena/Westwood Village comparison suggests that parking policies can help some areas rebound, and leave other areas trapped in a slump. If Westwood Village had always charged market prices for curb parking and had spent the revenue on public services, it probably would have retained its original luster rather than fallen into a long economic decline. If Old Pasadena had kept curb parking free and not spent $1.2 million a year on public services, it probably would still be struggling. The exactly opposite parking policies in Westwood Village and Old Pasadena have surely helped determine their different fates. As the signs on Old Pasadena's parking meters say, "Your meter money makes a difference."

Conclusion

Charging market prices for curb parking and returning the meter revenue for public improvements have helped pave the way for Old Pasadena's renaissance. The meter revenue has paid to improve the streetscape and to convert alleys into pleasant walkways with shops and restaurants. The additional public spending makes the area safer, cleaner, and more attractive for both customers and businesses. These public improvements have increased private investment, property values, and sales tax revenues. Old Pasadena has pulled itself up by its parking meters. ◆

Further Reading

Douglas Kolozsvari. *Parking: The Way to Revitalization. A Case Study on Innovative Parking Practices in Old Pasadena.* Comprehensive project submitted for the Master of Arts in Urban Planning, UCLA, 2002.

Donald Shoup, "Cashing in on Curb Parking," *Access*, no. 4, Spring 1994, pp. 20–26.

Donald Shoup, "An Opportunity to Reduce Minimum Parking Requirements," *Journal of the American Planning Association*, vol. 61, no. 1, Winter 1995, pp. 14–28.

Donald Shoup, "Buying Time at the Curb," in *The Half-Life of Policy Rationales: How New Technology Affects Old Policy Issues*, Fred Foldvary and Daniel Klein, eds. (New York: New York University Press, 2003).

Donald Shoup, "The Ideal Source of Local Public Revenue," *Regional Science and Urban Economics*, forthcoming.

Donald Shoup, *The High Cost of Free Parking*. (Chicago: The Planners Press of the American Planning Association, forthcoming.)

Community News

Village's parking revenue up 19 percent; new meters cited as reason

CHRIS KNIGHT, For the News

POSTED: October 1, 2009

Photos

A group of Lake Placid visitors use one of the village's new parking meters on Tuesday.

Photo/Chris Knight/For the News

Fact Box

The numbers

Parking revenues
collected Jan. - Aug. 2008:

Parking meters: $91,384
Municipal lot: $87,811
Permits: $12,278
Total: $191,473

Parking revenues
collected Jan. - Aug. 2009:

Cash and credit card
(new meters): $110,012
Coin-operated meters: $38,943
Municipal lot: $65,010
Permits: $13,892
Total: $227,857

LAKE PLACID — Parking revenue is up substantially in the village so far this year, and some local officials are attributing the spike to the village's new parking meters.

From January through August, the village collected $227,857 in parking revenue compared to $191,473 over the same period last year, according to figures provided by village Treasurer Peggy Mousaw.

She attributed the roughly $36,000 or 19 percent increase in revenue to the new, electronic "pay and display" parking meters the village has installed along Main Street.

"I would have to say that the meters are substantially adding to our revenue," Mousaw said.

The new machines, which replaced several dozen coin-operated meters, accept coins, cash, credit and debit cards and print out a slip to be placed on a vehicle's dashboard. When they were purchased last year, village officials said they expected to see a 20 to 30 percent increase in parking revenue.

The simple fact that new meters are working may be one of the biggest reasons why they've added more revenue to the village coffers.

"We had problems with the old meters where they would jam up and you couldn't put coins in them," Mousaw said. "We're not having that problem anymore."

"They're up, they're operational, and they're working," said village Police Chief Scott Monroe. "We had so many that were constantly jammed or broken down before."

Several other factors may play a role in the increased numbers. Monroe said much of the new parking revenue may be coming from the meter that's been installed in the upper parking lot across from NBT Bank, which had not been metered in the past.

"That meter has generated increased revenue that we never had before," Monroe said.

The village is also collecting more parking revenue because drivers are no longer able to "piggyback" or use the time left over on a coin-operated meter by another motorist, Monroe said. Each new meter covers multiple spaces, so each motorist has to pay to get their own parking slip.

The village also increased the fine for a parking violation last year from $10 to $25. Monroe said the stiffer penalty has created an incentive for people to pay for parking rather than risk getting a ticket. He wasn't able to provide specific

numbers, but Monroe said police are writing less parking tickets this year.

"I would say compliance is a lot better now than it was before," he said.

Village Mayor Craig Randall said the increased parking revenue could potentially be connected to an increase in tourism.

"The numbers are way up," he said. "That tells me there could have been more people in the village this year versus last year or at least more people parking."

However, Randall said he didn't want to draw too many conclusions about the numbers without looking at a full year's data.

"We're looking at a nice increase in parking revenues," he said. "A lot of it seems to be coming in areas where we're using the new technology. So whether we liked the change or not, it appears to be working."

The new parking meters were controversial when they were installed earlier this year. Some people complained the instructions were difficult to understand and there wasn't enough signage to indicate that motorists had to pay for parking.

Now, nine months later, local residents seem to have accepted the new meters, or at least learned how to live with them.

"We definitely went through some trials and tribulations at first, much of it related to education," Monroe said. "But now we don't get nearly the complaints that we did in the beginning."

The village continues to work on ironing out some of the difficulties with the new meters. The backlighting on each meter's screen was recently improved and the setup for the new meters is also being tweaked, Randall said. A parking committee appointed earlier this year has also been working on improved signage for the new meters.

Meanwhile, the village is considering getting rid of the remaining coin-operated meters on Main Street and in other areas, Randall said.

"We've pirated all the parts we can find to repair them," he said. "We're at a point, with a fairly high percentage of them not operating anymore, where the time has come to remove them."

The mayor has asked the parking committee to look into the issue. One option the group is considering, Randall said, is not replacing the coin-operated meters on the lower end of Main Street and instead offering free, two-hour parking.

Payment IN LIEU OF Parking...

...A Growing Trend for

For years, municipalities both small and large have used payment in lieu of parking (PILOP) initiatives as a way of allowing new developments to be built without the need to create new parking supply. This concept has proven to be beneficial to both public and private interests, and can be a valuable tool for driving new development, or as a way to help revitalize and reinvigorate older areas.

What is payment in lieu of parking?

Simply stated, a developer or other entity pays into a parking or municipal fund in lieu of creating new parking supply. Cities generally have specific zoning requirements stipulating the number of spaces required to be built to serve a particular land use. For instance, a residential development in a downtown area may require 1.5 parking spaces for every two-bedroom unit. Other land uses, such as restaurants, may require a significant number of new spaces to be built.

Payment in lieu of parking ordinances can be mutually beneficial for both the developer who can avoid constructing costly parking, as well as a municipality who may not have a need for parking to serve the particular business. Therefore, a fee is paid. The amount of the fee is frequently calculated based on the per space cost of constructing either on-street or structured parking. Depending on the location and type of parking, this in lieu of fee can range from as little as $500 per space in smaller towns with surface parking, to over $20,000 per space in more dense, urban areas where structured parking is generally a necessity.

Many municipalities around the country have adopted by-laws providing different ways to help finance the in-lieu costs developers must pay. It typically depends on the fiscal needs, liquidity, and desires of each municipality. A few of these payment options include:

- **lump sum payments**
- **annual payment increments**
- **combination of both of the above**
- **require purchasing a set number of permits to provide reliable cash flow**

Economic Development

By Chris Walls, CPP, in cooperation with the Miami Parking Authority

Since the Coconut Grove PILOP was implemented, the fund has grown by millions of dollars and has funded new parking developments as well as other neighborhood improvements.

Further benefits of payment in lieu of parking ordinances may include a reduction in over building, encouraging shared parking opportunities, saving valuable land for other uses, and creating a fund from which to build parking in the future. The fund allows the opportunity to build parking not only when it is needed, but also where it is needed.

A specific example of a city that has implemented and enjoyed the benefits of payment in lieu of parking initiatives is Miami, Florida. The City of Miami's PILOP program was implemented in the popular area of Coconut Grove in the early 1990s when the Miami zoning department recognized key parking issues facing the area. At the time, the trendy Coconut Grove neighborhood was at the peak of its popularity, and there was a strong influx of new restaurants and retail outlets. There was simply not enough parking to satisfy the zoning requirements for these new businesses.

"Since the Coconut Grove PILOP was implemented, the fund has grown by millions of dollars and has funded new parking developments as well as other neighborhood improvements" says Art Noriega, chief executive officer of the Miami Parking Authority (MPA). "About one-third of the funding for the Miami Parking Authority's Oak Avenue Parking Plaza, which is a major mixed-use facility in the Grove, came from the PILOP. The fund has also been used for improved signage, street lighting, special holiday lighting and other capital projects, but the lion's share always goes towards parking."

Noriega and the MPA have seen where business owners get behind the PILOP concept when they see tangible improvements to their area or neighborhood. "Property owners who pay an up-front, lump-sum fee into the PILOP program to receive a permanent parking waiver have seen a significant increase in the value of their properties over time," he says.

Coconut Grove's in lieu program is now run by the local Business Improvement District. The organization makes the recommendations as to how to spend the funds, with the Miami City Commission giving final approval. This process has allowed the local business district to have a strong voice as to how the funds are implemented in the most beneficial way.

"You need to have a certain environment for a PILOP program to be successful," says Noriega. "You need to have a concentrated business district that's configured so that you can place future parking inventory in a way that it's accessible district-wide. You also need preexisting buildings that did not have parking built with them or their use has changed over the years to be more parking-intensive. You also need a thriving and growing business climate that currently has significant unmet parking demand. All of these elements have to be in place before you can reasonably collect fees for a successful PILOP program."

As we have seen in places such as Coconut Grove in Miami, payment in lieu of parking can be a valuable way to more effectively plan and pay for parking resources while being an engine to help drive growth and revitalization. In these difficult economic times, using parking and transportation-based initiatives to encourage development will likely increase in popularity in the coming months and years, and payment in lieu of parking will certainly play a role.

Chris Walls, CPP, is a parking specialist with Timothy Haahs & Associates, Inc. (TimHaahs). He can be reached at **cwalls@timhaahs.com**.

APPENDIX III – Maps

CAPITOL AREA SITE PLAN

State Owned Buildings

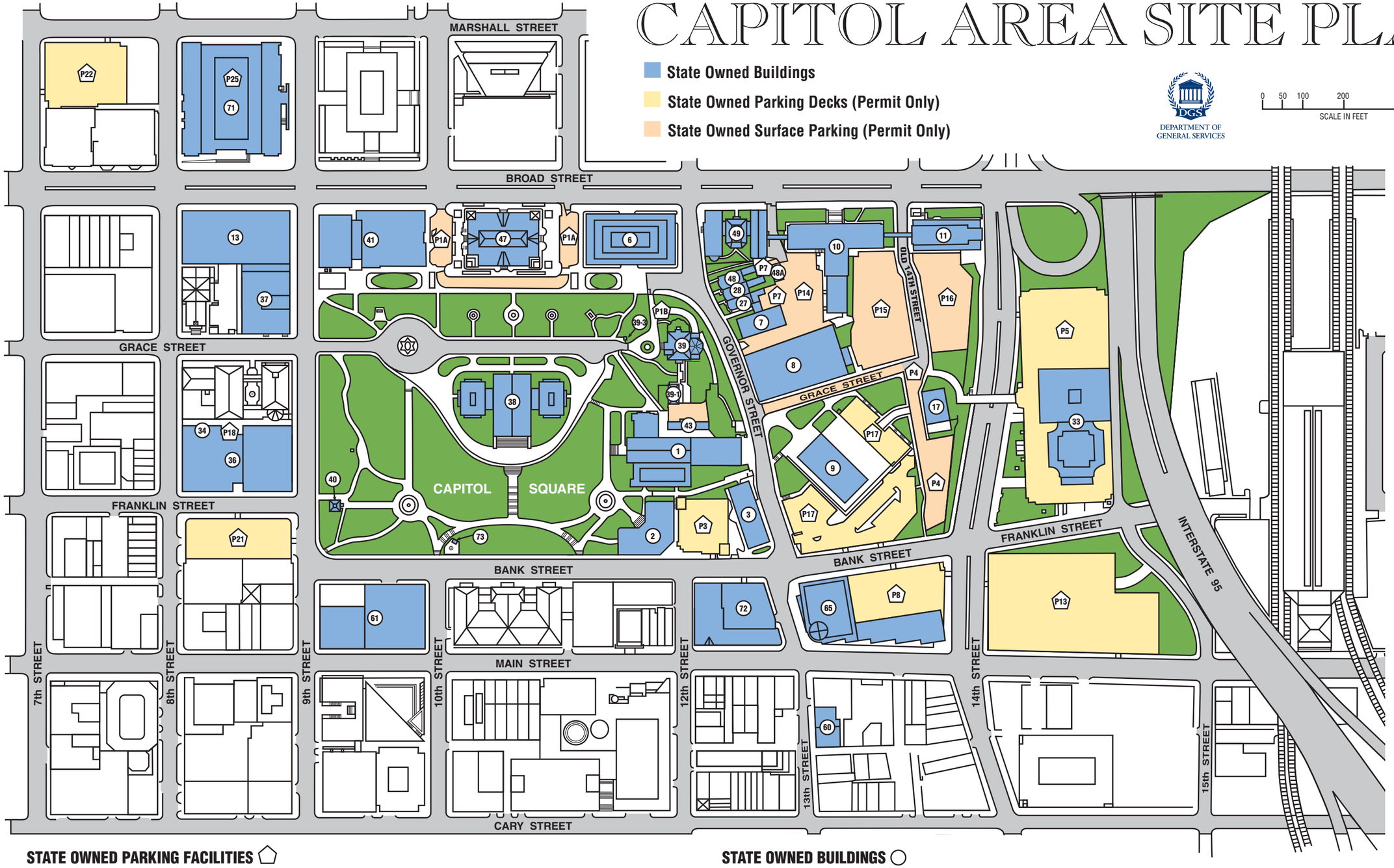
State Owned Parking Decks (Permit Only)

State Owned Surface Parking (Permit Only)

DEPARTMENT OF GENERAL SERVICES

0 50 100 200 400
SCALE IN FEET

North



STATE OWNED PARKING FACILITIES ⬠

P1A	Darden Memorial Garden Parking
P1B	Governor's Mansion Parking
P3	Bank Street Deck
P4	Closed Portion of Old 14th and Grace Streets
P5	James Monroe Building Deck
P7	Morson Row Parking
P8	Tyler Building Deck
P13	14th and Main Street Deck
P14	Rear of 1221 E. Broad Street, West Side
P15	Old 14th and Grace Streets
P16	Rear of Transportation Annex
P17	James Madison Building Deck
P18	Supreme Court Building Deck
P21	9th and Franklin Street Deck
P22	7th and Marshall Street Deck
P25	Library of Virginia Deck

STATE OWNED BUILDINGS ◯

1	Oliver W. Hill Building
2	Washington Building
3	Jefferson Building
6	Patrick Henry Building
7	Aluminum Building
8	Zincke Building
9	Madison Building
10	Department of Transportation Building
11	Department of Transportation Annex
13	Proposed Broad Street Building
17	Ferguson Building
27	219 Governor Street (Morson Row)
28	221 Governor Street (Morson Row)
33	Monroe Building
34	Rose and Lafoon Building
36	Supreme Court Building
37	Ninth Street Office Building
38	State Capitol Building
39	Governor's Mansion
39-1	Governor's Mansion Cottage
39-3	Governor's Mansion Guardhouse
40	Old Bell Tower
41	General Assembly Building
43	Governor's Mansion Carriage House
47	Old City Hall
48	223 Governor Street (Morson Row)
48A	Garage for 223 Governor Street
49	Memorial Hospital Building
60	Powers Taylor Building
61	Pocahontas Building
65	Tyler Building
71	Library of Virginia
72	VRS Building
73	Capitol Visitor Center

Revised 4\07


Legend
Virginia Biotechlogy Research Center
Existing Biotech Facilities
Future Biotech Facilities
VCU Meadical Center
Neighboring Development
INTERSTATE 64
64
INTERSTATE 95
95
DUVAL STREET
BIOTECH 7
UNOS
BIOTECH 2
DFS/OCME
BIOTECH 8
PARKING
PARKING
BIOTECH 3
BIOTECH 5
J.SARGEANT REYNOLDS C.C.
EAST JACKSON STREET
VIRGINIA COMMONWEALTH UNIVERSITY MEDICAL CENTER
FUTURE BIOTECH
BIOTECH 6
DCLS/VDACS
BIOTECH 9
CENTER FOR RESEARCH & TECHNOLOGY
FUTURE BIOTECH
PARKING
BIOTECH 1
BIOTECH CENTER
4TH STREET NORTH
7TH STREET NORTH
EAST LEIGH STREET
HISTORIC JACKSON WARD
3RD STREET NORTH
GREATER RICHMOND CONVENTION CENTER
5TH STREET NORTH
RICHMOND COLISEUM
PARKING
FUTURE BIOTECH
FUTURE BIOTECH
FUTURE PARKING
FUTURE BIOTECH
PARKING
8TH STREET NORTH
9TH STREET NORTH
10TH STREET NORTH
EAST CLAY STREET
CLAY STREET
FEDERAL BUILDING
JOHN MARSHALL COURTS BUILDING
SOCIAL SERVICES BUILDING
EAST MARSHALL STREET
MASTER PLAN OF DEVELOPMENT
VIRGINIA BIO-TECHNOLOGY RESEARCH PARK
McKINNEY AND COMPANY
planning • design • construction

Virginia Commonwealth University
Monroe Park Campus
Parking Locator
July 29, 2009

Office of Parking & Transportation Services

1108 A West Broad Street
P.O. Box 843002
828-8726

www.bsv.vcu.edu/vcupark

84 VCU Campus Connector

Routes and times and subject to change. Operational hours can vary by semester or during holidays. For the latest information about VCU Transit Services, visit us at: www.bsv.vcu.edu/vcupark

The bus headsigns will designate one of the following routes: VCU Campus Connector, VCU Medical Center Route, VCU Medical Center Evening Route or VCU Sanger Express

Legend

- VCU Campus Connector Route Stops
- VCU Parking Facilities & Buildings
- Cabell Library Stop
- VCU Campus Connector Route

6:30 am - 2:00 am Monday - Friday,
10-minute service provided until 10 pm,
15-minute service provided after 10 pm

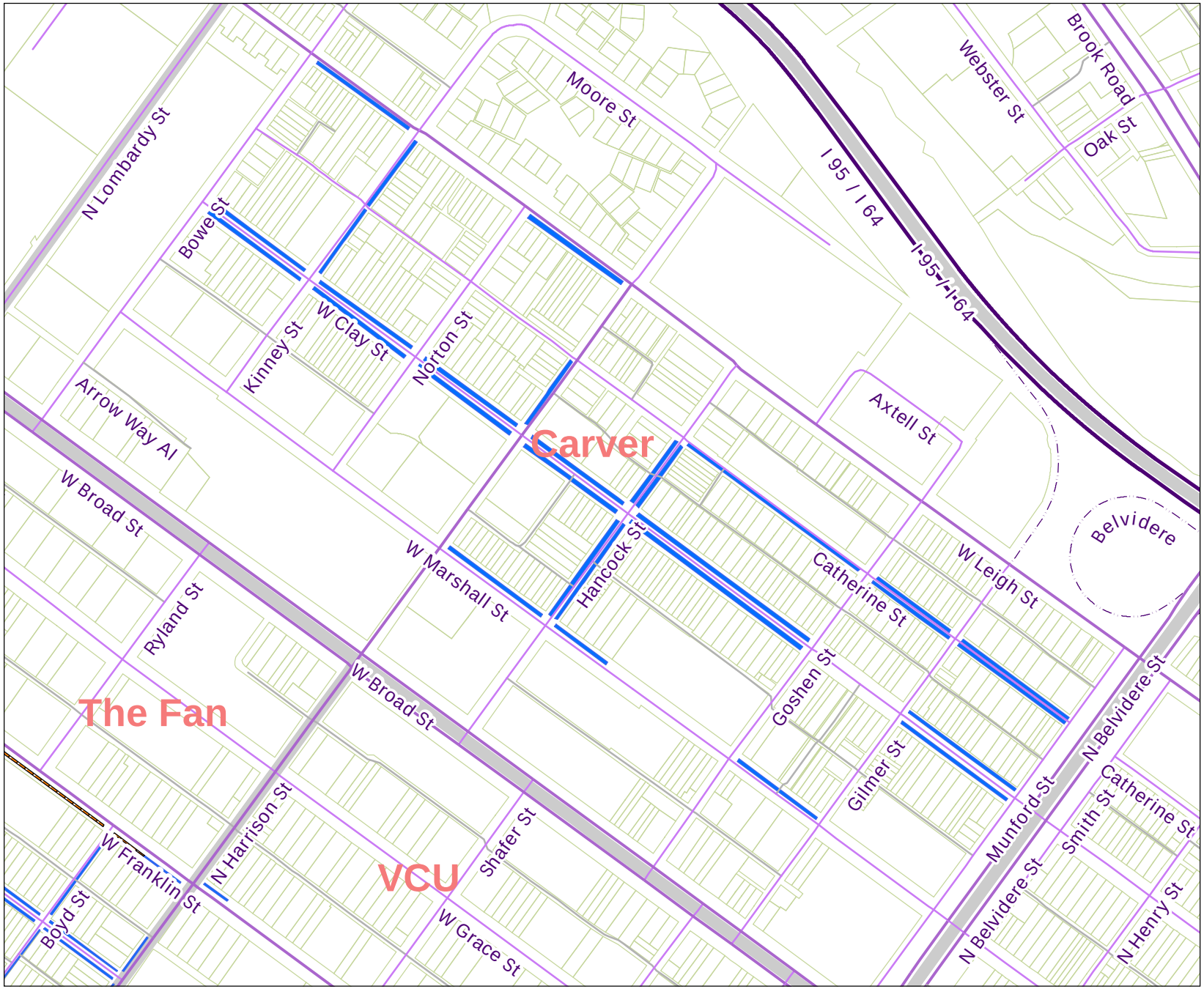
10:00 am - 9:00 pm Saturday - Sunday
15-minute service provided

Holidays observed by VCU and breaks may conform to a different schedule.

Permit Parking Zone - Carver

City of Richmond, VA
Geographic Information Systems

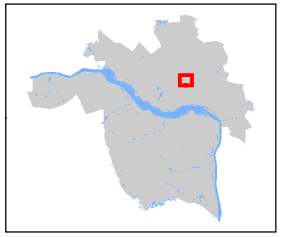
O



BlockFaced_Sign

- No
- Yes

Location Reference



Disclaimer:
The City of Richmond assumes no liability either for any errors, omissions, or inaccuracies in the information provided regardless of the cause of such or for any decision made, action taken, or action not taken by the user in reliance upon any maps or information provided herein.

1 inch = 395 feet

0 0.005 0.01 0.02 0.03 0.04 Miles

Permit Parking - Fan District

City of Richmond, VA
Geographic Information Systems

Street Type

- Freeway
- Primary Road
- Secondary Road

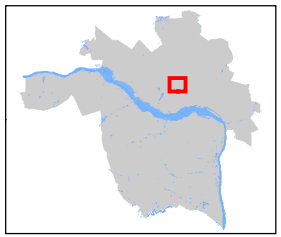
Permit Parking Zone

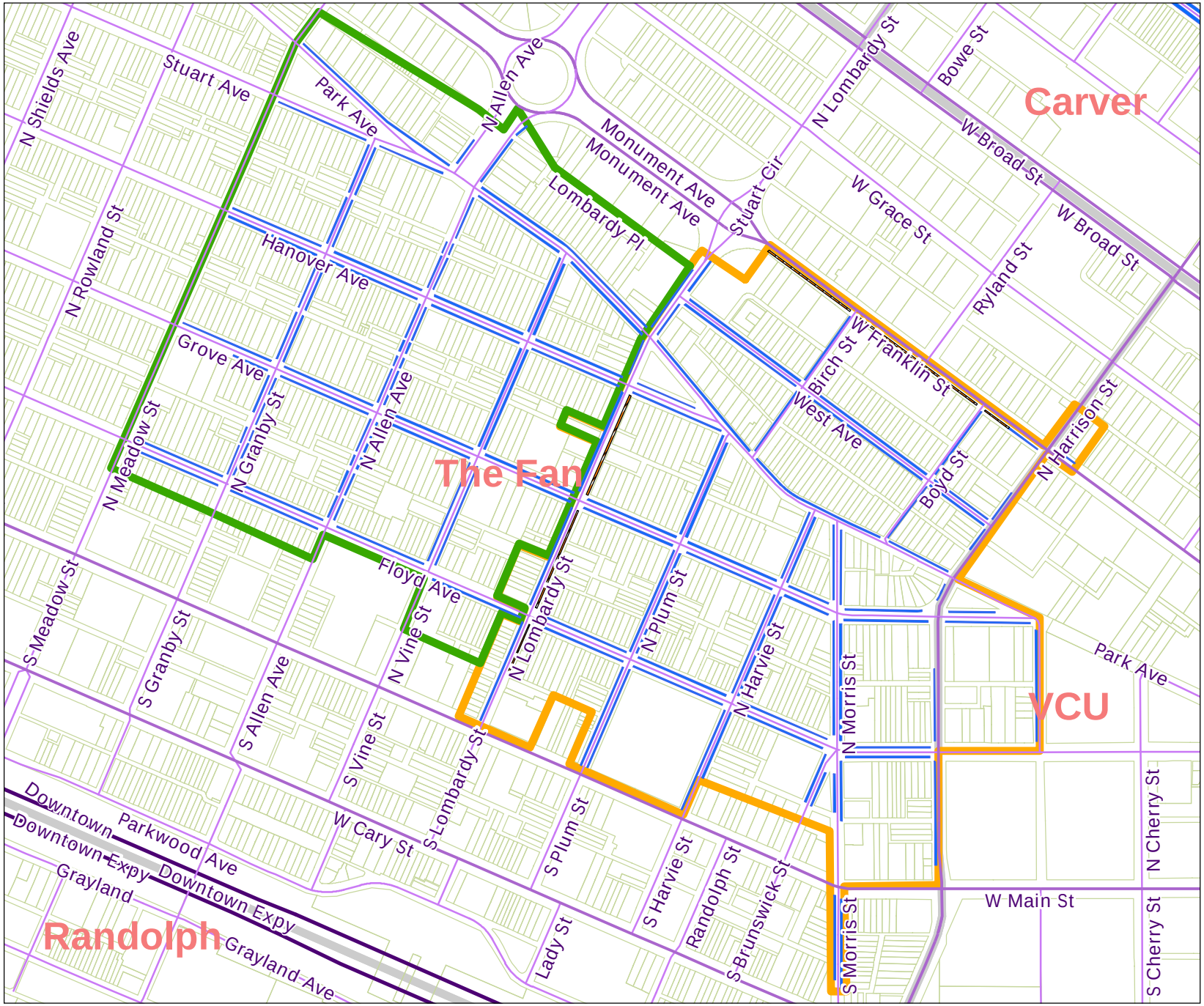
Block Faced Sign

- No
- Yes

- Zone 1
- Zone 2
- Parcels
- Neighborhoods

Location Reference





1 inch = 500 feet

0 0.025 0.05 0.1 0.15 0.2 Miles

APPENDIX IV

Included in Appendix 4 is a summary of the meetings held during this study. In addition, a one-page summary of the management options discussed in the report is provided.

City of Richmond Parking Study

Summary of Meetings and Task Report
Updated: November 3, 2009

To date, many meetings have taken place between TimHaahs and various government entities, local businesses, citizens, and interested stakeholders. The following information is an overview of these meetings including the date, those present, and the primary discussion points. These meetings have been important opportunities to collect information and educate ourselves on the parking and transportation issues facing downtown Richmond.

September 30th, 2008
Meeting with City of Richmond officials including Rachel Flynn, Garland Williams, and Tom Flynn

- Coordination of parking assets is critical. Currently too many entities exist with the RMA, RRHA, CDA, City, & State all managing and operating independently of one another.
- More meters have brought in greater revenues along with improved enforcement.
- The public perception needs to change. The current perception is that not enough parking is available in the City.
- A desire to activate the sidewalks and create more pedestrian traffic is critical.
- A key issue is VCU flooding neighboring areas.
- A Broad Street median bus track is currently being considered.
- Lack of proper enforcement is a common complaint.
- Rachel indicated the need for more below grade parking needs to be built along with more street level retail.
- The recently completed Master Plan shows a strong desire to make downtown more liveable, dense, and vibrant.

October 14th, 2008
Meeting with private parking operators: Johnnie Hogue from Standard Parking, Brandon Smith & Jon Michael Tolbert from Central Parking, Charlie Farmar from Monument City Parking, David Sharrar from City Parking, and Alan Shaia from Capital Parking.

- The primary objective of this meeting was to introduce ourselves to the private operators and gain a better understanding of their controlled parking assets.
- We requested a listing of their parking assets for rate, space, and availability information.
    - To date, we have received information from all operators except Lanier. We have been in contact with Lanier and hope to receive their information by the end of the calendar year.
- The operators are open to working with the city to maximize the use of their facilities where possible. However, the major downtown office buildings must first provide parking to their tenants.
- All operators confirmed strong parking demand levels during the business day but supply is abundant after 5pm.
- The biggest issue with lack of supply occurs when the General Assembly is in session.

October 14, 2008
Meeting with CDA representatives Lynn Lancaster & Lynda Sharp Anderson.

- All CDA parking assets are managed by Standard Parking.
- The bond payments are presently in bad shape.
- We requested the following: a list of parking assets, the inventory, financials/operating statements, copy of the management agreements, and bond document (issued in 2003).

October 15th, 2008
Meeting with GRTC representatives Scott Clark & Corina Herrer.

- They operate park-n-ride lots primarily between VCU and MCV campus locations.
- BRT – a bus rapid transit has been strongly considered with a central station to link the BRT with a downtown circulator. Funding for a trial would be funded by the State.
- The standard fare is $1.25.
- Major complaint from them in the lack of enforcement for people parking in bus stop lanes.
- We requested ridership statistics and financials.

November 6th, 2008
Meeting with VCU representative Emma Minor.

- VCU leases parking spaces from RRHA & RMA.
- They contract shuttle service through GRTC. The shuttle provides free transportation with University ID between the VCU main campus and the medical campus. The shuttle has approximately 1,000,000 rides/year.
- Tuesday and Thursday parking at MCV is heavy because of clinical days.
- Emma confirmed that a lot of nearby on-street parking is utilized because much of it is free.
- They Jefferson parking deck is available for public use as well as university use.
- They have a parking shortage partly because of the lost surface lots they lost when Phillip Morris built their new downtown campus.
- They have a comprehensive parking website at vcu.edu.

November 6th, 2008
Meeting with Venture Richmond – we were added to their regularly scheduled meeting agenda.

- They voice the need for a centralized parking entity with a website for public use.
- They believe a consistent signage and wayfinding system needs to be developed directly motorists to parking facilities. Some signage has been developed and implemented in Shockoe Slip and along Broad Street.
- We requested a list of regularly occurring events downtown and the average attendance.
- We requested regularly occurring events at the convention center.

November 6th, 2008
Meeting with Biotechnology Research Park CEO, Robert Skunda.

- This meeting was to gather more information on the current and future plans for Biotech.
- They currently have an adequate amount of nearby parking.
- They have 1.1million square feet now with a cap of 1.5 million square feet.
- Biotech employees do qualify for a VCU ID and can utilize the shuttle but it isn't believed it is widely utilized.
- They have considered eliminating the surface parking at 8th & Leigh and Leigh & 4th Street for future growth plans but that is probably 5 years out.
- They don't have a lot of ability to absorb higher costs to provide parking.
- Employees currently pay $75.00/month for non-reserved parking in the newest structure. They pay approximately $50.00/month for surface parking. The majority of their parking is managed by Standard Parking.

November 7th, 2008
Meeting with RRHA representative Garland Curtis.

- Theatre Row building (owned and managed by RRHA) employees park at the nearby Coliseum garage. The primary tenant is VCU.

- RRHA owns the land under the downtown Marriott.
- They sit on the CDA board.
- Work closely with both Standard and Central Parking.
- CDA owns 5th & Marshall parking.
- Complaint that there is no central person to discuss parking issues with. Creating a central contact would be beneficial.
- The Coliseum Garage and the Shockoe Garage is owned by RRHA.
- Debt service funded 1/3 by Coliseum and 2/3 by Theatre Row.
- CDA is required to provide parking for Performing Arts Center and the Hilton Garden Inn scheduled to open in 2009.

November 8th, 2008
Meeting with the State (Department of General Services) representatives Sheila Erickson & Bert Jones.

- They currently have 10 structured parking facilities and 11 surface lots.
- They provide parking for state employees and sometimes contractors.
- General Services owns the parking facilities.
- They use tax-free bond financing for building and restoration. This limits the ability to make taxable revenues – this speaks to whether they can allow public parking in certain facilities.
- Employees pay $42/month thru payroll deduction
- Financially the goal is to merely break-even.
- City had an option for 350 spaces for $ 4.1 million in 14th & Main garage.
- They are considering constructing a new 1,000 space deck at 7th & Main. This is under bond consideration and could also serve the Performing Arts Center.
- Master plan is on the website.
- Some of there parking may be able to open for public use in the evening however security and bond issues must be considered before this could occur.

December 16th, 2008
Meeting with State (Department of General Services) representatives Sheila Erickson, Bert Jones, and Richard

- This meeting was a follow-up to the prior meeting since the Director was previously unavailable.
- 14th & Main Street deck has no debt service
- Bought 1600 E. Main Street Center and will add a 1,000 space parking deck next to it. Will not include retail unless city agrees to lease it for "40 years at 100% occupancy".
- They have an Agreement with CDA to allow parking at 7th & Marshall deck for use on nights when events are scheduled at the Performing Arts Center opening in September 2009.

December 17th, 2008
Meeting with RMA – Jim Kennedy, Director of Operations

- Assets include:
    - 1,000 space "Expressway Parking Deck" that charges $90/month for groups and $95/mo for individuals.
    - Also, includes 325 space "2nd Street Deck" at the corner of 2nd & Grace. Monthly parking is $55/month.
    - RMA manages the toll roads – Downtown Expressway and Powhite Parkway.
    - They own and built the two 110 space decks in Carytown that provide free parking.
    - Two small surface lots at 12th & Byrd and one under the expressway off Virginia.
    - Expressway Deck will increase monthly rates to approximately $120/month once the new Williams Mullin law building opens on former surface lot.

- The RMA has eminent domain and bonding powers and they report to the Commonwealth and not the city of Richmond. They are manager by a Board of Directors.
- They manage the Main St. Station parking for the city
- They have an agreement to manage parking at the Diamond though the Braves are gone.
- Annual report available on-line at: www.rmaonline.org
- Confirmed that no centralized parking entity exists but they strongly agree it would be beneficial to do so.
- We requested a complete list of their parking assets, management agreements, and financials.

December 17th, 2008
Meeting with Rachel Flynn

- Lack of parking is not the problem.
- The goal of the Master Plan is to develop a successful downtown.
- Activating streets is a key component.
- They would like to see examples of cities that have a parking authority or similar structure and how it has been successful. Show the same with how parking meters have been successful.
- Recommended we meet with Kathy Graziano and Ellen Roberts – these are city council members and believed to be the next council president and VP.
- Would like a section of the report discussing underground parking with examples including cost, pros/cons, long-term advantages, etc.

December 17th, 2008
Meeting with Mike Byrne (owner of Richbrau/Taphouse)

- Shockoe Slip has lost multiple retailers in the last 36 months partly due to parking.
- Two large malls, Stony Pointe and Short Pump, have encouraged the retailer exodus from downtown & the Slip.
- We requested and received a copy of the Shockoe Slip parking study and the transportation study which Mike believes are still current and relevant.
- Has a strong tie to Lanier Parking.
- Believes managing the parking assets and a link between downtown/convention center and the Shockoe Bottom and Slip is critical to the success of both areas.

March 9th, 2009
Meeting with Garland Curtis and Anthony Scott (RRHA)

- Met Mr. Scott and re-introduced ourselves to Mr. Curtis as he was becoming our new central point of contact since John Sydnor was no longer with RRHA.
- Provided an update on our study-to-date progress and remaining tasks.
- Discussed items and overview of key points for City-based meeting to take place the following day at city hall.
- Discussed our overall observations and findings.

March 10th, 2009
Meeting with City Officials – in attendance was David Hicks (Senior Policy Advisor), Suzette Denslow (Chief of Staff), James Duval (City of Richmond Debt Portfolio Manager), Anthony Scott, Garland Curtis, & Rodney Forte.

- Introduced ourselves to the new mayoral administration.
- Defined the study area boundaries and phases of the on-going parking study.

- Provided an update on progress thus far.
- Discussed preliminary findings including the need for a centralized parking management entity; specifically a Parking Authority or Enterprise Fund.
- Identified a deliverable date of Jun 30th for the draft report with an earlier date for an overview of the pro's/con's of the various management entities. The current governor (a former Richmond mayor) will be a key supporter of any proposed legislative or other changes. They (City) will provide feedback on their desired direction.
- A point to possibly increase the study boundaries west of Belvidere Street and east of 21st was discussed and will be addressed between TimHaahs and RRHA.

September 23rd, 2009
Meeting with Garland Curtis and Anthony Scott (RRHA)

- Quick discussion to update our study efforts and to define meeting objectives for the meeting with the mayor and his staff.
- Discussed potential timelines for remaining tasks.
- Garland will send a contract renewal for Mike to sign – the original has expired.
- Garland to provide updated financials to reflect change in economic climate. He indicated the new VCU deck has decreased demand for the Coliseum garage.

September 23rd, 2009
Meeting with City Officials – in attendance was Mayor Dwight Jones, Peter H. Chapman, (Deputy Chief Administrative Officer), Garland Curtis and Anthony Scott (RRHA), Jane Ferrera (Deputy Director and Chief Operating Officer Department Of Economic and Community Development

- This was our first meeting with the mayor and therefore we brought him up to speed on the work-to-date along with initial conclusions & recommendations.
- Mr. Chapman and Ms. Ferrera indicated two weeks would be reasonable to have comments returned to us.
- They requested we identify existing parking authorities, enterprise funds, and parking departments as part of the report.
- Ms. Ferrera requested a one-page visual document with the definitions, advantages and disadvantages of the various management options.
- A question regarding the EDA (IDA) was brought forth based on the belief they may operate parking assets. This was the first time we had heard of such an organization. Garland indicated he would contact Rich Johnson for the information. If they do operate parking assets we will need to include the information in our financial analysis of city-owned assets.

Management Type	Leadership Structure	Advantages	Disadvantages	Revenue Stream
Parking Authority Definition: An independent entity enabled under state, county, or municipal legislation to manage the public parking assets in a self-sustaining manner,	-Normally comprised of a 5 member Board of Director's who reside or have a place of business within the boundaries of the parking authority and are self-appointed. -Executive Director reports directly to Board.	-Consolidate all parking entities and agencies into one central point. -Reduces the impact of political will and process. -Ability to quickly change and or set parking rates. -Independent Authority with bonding capacity power. -Little accountability to City.	-Requires legislative action at the State level that can be a time consuming process. -Little accountability to City. -Appointment process for board members may become political.	An Authority maintains control over its revenues. However, the intial legislation can require that if certain revenue thresholds are met, a set percentage or specific amount of funds must be directed to the General Fund.
Enterprise Fund Definition: A government service that is self-supporting through the collection of fees associated with operating its parking assets.	-Normally has an Executive Director who report to the City Council and/or Mayor. -The executive director should have business experience. -Other manager(s) should have preferably have some parking-related background.	-Consolidate all parking entities and agencies into one central point. -Should be self-supporting and therefore should not seek funds from the General Fund. -May have bonding powers.	-Can be slowed down by the political process. (i.e. cannot set or change parking rates without city council approval; thereby slowing down the process.) -Cannot approve its own budget.	Maintains control over its revenue but may lend out to other municipal agencies through an interest bearing loan. The fund controls all revenues and pays all expenses while maintaining excess revenues for future parking-based initiatives including new construction.
Parking Department Definition: A municipal parking entity under the umbrella of city government.	-Frequently the person already managing parking retains his duties.	-Helps to bring some centralized oversight. -Minimal administrative changes needed over current system. -Minimal personnel changes as the majority of employees retain their job functions.	-Usually falls under an existing department such as public works, facilities, or even the police department. Therefore, the necessary funds to make repairs or pay for new parking may not be seen as a priority. -Doesn't allow for swift change or significant improvement.	All funds flow directly to the General Fund.