

**Draft Final Report  
Silver Spring PLD Parking Demand Study  
Assessment of Existing and Future Conditions**

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**Submitted To:  
Montgomery County Government,  
DOT-Division of Parking Management**

**MCV Associates, Inc.  
&  
DESMAN  
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## INTRODUCTION

MCV Associates, Inc. and DESMAN (MCV Team) have been retained by the Montgomery County Department of Transportation, Division of Parking Management, to perform a Parking Demand Assessment Study of the Silver Spring Parking Lot District (PLD). The goals of the study are to document the existing parking conditions in Silver Spring and to assess the impact of future development on the parking system. More specifically, questions to be answered include, but are not limited to:

- Is current parking system under- or over-built in the Silver Spring PLD?
- What is the impact of new development on the current parking system?
- Does the supply of publicly available spaces sufficiently meet the current and future needs?

To achieve the goals of the study, the project methodology has been designed to be completed in the following three Phases:

- Phase I – Assessment of Existing Conditions
- Phase II – Existing Land Use (GIS) Analysis
- Phase III – Development Impact Analysis

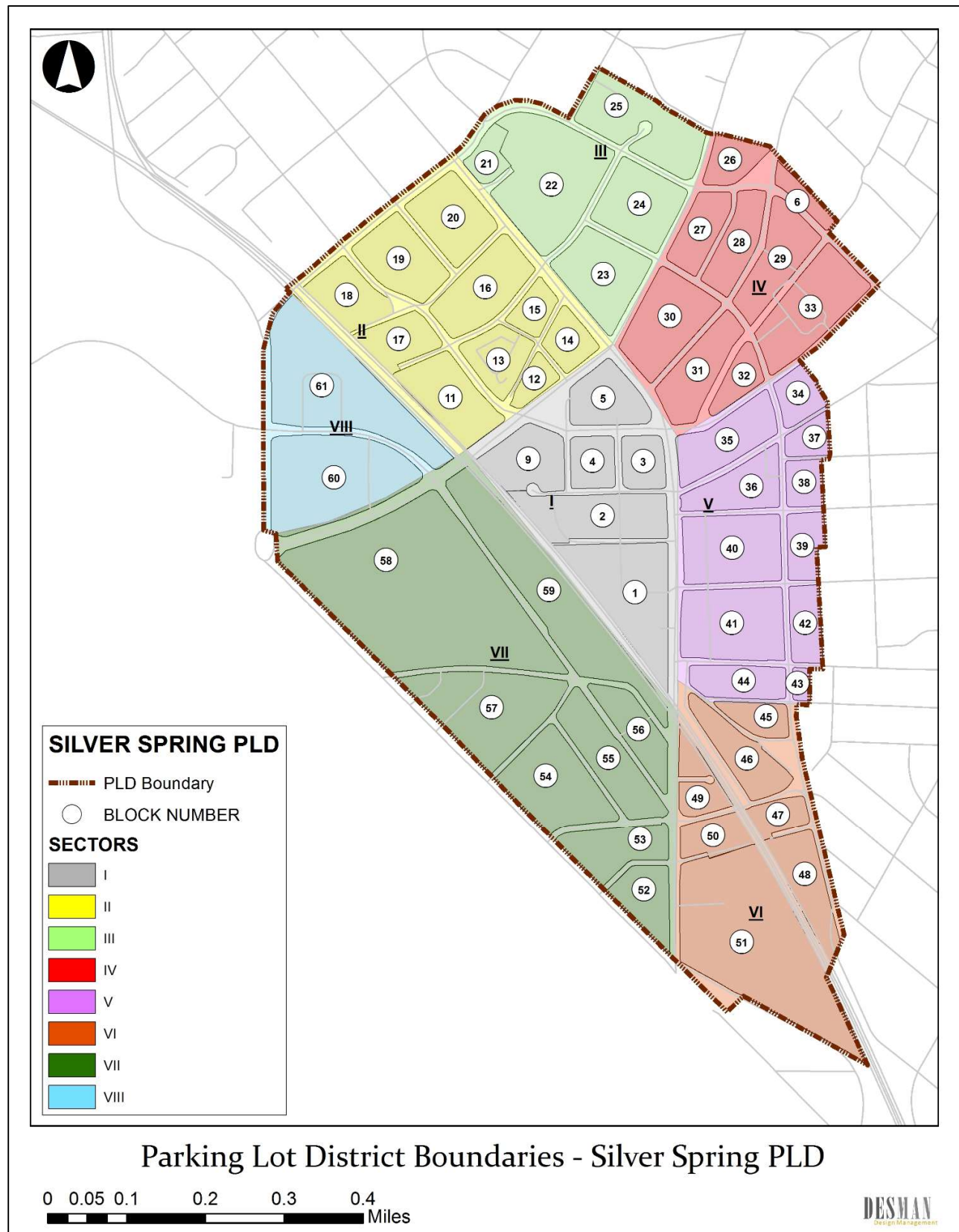
Note that given the volume of data collected and disseminated for this effort, all background information and spreadsheets are included in a separate Appendix. Please refer to the Appendix for detailed information.

## PHASE I – ASSESSMENT OF EXISTING CONDITIONS

### 1. STUDY AREA

The downtown study area, as illustrated in **Exhibit A**, is bounded by Spring Street to the northwest, Cedar Street and Fairview Street to the northeast, Eastern Avenue to the southwest, and Fenton Street and a center block line between Fenton and Grove Street to the east. The Department of Parking Management currently employs a sector and block numbering system for the blocks located within the PLD. For the purpose of this study, MCV TEAM used the same block numbering system in order to illustrate the areas that are currently experiencing a surplus or deficit of parking spaces, as well as specific blocks which have the potential to absorb additional future parking demand. Exhibit A illustrates the PLD boundaries and the existing sector and block numbering system.

Exhibit 1: Silver Parking Lot District (PLD) Boundaries and Block Groups



## 2. EXISTING PARKING CONDITIONS

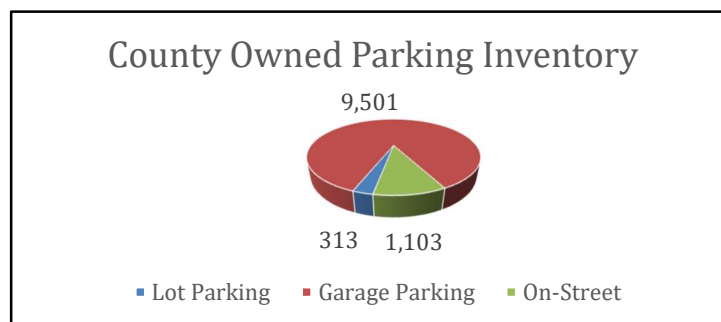
Phase I of the study included analysis of the system-wide inventory of spaces, as well as turnover and utilization surveys of those spaces, both on- and off-street. The following presents a summary of our findings based on the tabulation of that data.

### Parking Supply

The public parking supply in the PLD consists of publicly-available, off-street and on-street spaces. There are 10,917 publicly-available on- and off-street parking spaces in the Silver Spring PLD, of which 9,501 spaces (87%) are located within 9 public parking garages, 313 spaces (3%) are located within 5 public parking lots and 1,103 spaces (10%) are on-street. (Appendix: Figure 1a – 1e).

There is a total of 1,103 on-street parking spaces within the PLD, which equates to about 10% of the total supply of public parking in the PLD. Of those spaces, 301 (27%) are dedicated to 1-hour parking, 582 (53%) to 2-hour parking, 8 (<1%) to 3-hour parking, and 208 (19%) to 9-hour parking. There are also four (4) 30-minute parking spaces in the total inventory. Figure 1e in the Appendix shows the full inventory of on-street spaces by block and by zone.

There are private parking spaces throughout the PLD as well. It should be noted that private parking spaces are not available to the general public (i.e. they are restricted for use only by specific user groups) and cannot be counted on to satisfy the parking needs of the general public. As such, the first phase of this study will focus on assessing the existing and future conditions of only publicly-available parking spaces both on- and off-street.

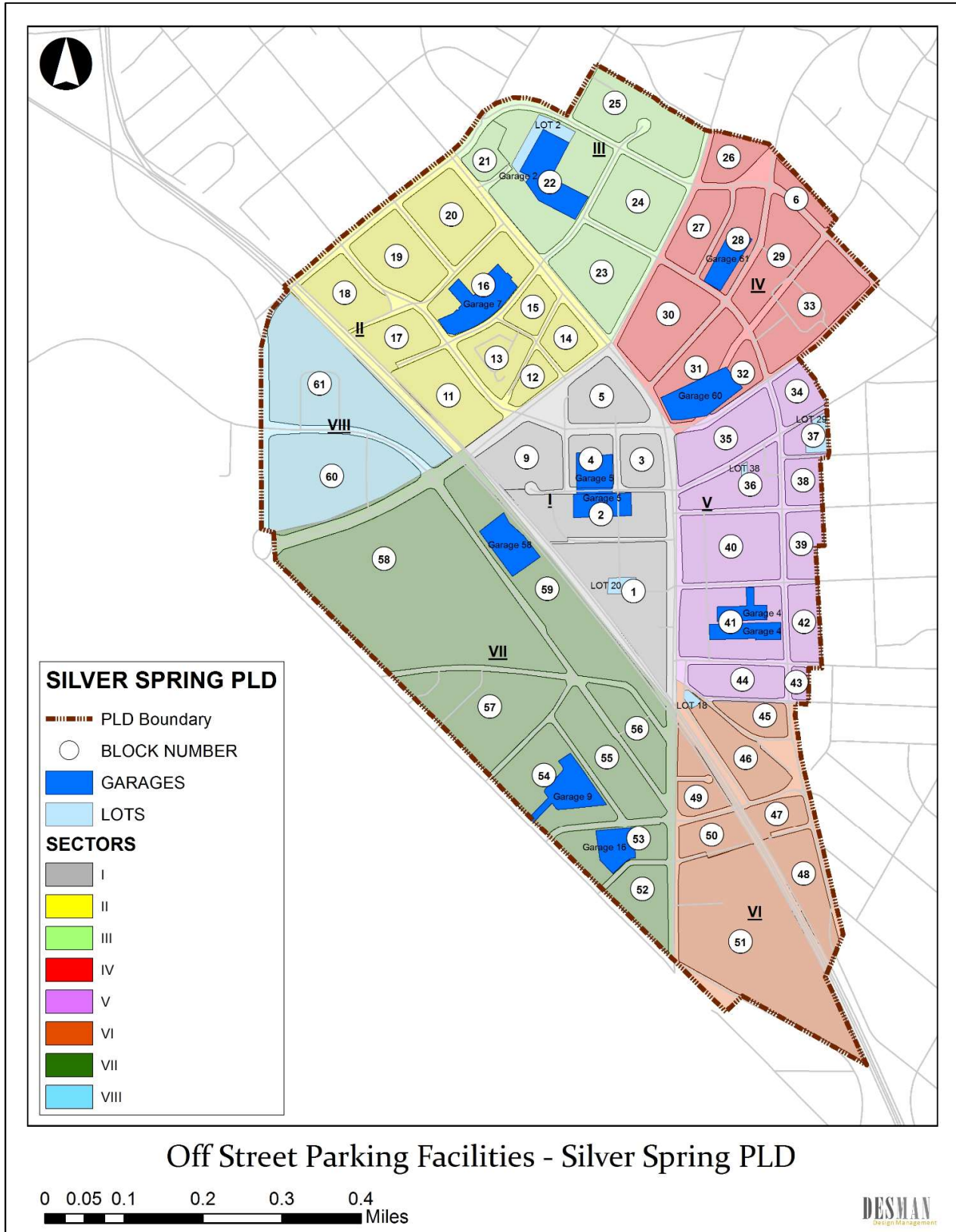


Source: DESMAN

**Exhibit B**, below, identifies the location of the off-street public parking facilities within the PLD boundaries. Figures 1b – 1d of the Appendix illustrate the inventory of public off-street parking by type, by block, and highlight restrictions of the spaces within these facilities.



Exhibit 2: Location of the Publicly Available Off-Street Facilities



## Parking Utilization

MCV Associates collected hourly parking utilization and turnover and duration of stay surveys in all County parking facilities and curbside areas within the Silver Spring PLD. This data was gathered during the course of a typical weekday between 10:00 AM and 9:00 PM. Data was collected on a typical Friday and a typical Saturday between 11:00 AM and 10:00 PM.

The peak utilization of the total PLD area during a typical observed weekday occurred at 1:00 PM with a total of 6,258 (57%) spaces occupied. The Friday peak utilization occurred at 1:00 PM and had a total of 5,723 (52%) of the spaces within the PLD occupied. On a typical Saturday the peak occupancy occurred at 12:00 PM with 3,951 (36%) total spaces occupied within the PLD.

The peak utilization periods varied from one off-street facility to another, based on the type of user groups parking at the facility (i.e. employee, visitor, etc.). System wide, off-street utilization peaked during the 1:00 PM hour on a typical weekday when 5,429 (55%) of the total off-street supply was occupied. On a Friday, 4,925 (50%) of the off-street spaces were occupied during the 1:00 PM hour. On a typical Saturday, 3,135 (32%) of the off-street spaces were occupied during the 12:00 PM hour. (Appendix: Figure 2a, 2b, & 2c).

On-street parking occupancy differed from block-to-block, based on the types of land uses found within each block. System-wide, on-street spaces experienced the highest utilization during the 12:00 PM hour on a typical weekday with 871 (79%) of the on-street spaces occupied. On Friday the highest utilization was during 7PM with 868 (79%) of on-street spaces occupied. During the 7:00PM hour on Saturday 863 (78%). Across these days, the peak occupancy rates were averaged about 80% of the total capacity of on-street parking within the PLD (Appendix: Figure 2d, & 2e, & 2f.)

## Parking Surplus/Deficit

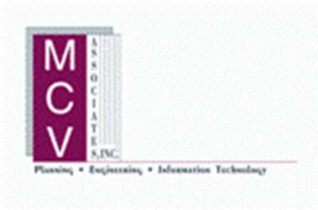
In order to accurately assess the stress on the parking system in relation to parking demand, the concept of practical capacity needs to be discussed. The level of utilization within a facility, block or study area may reach a point where potential parkers become frustrated when trying to locate an available space and therefore perceive the facility as full. This is particularly problematic for drivers who wish to remain parked only for a short period of time (e.g. shoppers, diners, etc.). For the purposes of this study, a practical capacity factor of 90% was used to analyze the parking conditions in the PLD. For example, if a 100-space parking lot has 95 parked vehicles during the peak hour, then a practical deficit of 5 spaces would exist (the practical capacity of the parking lot is 90 spaces).

Figures 3a, 3b, and 3c in the Appendix illustrate the peak on- and off-street practical surpluses/deficits on a weekday, a Friday and a weekend. Overall, the numbers indicate that, on a weekday, there is a practical surplus of 166 on-street and 3,405 publicly-available, off-street spaces in the PLD or a system-wide practical surplus of 3,571 (33%) spaces during a typical weekday.

On a typical Friday, the PLD experiences a practical surplus of 197 on-street spaces and 3,909 off-street spaces. Overall, the study area had a surplus of 4,106 (38%) publicly available spaces during a typical Friday.

On a typical Saturday the PLD had a surplus of 177 on-street spaces and a surplus of 5,698 off-street publicly available spaces. Overall the PLD experiences a surplus of 5,874 (54%) spaces during the Saturday peak period. (Appendix: Figure 3a, 3b, & 3c).





**Exhibits C1, C2, and C3**, below, further illustrate the current surplus/deficit conditions by color coding based on the amount of surplus or deficit within each block. The color blue indicates that the block is experiencing a surplus of parking. The lighter shade of blue represents blocks with a surplus of less than 25 spaces during the peak period and the darker shade represents blocks with 100 or more spaces available during the peak period.

It is clearly visible that blocks with a county operated off-street facility, have a surplus of publicly available parking. The blocks with the parking garages offer the largest surplus, especially on weekends. The parking garages in the PLD go largely underutilized outside of normal weekday business hours.

Exhibit 3: Peak Weekday Publicly Available On- and Off-Street Surplus/Deficit by Block

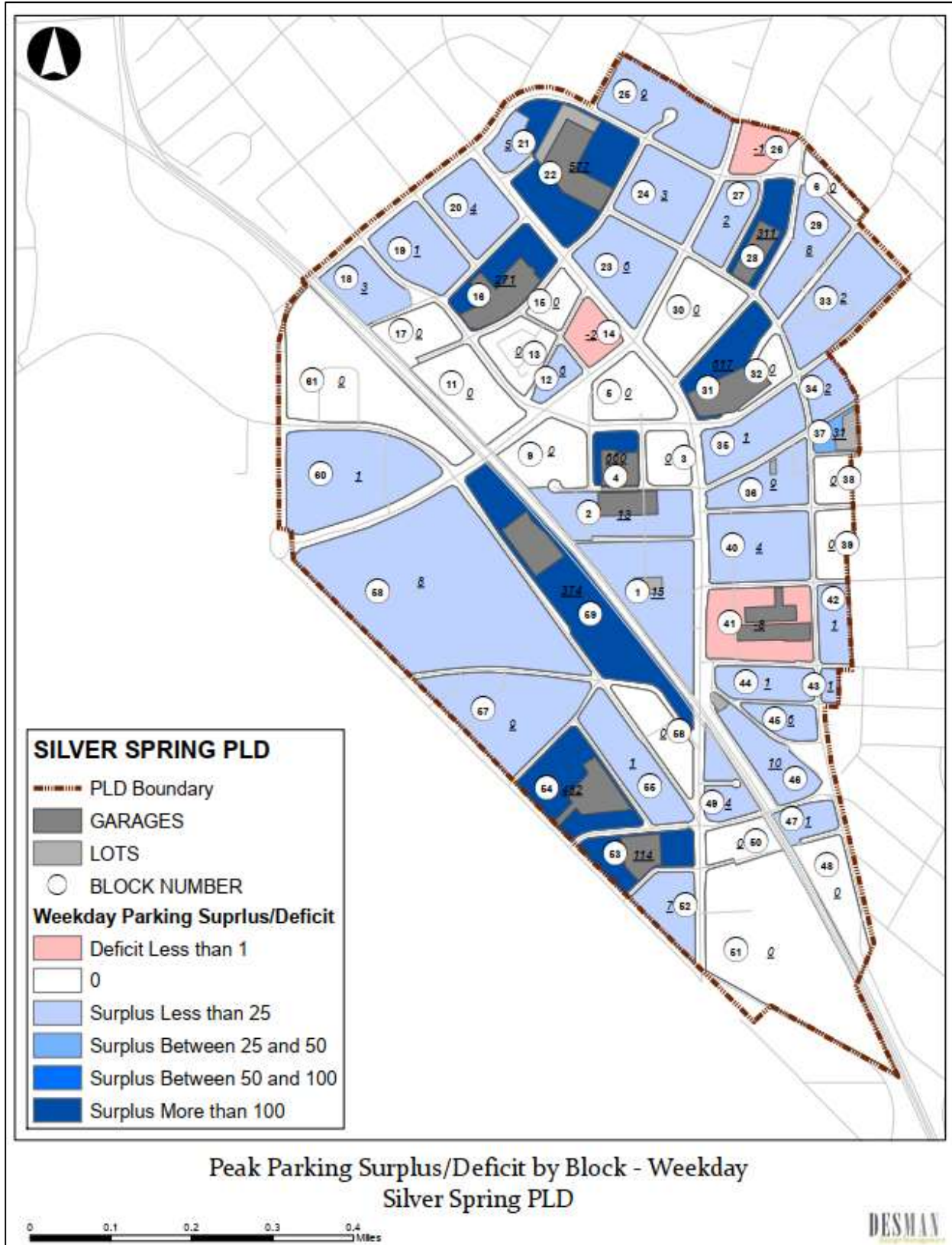


Exhibit 4: Peak Friday Publicly Available On- and Off-Street Surplus/Deficit by Block

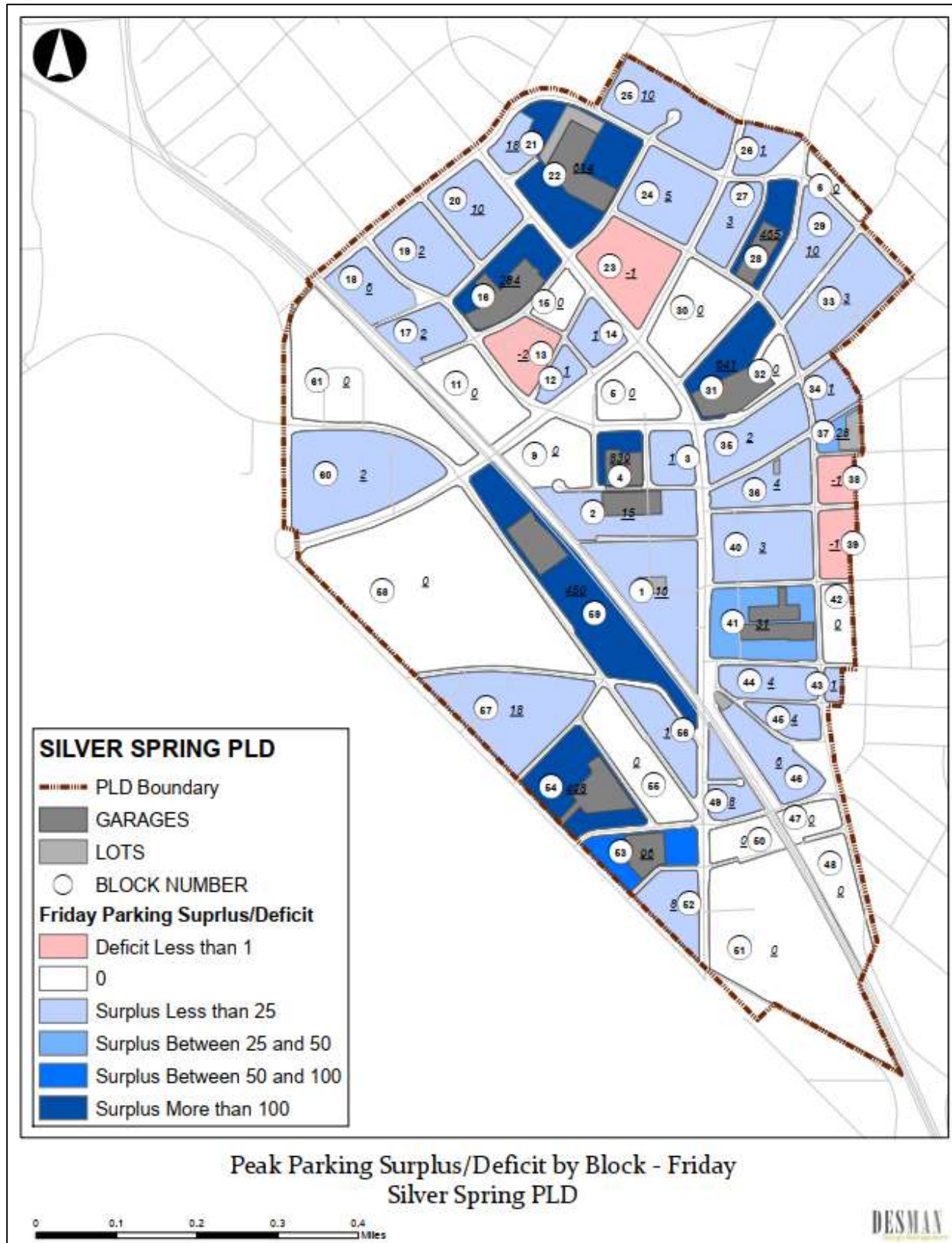
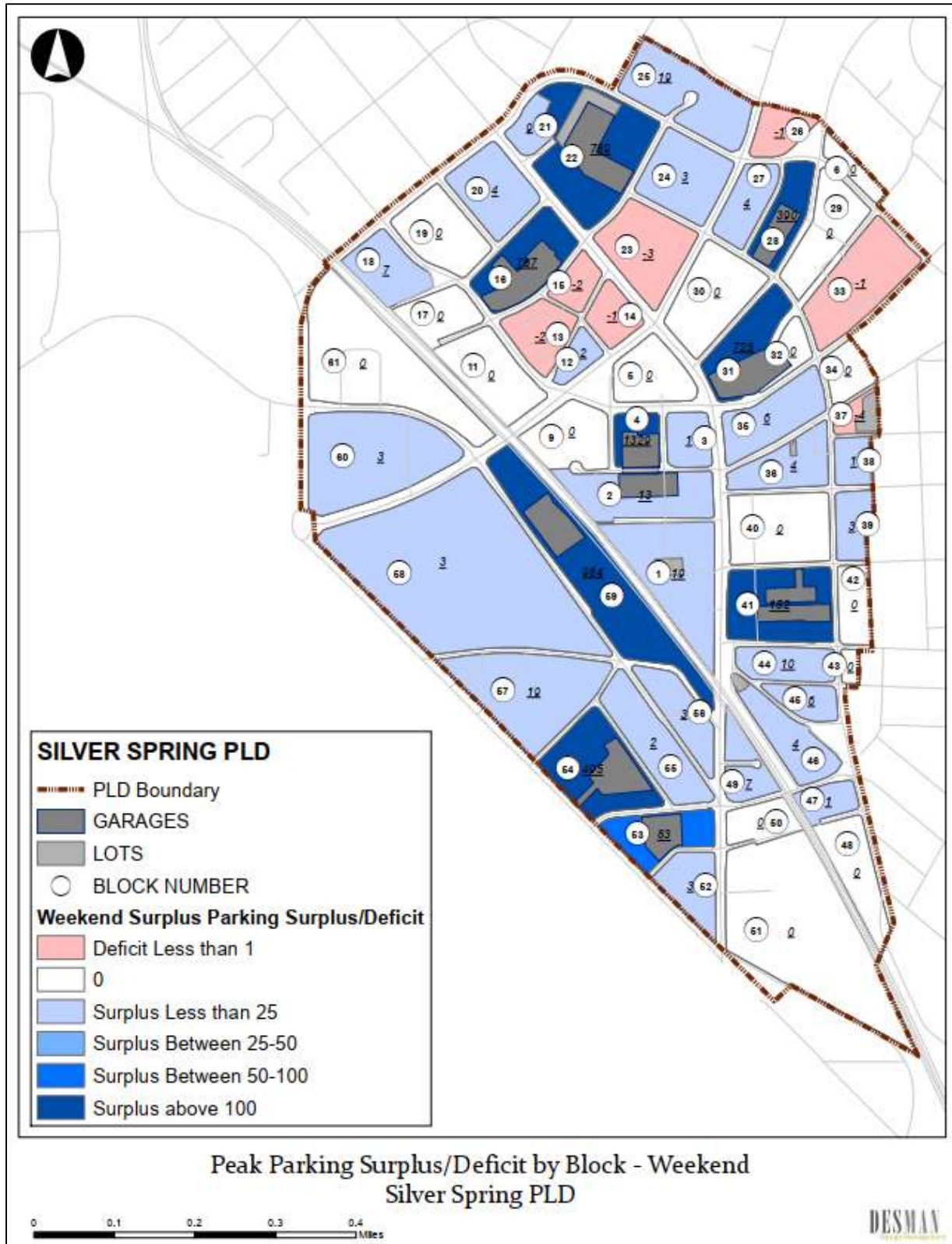




Exhibit 5: Peak Weekend (Saturday) Publicly Available On- and Off-Street Surplus/Deficit by Block



## Parking Turnover

In addition to the public parking utilization surveys, MCV Associates also completed a drive-by survey to monitor the length of time each vehicle occupied a single public parking space. This practice is used to determine how many vehicles utilize a specific parking space throughout the course of the day as well as the number of times a different vehicle utilizes the available parking spaces. These metrics are referred to as the average length of stay and the vehicle per space turnover. The detailed results of the turnover survey are summarized in Figures 4a, 4b, & 4c of the Appendix.

The average amount of time a vehicle remained parked at a given off-street space varied from facility-to-facility between a typical weekday, Friday and Saturday. The overall average duration of a single vehicle occupying a space in an off-street parking space, including both garages and lots, averaged 3.9 hours on a weekday, 3.7 hours on a Friday and 3.6 hours on a Saturday.

In addition to the average length of stay, the total number of vehicles using the facilities was also monitored. The number of vehicles that use a specific space within an off-street facility was similar for the observed days in the PLD. The vehicle per space turnover averaged 1.7 for a weekday, 1.7 for a Friday, and 1.3 on a Saturday. These metrics show that on average more than one vehicle uses a parking space over the course of a typical day.

The observed rate of vehicle turnover for on-street spaces varied from block-to-block as well. On the typical weekday, on-street spaces turned-over an average of 7.2 times. On Fridays the turnover ratio averaged 7 times. Weekends also experienced the same turnover ratio of an average of 7 times.

During the weekday survey period, 13,759 vehicles utilized the 9,814 off-street spaces and 7,940 vehicles utilized the 1,103 on-street spaces. For the off-street spaces, this equates to a turnover ratio of 1.7 turns per day and a duration of stay of about 3.9 hours. On-street parking experienced a turnover ratio of 7.2 turns per day and a duration of stay of 1.2 hours.

During the Friday survey period 13,571 vehicles used the available 9,814 off-street spaces and 7,671 vehicles utilized the 1,103 on-street spaces. For a Friday, off-street spaces experienced a turnover ratio of 1.7 with an average length of stay of 3.7 hours. The turnover ratio for on-street spaces came to 6.9 turns per day with an average length of stay of only 1.3 hours.

Weekend parking on a typical Saturday experienced 9,987 vehicles utilizing the available off-street parking spaces. 7,678 vehicles utilized the available on-street spaces. The Saturday average length of stay off-street was about 3.6 hours, while the on-street length of stay averaged only 1.2 hours. The vehicle per space turnover for off-street facilities was 1.3 with on-street experiencing an average of over 7 vehicles using the space over the course of the day.

Please see the Appendix for additional information, including tables and graphs, about the PLD.

## PHASE II – EXISTING LAND USE ANALYSIS

Field surveys of parking utilization and turnover cannot by themselves determine if or when Silver Spring has an overabundance of parking spaces. The need for parking is generated by occupied and vibrant commercial, institutional, and residential buildings and without an understanding of land use activity an analysis of parking need is incomplete. The following section introduces a comprehensive land use database for Silver Spring and peak period parking demand ratios associated with Silver Spring.

### 1. LAND USE BASED MODELLING OF PARKING DEMAND

In order to determine the existing land use-based parking demand, the concept of parking demand factors needs to be introduced. Land use-based parking demand factors or ratios are per-unit measures of peak hour parking generation. By applying these factors to the density of various land uses (office, retail, residential, etc.), the weekday and weekend parking activity associated with those developments can be estimated. **Exhibit D** shows current peak parking demand factors that are believed to be relevant for Silver Spring, MD for a typical weekday, Friday, and weekend day. For example, for each occupied 1,000 SF of retail space within the PLD today, roughly 1.22 parking spaces would be needed during the typical weekday peak period to satisfy the parking demand generated by this land use.

These ratios, however, are below those currently published by the Urban Land Institute and the Institute of Transportation Engineers. This would suggest that although the intensity of existing office, residential, retail, and restaurant land use activity in the Silver Spring PLD is the same as what may be experienced in other town center environments, the proximity and ease of access to public transportation results in a lower parking demand ratio. These additional factors of auto use and synergy, which takes into account patrons visiting multiple land uses, are taken into account to determine the appropriate ratio for parking needs in Silver Spring, MD.

*Exhibit 6: Existing Land Use Based Parking Ratios (Typical Weekday, Friday, and Weekend)*

<b>Recommended Weekday Parking Ratios by Land Use</b>				
<b>Land Use Category</b>	<b>ULI Demand Dependent Ratio <sup>(1)</sup></b>	<b>Auto Use <sup>(2)</sup></b>	<b>Synergy <sup>(3)</sup></b>	<b>Auto Base - Auto Dependent Ratio <sup>(4)</sup></b>
Retail ( per 1,000 sq. ft. GFA)	2.90	70%	40%	<b>1.22</b>
Hotel (per Room)	1.00	90%	10%	<b>0.81</b>
Office ( per 1,000 sq. ft. GFA)	2.60	65%	10%	<b>1.52</b>
Live Theater (per 1,000 sq. ft. GFA)	0.37	65%	2%	<b>0.24</b>
Restaurant ( per 1,000 sq. ft. GFA)	13.60	70%	40%	<b>5.71</b>
Church ( per 1,000 sq. ft. GFA)	8.37	10%	0%	<b>0.84</b>
Residential ( per Dwelling)	1.15	100%	0%	<b>1.15</b>
Institutional ( per 1,000 sq. ft. GFA)	1.20	80%	0%	<b>0.96</b>
Light Industrial ( per 1,000 sq. ft. GFA)	0.65	90%	2%	<b>0.57</b>
Health Club	6.60	75%	5%	<b>4.70</b>

(1) Base Ratios were derived from ULI "Shared Parking"(2nd Edition) and ITE "Parking Generation" (5th Edition)  
(2) Percentage of people who typically drive to their destination  
(3) Percentage of people who would already be parking in association with other uses  
(4) Vehicles per 1,000 sq. ft. GFA



<b>Recommended Friday Parking Ratios by Land Use</b>				
<b>Land Use Category</b>	<b>ULI Demand Dependent Ratio <sup>(1)</sup></b>	<b>Auto Use <sup>(2)</sup></b>	<b>Synergy <sup>(3)</sup></b>	<b>Auto Base - Auto Dependent Ratio <sup>(4)</sup></b>
Retail ( per 1,000 sq. ft. GFA)	2.90	80%	40%	<b>1.39</b>
Hotel (per Room)	1.00	90%	10%	<b>0.81</b>
Office ( per 1,000 sq. ft. GFA)	2.60	65%	10%	<b>1.52</b>
Live Theater (per 1,000 sq. ft. GFA)	0.37	75%	2%	<b>0.27</b>
Restaurant ( per 1,000 sq. ft. GFA)	13.60	80%	40%	<b>6.53</b>
Church ( per 1,000 sq. ft. GFA)	8.37	20%	0%	<b>1.67</b>
Residential ( per Dwelling)	1.30	90%	2%	<b>1.15</b>
Institutional ( per 1,000 sq. ft. GFA)	1.20	70%	0%	<b>0.84</b>
Light Industrial ( per 1,000 sq. ft. GFA)	0.65	90%	2%	<b>0.57</b>
Health Club	6.60	75%	5%	<b>4.70</b>

(1) Base Ratios were derived from ULI "Shared Parking"(2nd Edition) and ITE "Parking Generation" (5th Edition)  
(2) Percentage of people who typically drive to their destination  
(3) Percentage of people who would already be parking in association with other uses  
(4) Vehicles per 1,000 sq. ft. GFA

<b>Recommended Weekend Parking Ratios by Land Use</b>				
<b>Land Use Category</b>	<b>ULI Demand Dependent Ratio <sup>(1)</sup></b>	<b>Auto Use <sup>(2)</sup></b>	<b>Synergy <sup>(3)</sup></b>	<b>Auto Base - Auto Dependent Ratio <sup>(4)</sup></b>
Retail ( per 1,000 sq. ft. GFA)	3.20	90%	30%	<b>2.02</b>
Hotel (per Room)	0.90	90%	15%	<b>0.69</b>
Office ( per 1,000 sq. ft. GFA)	0.26	40%	5%	<b>0.10</b>
Live Theater (per 1,000 sq. ft. GFA)	0.37	95%	2%	<b>0.34</b>
Restaurant ( per 1,000 sq. ft. GFA)	14.30	85%	30%	<b>8.51</b>
Church ( per 1,000 sq. ft. GFA)	8.37	100%	0%	<b>8.37</b>
Residential ( Per Dwelling)	1.30	90%	2%	<b>1.15</b>
Institutional ( per 1,000 sq. ft. GFA)	1.20	40%	0%	<b>0.48</b>
Light Industrial ( per 1,000 sq. ft. GFA)	0.65	50%	2%	<b>0.32</b>
Health Club	5.50	85%	5%	<b>4.44</b>

(1) Base Ratios were derived from ULI "Shared Parking" (3rd Edition) and ITE "Parking Generation" (5th Edition)  
(2) Percentage of people who typically drive to their destination  
(3) Percentage of people who would already be parking in association with other uses  
(4) Vehicles per 1,000 sq. ft. GFA

**Figure 5** in the Appendix illustrates the total square footage of each land use category by block as provided by the County through its CoStar commercial real estate database. Note that this analysis focuses on presently occupied commercial, institutional and residential property.

The dominant land uses according to **Figure 5** of the Appendix are Office and Residential. Parking demand associated with these two land uses is higher than other land uses. There is 7,527,581 square feet of occupied office space within the Silver Spring PLD. Considering a parking ratio of 1.52, see **Exhibit D** for weekday demand, the office land use generates a demand for 10,444 parking spaces during a weekday peak period at 1:00 PM based on the total amount of square feet. The peak demand generated by 14,542 residential dwelling units at 1:00 PM on the weekday was calculated at 16,723 spaces, using an adjusted ratio of 1.15 spaces per unit. It should be noted that the residential demand ratio is only an indicator of demand during the system-wide peak utilization hour at 1:00 PM as this is when a majority of residents are away from home during the day. During the evening hours the office parking demand would decrease while the residential parking demand would increase, as people return home.

**Figure 6** in the Appendix illustrates the estimated existing peak parking demand figures and surplus/deficit conditions associated with such land uses on a weekday. Overall, it is indicated that there is a parking demand for 30,935 spaces associated with all uses within the PLD boundaries. The demand for parking is calculated by comparing the total available square feet of a building or land use and utilizing the associated pre-set ratios to determine the anticipated parking demand.

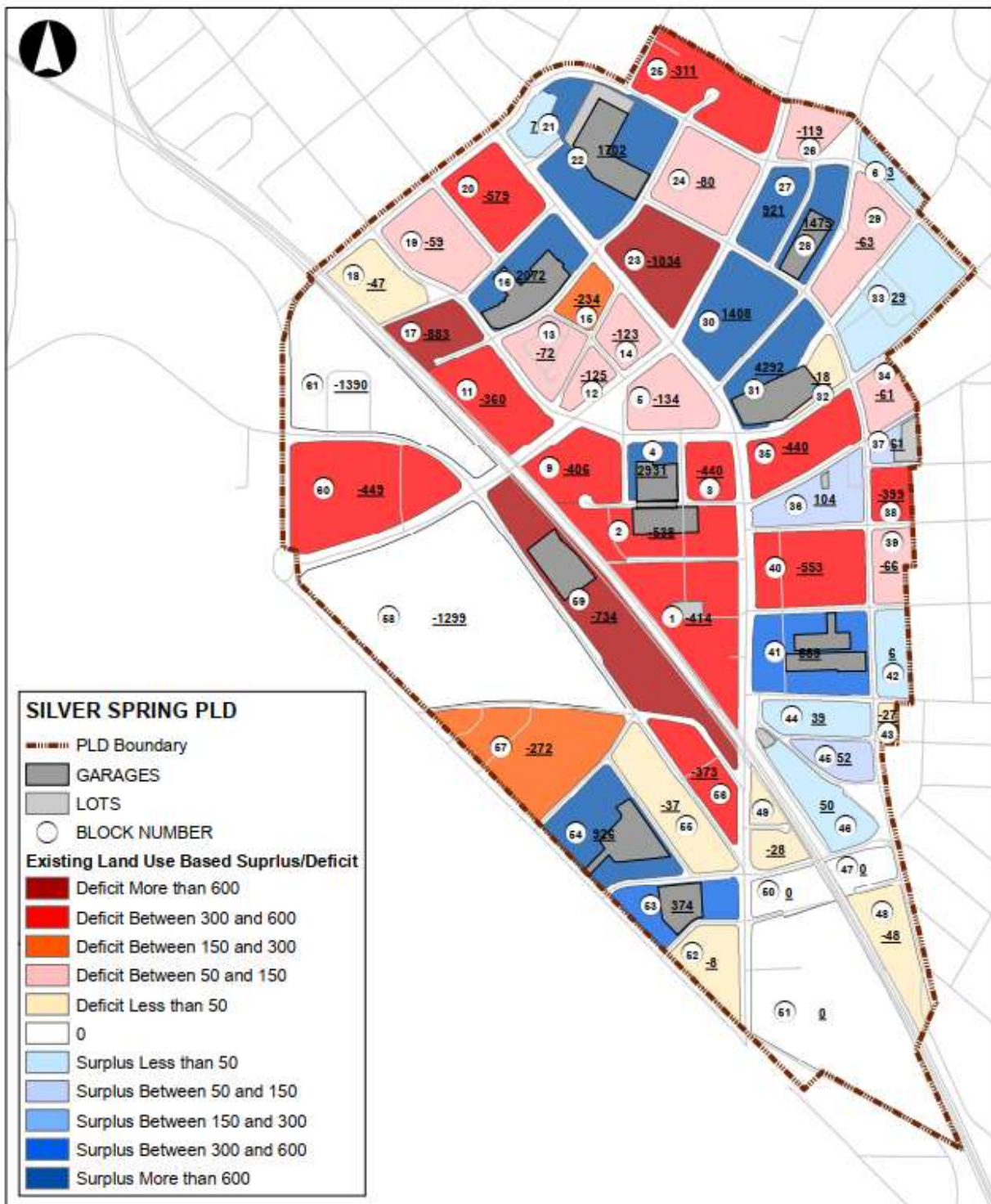
**Figure 7** in the Appendix shows the total land use-based parking demand for a typical Friday in Silver Spring, Maryland. The total projected parking demand for a Friday at the peak hour is 31,331. **Figure 8** shows the demand for parking again based on land use for a weekend day. The weekend parking demand for Silver Spring is 23,261. The demand for parking in downtown Silver Spring is less on a weekend day than it would be for a weekday due to the number of office buildings and workers commuting to the downtown area.

**Exhibit E1, E2, and E3** illustrate the land use-based parking surplus/deficit by block for each daily demand scenario. The color blue indicates that the block is experiencing a surplus of parking. The lighter shade represents blocks within which a surplus of less than 50 spaces exists during the peak period and the darker shade represents blocks with more than 600 available spaces during the peak period. At present it appears that the deficits of parking throughout the PLD is satisfied due to the surplus of parking in adjacent blocks. While there are darker shades of red throughout the map, there are also darker shades of blue representing under-utilized parking assets.

This analysis indicates that overall the Silver Spring PLD experiences a surplus of 4,438 parking spaces during the peak utilization period of 1:00 PM on a weekday. The PLD experiences a surplus of 4,041 spaces at the peak hour on a typical Friday. On a weekend day, the PLD experiences a surplus of 12,111 spaces. **Figures 6, 7, and 8** of the Appendix show how the surplus was calculated.

While this analysis supports the establishment of parking demand ratios that are unique to Silver Spring, it does not determine if Silver Spring has an overabundance of parking because it does not include presently vacant commercial property or pending development activity. The next phase of this report will examine if the current public parking system could absorb an increase in parking demand associated with the occupied vacant space as well as the new development projects in the pipeline.

Exhibit 7: Weekday Land Use-Based Surplus/Deficit by Block

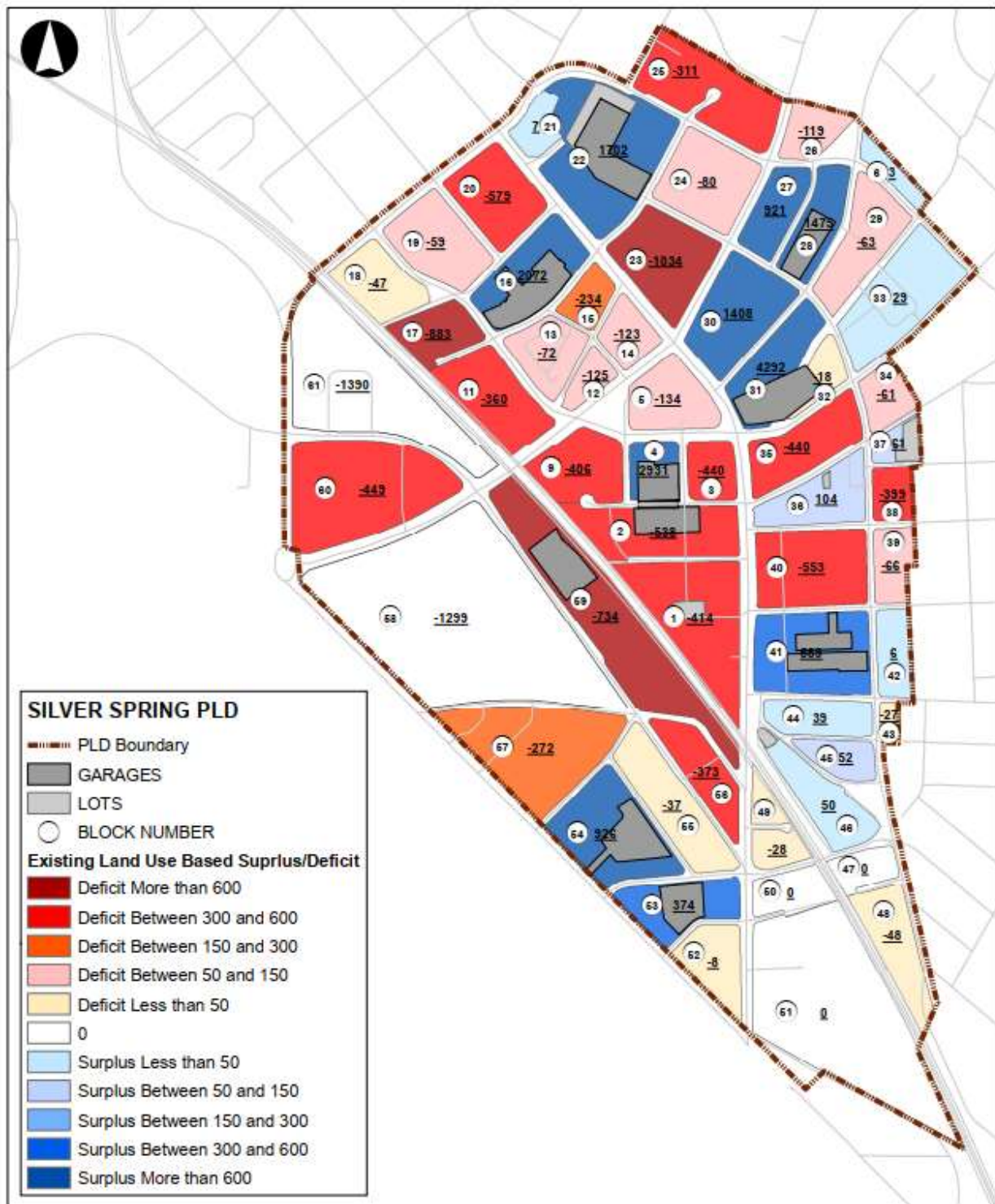


Existing Land Use based Surplus/Deficit by Block-Weekday-Silver Spring PLD





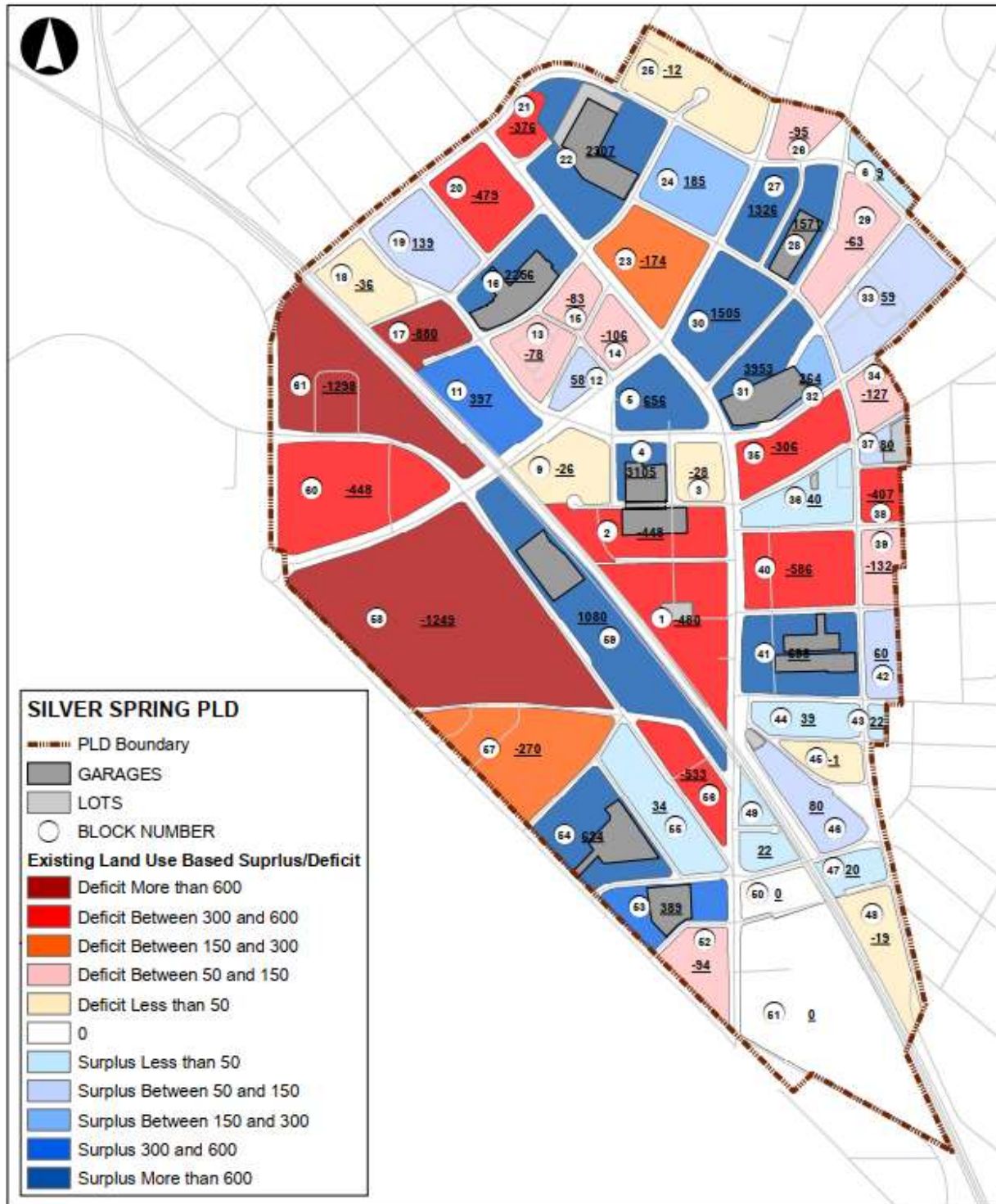
Exhibit 8: Friday Land Use-Based Surplus/Deficit by Block



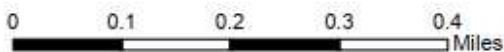
Existing Land Use based Surplus/Deficit by Block-Weekday-Silver Spring PLD

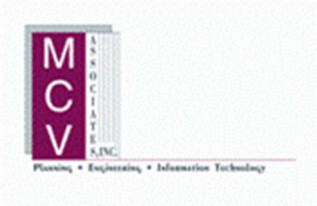


Exhibit 9: Weekend Land Use-Based Surplus/Deficit by Block



Existing Land Use based Surplus/Deficit by Block-Weekend-Silver Spring PLD





## PHASE III- DEVELOPMENT IMPACT ANALYSIS

### 1. ESTIMATE OF PARKING DEMAND AT FULL BUILDING OCCUPANCY

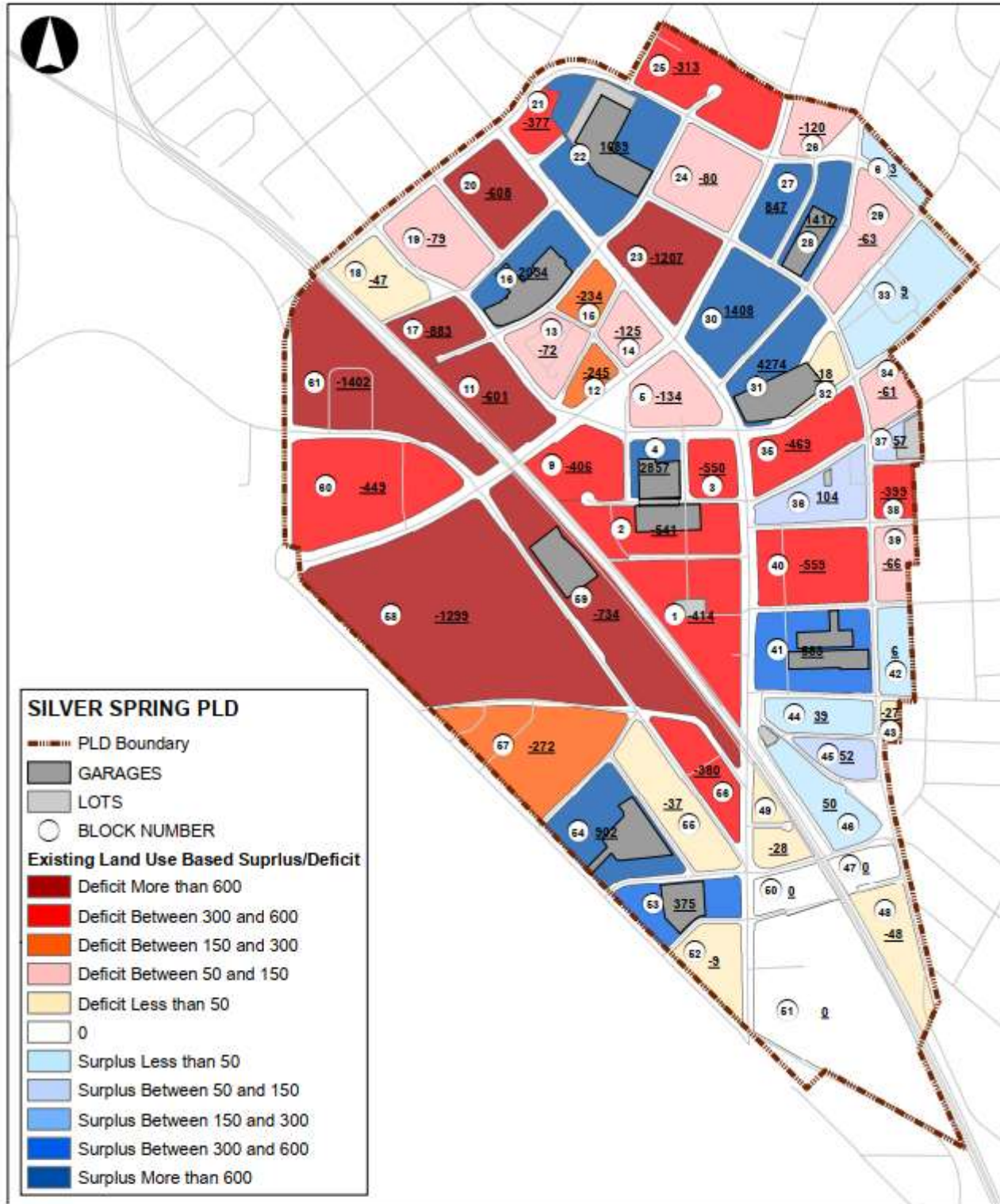
At present and according to the Co-Star information, 724,885 square feet of commercial space is vacant, 660,912 square feet of vacant office spaces and 63,973 square feet of vacant retail space. **Figure 9** in the Appendix illustrates land use areas and their associated parking demand presuming full building occupancy. Under this scenario, if all vacant land uses, identified as office and retail, within the PLD were to be occupied the system-wide weekday peak parking demand would increase reducing the total surplus to 3,350 spaces. This increase would equate to a realized demand for 32,022 parking spaces system-wide on a typical weekday.

**Exhibit F1, F2, and F3** illustrate the block-by-block practical surpluses and deficits of spaces once all vacancies are absorbed on a respective weekday, Friday, and weekend. Blocks that are shown in the dark blue shade experience a surplus of more than 600 spaces and primarily contain a publicly available garage. Blocks with a higher surplus of parking spaces have the ability to satisfy the need for parking in adjacent blocks.

This analysis suggests that at present, even when all vacancies are filled, the PLD would experience a surplus of 3,350 spaces on a typical weekday. The resulting Friday parking surplus is 2,946 based on land uses and the specified ratios. Weekend demand with full building occupancy results in a parking surplus in the Silver Spring PLD of 11,917 spaces system-wide. The details of these surpluses are available in the Appendix of this report.



Exhibit 10: Weekday Land Use-Based Surplus/Deficit at Full Building Capacity



Existing Land Use based Surplus/Deficit at Full Building Capacity - Weekday  
 Silver Spring PLD

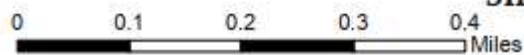
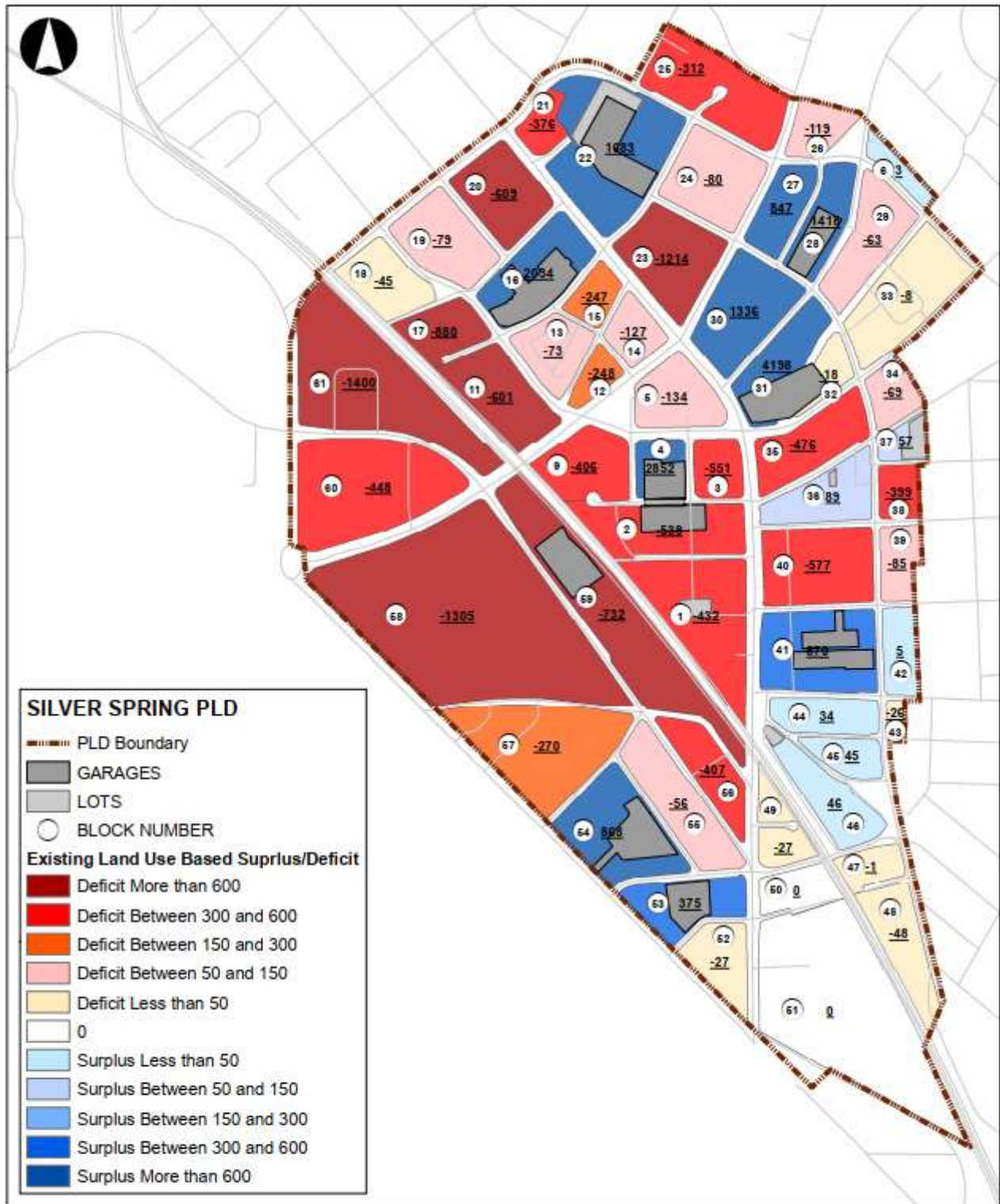


Exhibit 11: Friday Land Use-Based Surplus/Deficit at Full Building Capacity

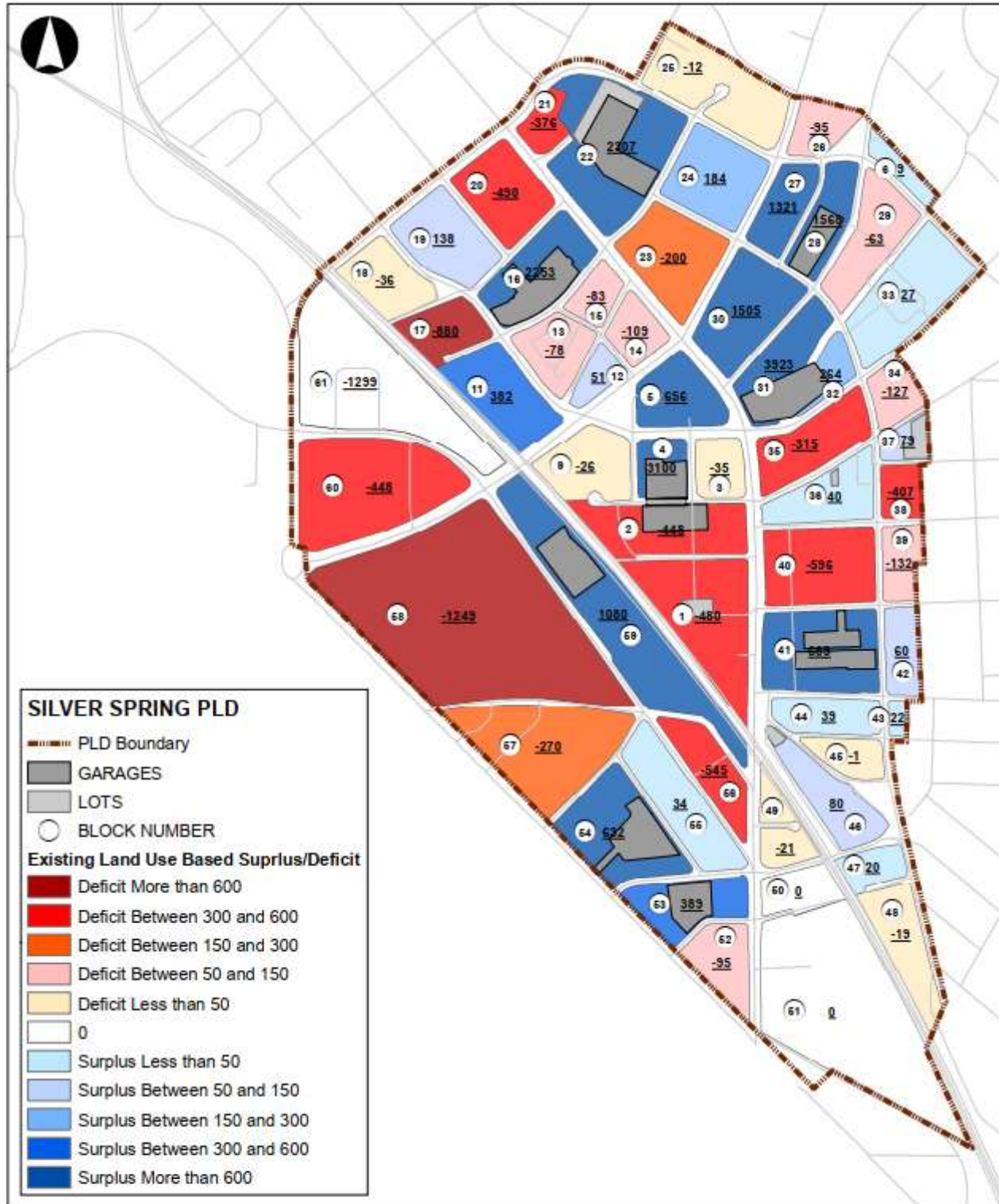


Existing Land Use based Surplus/Deficit at Full Building Capacity - Friday  
Silver Spring PLD





Exhibit 12: Weekend Land Use-Based Surplus/Deficit at Full Building Capacity



Existing Land Use based Surplus/Deficit at Full Building Capacity - Weekend  
Silver Spring PLD



In addition to increases in the occupancy levels of the existing land uses within the PLD, future development and redevelopment projects will also have an impact on the demand for and availability of parking. In an attempt to quantify possible future changes in the supply of and demand for parking, the Maryland National Capital Park and Planning Commission (MNCPPC) was asked to provide data regarding

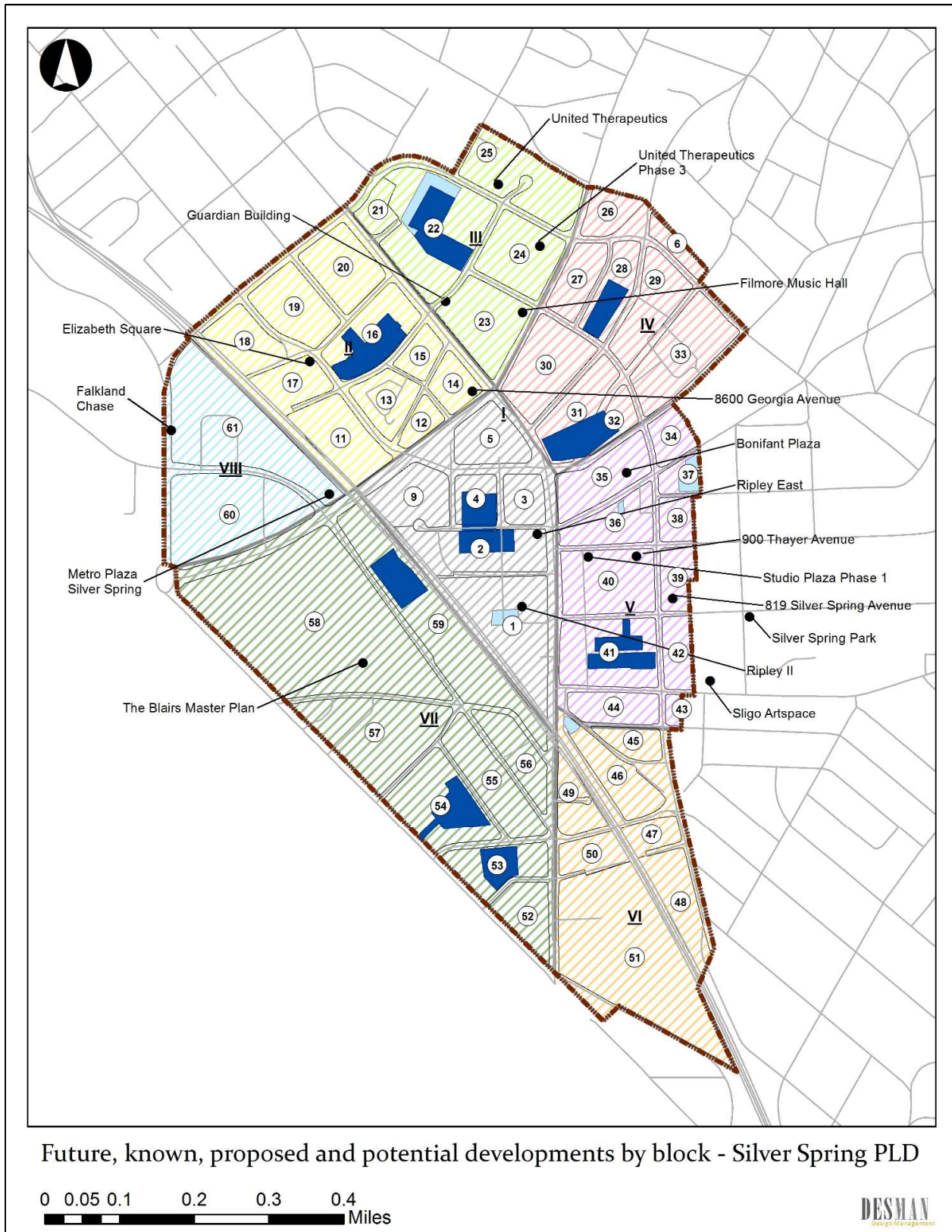
any known, proposed and/or potential developments within the Silver Spring PLD. The information provided included the location, size, and proposed uses of the projects as well as the number of available parking spaces within each development. **Exhibit G** presents the future development information and **Exhibit H** illustrates the precise location of future developments in the PLD by block.

*Exhibit 13: Future, Known, Proposed and Potential Developments*

Block #	Development Name	Gross Floor Area	Dwelling Units	Office	Retail	Hotel	Other	Parking Spaces
1	Ripley II		440					223
2	Ripley East		360					262
14	8600 Georgia Avenue	151,496			4,206	173 rooms		28
17	Elizabeth Square	117,599	746		117,599			107
23	Filmore Music Hall	360,200		219,700	140,500			571
23	Guardian Building	7,496	177		7,496			24
24	United Therapeutics Phase 3	121,724		111,724	10,000			152
25	United Therapeutics	17,989		17,989				0
35	Bonifant Plaza		72					72
39	819 Silver Spring Avenue	10,232		4,775	5,457			12
40	Studio Plaza Phase 1	9,146	394		9,146			443; additional 152 to be owned and operated by PLD
40	900 Thayer Avenue	33,220	95	18,200	15,020			171
42	Silver Spring Park	37,404	58	28,170	9,234	110 rooms		117
42	Sligo Artspace	20,000	79		1,500		18,500	102
58	The Blairs Master Plan	297,329	2,800	133,528	163,801			3,275
61	Metro Plaza Silver Spring	180,078		180,078				150
61	Falkland Chase	120,000	1,068		120,000			1,672
Total		1,483,913	6,289	714,164	603,959	283 Rooms	18,500	7,533



Exhibit 14: Future, Known, Proposed and Potential Developments by Block



### 3. ESTIMATE OF PARKING DEMAND BY LAND USE BASED ON FULL BUILDING OCCUPANCY AND EXPECTED FUTURE DEVELOPMENT

In order to create an accurate estimate of future parking needs, the analysis combines the projected needs of all of the noted future developments as well as the estimated parking demand with 100% vacancy absorption, as calculated previously in this report. This will allow Montgomery County to plan ahead for any additions or alterations to the parking supply or changes to its parking management program necessary to accommodate the expected future demand.

**Figure 13** in the appendix illustrates the estimated future land use areas when development is complete and all buildings are at full occupancy. **Figure 14**, **Figure 15**, and **Figure 16** document the future parking demand associated with each land use during a typical weekday, Friday, and weekend day respectively.

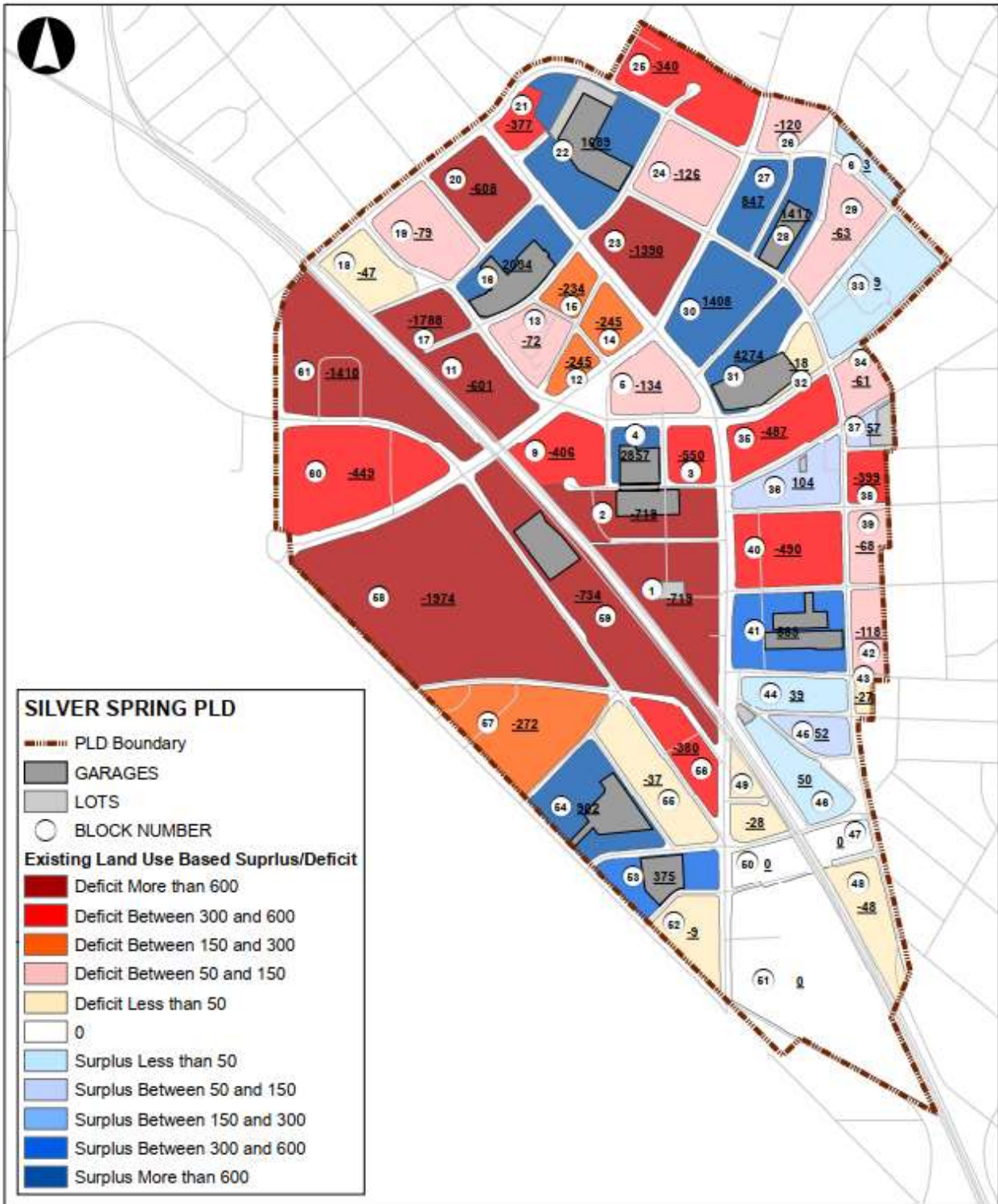
With the future developments slated to create 7,533, there will be a total of 35,762 private parking spaces in the PLD. With the additional 152 spaces that will be added from new development in Block 40 of the PLD, the MCDOT Division of Parking Management will control 11,059 public parking spaces. In total with all developments and applicable additions, there will be a total of 46,831 parking spaces in the PLD based on the information collected.

Under this scenario, the total parking demand based on current and future land use equates to 41,322 spaces on a weekday, resulting in a surplus of 828 parking spaces in the study area. **Exhibit I1** illustrates the weekday block-by-block surplus/deficit of parking under the development scenario. **Exhibit I2** shows the Surplus/Deficit by block for Friday under the development scenario, resulting in a surplus of 342 spaces in the PLD with an anticipated demand of 41,808 parking spaces. **Exhibit I3** represents the weekend demand for parking in the PLD which is significantly less than on weekdays, and reflects a surplus of 9,993 spaces.

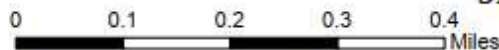
The anticipated parking surplus under this scenario shows that Silver Spring does have enough parking associated with the current and future developments to accommodate the demand generated by the various land uses in Silver Spring.



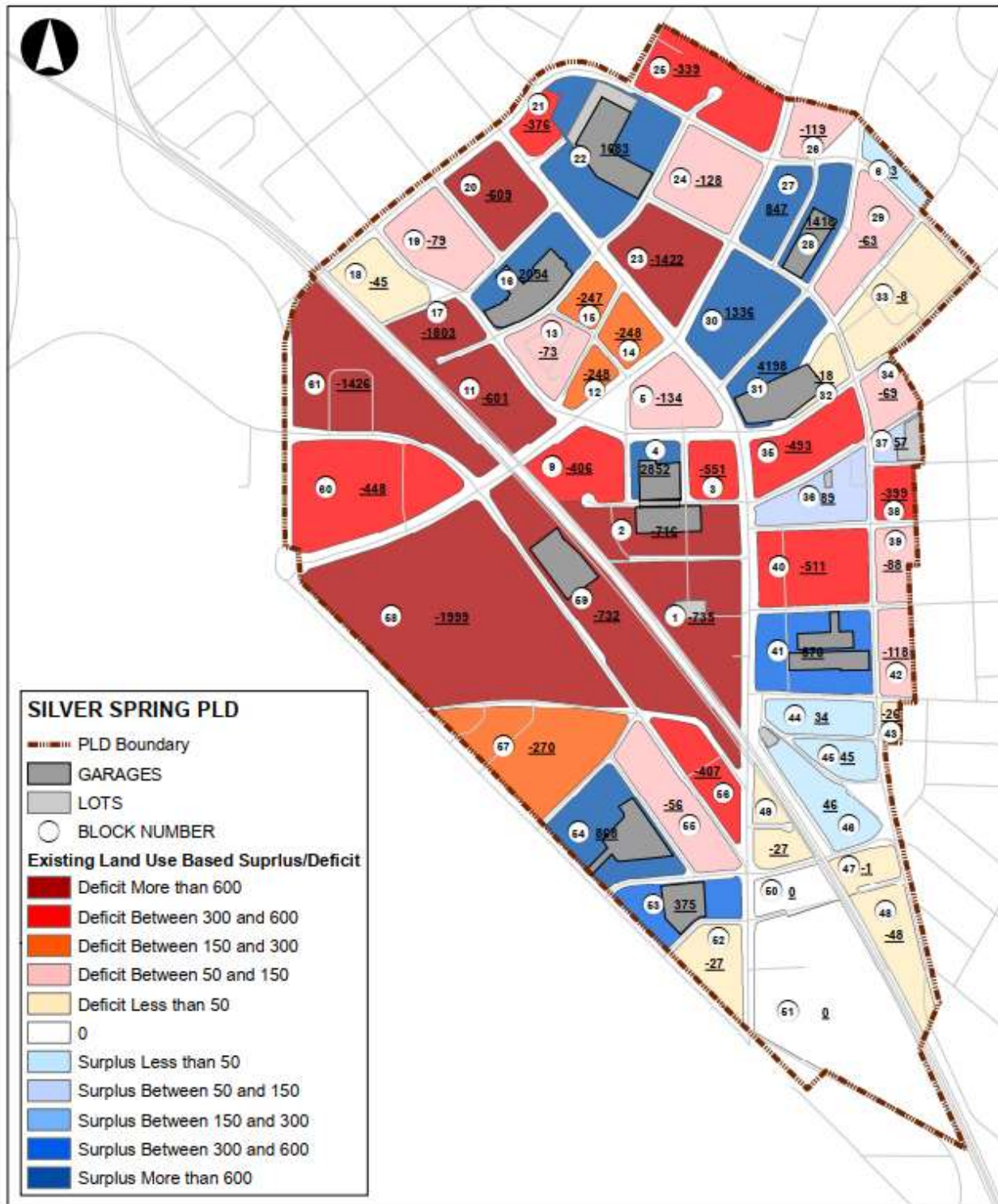
*Exhibit 15: Weekday Future Land Use Based Surplus/Deficit Based on Full Building Occupancy and Expected Future Development*



**Future Land Use based Surplus/Deficit at Full Occupancy - Weekday  
Silver Spring PLD**

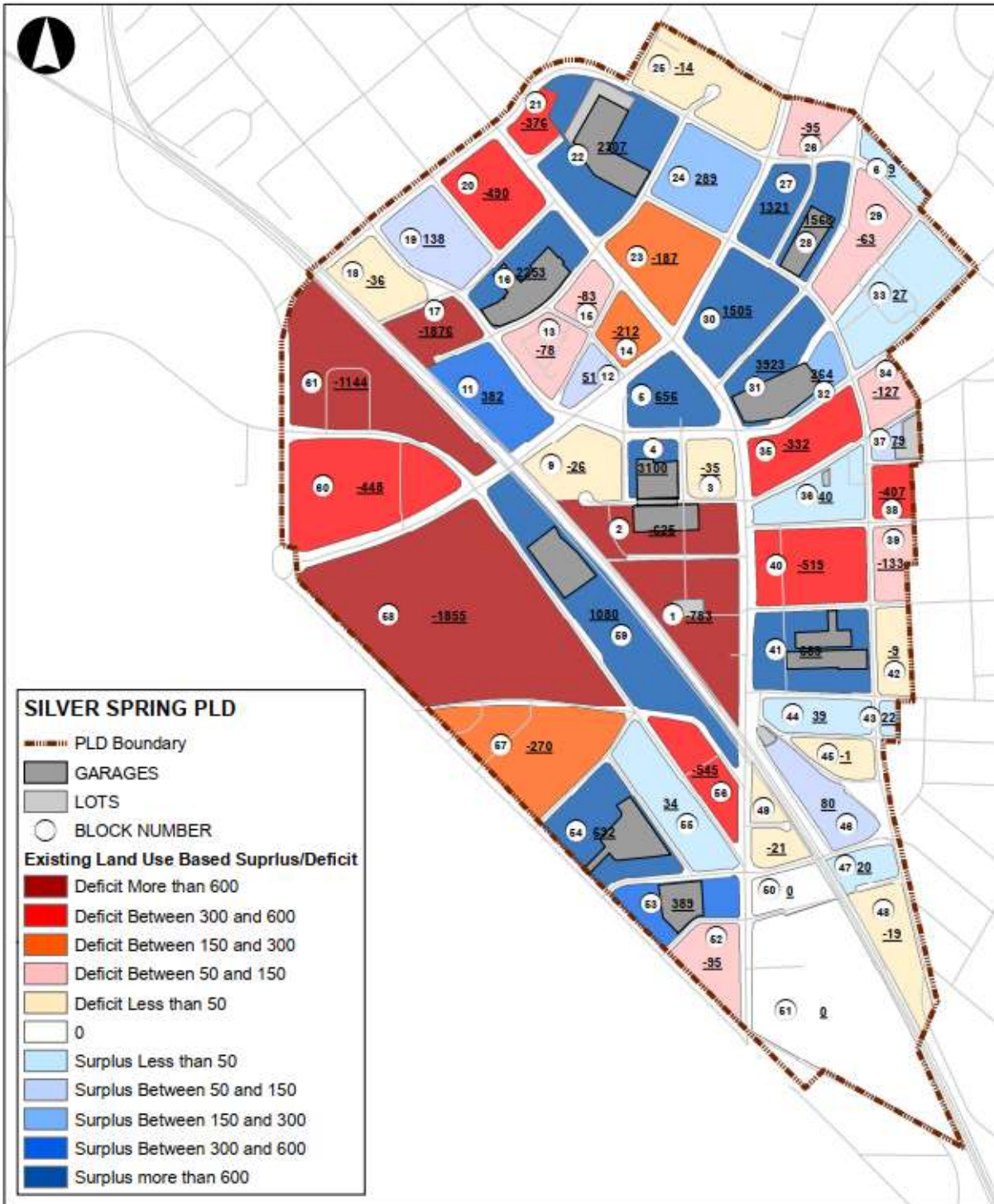


*Exhibit 16: Friday Future Land Use Based Surplus/Deficit Based on Full Building Occupancy and Expected Future Development*





*Exhibit 17: Weekend Future Land Use Based Surplus/Deficit Based on Full Building Occupancy and Expected Future Development*



**Future Land Use based Surplus/Deficit at Full Occupancy - Weekend  
Silver Spring PLD**

