

# City of Danville, Virginia River District Parking Study



## *FINAL REPORT*

September 4, 2013

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Mr. Ken Larking  
Deputy City Manager  
City of Danville, Virginia  
P.O. Box 3300  
Danville, VA 24543-3300

Re: River Center Parking Study  
Danville, Virginia

Subj: Final Report

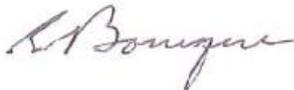
Dear Mr. Larking,

This report is the result of both the efforts of the Carl Walker study team and excellent support provided by the City of Danville staff, including administrative staff, members of the Public Works Department who assisted in the collection of field survey data, and staff of the Industrial Development Authority who provided excellent and detailed land use information.

It was good to learn of new interest in new development sites that arose during the course of the study. The River District has such great potential based on a personality and character that is based on a rich history that simply cannot be replicated. The success of redevelopment efforts across the country in districts with historical character is generating new interest in what downtowns can offer as vibrant workplaces and places to live. It is easy to envision Danville becoming a "must see" stop for people who are drawn both to the nearby mountains and the historical sites of the Tidewater area.

Again, it has been a pleasure working with the City of Danville and I look forward to being there again for the City Council presentation.

Yours truly,  
Carl Walker, Inc.

A handwritten signature in cursive script, appearing to read "Lee Bourque".

Lee Bourque  
Principal

## TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY .....	4
STUDY AREA .....	7
Organization of the Study Area .....	8
CURRENT CONDITIONS .....	10
Inventory of Parking Capacity .....	10
Survey of Parking Occupancy .....	11
City-Owned Parking.....	14
On-Street Parking Occupancy .....	16
Off-Street Parking Occupancy .....	18
Specific Observations of Note .....	19
Turnover Survey (Utilization of On-Street Spaces) .....	20
Effective Use of Existing Parking Resources.....	24
Parking Location (off-street parking) .....	24
Vehicular Access to Parking.....	25
Identification of Public Parking (and Best Practices).....	26
Website Promotion of the City’s Public Parking Facilities (Best Practices) .....	31
Pedestrian Connections to Parking (and Best Practices) .....	32
Private Parking for “Public Use” .....	37
PROJECTION OF FUTURE CONDITIONS.....	41
Impact of Anticipated Development Activity .....	41
Reactivation of Existing Building Space .....	41
Main Street and Union Street Focus Area .....	43
Near-Term Parking Sufficiency .....	44
Long-Term Parking Sufficiency.....	46
Union Street Retail Block .....	46
Municipal Complex .....	48
Potential Locations for Future Parking Expansion.....	49
Potential Parking Expansion Sites .....	49
General Design Considerations.....	54
Specific Sites.....	56
Tobacco Warehouse District Focus Area.....	67
Current Parking Surpluses.....	69
Impact of Near-Term Development on Parking Sufficiency – TWD .....	70
Impact of Long-Term Development on Parking Sufficiency – TWD .....	71
Strategy for Meeting Future Parking Needs .....	75
SYSTEM FUNDING AND FINANCIAL ISSUES .....	81
Proactive City Involvement in Parking.....	81
Challenges to Prospective Developers.....	82
Benefits of Direct City Involvement .....	83
Options for Parking System Funding .....	85
City of Rock Hill, SC – Program Example .....	90
What Approach Makes Sense for Danville? .....	92
APPENDIX .....	94
Pro Forma Cost Estimates for Developing & Operating Structured and Surface Parking .....	94
Inventory & Occupancy Data .....	95
Turnover Data .....	100
Parking Facility Concepts.....	103

## **EXECUTIVE SUMMARY**

Staff from the Atlanta office of Carl Walker, Inc. was engaged by the City of Danville, through its services contract with Land Planning & Design Associates (LPDA) to conduct a parking study of the River District. The purpose of the study was to assess current and future parking sufficiency, utilization of parking resources, and ways to improve the level of service provided by current parking resources.

The City provided support in the form of information about the current master plan, current land uses and vacancies, and development activity. It also provided staff to assist in the inventory of existing parking resources followed by field surveys of both parking facility occupancy and utilization of on-street parking spaces.

The process included field surveys, field observations, a web survey to obtain public comment, interviews with city staff, and input from downtown business owners.

The following is a summary of conclusions from the field work and analysis:

- Currently, there is ample on-street and off-street parking in all portions of the study area with an overall occupancy of 37% within the full study area. Occupancy was highest in Zone 4 which is the municipal area bounded by Craghead, Patton, Loyal and Ridge Streets.
- There is no need to pursue more vigorous control of on-street parking because on-street parking spaces were available on nearly all blocks and compliance with posted time limits was found to be exceptionally high. Compliance with posted time limits was 91% along several blocks of Main Street and 80% along core segments of Union and Spring Streets.
- The conversion of Patton Street to two-way traffic that took place during the course of the study represents a dramatic improvement in the ability to navigate Downtown and attract both local and out-of-town visitors. It will also simplify the development of a wayfinding program that is currently underway.
- Despite the good example set by City-owned parking lots, many private parking lots are in poor condition, creating a negative overall impression of the quality of downtown parking.
- Improved wayfinding is needed not only to identify available public parking but also to promote the amount of public parking that is actually available in the River District. That issue will be addressed in developing the overall wayfinding program.

- Mid-block pedestrian connections between major parking areas and Main Street should be improved to provide an attractive and safe walking environment that links parking with the businesses it supports. Best practices examples are provided in the Report.
- The Report includes recommendations for how the City can be proactive in bringing privately owned parking capacity into the inventory of parking that is available for general public parking by addressing liability issues, providing operational support, offering administrative services, and providing maintenance.
- A new parking structure will be needed to provide additional parking capacity in the Main Street corridor if building activation and occupancy along Main Street approaches normal “full” levels. The preferred location is on the Downtowner site under a configuration that takes the full width of the block back to Spring Street and provides options for vehicle access from both Main and Spring Streets. Other options were examined but this location is considered more advantageous.
- Additional parking capacity will be needed in the northwest sector of the Tobacco Warehouse District in the near-term, with near-term demand centered on the intersection of Bridge and Lynn Streets.
  - Approximately 2,000 new parking spaces will be needed in the TWD in order to accommodate full reactivation of all existing vacant warehouse space that is considered suitable for prospective redevelopment. This includes most existing vacant warehouse space.
  - The recommended strategy for meeting long-range parking needs includes development of three (3) new parking structures and a large surface lot. The new capacity will meet all parking needs with a working surplus to accommodate more intense use (higher population density) of some space and provide additional parking for the north end of Main Street.
- The Report provides an overview of strategic advantages associated with active City involvement in providing parking in the River District, particularly as a means of supporting and promoting development activity. Principal advantages include strategic placement of parking resources, ability to consolidate land and funding, more efficient parking facility design (larger facilities allowing for more efficient design), conservation of downtown land area, and funding options that are not available to private developers. In some cases providing city-owned, off-site parking option will allow a project to move forward when it would not be feasible otherwise.

- The Report includes a discussion of funding options that could be used by the City to cover the cost of existing City-owned parking facilities and provide for the development of additional parking capacity that will be needed to support new development.
- The City should consider initiation of a long-term funding mechanism to support the operation and expansion of city-owned parking facilities. The model could be similar to the Rock Hill, SC program that is described in the report, which charges a monthly fee for spaces not provided by property owners on their own properties. This requires removal of the exemption from minimum parking requirements in the downtown core, and a modified schedule of minimum parking requirements that are appropriate for a downtown setting.

## STUDY AREA

The study area is defined as a group of approximately 47 blocks within the perimeter shown in FIGURE 1-1.

FIGURE 1-1 Study Area Boundary



## Organization of the Study Area

As a basic framework for performing an analysis of the parking system, the study team created a numbering system for all defined blocks within the study area. Blocks were generally defined by a set of surrounding streets. A number was assigned to each block and letter designations given to each defined parking area within that block. Each curb face along the adjacent streets was included as a separate parking area and identified with the street name and an "S" designation in the database.

To facilitate analysis, the study area was divided into 8 analysis zones generally based on predominant land uses within specific blocks, physical barriers or, when those characteristics were not relevant, by zone size and shape.

A map of Zone and Block numbers is provided in FIGURE 1-2.

Zone definitions:

**Zone 1** - White Mill property and all of the area along the riverfront to the Main Street Bridge.

**Zone 2** - All of the remaining study area west of High Street, a modest mix of retail/service establishments with some blocks primarily residential

**Zone 3** - The downtown retail core between High Street and Patton Street north of Ridge Street, including the blocks between Main and Patton near the river.

**Zone 4** - The primary governmental core that includes City Hall, the Library and other public buildings

**Zone 5** - Northern half of the Tobacco Warehouse District from the river to Craghead Street.

**Zone 6** - Southern portion of the Tobacco Warehouse District, south of Craghead Street.

**Zone 7** - Southern mid-section of the study area that includes a mix of small service/retail businesses, light industrial and small-office space with residential buildings at the edges. Zone 7 also includes the Galileo School.

**Zone 8** - Area located on the north side of the Dan River but not included in the survey process because parking is ill-defined and not part of the active downtown parking market.

FIGURE 1-2 Analysis Zones

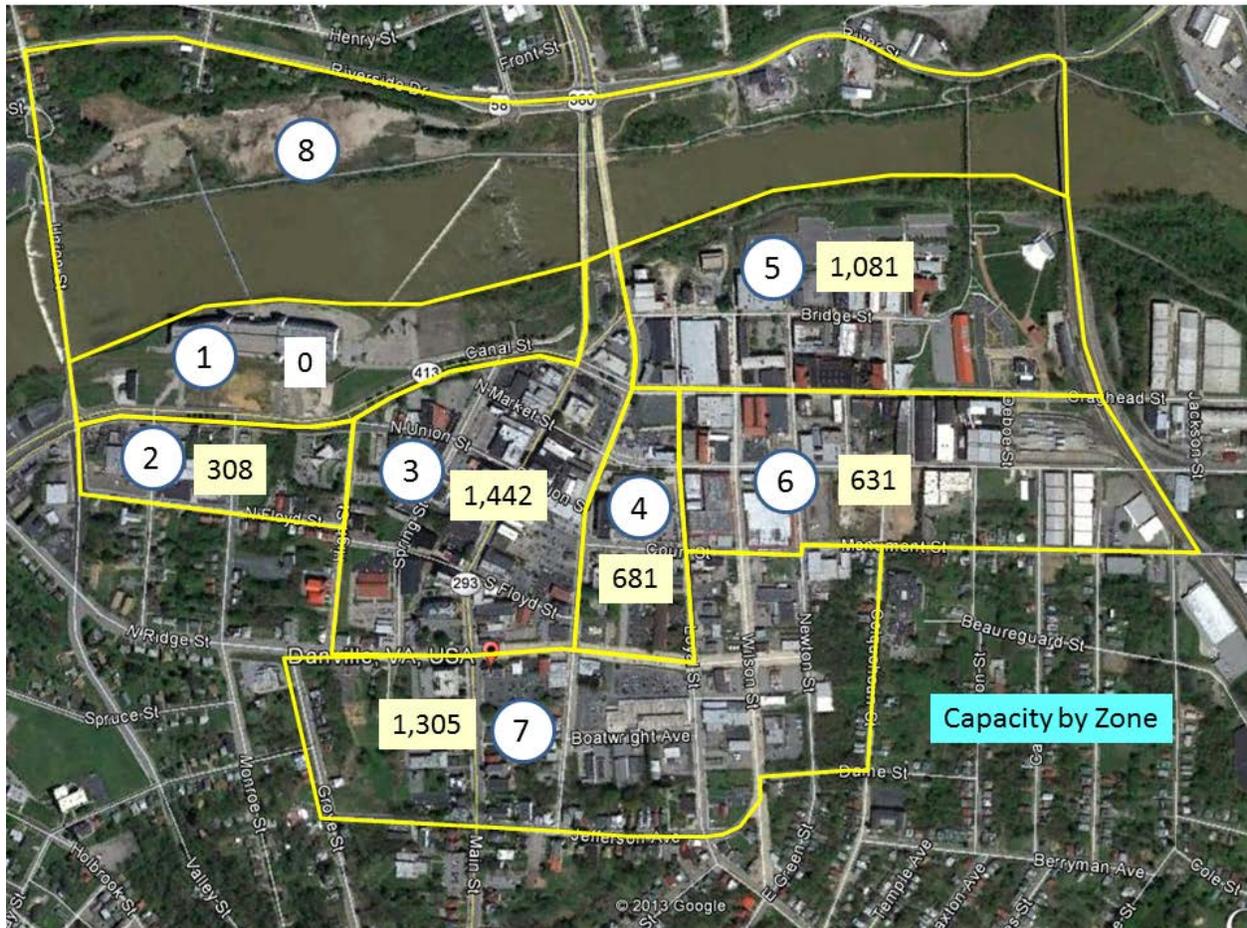


## CURRENT CONDITIONS

### Inventory of Parking Capacity

The study team conducted an inventory of all public and private parking within the defined study area during the week of February 11-15, which was a normal week in terms of expected downtown activity with the exception of construction work along Main Street and some cross streets. All parking lots and identifiable parking area were included in the inventory with the exception of private off-street residential parking on residential streets. On-street parking spaces were also inventoried and identified as to whether they were marked or unmarked, time-restricted or without time restrictions.

**FIGURE 1-3 Parking Inventory by Zone**



## Survey of Parking Occupancy

On Wednesday, 2/13/2013, the team conducted a field survey of parking occupancy within the full study area. The only exceptions were the portions of the study area on the north side of the Dan River, which were not accessible, not clearly defined, and not part of the River Center parking environment.

Survey tours were conducted at 8 A.M., 10 A.M., 1P.M. and 3 P.M. The late morning survey proved to be the time of peak vehicle accumulation which is the normal pattern for downtowns. The survey process was affected to some extent by the construction taking place along Main Street and, to a lesser degree, on some other streets, primarily in Zone 4. Sections of on-street parking along Main Street were out of service for construction of streetscape improvements and parking volume that would normally be



accommodated those spaces was relocated to other streets and, likely, to nearby off-street parking lots. Construction did affect the results of the Turnover Survey, since parking habits were not normal along and near Main Street in the core. However the impact was not material in the measure of overall vehicle accumulation within the multi-block Main Street area.

Overall parking occupancy within the study area was 38%, but that includes all of the peripheral parking that is lightly used. The large parking area on the White Mill property in Zone 1 was excluded from the inventory, occupancy and analysis because access was restricted, parking ill-defined and not in current use to any degree. Inclusion of this inaccessible and unused capacity would have distorted the overall analysis.

The highest level of overall occupancy was 61% in Zone #4, the retail core. This is normal although there are often pockets of higher occupancy within the broader study area in a typical downtown. Occupancy dropped significantly outside of the retail core, to a fairly narrow range of 36% to 40% in all of the remaining zones. The exception was Zone 5 with only 23%. Zone 5 is the northern portion of the Tobacco Warehouse District that includes large municipal lots along the river and around the Community Market that are not typically used during the week.

FIGURE 1-4 Occupancy by Zone (Highest to Lowest)

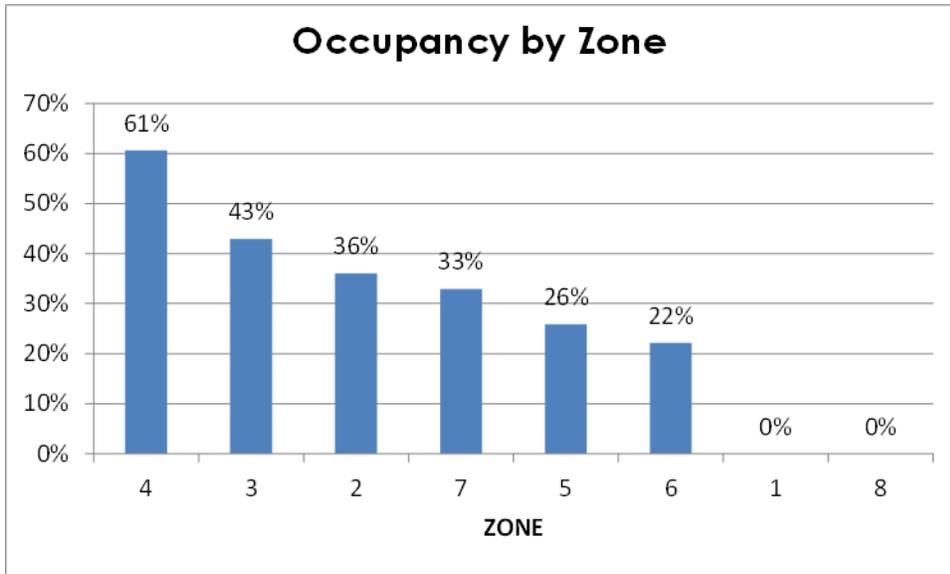


FIGURE 1-5 Overall Occupancy by Zone



FIGURE 1-6 Zone Analysis of All Parking (Public & Private)

Inventory (Capacity)														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	9	0	0	0	0	0	0	0	0	0	0	0	0	9
2	232	0	2	2	0	9	6	57	0	0	0	0	0	308
3	828	85	26	240	0	26	191	44	1	0	1	0	0	1,442
4	127	81	22	306	6	0	90	35	13	0	0	0	1	681
5	121	604	35	94	36	15	25	140	0	0	11	0	0	1,081
6	312	29	7	0	38	18	32	188	0	0	7	0	0	631
7	741	128	14	69	34	9	65	218	18	0	9	0	0	1,305
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2,370	927	106	711	114	77	409	682	32	0	28	0	1	5,457

Occupied														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	5	0	0	0	0	0	0	0	0	0	0	0	0	5
2	92	0	1	1	0	0	0	17	0	0	0	0	0	111
3	313	18	5	160	0	1	99	19	1	2	1	0	0	619
4	98	41	9	154	5	0	63	32	10	0	0	0	1	413
5	28	92	3	26	26	8	8	80	0	7	1	0	0	279
6	32	7	4	0	21	7	16	49	0	1	3	0	0	140
7	294	12	2	27	5	5	21	61	1	1	1	0	0	430
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	862	170	24	368	57	21	207	258	12	11	6	0	1	1,997

Empty														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
2	140	0	1	1	0	9	6	40	0	0	0	0	0	197
3	515	67	21	80	0	25	92	25	0	-2	0	0	0	823
4	29	40	13	152	1	0	27	3	3	0	0	0	0	268
5	93	512	32	68	10	7	17	60	0	-7	10	0	0	802
6	190	22	3	0	17	11	16	139	0	-1	4	0	0	401
7	447	116	12	42	29	4	44	157	17	-1	8	0	0	875
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1,414	757	82	343	57	56	202	424	20	-11	22	0	0	3,366

% Occupied														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	56%													56%
2	40%		50%	50%				30%						36%
3	38%	21%	19%	67%		4%	52%	43%	100%		100%			43%
4	77%	51%	41%	50%	83%		70%	91%	77%				100%	61%
5	23%	15%	9%	28%	72%	53%	32%	57%			9%			26%
6	10%	24%	57%		55%	39%	50%	26%			43%			22%
7	40%	9%	14%	39%	15%	56%	32%	28%	6%		11%			33%
8														0%
	36%	18%	23%	52%	50%	27%	51%	38%	38%		21%		100%	37%

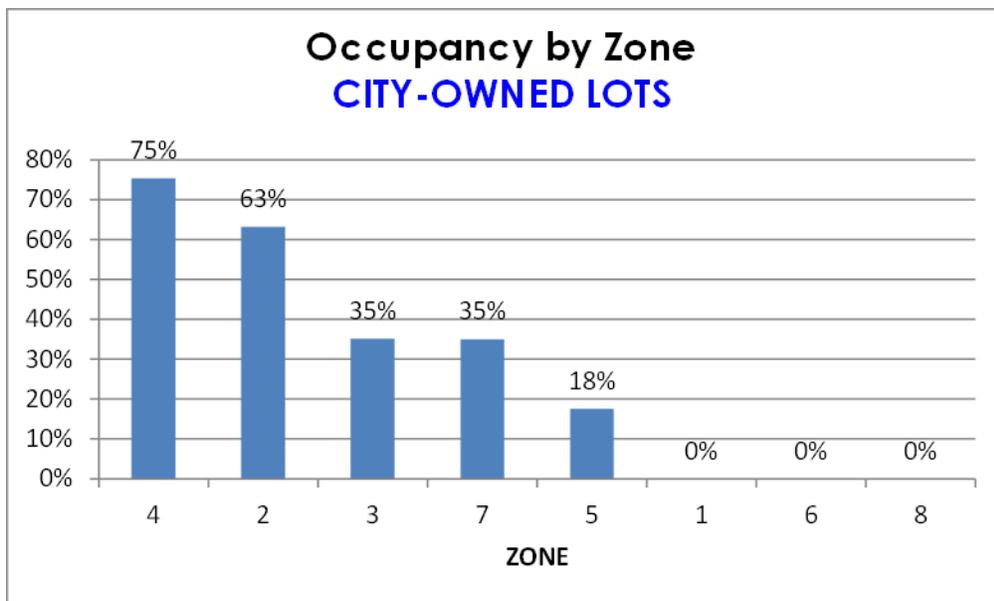
### City-Owned Parking

Occupancy levels in parking lots owned by the City were analyzed as a group to provide a sense of whether adequate unrestricted parking is available for public use in all portions of the study area. FIGURE 1-8 on the following page summarizes the inventory, occupancy and empty space remaining on all City-owned lots. *The grid includes figures for on-street parking, but only those blocks with city-owned off-street parking are included in this summary.*

As a note, there are three parking areas in Block #16, with a total of 90 spaces that were fenced (no access) or used for staging and storage at the time of the field survey. That inventory is included, but those lots were not available for parking, understating the overall computed occupancy for the remaining City-owned facilities and overstating actual space availability in the City system.

As expected, occupancy was highest in Zone #4 at 75%. These blocks are identified as the municipal operations zone. It is followed closely by Zone #2, the area west of High Street.

**FIGURE 1-7 ranks occupancy in City-owned facilities by zone from highest to lowest occupancy.**



**FIGURE 1-7**

FIGURE 1-8 Zone Analysis of City-Owned Parking (only blocks with off-street parking)

Inventory (Capacity) - CITY LOTS														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	34	0	2	2	0	0	0	0	0	0	0	0	0	38
3	68	38	5	0	0	0	0	0	0	0	0	0	0	111
4	88	37	12	74	6	0	38	0	0	0	0	0	0	255
5	35	561	28	0	36	0	0	0	0	0	1	0	0	661
6	174	0	0	0	0	0	0	0	0	0	0	0	0	174
7	263	3	6	0	0	0	0	0	0	0	0	0	0	272
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	662	639	53	76	42	0	38	0	0	0	1	0	0	1,511

Occupied - CITY LOTS														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	22	0	1	1	0	0	0	0	0	0	0	0	0	24
3	31	8	0	0	0	0	0	0	0	0	0	0	0	39
4	81	26	6	45	5	0	29	0	0	0	0	0	0	192
5	3	85	2	0	26	0	0	0	0	0	0	0	0	116
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	93	0	2	0	0	0	0	0	0	0	0	0	0	95
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	230	119	11	46	31	0	29	0	0	0	0	0	0	466

Empty - CITY LOTS														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	12	0	1	1	0	0	0	0	0	0	0	0	0	14
3	37	30	5	0	0	0	0	0	0	0	0	0	0	72
4	7	11	6	29	1	0	9	0	0	0	0	0	0	63
5	32	476	26	0	10	0	0	0	0	0	1	0	0	545
6	133	0	0	0	0	0	0	0	0	0	0	0	0	133
7	170	3	4	0	0	0	0	0	0	0	0	0	0	177
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391	520	42	30	11	0	9	0	0	0	1	0	0	1,004

% Occupied - CITY LOTS														
Zone	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1														0%
2	65%		50%	50%										63%
3	46%	21%												35%
4	92%	70%	50%	61%	83%		76%							75%
5	9%	15%	7%		72%									18%
6														0%
7	35%		33%											35%
8														0%
	35%	19%	21%	61%	74%	0%	76%	0%	0%	0%	0%	0%	0%	31%

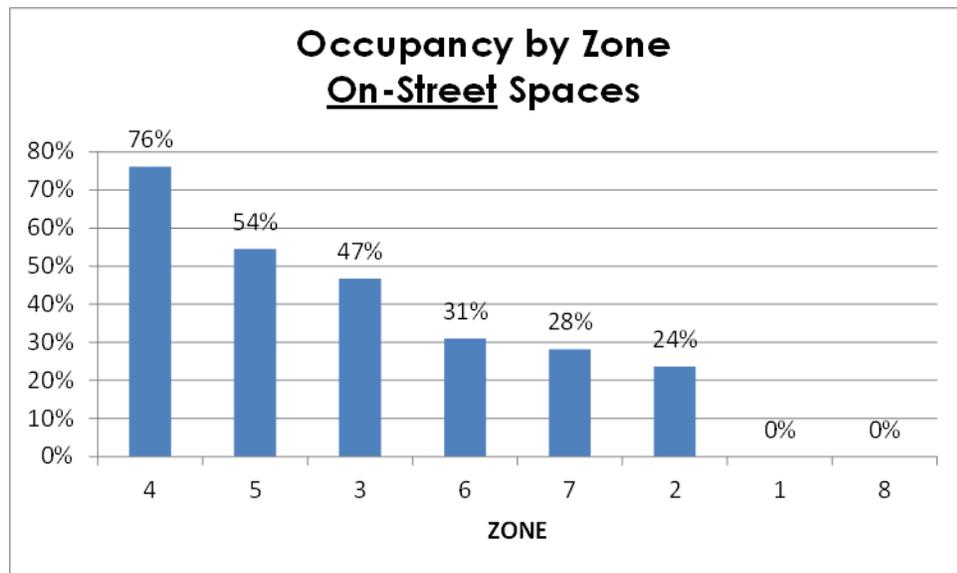
### On-Street Parking Occupancy

Block #4 again led in occupancy with 76% of the on-street spaces utilized at the time of the survey. Blocks #5 and #3 followed at 54% and 47% respectively.

It is rather unusual to find no blocks with occupancy higher than 80% within an entire study area which, on the face, would indicate sufficient on-street capacity to meet existing demand. The outcome may have been affected to some extent by on-street spaces along Main Street corridor that were not closed to use but were located within active construction areas that may have discouraged parking. It should also be noted that a higher percentage of on-street spaces appeared occupied in the area of City Hall on the day following the field surveys. Despite construction impacts, the low occupancy levels and observed availability of open on-street spaces throughout the area indicate a supply of on-street parking that is more than adequate for current activity levels. Drivers avoiding the construction areas would have parked in off-street lots and those lots also showed low occupancy levels in most cases.

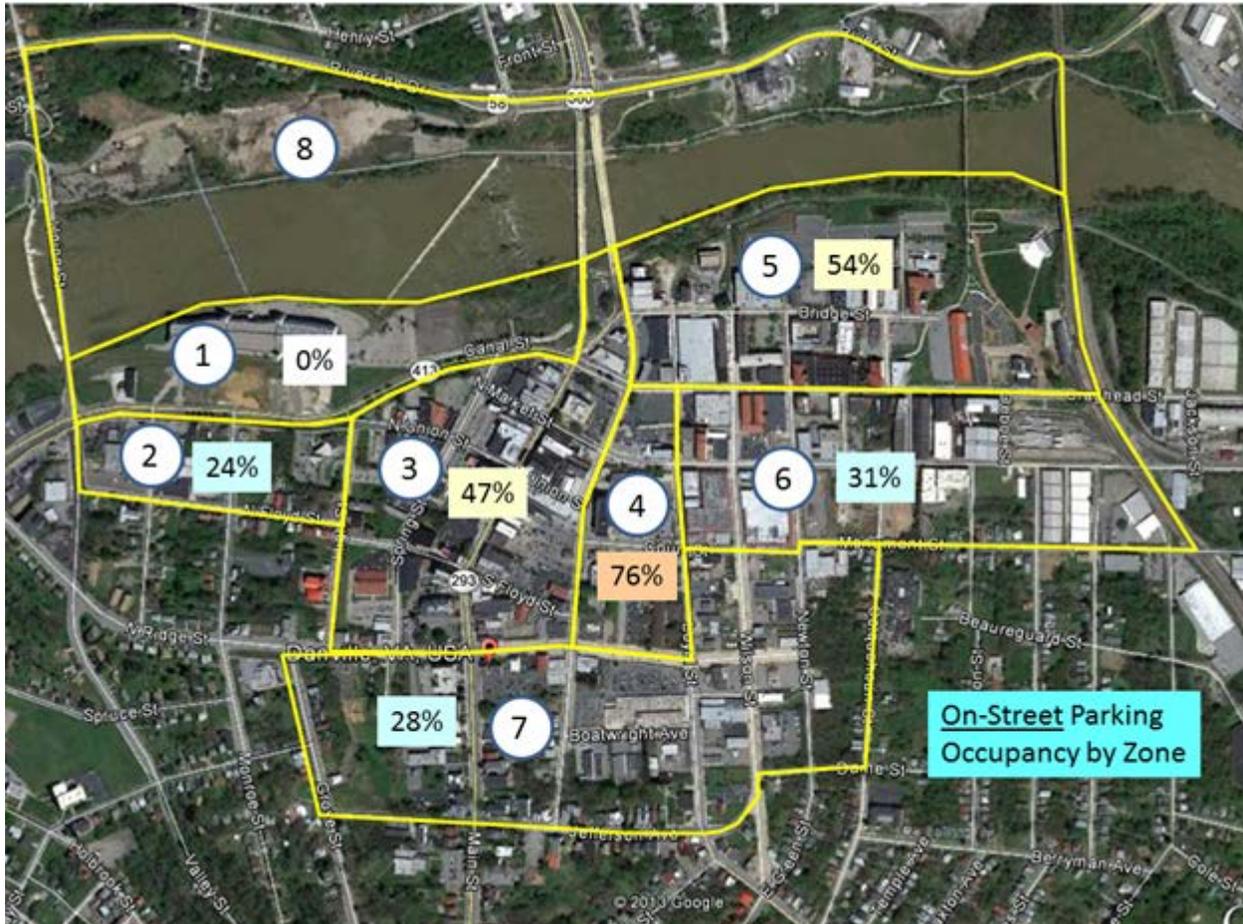
FIGURE 1-9 shows occupancy by zone, ranked highest to lowest. FIGURE 1-10 displays occupancy by zone on the study area map.

**FIGURE 1-9**



Additional information related to use of on-street spaces was developed through a Turnover Survey which is described in the next section.

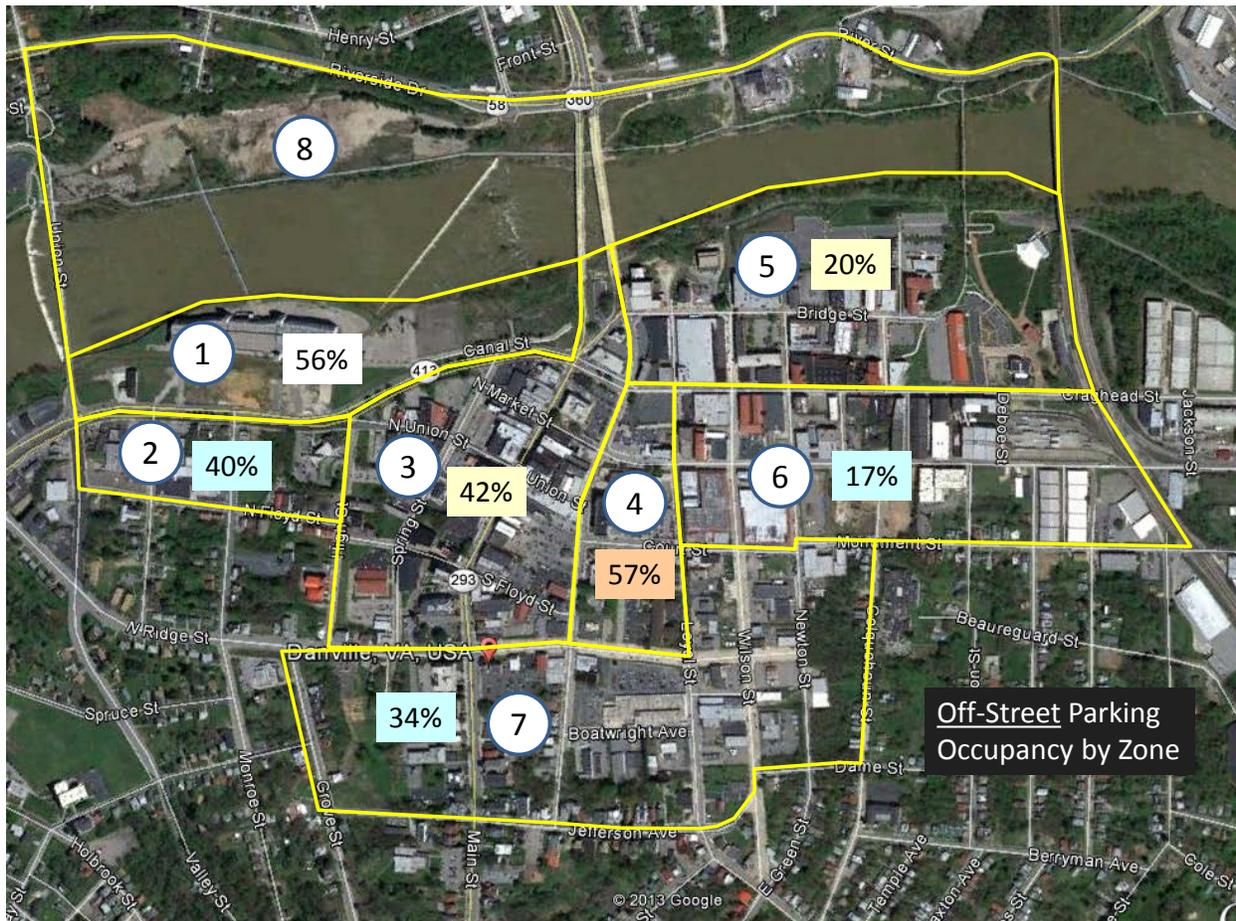
FIGURE 1-10 Occupancy of ON-STREET SPACES by Zone



### Off-Street Parking Occupancy

Utilization of off-street parking was relatively low across the study area, with the highest occupancy at 57% in the “municipal” zone with City Hall and the Library. No occupancy is shown for Zone 8 because parking facilities in that zone are ill-defined and, for the most part, inaccessible. An occupancy level of 42% along the Main Street corridor is not unusual for a city of this size with a significant amount of vacant or underutilized building space. Occupancy was found to be very low in the Tobacco Warehouse District (TWD), due in part to the large parking areas near the Community Market and Science Museum that support special events. Ongoing development activity in Zones #5 and #6 is expected to gradually absorb existing parking surpluses over the next few years. That progression will be addressed later in this report.

**FIGURE 1-11 Occupancy of Off-Street Facilities by Zone**



### Specific Observations of Note

- Significant construction activity was taking place along Main Street and some cross-streets. This affected observation of parking patterns for both on-street and off-street parking in the Main Street area – but not overall occupancy.
- Parking was generally available throughout the core Downtown area at all times during the field surveys and general observations. On-street parking along some segments of Main Street was heavily utilized, but in most cases parking could be found either on the street or in a surface parking lot within the same block. The exception was the area around City Hall. The lot to the rear of City Hall and most on-street parking was full at the time of a mid-morning meeting during the study. The closest parking found was along Loyal Street close to the intersection with Ridge Street. This was technically only a block away, but required an uphill walk of nearly 1,000 ft. after the meeting. The notable point is that this was the only time and area where parking was difficult to find during the field observations.
- On-street parking along the portion of Union Street between Spring Street and High Street remained active at least into the early evening and represented the most active portion of the downtown area after normal business hours. The number of barber/salon establishments appeared to account for most of that activity.
- There are an unusual number of “special” time limits for a small number of spaces at various locations across the study area. These special time limits (e.g. 10 minute vs. 2 hour limits) have apparently been created over time in response to specific identified needs or specific requests made by businesses to solve a lack of alternate short-term parking at those locations.
- Public parking (not dedicated to a specific business) was difficult to identify among a variety of signs posted to identify and preserve private parking areas for specific users.
- Despite the good example provided by City-owned parking facilities, many private parking areas are in very poor condition and there is no evidence of design standards for parking that would enhance its appearance or usability.
- Topography is an obvious factor in the placement and convenience of parking.

### **Turnover Survey (Utilization of On-Street Spaces)**

As part of the field data collection process, a survey was conducted on a significant portion of the key core area streets to measure actual utilization of those spaces in terms of frequency of use and typical length of stay. Unfortunately, at the time of the survey, on-street parking in portions of the survey area was out of service for sidewalk construction. Obviously, this disrupted normal parking patterns and moved some parking volume to street segments further away from Main Street where most construction activity was taking place. The survey results may still be meaningful but certainly cannot be considered “conclusive” as any measurement of normal activity. Construction is likely to have affected occupancy levels in some of the surface lots near Main Street, but does not affect the overall parking occupancy for that area as reflected in the combined measurement of both on-street and off-street parking utilization.

The survey was planned and coordinated by the study team, but conducted by City employees familiar with the area. Survey coverage focused on the primary retail areas of Main Street between Memorial Drive and Jefferson Avenue, and Union Street between High Street and Patton Street. Portions of Spring Street on in the immediate blocks to the north and south of Union Street were also included.

The surveys consisted of hourly tours from 8:00 A.M. through 4 P.M. The survey team recorded the license plate number (last 4 digits) of parked vehicles by individual space as numbered in a prepared survey form. The survey taker noted when a space was empty and entered a new license plate number whenever there was a change in vehicles occupying each space. The collected information was compiled into a spreadsheet organized by street segment and space number along each segment. The database was also used to search for vehicles that relocated within the survey area during the day.

There are two objectives in conducting a turnover survey:

- The first is to measure utilization patterns within the spaces surveyed to determine typical length of stay patterns. If stays consistently reached or approached the maximum time limit, it is a reasonable indication that the posted time limit may not be sufficient for all needs.
- The second is to determine whether employees are taking up on-street parking that is intended for downtown customers and visitors. Length of stay patterns that consistently approach or exceed the posted limit may also be an indication that employees are using that space and moving their vehicles every two hours to avoid ticketing.

Standard survey techniques will reasonably accomplish the first objective and provide some indication of potential employee use of on-street capacity. The technique used by Carl Walker does go beyond the typical process by searching the full database of collected plate numbers to track relocations within the surveyed street segments rather than focusing only on the occupancy record for each space. However, if

employees relocated to a space that is outside of the street segments that are included in the survey, they will not be captured as relocations. The result is that, without a fully survey of all on-street spaces within reasonable walking distance of the downtown center (Main Street), the full extent of employee use of on-street spaces cannot not be determined. Due to manpower and limited cost-benefit advantages, a full downtown turnover survey is rarely conducted unless the employee parking problem has already been clearly identified and a high priority element of the study. That was not the case in Danville.

The results of the turnover revealed a degree of compliance with posted 2-Hour time limits that is significantly higher than is normally found in systems that rely solely on enforcement of time limits.

**MAIN STREET SURVEY AREA**

The Main Street survey area included both sides of Main Street between Memorial Drive and Jefferson Street. As shown in FIGURE 1-12 the Main Street survey area included 81 spaces that represent 648 meter hours in an 8 hour business day. A very high 91% of the vehicles surveyed remained within the 2-Hour limit. Only 9% of the surveyed vehicles stayed beyond the 2-Hour limit and only 6 vehicles stayed longer than 3 hours. This is a high rate of compliance.

One of the critical measurements in the survey is the percentage of total meter time consumed as overstay time, time beyond the posted time limit. In this case, overstay time represented only 8% of the total time available in the system, which is a very low rate that, again, indicates an unusually high degree of compliance with posted time limits within the Main Street corridor.

**FIGURE 1-12 Results of Turnover Survey - 2-Hour Time Limit Spaces - MAIN STREET**

		Total Surveyed 2-Hr. Spaces: 81								
		Total Meter Time in 2-Hr. Spaces: 648		(based on 8 Hr. day)						
		<b>1 Hr.</b>	<b>2 Hr.</b>	<b>3 Hr.</b>	<b>4 Hr.</b>	<b>5 Hr.</b>	<b>6 Hr.</b>	<b>7 Hr.</b>	<b>8 Hr.</b>	<b>Total</b>
Vehicles:		183	42	16	4	1	1	0	0	247
% of Vehicles:		74%	17%	6%	2%	0%	0%	0%	0%	
		<b>Veh. %</b>				<b>Veh. %</b>				
Compliant Vehicles:		225	91%			22	9%			
Overstay Vehicles:										
Occupied Hrs.:		183	84	48	16	5	6	0	0	342
% of Capacity:		28%	13%	7%	2%	1%	1%	0%	0%	53%
		<b>Hrs. %</b>				<b>Hrs. %</b>				
Capacity Occupied by Compliant Vehicles:		267	41%			75	12%			
Capacity Consumed by Overstay Vehicles:										
Overstay Time:		32	12	4	5	0	0			53
% of Capacity:		5%	2%	1%	1%	0%	0%			8%

Compliance in spaces with a posted 5-Minute time limit was more difficult to discern because survey tours were done hourly. However, no vehicle remained in any 5-Minute space beyond the initial tour in which it was recorded as being in that space.

*UNION & SPRING STREETS SURVEY AREA*

Similar results were found in the survey area that included the segments of Union Street between Patton Street and Spring Street segments between Memorial and Floyd Streets. The survey area included 90 on-street spaces, all of which are 2-Hour spaces.

As with the Main Street survey area, there was ample available space throughout the day and a very high rate of compliance with time limits. As shown in FIGURE 1-13, 80% of the vehicles using those spaces complied with the time limit. Only 17 % of system time was consumed by overstay parking.

**FIGURE 1-13 Results of Turnover Survey – 2-Hour Time Limit Spaces - Union / Spring Street Area**

Total Surveyed 2-Hr. Spaces: 90										
Total Meter Time in 2-Hr. Spaces: 720 (based on 8 Hr. day)										
	1 Hr.	2 Hr.	3 Hr.	4 Hr.	5 Hr.	6 Hr.	7 Hr.	8 Hr.	Total	
Vehicles:	94	40	16	6	1	0	2	8	167	
% of Vehicles:	56%	24%	10%	4%	1%	0%	1%	5%		
Compliant Vehicles:		134 80%		Veh. %						
Overstay Vehicles:		33 20%								
Occupied Hrs.:	94	80	48	24	5	0	14	64	329	
% of Capacity:	13%	11%	7%	3%	1%	0%	2%	9%	46%	
Capacity Occupied by Compliant Vehicles:		174 24%		Hrs. %						
Capacity Consumed by Overstay Vehicles:		155 22%								
Overstay Time:			32	18	4	0	12	56	122	
% of Capacity:			4%	3%	1%	0%	2%	8%	17%	

The overall conclusions drawn from the field surveys and general observations made during other fieldwork are:

- There is ample on-street parking available in virtually all blocks. The only exceptions, based on observations, are the block segments near City Hall. Those blocks segments were periodically full.
- Parkers are adhering to time restrictions
- Although the survey may have missed some movement of vehicle to nearby side streets to avoid ticketing, there does not appear to be the wholesale consumption of on-street parking capacity by downtown employees that is often found in cities of this size. Normally, this level of compliance is achieved only through the use of parking meters.
- There is no apparent reason to increase enforcement efforts or change enforcement policies.

### **Effective Use of Existing Parking Resources**

In evaluating both current and future parking needs, management of existing parking resources is a key element of planning and the development of parking system management strategies. Improved availability, access and identification for existing parking can make a significant difference in both how well that existing parking system supports Downtown and whether the City must make significant capital investments to create more parking capacity. Before addressing future parking needs it is appropriate to consider how the City can use its existing parking resources, both public and private, more effectively.

### **Parking Location (off-street parking)**

Most off-street parking serving the northernmost blocks of Main Street can be categorized as “back door” lots located at the rear of the buildings. This is a typical configuration and, with proper pedestrian access, is far preferable to a streetscape that is broken by parking lots or parking access lanes. There is some surface parking along the west side of the block of Main Street between Union and Floyd Streets, but the east side of Main Street is largely unbroken from Memorial to Ridge. This unbroken streetscape should be protected as much as possible and vehicular access should not be created from Main Street to the “back door” lots.

With the exception of the “gap” in active buildings along Union Street between Main and Spring Streets, parking conditions for the retail blocks along Union between Spring and High Streets are similar to those along Main Street. Back door parking is available in lots fronting Memorial Drive and accessible at two points along Union Street.

Parking in other portions of the study area is provided in a more pragmatic way, with less attention to preserving unbroken street faces. This is more acceptable in a non-retail area such as the Bridge Street corridor that has a mix of primarily office and educational space. Surface parking in the southern and western portions of the study area (Zones 2, 6 & 7) typically takes a portion of the property of the demand generator it serves. Individual businesses and, in some cases, multi-family residential buildings, provide on-site parking next to or behind the buildings served. This is a pattern that is not likely to change unless specific properties are purchased and buildings demolished for new construction. With the focus of physical improvements along Main Street and current development attention in the Tobacco Warehouse District, the southern and western portions of the study area are likely to be relatively stable for the foreseeable future in terms of parking sufficiency and parking placement.

### Vehicular Access to Parking

Vehicular access to parking is affected primarily by street connections, the street pattern and traffic volumes.

With few exceptions, street connections include formal curb cuts which defined the access point and preserved the sidewalk. No parking lots were noted with a layout that required parkers to use the street as part of the circulation pattern for the lot. Drivers are able to stay safely within the confines of the lot when searching for a space and do not need to cross over sidewalks or use an adjacent street once they have entered the lot.

All lots (no noted exceptions) are accessible directly from the street and do not require drivers to pass through another lot (different ownership) or use a special access corridor to gain access.

Topography complicated entry into some private parking lots because of a steep angle at the point of the street connection, but lots used by the general public were generally free of those obstacles.

### One-Way Traffic

During the course of this study Patton Street was converted from one-way to two-way traffic. This is a significant improvement in navigating the Downtown area, accessing parking facilities and supporting effective wayfinding. Elimination of all one-way streets in a downtown street grid is arguably the best condition, but specific physical limitations or the need for on-street parking in specific locations can sometimes justify exceptions. Market Street may be one of those exceptions but was not analyzed as part of this study as Patton Street was considered the predominant one-way issue. Everyone will benefit from its recent conversion, but the greatest benefit will be gained by visitors who will be able to learn and navigate a street system that is now more intuitive and understandable.

### Identification of Public Parking (and Best Practices)

Although public parking is available in City lots, that parking is not clearly identified to a downtown visitor who is not intimately familiar with the existing parking arrangements.



The photo above shows a “Public Parking” sign mounted to the entry equipment at one of the City-owned lots in Danville. The design of the sign itself is attractive, but the size and placement is inadequate in terms of visibility to drivers searching for parking. The strategy for size and placement should assume it is intended for drivers who are unfamiliar with Downtown Danville and its public parking lots.

The appearance theme is carried nicely into the sign for the Danville Transfer Center, but the “Public Parking” message could be easily missed and certainly is not designed to identify that lot as public parking from a distance. That message is overpowered by the larger text above it.

The mid-block access from N. Union Street to its “back door” lot is promoted by a very small black and white sign that is barely visible within all of the distractions that surround it. A much larger, color-coded and themed sign at on the north side of the street (similar to current location of another small sign) would be far more effective. As an alternative, a large themed sign could be placed above that entry port.

FIGURE 1-14 Parking Identification at North Union Place



Individual retailers who have recognized the importance of guiding their customers to available parking, most notably Rippe's, have made an effort to provide visible signage to identify their parking and directions to it. Signage and identification of City-owned public parking should be even more visible.



FIGURE 1-15



FIGURE 1-16

Clear identification of public parking has a significant impact on the perception of overall parking availability. It also sends a very powerful message about how welcome people are in Downtown. If the effort to provide and identify public parking is weak, it undermines the "welcome" message. Public parking

signs can, in fact, serve as the City's welcome mats for greeting arriving visitors or shoppers. Good signs make a good, welcoming impression. A lack of signage or lack of attention to design, clarity and placement, makes a poor impression.

When the identification of public parking areas is clear and highly visible, it also promotes an impression of ample, convenient parking. It even promotes an impression of shorter walking distances because the parking destination can be more readily seen from the point of origin for pedestrians. The international "P" sign is useful but not a good substitute for "promotion" level signage that clearly indicates public parking and, more importantly, that it is City owned parking that is open to the general public. In cities with paid private parking, the "P" sign designates only that public parking is available and does not make a distinction between private paid parking and public free parking.

Prominent identification of parking availability, particularly for the City's lots and any future decks, will make parking easier to find, highlight its convenience, and add confidence to the Downtown visitor's experience. Seeing, from the distribution of visible signage, that public parking is available almost anywhere in Downtown Danville leaves a positive impression on visitors and removes parking as a potential concern on future trips. That increases the likelihood that the visitor will come back Downtown.

The following are basic characteristics of a good parking facility identification program:

- Consistent color coding and sign format for all City owned parking
- Inclusion of the international "P" symbol
- Large, visible text identifying the facility as "PUBLIC PARKING"
- Color coding that makes the sign distinctly recognizable from a distance as a parking location identifier
- Proper sign placement that makes the facility and entry point clearly visible to approaching drivers from a distance.
- Nighttime sign lighting



FIGURES 1-17 / 1-18  
Lynchburg, VA & Boulder, CO

The examples from Lynchburg, VA and Boulder, CO are “high end” examples of good identification signage. Additional examples are provided on the next page. These represent a range of approaches, effectiveness and cost. Even low cost identification banners help increase visibility and appearance, providing inexpensive opportunities for color-coding and branding.

Other good examples from from Orlando, FL, Asheville, NC, and Raleigh, NC are provided on the next page.

Also shown is an example from an unnamed city where a combination of standard traffic signs and “shop-made” signs are used to identify municipal parking lots. This may be an acceptable, neutral way to identify municipal parking lots, but is not effective in promoting a positive impression that the city considers its parking as an important downtown feature. Touching on an earlier theme, it is not an attractive “welcome mat”.

#### Current Wayfinding Project (underway)

The City has initiated a wayfinding project designed to provide improved signage for the identification of Downtown destinations and routing to those destinations. Typically, effective wayfinding programs are constructed under a “layered” strategy that delivers increasingly specific information at decision points where that information is needed. The City expects that guidance to available parking areas will be included as part of a layered system. This represents another significant improvement in Downtown mobility that will benefit local residents and be particularly beneficial to Downtown visitors, most of whom will learn the street system and location of destinations within that street system only after they arrive. This project, coupled with the conversion of Patton Street to two-way traffic will have far-reaching positive impacts on how Downtown Danville is perceived and how well it actually functions in terms of providing good access.

FIGURE 1-19 Examples of Parking Wayfinding Signage



**Website Promotion of the City’s Public Parking Facilities - BEST PRACTICES**

It is common practice today for cities to include a page on the city’s website that identifies public parking in the downtown area.

The benefit of website information is greatest in larger cities where parking can be a challenge and where much of the parking is restricted to private use. Parking occupancy does not rise to that level yet in Danville, but simple identification of public parking facilities would be beneficial to visitors who may not understand that parking is plentiful. It could also help downtown merchants promote the convenience of parking as they advertise, even placing a link to the parking map from their own websites.

In more sophisticated applications, interactive mapping platforms are used to provide a more dynamic tool for navigating parking in larger cities. These applications allow for more information to be provided to the website visitor, including address, street entries, hours of operation, rates, handicap accessibility, and even photos of the entrances to help the driver recognize the facility and entry point. As the result of an earlier Carl Walker study for the city of Atlanta, an interactive map was initiated (through a 3<sup>rd</sup> party designer) that provides this information from a database that is regularly updated. A similar system in Charlotte, NC was provided by a web design entrepreneur at no cost to the City in exchange for the right to sell advertising on the page.

There are some pitfalls that must be navigated in the more robust website promotion systems found in larger cities, related to competitive pricing and equity in how various facilities are promoted. If the system applies only to the City’s own parking facilities, there is a great deal of flexibility in how that system is used and what parking is promoted. When the system includes privately owned or managed parking facilities, competitive conditions can limit that flexibility.

**FIGURE 1-20**  
**Central Atlanta Progress Website**  
**Interactive Parking Information Map**



**Pedestrian Connections to Parking (and BEST PRACTICES)**

A strategy of providing “rear” parking for Main Street businesses is a solid strategy as long as good pedestrian accessibility is provided to that parking. If customers have to walk from a rear parking area to a center-of-block retail store along the perimeter of a large block, that can be considered as inconvenient and even unacceptable in some communities. Recognizing that an unbroken line of active building faces is critically important to Main Street (any main street) as an urban design priority, there may be opportunities to make appropriate pedestrian connections to rear-area parking if undesirable or unsafe buildings need to come down. The type of connection is important and can make an immense difference in how proximity to parking is perceived. The examples provided on the pages that follow illustrate a range of approaches, all considered good concepts.

The character of the connection should be linked to the streetscape design if possible, particularly if the City has invested in an attractive streetscape that contributes to the pedestrian experience. Narrow, dark passages that lack amenities to enliven the space for pedestrians are not desirable solutions. Attractive and appropriately sized pedestrian connections can effectively extend the Main Street streetscape to the parking area. Some of the best examples have been found in LaGrange, GA and in Williamsburg, VA where shop windows are part of the experience, truly making the passage part of Main Street. (Photos follow in this section.)

The photo to the right is an example of a fairly large format pedestrian connection in Rock Hill, SC. This corridor connects Main Street to a rear parking lot and adjacent parking deck. It also provides pedestrian access to the buildings that line the north (right) side. Although the gap is nearly twice as wide along Main Street than would be considered ideal, the design features make it an attractive component of the overall streetscape and allows for ADA access with space left for landscaping.



**FIGURE 1-21 City of Rock Hill, SC Pedestrian Connection**

Pedestrian Connections in Danville

There are some pedestrian connections in place along Main Street in Danville, but they are “ad hoc” connections that detract from the Downtown experience.

Some effort was obviously made to promote the pedestrian connection adjacent to Rippe’s as shown in the photos below. Signage directs pedestrians to the connection, the entry point from the parking lot is enhanced with landscaping, and the pathway itself is clear, with some greenery along the edge.



Other pedestrian connections along that block are less inviting and, in one case, the intended path is blocked by a tripping hazard. It is assumed that all of this is on private property, but it affects the impression of Downtown as a whole.



Examples of "Main Street to Parking" Connections in Other Cities

Williamsburg, VA



Williamsburg, VA



Concord, NC



Concord, NC



Concord, NC



Suffolk, VA



Raleigh, NC



Sanford, FL



LaGrange, GA - Connection between main retail street and parking garage location



### Private Parking for "Public Use"

**RECOMMENDATION:** One of the strategies that should be considered in the City's long range planning is how to maximize the availability of privately owned parking for public use.

At some point, the density and activity level in Downtown will reach the level that paid parking will become part of the downtown market. Monthly contract parking on private lots is already part of the market dynamic in Danville and that will eventually evolve into lots where paid parking is offered on a daily or hourly basis. When paid parking becomes the norm and rates make the investment and effort worthwhile, more and more private owners of parking will offer paid parking as a revenue generator.

Until that time, many property owners (with parking lots), will be hesitant to make their parking available to the general public. Without a material financial incentive for those owners, private parking can become even more removed from public use just as the need for additional public parking is becoming more of an issue.

- There is greater pressure for the owners of private parking to protect that parking for the exclusive use of their employees and/or customers because there is an increasing level of encroachment by parkers who are having more difficulty finding parking in Downtown.
- Owners are resistant to inviting the public to use their facilities (outside of their own customers) because public use of their parking lots carries unwanted liability. Inviting the public to use the facilities only increases that exposure from both the likelihood of something happening and the increased legal liability attached to welcoming "invitees" onto the property. This is often an obstacle in securing use of church parking lots during the week.
- If paid parking is not a normal part of the local parking market, there may be little or no opportunity for revenue that would justify the risk and additional expenses of inviting the public to use facilities.
- If paid parking is a factor in the market, but rates are still very low, owners may not have the knowledge or willingness to engage in selling use of their parking facilities to the public. The potential gain is too small compared to the time and effort required.

It is during this interim period between ample parking and paid parking that the City can and may need to be more involved in order to make sure adequate parking is available for the general public.

*WHAT CAN THE CITY DO?*

**RECOMMENDATION: The City can help overcome barriers to public accessibility to private parking.** The first step applies to current conditions but will become more important as new development activity causes existing parking surpluses to shrink. The second will apply when paid parking becomes more established as a part of the downtown parking market.

Near Term

Step 1 - Monitor parking surpluses in both City-owned and privately owned Downtown parking lots. At present there is ample parking in all active areas of Downtown. However, as surpluses begin to shrink due to improved occupancy rates in downtown buildings, the City should closely monitor those shrinking surpluses. It should maintain an updated inventory of parking capacity and occupancy patterns in both public and private parking lots.

Step 2 - If there is consistent surplus capacity on privately owned lots in areas where additional public parking is needed, the City should:

- Determine whether that capacity is made openly available to the public or it is reserved for private use by signage or gate controls.
- If the unused capacity is not available to the public, the City should enlist the support of that property owner in making parking openly available for public use, including the placement of prominent signage indicating the availability of public parking. The City can provide the signs to cooperating property owners so that there is no cost to the owner and the signs are consistent across Downtown.
- The City can help in proposing or even paying for signage, barriers or access equipment that is needed to protect parking availability for the property owner's tenants, visitors or customers. That cost to the City is far less than the cost of providing the parking.
- If liability is a concern to the property owner, the City should examine the risk and make a determination as to whether the City can provide insurance coverage and indemnify the owner. This may involve improvements to the parking lot to mitigate visible risk factors and the City can pay the cost of correcting those deficiencies as part of the arrangement. The City can determine whether the capacity gain justifies the cost of the improvements.
- Churches located downtown are a prime candidate for weekday parking if the City can provide liability protection (insurance coverage) for the public use of that parking during the week.

### Future

Without question a financial incentive is the most powerful factor that will drive privately owned space into the public market. In the near-term, a strong financial incentive related to parking fees is not likely to be a significant factor in Danville. It will take time and progressive densification of the Downtown in order for the scarcity of parking to stimulate revenue generation that is significant enough to cause changes in the market. As stated earlier, it normally begins with the offer of "monthly contract parking" and, eventually parking that is sold on a daily or hourly basis. Some monthly contract parking is already in place in Danville.

When paid parking does become a normal part of market dynamics, the City can still facilitate entry of private parking into the public market by providing guidance on good design and management techniques. It can even contract to manage privately owned parking as part of the City's system - or a parallel system. Just as a private parking operator looks for opportunities to place private parking lots into service as public parking, the City can extend its management services to the private sector by:

- Identifying surplus private parking in areas where additional public parking is needed, particularly where new public parking will not conflict with City-owned parking that is equally convenient and plentiful.
- Contracting with parking lot owners to convert the unused portion of their parking lots to public parking areas, providing the necessary equipment, collection and general management needed to do so.
- Sharing revenues with the property owner once sufficient revenue has been generated to cover initial equipment and start-up costs.
- Providing full "no risk" flexibility for the owner that allows for the public parking area to be expanded, contracted or eliminated at the direction of the owner without penalty.

Parking that is managed under such a program can be branded as part of a parking "Co-op" so that it can be easily identified to the community as available public parking.

At some point, it can be expected that a private parking operator, either a professional parking firm or someone local, will begin filling the role of contracted parking manager for property owners who do not want to perform that function themselves. If the City is established as a source for that service, it may be able to continue benefiting from the growing revenue stream and have an ongoing influence on the availability and character of privately owned public parking. There are indirect benefits attached to this involvement such as the ability to introduce uniform payment technologies and system branding that is identified by common signage.

*Case Study Example: Lynchburg, VA*

**Carl Walker** conducted a parking study for the City of Lynchburg in 2007. Among other recommendations, the study team proposed that the Lynchburg Parking Authority actively pursue management of private parking facilities, or underutilized portions of private parking facilities, to make them available for additional public parking. The Parking Authority hired a Parking Manager to take responsibility for operation of the parking system and implement recommendations provided in the study.

The Parking Manager, a parking professional with system management experience in other cities, began the implementation that included offering parking management services to private parking facility owners. In some cases, the Authority assumed operational responsibility for entire facility. In others, the Authority only managed the underutilized portion of the lots. Operating modes included both administration of monthly permit parking and implementation of hourly/daily parking using electronic multi-space meters. The program has expanded to several privately-owned locations and added several hundred parking spaces to the "public parking" inventory.

## PROJECTION OF FUTURE CONDITIONS

### Impact of Anticipated Development Activity

Projection of future parking needs is a function of anticipated development and the amount of surplus parking that is currently available to support the increased parking demand that will be generated by that development.

For the purposes of forecasting future parking needs, new parking demand will be created primarily by three conditions:

- Construction of new building space
- Re-activation of existing building space
- Changes in land use for active space that will generate a higher population and parking demand than the current use

As shown in the following map of vacant or underutilized properties from the Danville River District Redevelopment Plan (FIGURE 2-1), there is a considerable supply of available development property along Main Street and major concentrated development opportunities in the Tobacco Warehouse District.

### Reactivation of Existing Building Space

#### Downtown Business Core

In most medium-sized cities, the greatest potential for increased activity, population and parking demand is associated with reactivation of existing buildings. Typically, this type of redevelopment activity is centered around the downtown retail core where there may be vacant retail space at street level and, more often, vacant or underutilized space on upper floors. Downtown revitalization is often reflected in a strong pattern of reactivation of "Main Street" buildings. As part of its Master Plan, the City of Danville is already engaged in significant streetscape improvements and potential changes to its river gateway that are designed to bring more attention and definition to the Main Street corridor as the Downtown center of activity.

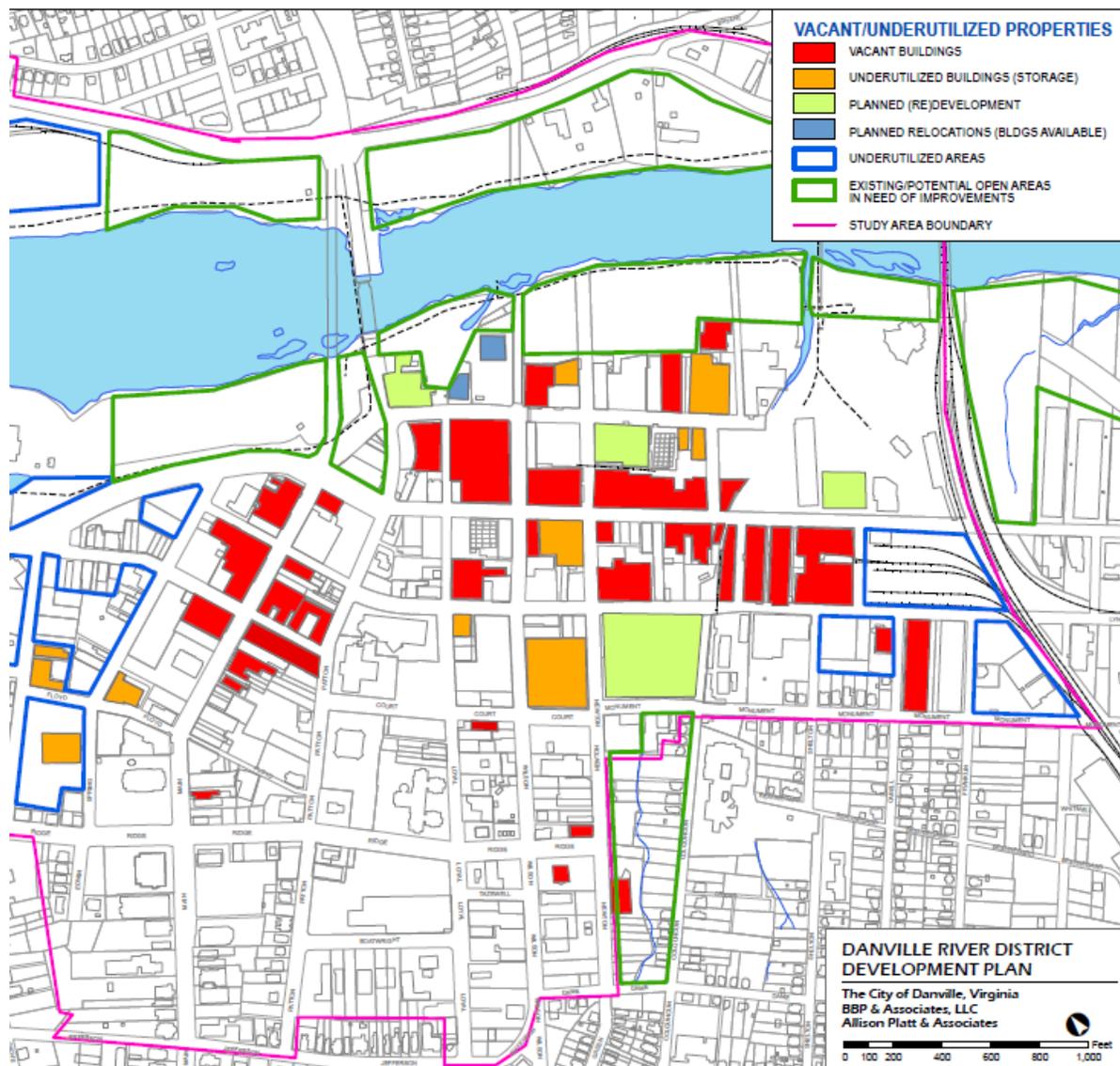
From the standpoint of parking support, redevelopment of existing downtown buildings presents a special challenge. Older buildings, particularly along Main Street, often do not have on-site parking or that parking is very limited.

In the case of Danville, there may be additional opportunities beyond "Main Street" where there is a supply of interesting and affordable building space that improves project financial feasibility. The character of

those existing buildings, like older buildings along Main Street, makes that development attractive and marketable.

In Danville, the large supply of unused tobacco warehouses in the Tobacco Warehouse District represents a significant long-term opportunity for ongoing development that is already reflected in the current and ongoing redevelopment activity along Bridge Street. Although there are recognized challenges with access to the riverfront, the presence of the river as an area feature certainly enhances the long-term potential for that District as focus for a full range of office, retail and residential development.

**FIGURE 2-1 Vacant and Underutilized Building Space**



## **Main Street and Union Street Focus Area**

Based on land use and development information provided by the City, a model was created to analyze the parking impact of development that may take place over the next decade, or beyond. The long-range assumption was that this development activity would fill existing building space along Main Street and Union Street, which together form the retail core of Downtown. A database of land use information was coupled with projections of future occupancy conditions to determine the impact of new building occupancy on area parking sufficiency.

The maps in FIGURES 2-3 and 2-4 illustrate parking sufficiency conditions under two conditions. FIGURE 2-3 shows parking sufficiency conditions when near-term (next 2 years) development activity increases the occupancy level of buildings in the Main Street / Union Street retail area. For the balance of this discussion, the term "Retail Core" will refer to the combined Main Street / Union Street market area.

FIGURE 2-2 shows the existing parking surpluses within the analysis sub-area based on the results of the field surveys of parking facility occupancy conducted as part of this study. The map indicates adequate parking conditions with the exception of Blocks #27 and #28, which show a surplus of only 9 spaces on each block. Block #27 is the location of City Hall. Block #28 is the downtown block with the highest density of building square footage and the least amount of space remaining for parking. In reality there is no actual surplus of parking in Block #28 because those spaces were out of service at the time of the survey as part of the sidewalk renovation project.

It is important to note that the term "surplus" does not make any comparison between the demand generated by buildings and the capacity serving those buildings. For the purpose of this analysis, the term "surplus" refers only to the fact that there was empty space available at the time of the occupancy survey. On blocks with high building density, such as Block #28, a small amount of empty space is meaningless and circumstantial. It does not mean that there is sufficient parking capacity on that block to accommodate all of the demand being generated by that block. However, in analyzing future sufficiency conditions, the projected absorption of existing "surpluses" of empty space is the first step in measuring the potential need for expanding parking capacity.

FIGURE 2-2 Existing Parking Surpluses



Assigned block numbers in yellow

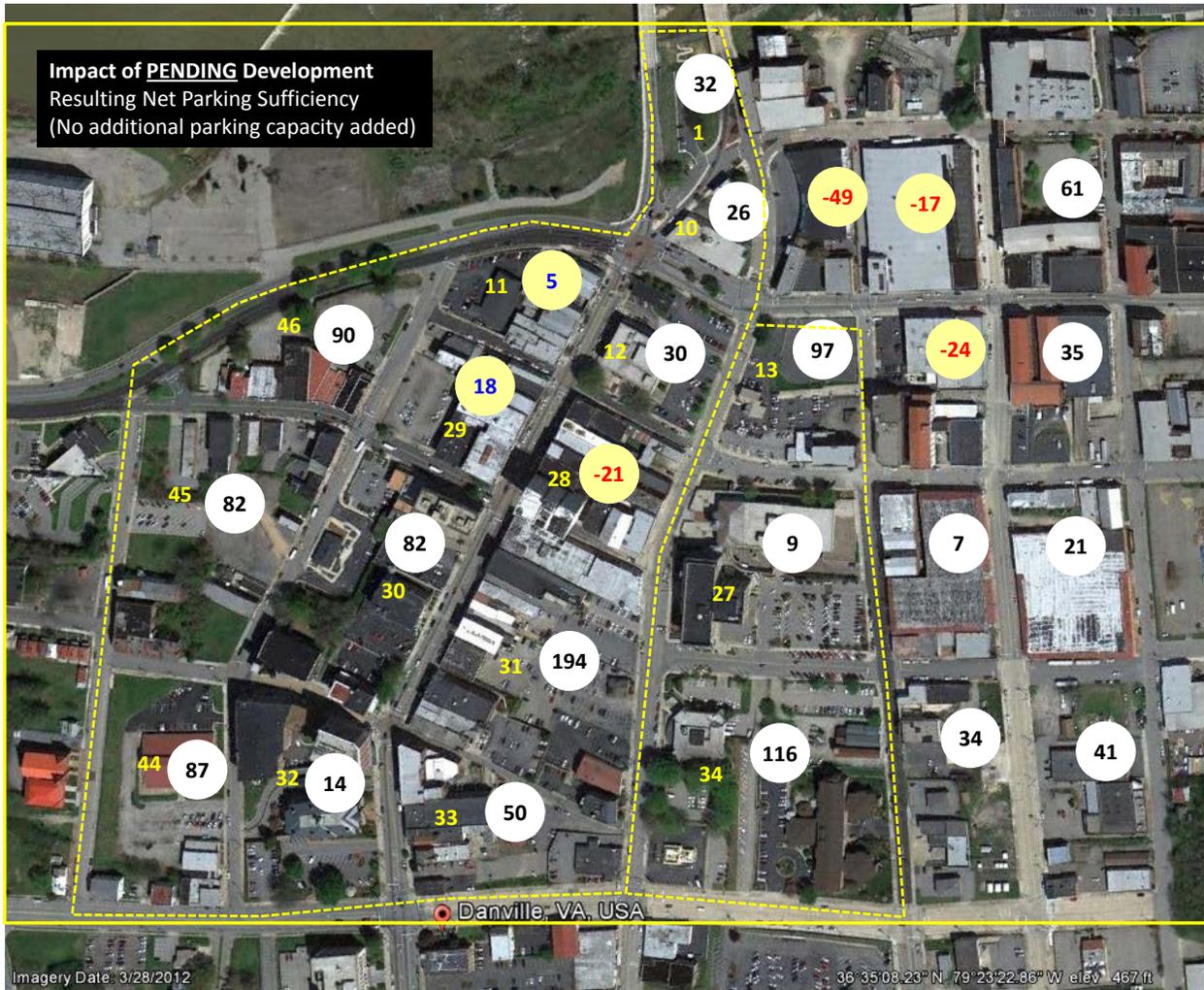
### Near-Term Parking Sufficiency

As plans move forward for revitalization of existing downtown building space, the increase in activity and population will be accompanied by an increase in parking demand. Over time, existing parking surpluses will diminish and, in some cases new demand will exceed available surpluses, resulting in parking shortfalls. FIGURE 2-3 shows the impact of projected near-term development on parking sufficiency, with surpluses shrinking on some blocks and creating shortfalls on others. The markers highlighted in yellow indicate blocks where some change in building occupancy is expected. Resulting parking deficits are indicated as negative numbers in red.

Conclusion (Near-Term Sufficiency)

The near-term picture indicates that there is reasonable parking support for the near-term, with opportunities to draw upon parking surpluses in adjacent blocks to meet small shortfalls in the four blocks indicated.

**FIGURE 2-3** Parking Surpluses Remaining After Near-Term Development



### Long-Term Parking Sufficiency

Because of the amount of vacant and underutilized building space in the retail core, the long-term picture is quite different. Reactivation of all vacant building space in the core will result in significant shortfalls that are concentrated in the blocks at the north end of Main Street between Union and Craghead Streets. The model projects that 360 surplus spaces will remain within the 11-block area, but a 500 space shortfall is concentrated in three blocks. If all empty space in the 11-block area was accessible and convenient to the blocks with large shortfalls, there would be a need for approximately 140 new spaces in the area. However, some of this surplus space is located several blocks from the parking demand generator which would be an unacceptable walk for the Danville community - a tolerance limitation complicated by the hilly terrain.

### Conclusion (Long-Term Sufficiency)

**The analysis concludes that 300-440 additional parking spaces** will be needed to support the 4-block area on either side of Main Street between Craghead and Union Streets. The range is dependent on the availability and the degree to which parkers in those blocks will be willing to use parking located in Blocks #30 and #31 on the south side of Union. The amount of parking that will be available for general use in those two blocks is questionable as much of it is presently reserved for private use.

### Union Street Retail Block

The N. Union Street block between Spring Street and High Street is the most active area within the retail core during the early evening hours. Although there is rather heavy demand for the available on-street parking during the day and evening, there were 20 empty parking spaces remaining the City-owned lot along Memorial Drive on the survey day, which should be sufficient to accommodate business peaks for both daytime and evening demand from those businesses. The projection of increased future demand, with all building space fully activated along that block indicates that there will still be sufficient parking on both sides of Union. However, that conclusion assumes that all non-residential parking in those blocks, both public and private, will be available to meet that need.

It was noted during the field observations that the street or alleyway that previously connected N. Union Street with a large parking lot along Spring Street is now closed, with a grass area separating that alleyway from the new Transfer Station lot. That lot has been improved as parking and a circulation area for transit buses. The new lot, with 23 spaces, was used by only one parker during the course of our field observations and survey work.

**FIGURE 2-4** Closed Union Street Connection to Former Parking Lot (now a Transfer Center Lot)

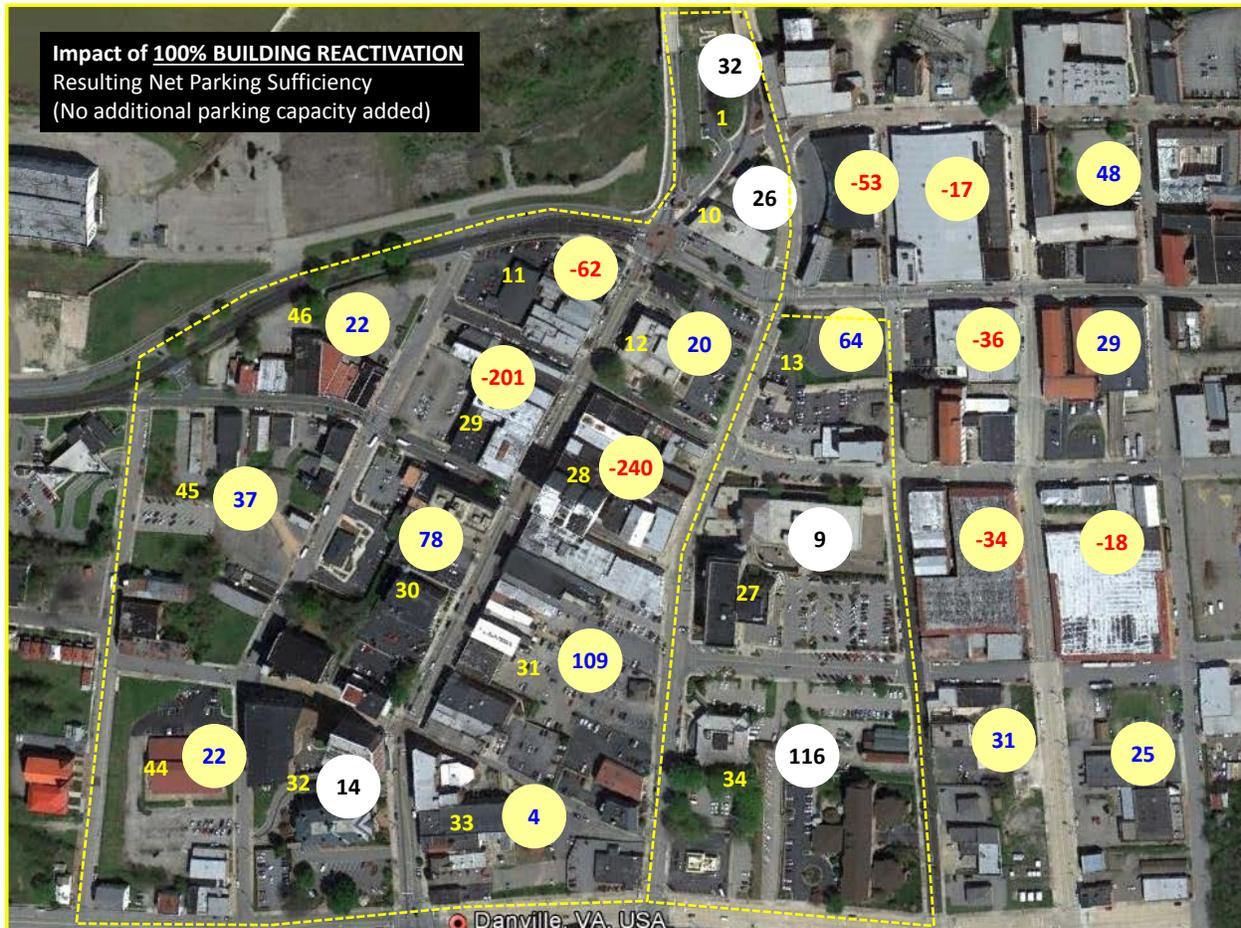


**FIGURE 2-5** Underutilized Transfer Center Lot



Recommendation: Unless there is some valid expectation of future material use of the Transfer Center lot, it is recommended that the connection to N. Union Street be reopened so the lot can serve as additional public parking for those businesses. The access point from Union Street should be marked with prominent signage that clearly identifies the availability of public parking as discussed earlier in this report.

FIGURE 2-6 Projected Parking Sufficiency with 100% Building Occupancy



### Municipal Complex

Although the City provides public parking in the surface lot east of City Hall, the public portion of that lot is not sufficient to accommodate normal demand generated by City Hall. On-street parking is necessary to meet the overflow parking needs generated by City Hall, the library and other municipal functions in that area. This was the area of most noticeable parking scarcity within the overall study area.

The City may be able to relieve the shortage of public parking at City Hall by relocating some or all of the Reserved parking in the City Hall Lot to other nearby parking locations (e.g. lots on the west side of Patton Street or the Library block). Securing that supplemental parking would, of course, would be an added cost to the City.

Long-term projections of parking sufficiency in the City Hall and Library blocks do not indicate any future insufficiency assuming that all parking capacity in those blocks is available for use by the public or under specific parking arrangements. With more than 250 surplus spaces in the adjacent blocks immediately to the south of City Hall, efforts should be made to take advantage of that surplus before considering any expansion of parking capacity to support City Hall. The issue there is providing sufficient public parking.

### **Potential Locations for Future Parking Expansion**

The Danville River District Redevelopment Plan identified several parking areas for target improvement projects as show in FIGURE 2-7. Most of those projects involve rehabilitation of existing surface lots, but two locations were identified as potential sites for development of structured parking.

Based on the potential need for additional parking capacity in the core area that may result from reactivation of existing building space along Main Street, the study team considered potential locations for placement of additional parking capacity that may be most beneficial. The primary considerations in identifying these potential locations are:

- ❖ Proximity to current and future parking demand generators
- ❖ Proximity to current or projected future parking shortfalls
- ❖ Opportunities for joint-use, shared parking by multiple demand generators
- ❖ Vehicular access
- ❖ Pedestrian access and routes to principal destinations
- ❖ Size and dimensions of the property in terms of supporting an efficient facility design
- ❖ Potential for incorporating other land uses to support development objectives
- ❖ Other potential uses for the property that may be a higher and better use

Included in this assessment are two locations that are currently used for parking but where improvement can be made to improve the accessibility and usability of that inventory.

### **Potential Parking Expansion Sites**

FIGURE 2-8, extracted from the Danville River District Development Plan shows the location of current City-owned and privately owned parking within this focus area. The map has been modified to include the City-owned parking associated with the Danville Transfer Center on both sides of Spring Street.

Potential sites for development of additional parking are numbered on this map and in the aerial that follows in FIGURE 2-9

FIGURE 2-7 Parking Development and Enhancement Sites from Danville River District Development Plan



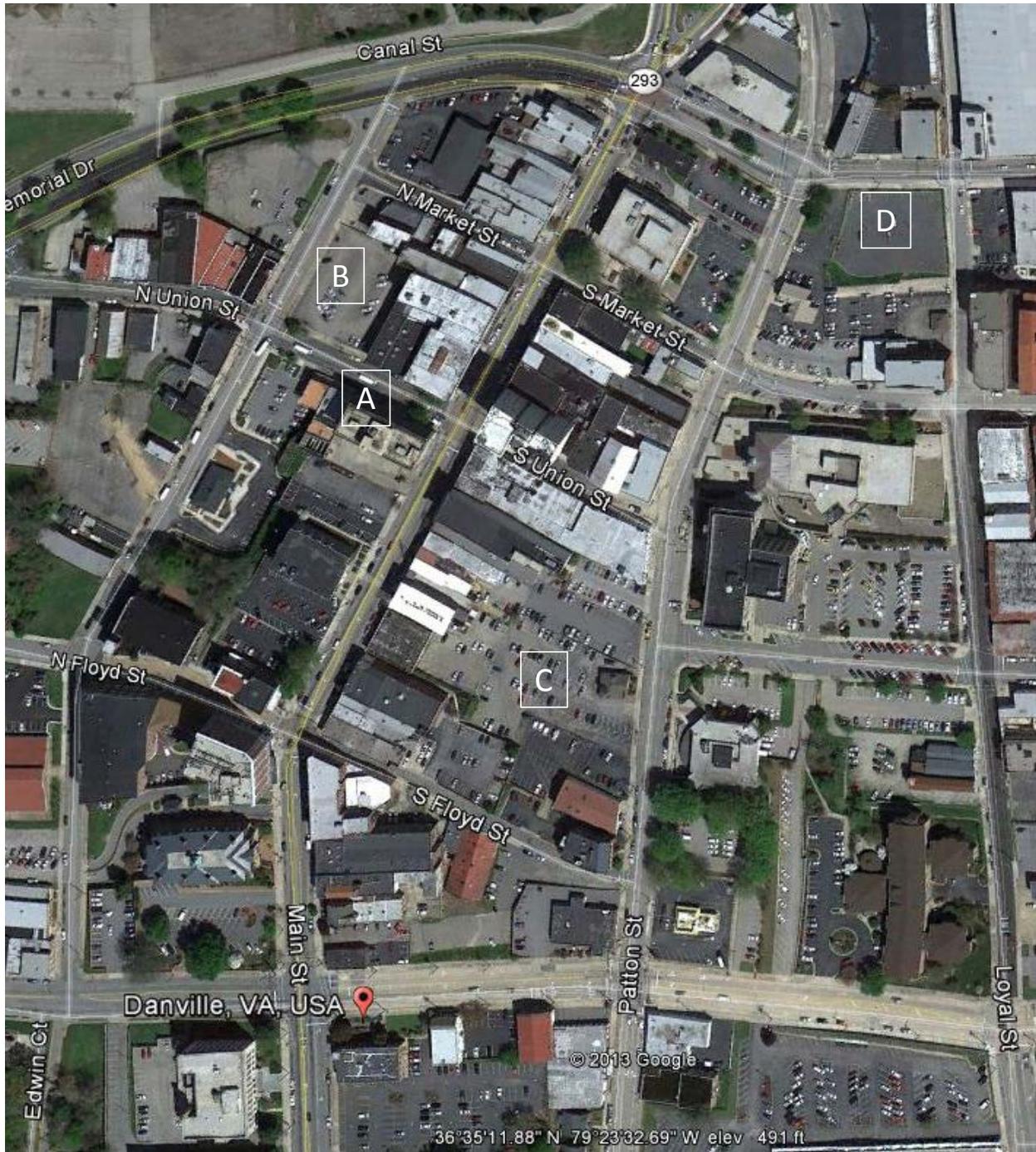
FIGURE 2-8 Map of Existing Public & Private Parking Lots



FIGURE 2-9 Potential Locations Considered for Development of Structured Parking



FIGURE 2-10 Potential Parking Development Locations



### **General Design Considerations – Site Dimensions**

In considering desirable sites for development of structured parking, the size and specific dimensions of each site are important in determining both feasibility and design efficiency. Design efficiency (the computed number of square feet of built structure per space provided) can make a material difference in structure cost.

Design efficiency is measured in two ways, cost per constructed space and the number of square feet per space constructed.

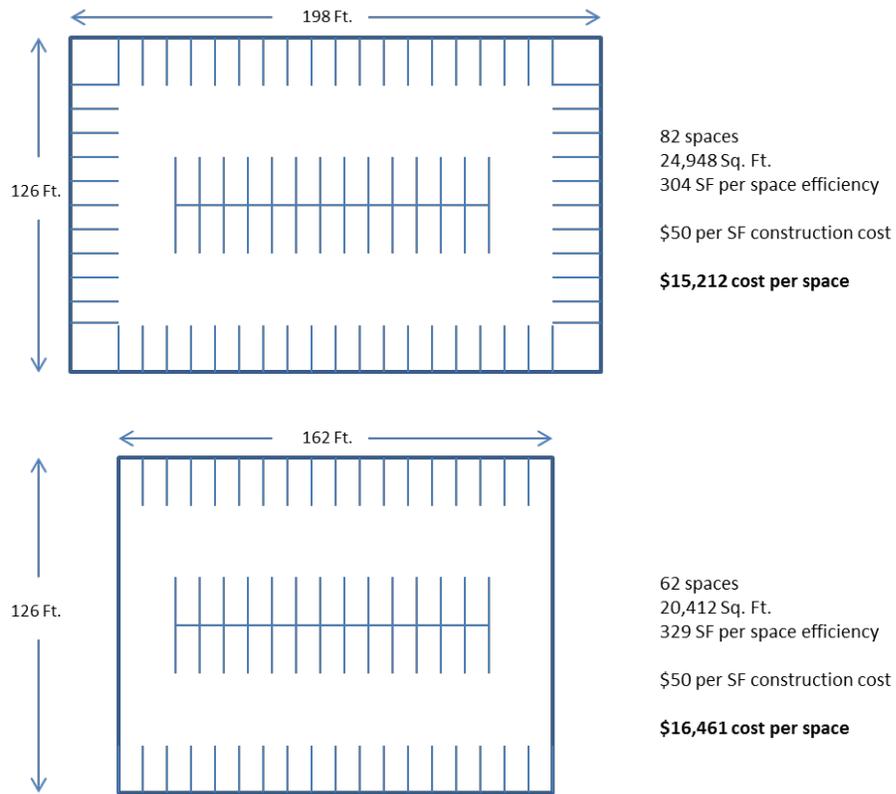
- A default “normal” design efficiency for a parking structure of moderate size and dimensions is 320 SF per space. The efficiency can normally be improved in larger structures where the number of spaces in relation to non-parking areas (stairwells, mechanical rooms, etc.) is higher. It can fall below 300 SF per space on large, open surface lots with limited landscaping. In contrast, small, odd shaped sites or other design constraints may move reduce the efficiency to 350 SF per space or higher.
- The actual cost of construction per space is affected by site conditions, design constraints, topography, soil conditions, structural configuration, method of construction, and, significantly, exterior architectural features and materials. These are less related to site dimensions than the overall efficiency in terms of square feet per space.

The “Net” efficiency of a new structure is also affected by placement and footprint if the site is already used for parking. In a simplified example, construction of a 600 space, 3-level deck on an existing parking lot represents a net gain of only 400 spaces if that footprint currently accommodates 200 parked cars. If the actual construction cost of the new deck is \$18,000 per space, the effective cost per space added to the parking supply is \$27,000. The negative impact is reduced as levels are added to the deck. Adding another level to the example deck to increase its capacity to 800 spaces results in a net gain of 600 spaces and a lower net cost of \$24,000 per space added to the parking inventory.

Site dimensions also impact the usability of a parking structure, primarily in terms of ramp slopes, turning maneuvers and other structural characteristics that affect the driving or walking experience. Steep ramps create uncomfortable driving conditions and even more uncomfortable conditions for getting in our out of parked vehicles. As set out earlier in this report, design standards for parking ramps (ramps with parking) range from 5% (LOS A) to 6.5% (LOS D). Longer sites allow more gradual, comfortable slopes.

Limited site length can reduce efficiency and increase the cost per space if the site does not allow inclusion of “end bay parking” in the design. End-bay parking along the wall at the top and bottom of each parking ramp adds capacity at a 100% efficiency gain because all of the additional built space is parking space vs. adding any drive aisle space to access that parking.

FIGURE 2-11 Illustration of Design Efficiency Gained with End Bay Parking



### Specific Sites

#### SITE A - former Downtowner Hotel

This location has already been identified and considered by the City and planners as a site for potential parking. It is also being considered as the site for development of a new downtown open space or urban park area that would complement the other streetscape improvements already underway and provide a central focal point for the Main Street core.

The dimensions of the property would allow for a single bay of parking that would provide approximately 17 parking spaces accessed from Main Street as illustrated in FIGURE 2-12, which is the rendering developed by Land Planning & Design (LPDA).

**FIGURE 2-12 Main Street Parking Lot Concept (LPDA)**



This intersection is the center point of the streetscape enhancement axes of Main and Union Streets as laid out in the Danville River District Development Plan, elevating the importance of that location in terms of the plan vision for Main Street. Accordingly, LPDA has also developed a concept for a downtown urban park with permanent features.

With no other immediate intended use, this location could be used to provide temporary surface parking as a site reserved for a key future development. That would be benefit nearby businesses. But, in the

opinion of this consultant, the location is too valuable to be used as surface parking given the limited number of spaces it would add to the inventory. Newly created surface parking on the adjacent parcel to the south will serve that purpose until that parcel is taken for development.

The site was considered for development of a multi-story parking structure that would, of necessity, also use the adjacent parcel in order to provide for circulation within the facility.

- As a rule this consultant is resistant to placement of parking directly on "Main Street". The resistance is strongest toward surface parking that breaks the continuity of building faces. It is more acceptable as a component of a structure that includes first floor retail space or other non-parking uses that contribute to the land use mix.
- Compared to an office building, locating a parking structure directly on Main Street also reduces the potential population along that street, even if non-parking land uses are incorporated into the design at street level. The upper floors are not populated.
- Other than proximity to the businesses served, the primary benefit of placing a parking structure on that corner, as opposed to another mid-block location on the west side of Main Street, would be the ability to provide vehicle access from Union Street rather than Main Street. This is consistent with accepted priorities in restricting or limiting vehicle access from a "Main Street" corridor and protecting all of the Main Street sidewalks from crossing vehicular traffic.

Three concepts were developed for this site, each with significant differences.

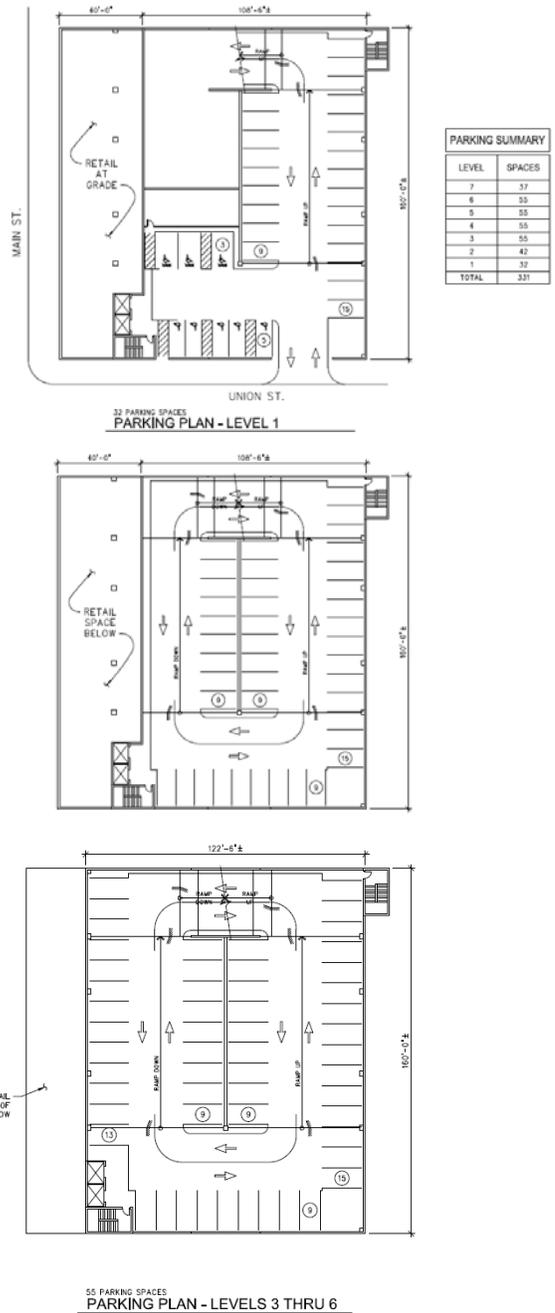
**SCHEME A**

(Full concept drawings in APPENDIX)

Scheme A generally restricts the facility to the boundaries of the former hotel and adjacent City-owned parking lot.

- Access to the garage is from Union Street through a single entry/exit point.
- ADA parking is provided in a flat area just inside the entrance.
- The configuration is a single helix design that consists of a continuous two-way parking ramp.
- Because of the limited length of the footprint, it is necessary to include additional ramping at one end of the facility in order to keep the slope of the parking ramps within acceptable design limits.
- Some efficiency is lost on Level 2 in order to provide sufficient depth for the retail space.
- First floor retail space is included along the Main Street exposure.
- The stair-elevator tower is accessed from within the parking facility
- The capacity per level varies (see capacity table in the concept drawings)
- Total capacity: **331 spaces on 7 levels.**

The most significant drawback of this design is number of levels required to provide a significant number of total spaces.

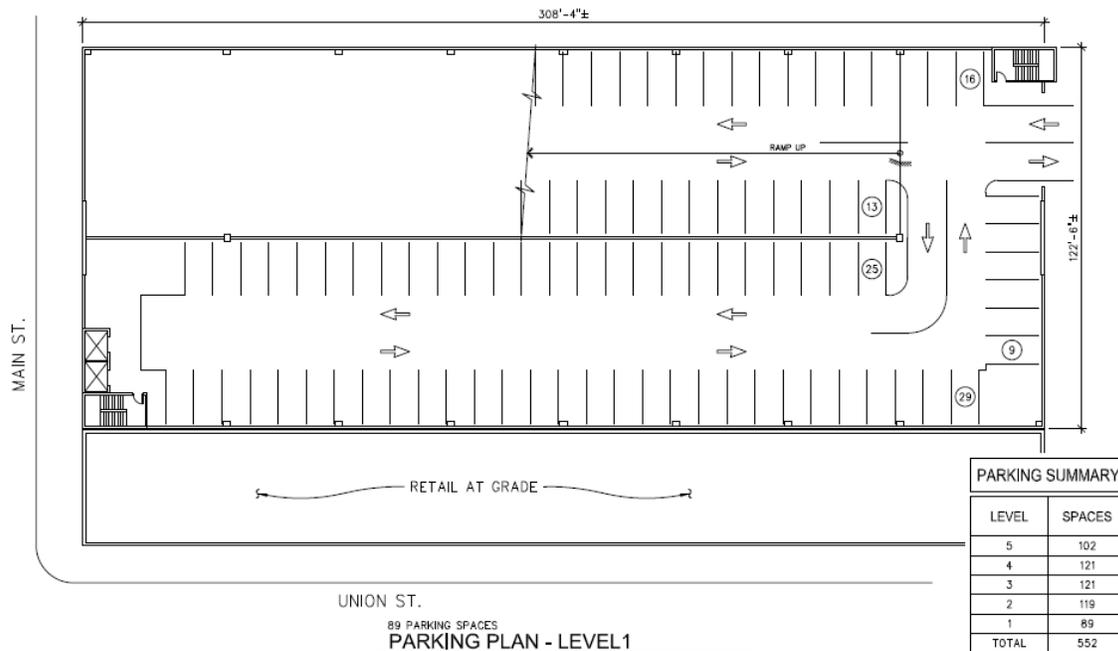


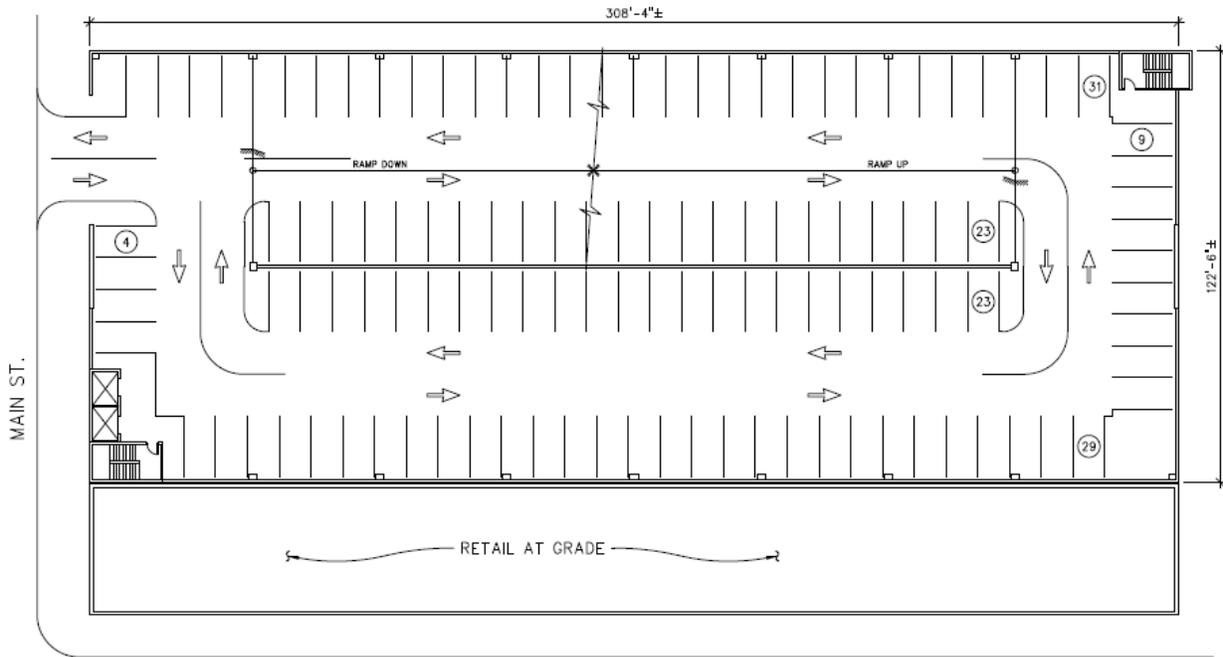
**SCHEME B**

(Full concept drawings in APPENDIX)

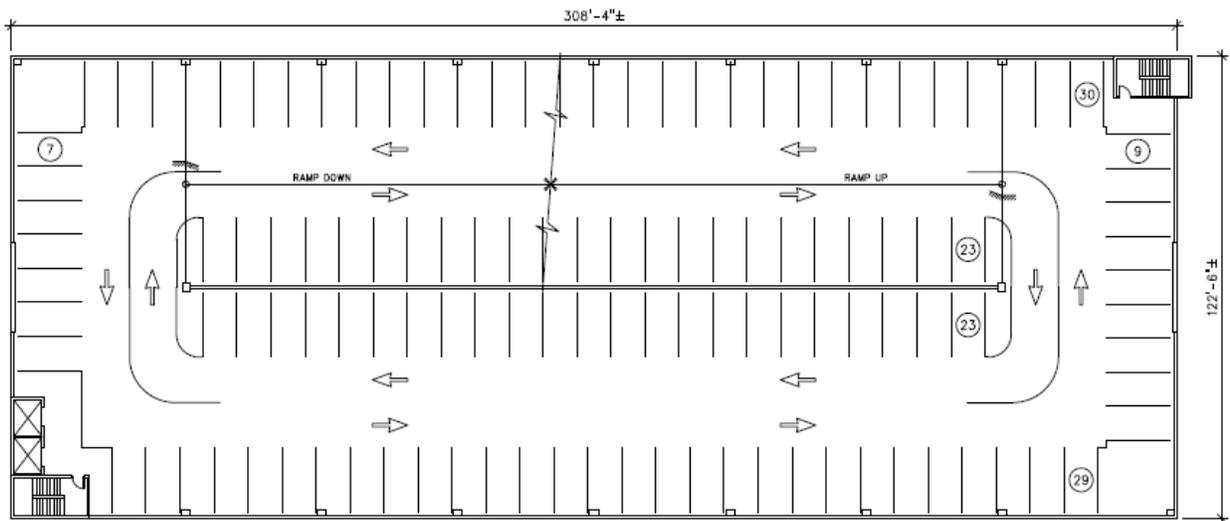
Scheme B takes requires use of the full width of the block from Main Street to Spring Street.

- This concept is a single two-way helix that provides a flat floor on each level in addition to the parking ramp. The slope of the parking ramp is consistent with good design standards.
- The example includes an option for vehicular access from Main Street.
- This concept would require removal of existing commercial buildings along Union Street.
- It provide for 1<sup>st</sup> floor retail space along the longest exposure, which is along Union Street, with no provision for retail space on the Main Street exposure.
- The retail space would have to be stair-stepped because of the slope of the street.
- The design is more efficient than Scheme A with a larger footprint that provides approximately **550 spaces on 5 levels** and allows a lower profile than Scheme A.
- A portion of the structure would be built on an existing City parking lot, which marginally reduces the net gain in capacity for the investment.





119 PARKING SPACES  
**PARKING PLAN - LEVEL 2**



121 PARKING SPACES  
**PARKING PLAN - LEVELS 3 & 4**

**SCHEME C (Preferred Scheme)**

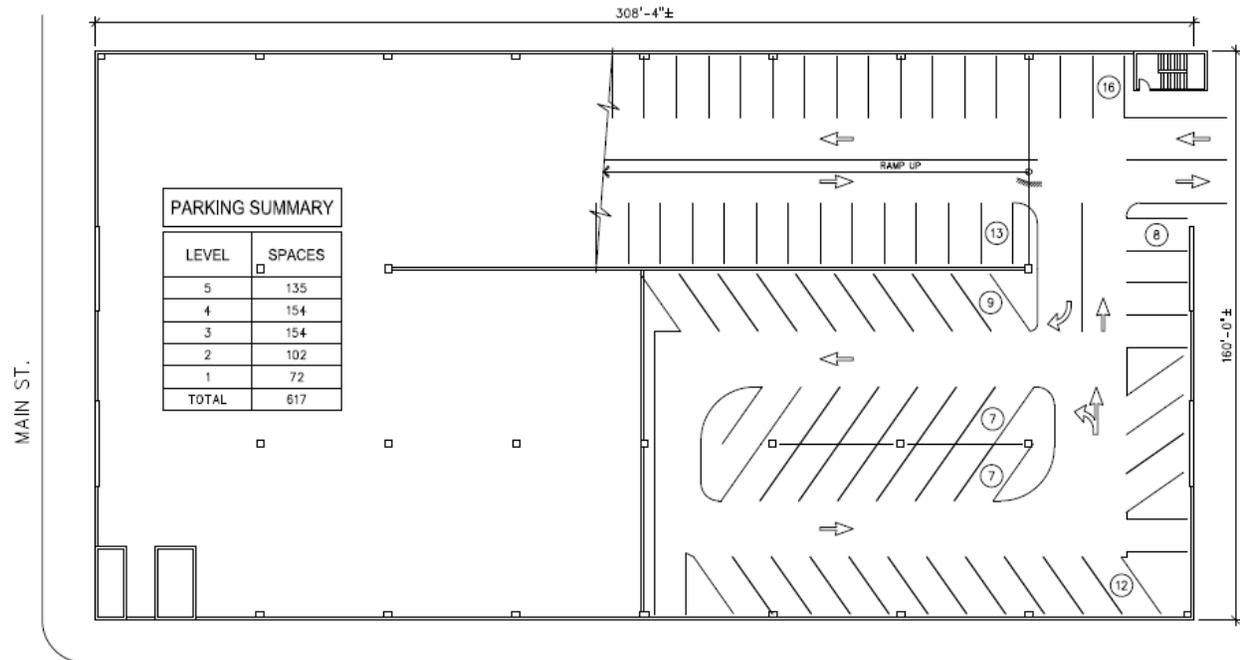
*(Full concept drawings in APPENDIX)*

Scheme C is a variation of Scheme B that provides for retail space along both the Main Street and Union Street exposures.

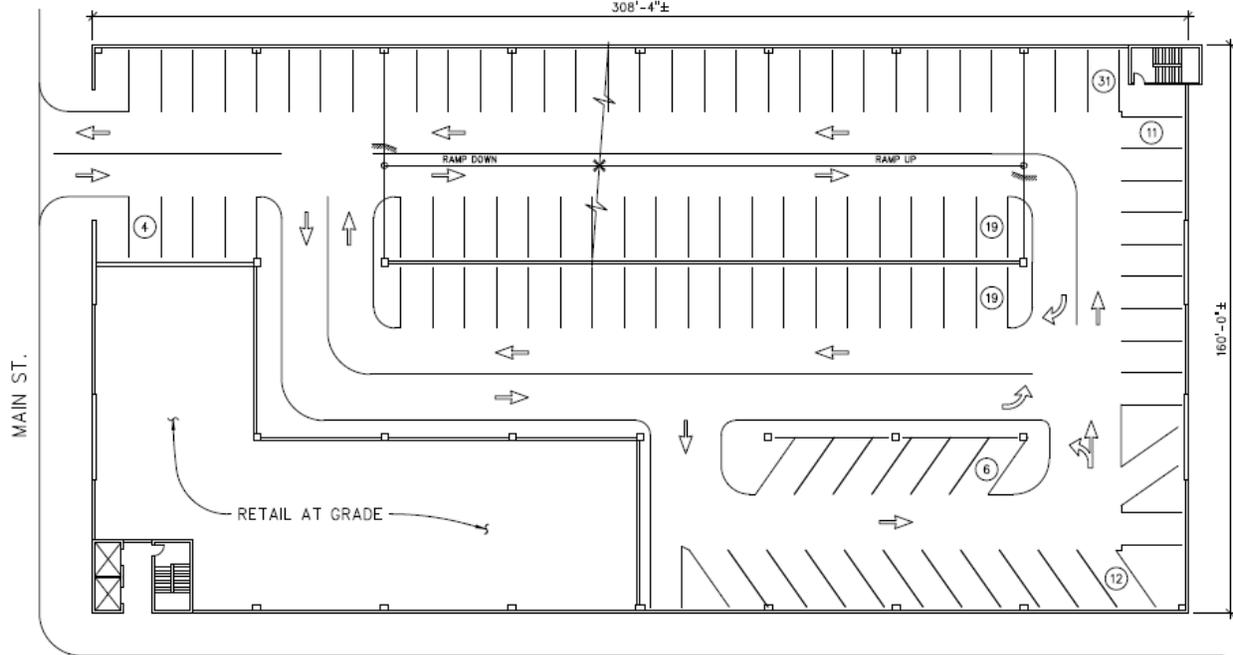
- The concept drawing includes optional vehicular access from Main Street.
- On the Spring Street side of the structure, the full footprint is used for parking. This increases the capacity yield, providing **617 spaces on 5 levels**.
- The stair-elevator tower and access is placed at the corner and it is assumed that the design would include an attractive architectural treatment of that corner to identify the pedestrian entry point and add interest to the streetscape.

Scheme C offers advantages over the other schemes in that it:

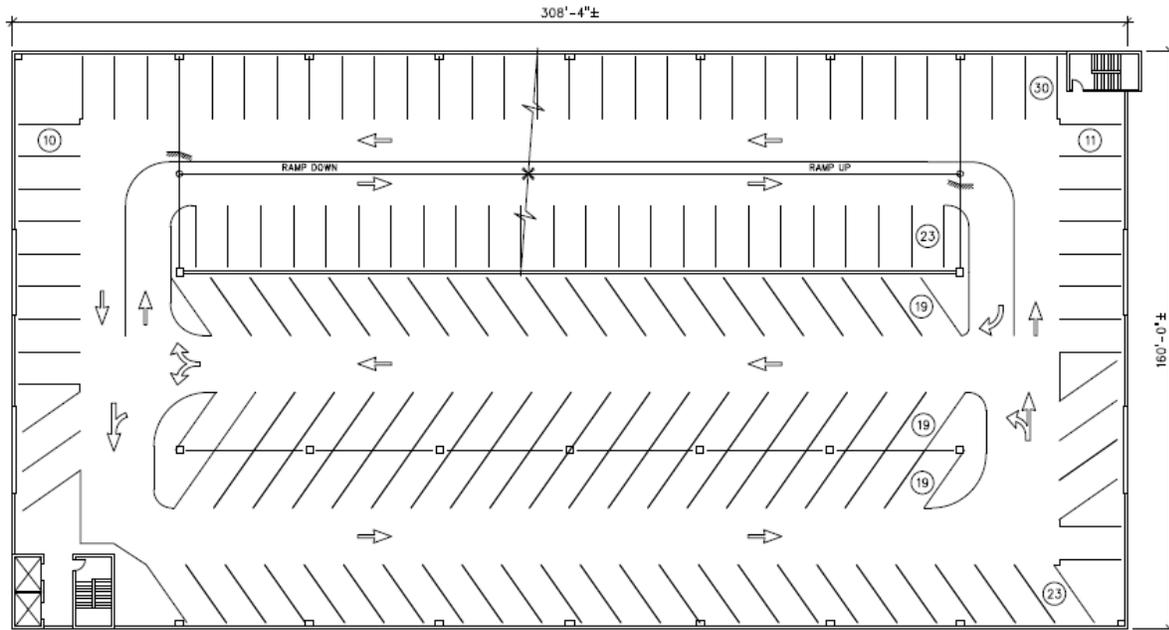
- provides retail exposure to both streets
- provides the highest capacity
- maintains a lower height profile than two of the other schemes - 5 levels (4 structured levels and rooftop)
- offers an option for Main Street vehicle access if that is deemed important



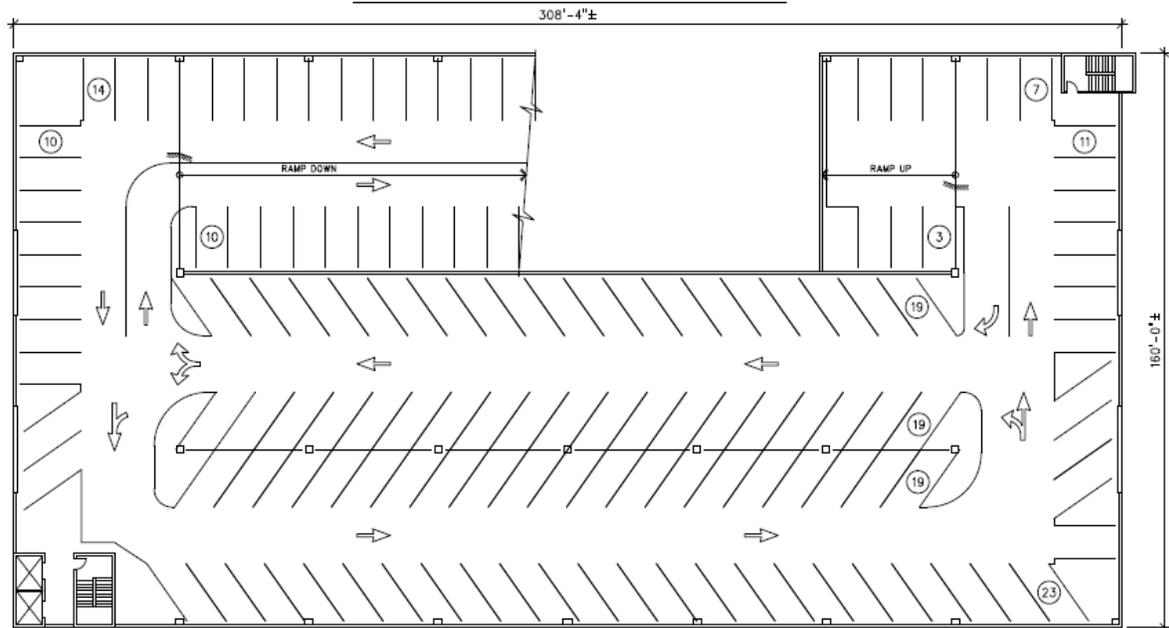
UNION ST.  
 72 PARKING SPACES  
**PARKING PLAN - LEVEL 1**



UNION ST.  
 102 PARKING SPACES  
**PARKING PLAN - LEVEL 2**



154 PARKING SPACES  
**PARKING PLAN - LEVELS 3 & 4**

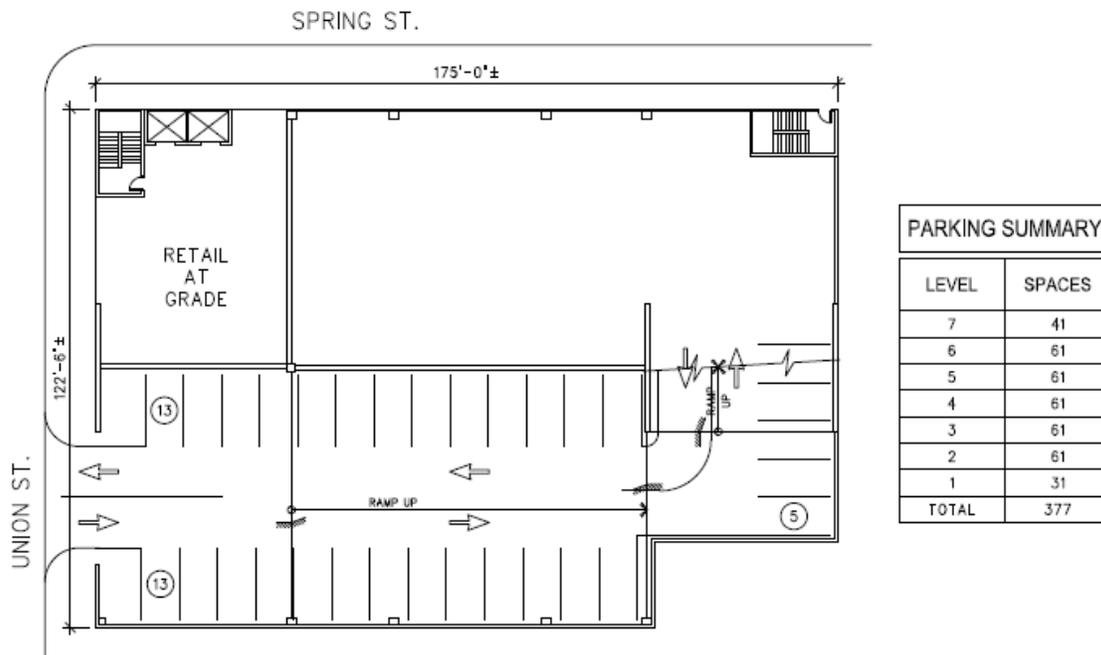


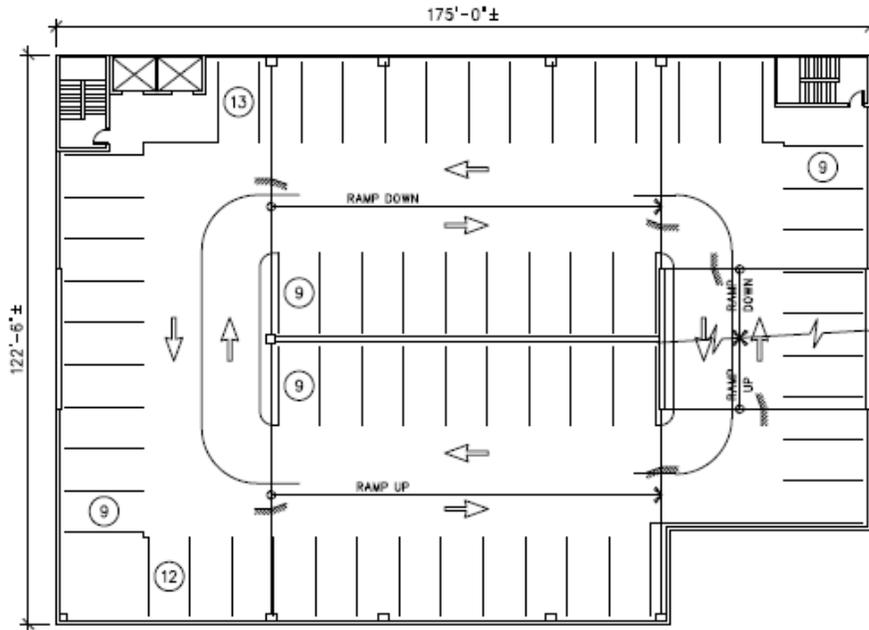
135 PARKING SPACES  
**PARKING PLAN - LEVEL 5**

**SITE B - Existing Parking Lot – N.E. Corner of Spring Street and N. Union Street**

This facility would be located at the corner of Spring Street and N. Union Street with vehicle access from Union. The principal drawback to this location is the restrictive dimensions that limited opportunity for first floor retail space as part of the design.

- Similar to Scheme A for the Downtown site, this design consists of a single helix with two-way traffic.
- All parking ramps are sloped with additional ramping needed at the end of the bays to achieve the required rise in a single cycle. The areas at and above the entry point are flat.
- Finding a way to provide accessible and safe ADA parking could be a challenge.
- Site dimensions restrict the capacity per level, requiring a seven level structure (6 structured levels and rooftop parking) to provide a total of 377 spaces.
- The inefficiency caused by site dimension constraints would affect the design efficiency and cost.
- The concept drawing includes a “notch” to accommodate an existing building adjacent to the property.
- Because it would be built on existing parking, the cost per net space gained will be higher.





61 PARKING SPACES  
**PARKING PLAN - LEVELS 2 THRU 6**

**SITE C - Assembly of Parking Lots West of Patton Street**

This location has come to be referred to during this study as the “bowl” because of the topography. Specific concept drawings were not developed for this site as the concentration of future parking shortfalls favors Sites A and B.

- Site C offers the largest footprint and the opportunity to provide the greatest capacity in a single downtown structure within reasonable height limits.
- Its location does make it a good location to serve the retail businesses located in the “lower half” of the Main Street retail corridor and is reasonably close to the tallest office building in downtown.
- Its proximity to City Hall and the library is an advantage in terms of convenience to those destinations, but the need in that area is not as great as what is anticipated in the north half of the Main Street corridor.
- Because it would be built on existing parking, the cost per net space gained will be higher.

**FIGURE 2-13 Illustration of Parking Structure on Site C from Danville River District Development Plan**

The illustration indicates a capacity of 170 spaces per typical level, with fewer spaces on the first level to allow for vehicle access points. A 4-level structure would provide an **estimated 660 spaces**.

If this site was developed as structured parking, it is recommended that the design include an enhanced pedestrian connection to Main Street be developed. The illustration has been modified to indicate the presence of such a connection.



## **Tobacco Warehouse District Focus Area**

Considerable development activity is already underway in the historic Tobacco Warehouse District (TWD) and interest is expected to only increase as more robust economic conditions return.

An analysis similar to that performed for the retail core was performed for the TWD:

- Quantification of current parking sufficiency.
- Forecasting the impact of anticipated near-term development (within 2 years) on parking sufficiency, including requirements for additional parking capacity.
- Forecasting the impact of full reactivation of all vacant and underutilized building space in structures that are considered development prospects.



FIGURE 2-14 Tobacco Warehouse District Study Sub-Area (with assigned block numbers)

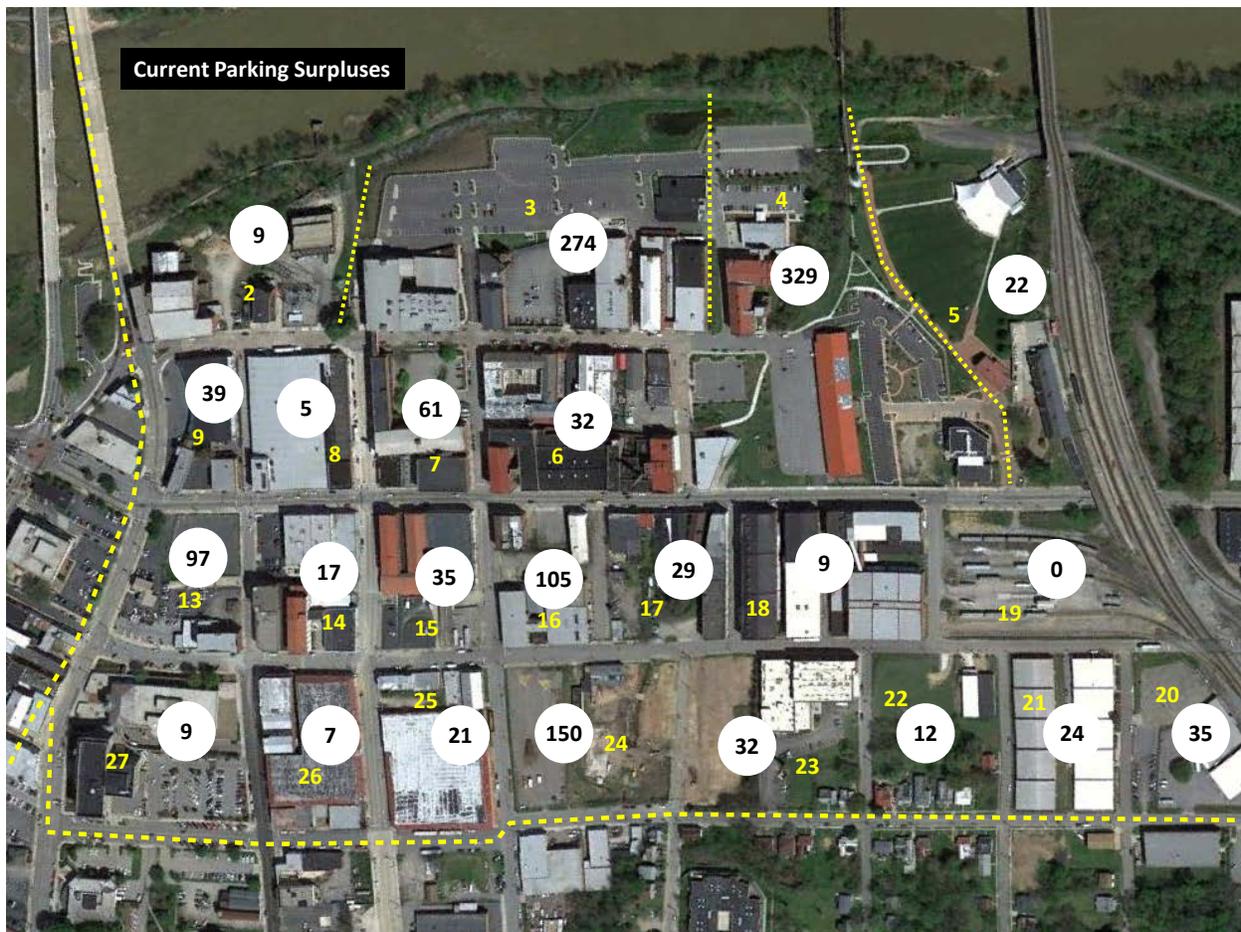


**Current Parking Surpluses**

FIGURE 2-15 provides an illustrative summary of the current parking surpluses found in the TWD during the parking occupancy survey that was conducted for this study. These surpluses were computed by subtracting observed vehicles accumulation from total parking capacity on a block by block basis. A 10% Search Margin of contingency space was added to the observed vehicle accumulation as part of the calculation before arriving at the computed surplus.

*Note that the capacity of the building formerly used for vehicle storage in Block #15 was not included since the feasibility for re-use of that building as a parking facility is not known. Database information indicates that 75% of that building is currently active warehouse space.*

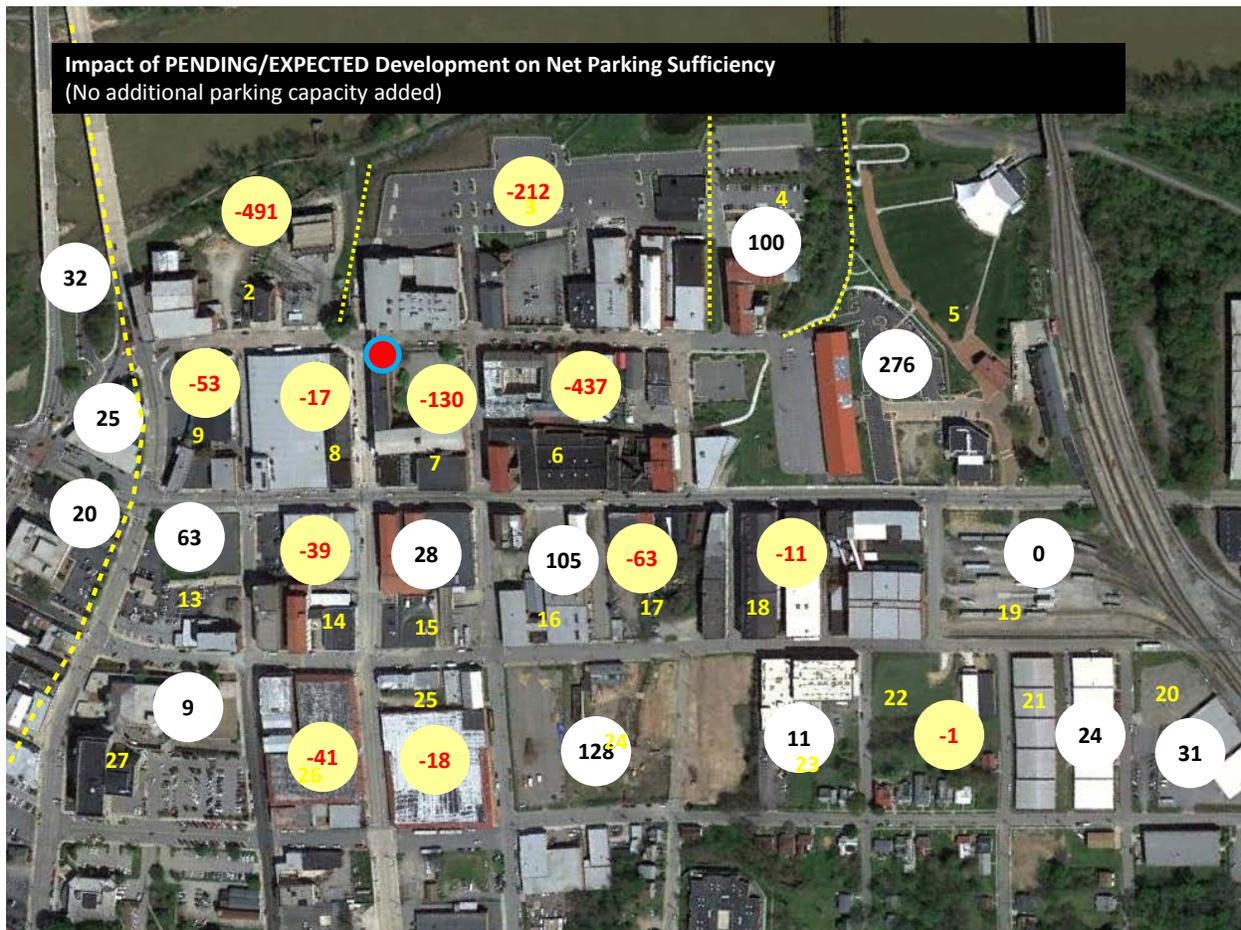
**FIGURE 2-15 Current Parking Surpluses (TWD)**



**Impact of Near-Term Development on Parking Sufficiency - TWD**

FIGURE 2-16 summarizes the impact of development activity that is either underway or expected within the next two years. Most of the near-term development activity is expected to take place in the blocks north of Craghead Street. The result is a consistent pattern of parking shortfalls with the exception of the two blocks at the east end of the area that includes a “real” surplus of 100 spaces on Block #4 and an additional surplus of 276 spaces on Block #5 that is periodically needed for activity associated with the Community Market and the Danville Science Center. The total shortfall in the area north of Craghead is projected at **1,240 spaces**. This includes use of the 100 space surplus in Block #4 to meet shortfalls in adjacent Block #3. The red dot identifies the approximate center of the deficit concentration.

**FIGURE 2-16 Projected Parking Sufficiency After Completion of Expected Near-Term Development (TWD)**



Several potential strategies for addressing these parking shortfalls were considered, with the most feasible presented later in this section of the report.

**Impact of Long-Term Development on Parking Sufficiency - TWD**

FIGURE 2-20 summarizes the impact on parking sufficiency if all of the building space in the TWD is reactivated. This includes all of the development anticipated in the near-term timeframe and assumptions about an overall mix of land uses that was applied to undefined potential redevelopment of the balance of vacant warehouse space.

The following is the assumed land use mix applied to that undefined redevelopment activity, realizing that the specific mix and its distribution will ultimately affect actual parking sufficiency. The mix was used to compute a “composite” parking demand ratio of approximately 2.5 spaces per 1,000 SF that was applied to all future redevelopment of warehouse space. That ratio includes a 10% Search Margin as standard planning practice. The base ratios are more applicable to a downtown parking environment rather than suburban ratios and take into consideration some live-work effects as the residential component of the TWD matures. The lower ratios, particularly for office space, assume that the population density in warehouse space converted to office space will be lower than in new construction buildings designed to accommodate higher worker densities. The residential ratio assumes a 1.5 space per unit ratio and an average unit size of 1,000 SF.

**FIGURE 2-17**

Office	Retail	Restaurant	Residential	Raw Demand	Ratio w/ 10% SM
60%	10%	5%	25%		
@ 2.00	@ 2.50	@ 8.00	@ 1.50		
1.2	0.25	0.4	0.375	2.225	2.472222

The projections are a combination of conservative and optimistic assumptions.

- The optimistic assumption is 100% reactivation of vacant warehouse space without significant impediments to the use of that space in terms of efficiency within the structures. This is a “worst case” scenario from the standpoint of parking sufficiency but a best case scenario in terms of successful development efforts. An occupancy rate of 90%-95% is more likely as an ongoing condition.
- The conservative assumption, for the purposes of the projections, is that there will be no significant shared parking benefits. That assumption is reasonable in considering long-term strategies for several reasons:

- o Shared parking benefits depend heavily on the development of what, from a shared parking perspective, is a "compatible" mix of land uses in close proximity to each other and to supporting parking. Shared parking benefits depend on the degree to which that mix results in dissimilar parking demand patterns, parking demand that occurs at different times of the day or week. If similar land uses are concentrated in a given area, shared parking benefits diminish. Likewise, if different land uses with similar demand patterns are concentrated in an area, shared parking benefits are diminished.
- o The specific character of certain land uses dramatically affects shared parking potential. Take, for example, a restaurant with a strong dinner business that draws heavy drive-in traffic from outside the immediate area. If that restaurant does not serve lunch or draws primarily local walk-in lunch business, it is a very compatible land use to share parking with office workers who typically leave the parking facility before dinner business starts. A bar or club with limited daytime activity would provide the same kind of benefit. In contrast, a popular casual restaurant that routinely draws heavy drive-in traffic for a strong lunchtime business will be competing for parking space with area office workers.
- o If new residential development is in the form of moderately priced rental apartments, there may be some opportunity for shared parking with office buildings. However, as the quality and pricing of those units increases, residents are less tolerant of sharing space with non-residents. If the residential units are purchased condominiums, it is likely that those residents will demand dedicated parking that is isolated from any other parking and physically secured. In that case there is no shared parking benefit at all.

A shared parking model was prepared to test the potential for shared parking for the mix of land uses assumed for the projection of future parking needs in the TWD with all vacant warehouse space converted to new uses. The results of the shared parking model are shown in FIGURES 2-18 and 2-19.

The sum of the demand computed for each land use component individually is 223 spaces. The greatest opportunity for shared parking is between the daytime office space and nighttime residential units. With full sharing of space and no separate (protected) area for residential parking, the combined demand drops to 186 spaces, a savings of 17%. However, as already pointed out, it is normally difficult to market residential properties if residents are required to share a parking area unless it is with their neighbors. Due to the actual demand patterns through the day of the mix of land uses used for the demand projection, there is no shared parking benefit if residential parking is not shared. The requirement remains the same at 223 spaces for the combined mix.

FIGURE 2-18

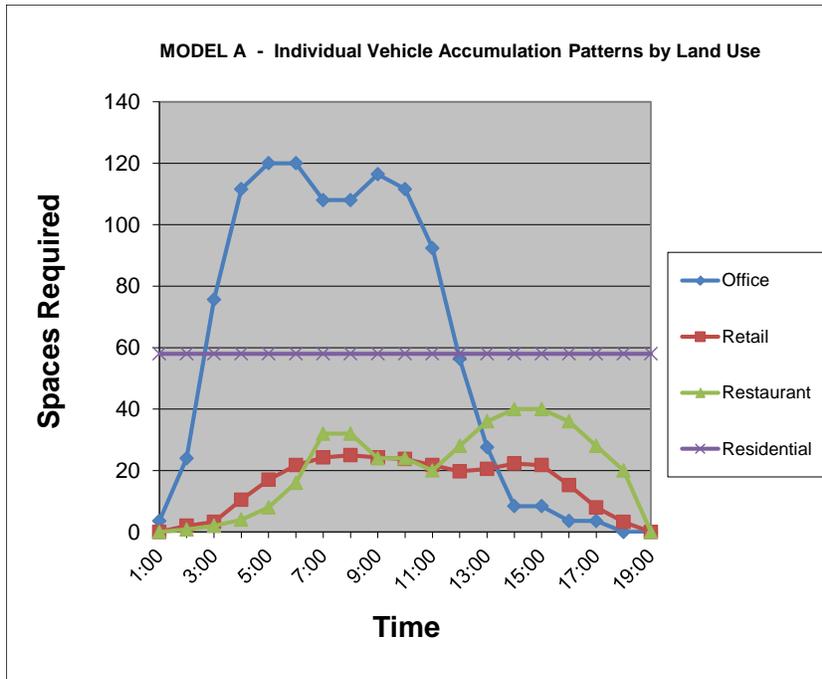


FIGURE 2-19

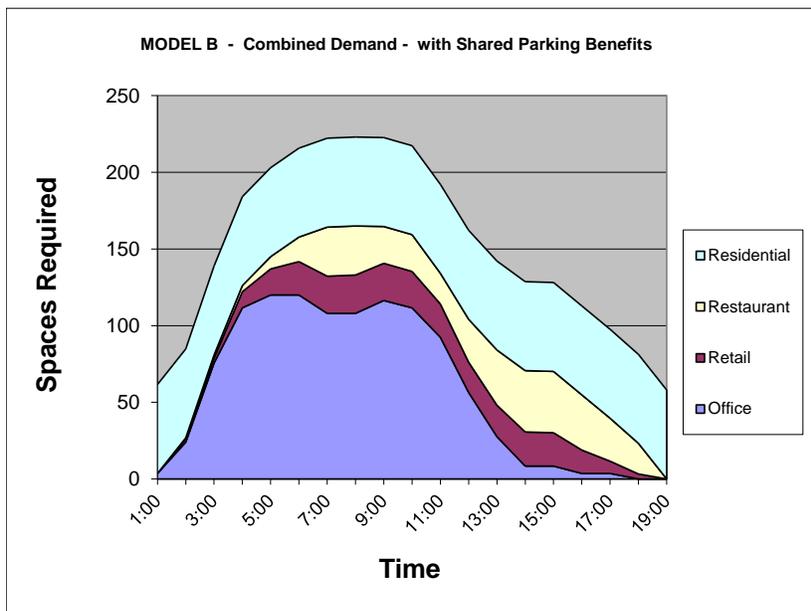
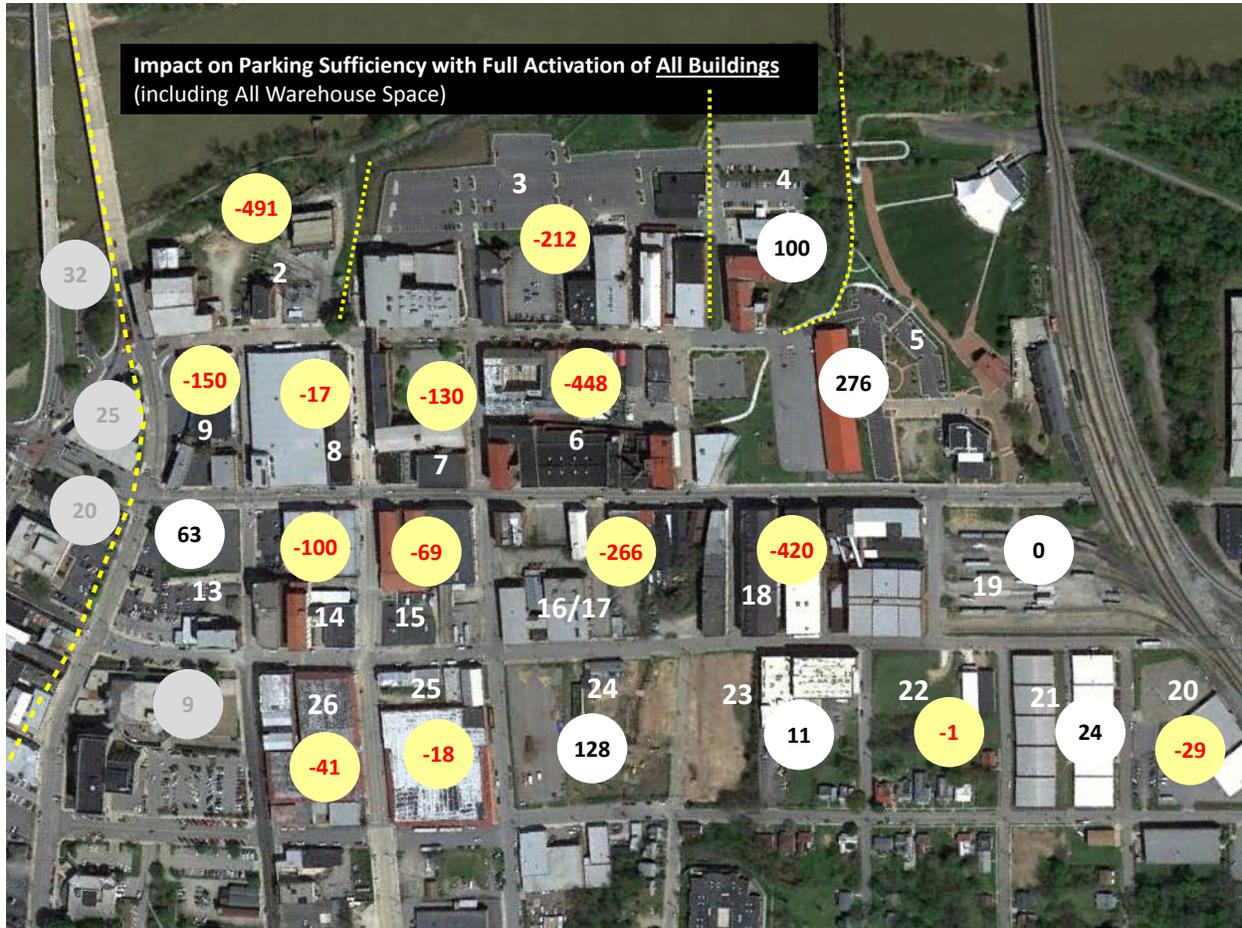


FIGURE 2-20 Parking Sufficiency with 100% Building Activation



The most significant changes in the long-term timeframe take place in the blocks located south of Craghead Street, most significantly in Blocks #16, #17 and #18, with a net total **shortfall of -718 spaces**.

*Note that the blocks with muted grey markers are outside of the TWD analysis area.*

**Strategy for Meeting Future Parking Needs**

Projections of potential parking demand made it clear very quickly that new surface parking was limited in its ability to meet long-term parking needs. The amount of new population and new parking demand that will be created with reactivation of all warehouse space will require development of multiple parking structures that maximize the “production” of available footprints in providing needed parking (multiple stories).

In preparation for developing parking expansion strategies, general estimates of parking capacity were developed for five locations within the Tobacco Warehouse District. Although these capacity estimates are not as refined as the concepts developed for the Main Street / Union Street retail area, they are reasonable for this analysis.

In each case, the computation of a “net gain” factored in the loss of any existing parking taken as part of the parking structure site.

**FIGURE 2-21**  
**Estimated Parking Capacities**  
**for Prospective New Parking Structures**

	Level	Estimated Capacity	Cumulative Capacity	Less Replaced Capacity	Net Gain
<b>Block #3</b>	L1	113	113	61	52
	L2	120	233	61	172
	L3	120	353	61	292
	L4	120	473	61	412
	L5	120	593	61	532
<b>Block #5</b>	L1	264	264	106	158
	L2	274	538	106	432
	L3	274	812	106	706
	L4	274	1,086	106	980
<b>Block #7</b>	L1	63	63	0	63
	L2	66	129	0	129
	L3	66	195	0	195
	L4	66	261	0	261
<b>Block #13</b> (Option A)	L1	75	75	68	7
	L2	82	157	68	89
	L3	82	239	68	171
	L4	82	321	68	253
<b>Block #13</b> (Option B)	L1	112	112	98	14
	L2	122	234	98	136
	L3	122	356	98	258
	L4	122	478	98	380
<b>Block #13</b> (Option C)	L1	138	138	138	0
	L2	148	286	138	148
	L3	148	434	138	296
	L4	148	582	138	444
<b>Block #16/17</b>	L1	207	207	0	207
	L2	290	497	0	497
	L3	290	787	0	787
	L4	290	1,077	0	1,077

Several strategies were considered in meeting the growing parking demand that will accompany potential redevelopment activity. Within the limitations of property availability that respects current commitments and preservation of buildings with historical significance, the strategies differed primarily in the sequence of new parking development.

This strategy includes the eventual development of three (3) new parking structures and a large surface lot. In two cases (Blocks #3 and #13) the new structures will be developed on existing parking lots, which reduces the net gain vs. the capital investment. The proposed structure on Block #5 near the Community Market will take up all of an existing residential lot and part of the lot currently serving the Market.

The new parking lot in Block #16/17 would be developed on property that is currently vacant or underutilized, with no measurable loss of existing parking.

Included in FIGURE 2-22, which summarizes these capacity additions, is refurbishment of the existing surface lot in Block #24 with no significant gain in capacity. It is included in the table to show the surplus projected on that lot after full occupancy of all buildings.

**FIGURE 2-22 Proposed Future Parking Facilities for Tobacco Warehouse District**

Block	Facility Capacity	Loss of Existing Parking	Net Gain	Remaining Surplus
#3	595	-63	532	95
#5	1,090	-106	980	0
#13	478	-98	380	169
#16/17	270	0	270	4
#24	128	0	0	57
		Total:	2,162	268

The three illustrations that follow show the strategy for satisfying parking needs upon full activation of all buildings.

- The first illustration shows conversion of the building in Block #8 to parking that will provide support for new development in Block #3.
- The second shows removal of parking demand that is linked to buildings on Block #16/17, buildings that will be removed for parking.
- The third illustration shows conditions at full activation of all building space and development of all proposed new parking facilities. Under this scenario:
  - Parking demand for all activated buildings in the TWD is met.
  - The new parking structure in Block #3 has a surplus of 95 spaces to support any expansion of existing building space or more intense use of existing building space than factored into the demand model.
  - The new parking structure in Block #13 has a surplus of 169 spaces that can be used to help support demand generated in the Main Street corridor or growing needs at the court building and City Hall.
  - The 276 space surplus in Block #5 is reserved for activities at the Community Market, amphitheater and museums without conflicting with other daytime parking users.
  - The 270 space surface lot on Block #16/17 is available as a potential site for a major future development (new construction).
  - The 128 space surface lot on Block #24 is available for future construction of an additional parking structure if needed to support a major development on Block #16/17.

FIGURE 2-23

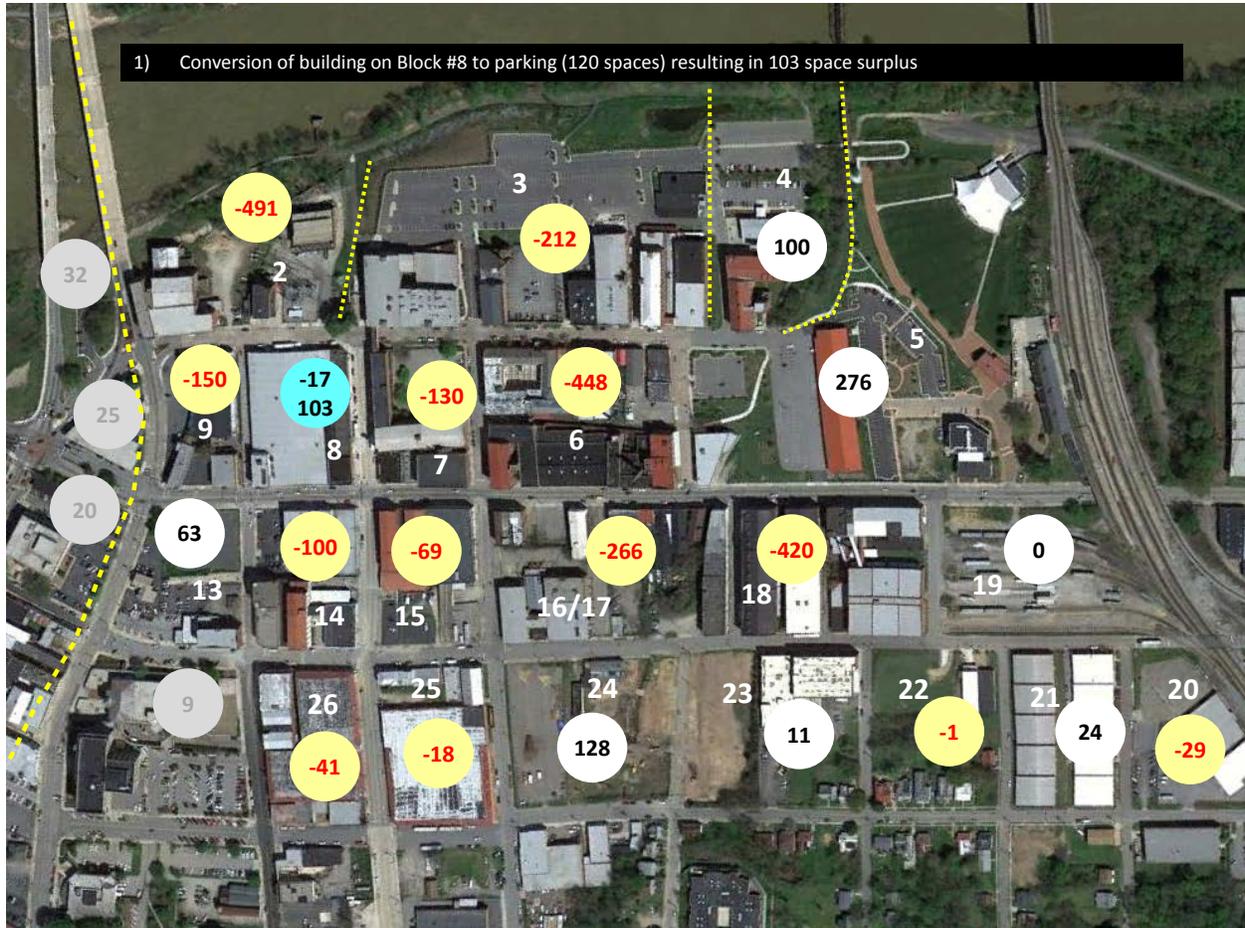


FIGURE 2-24

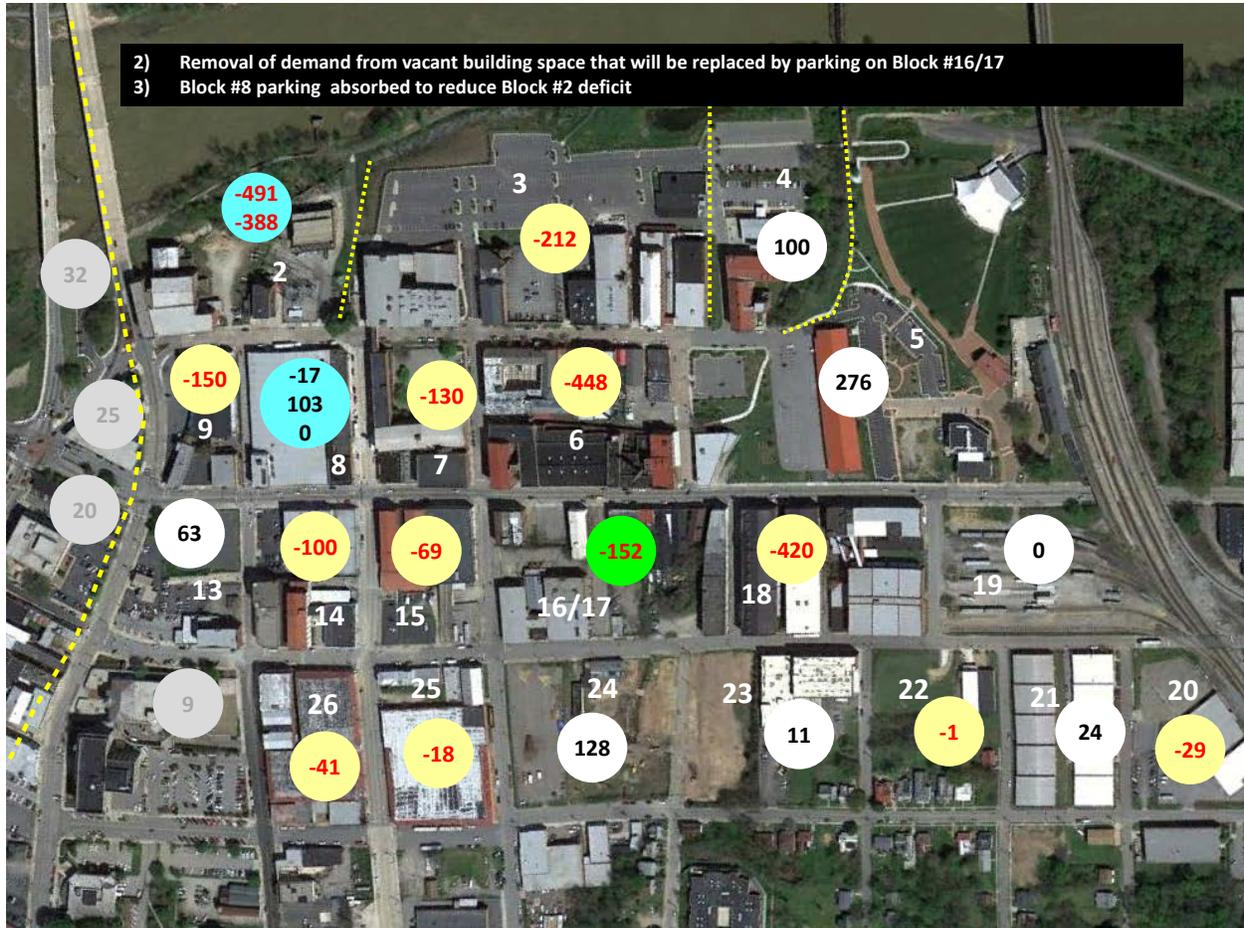
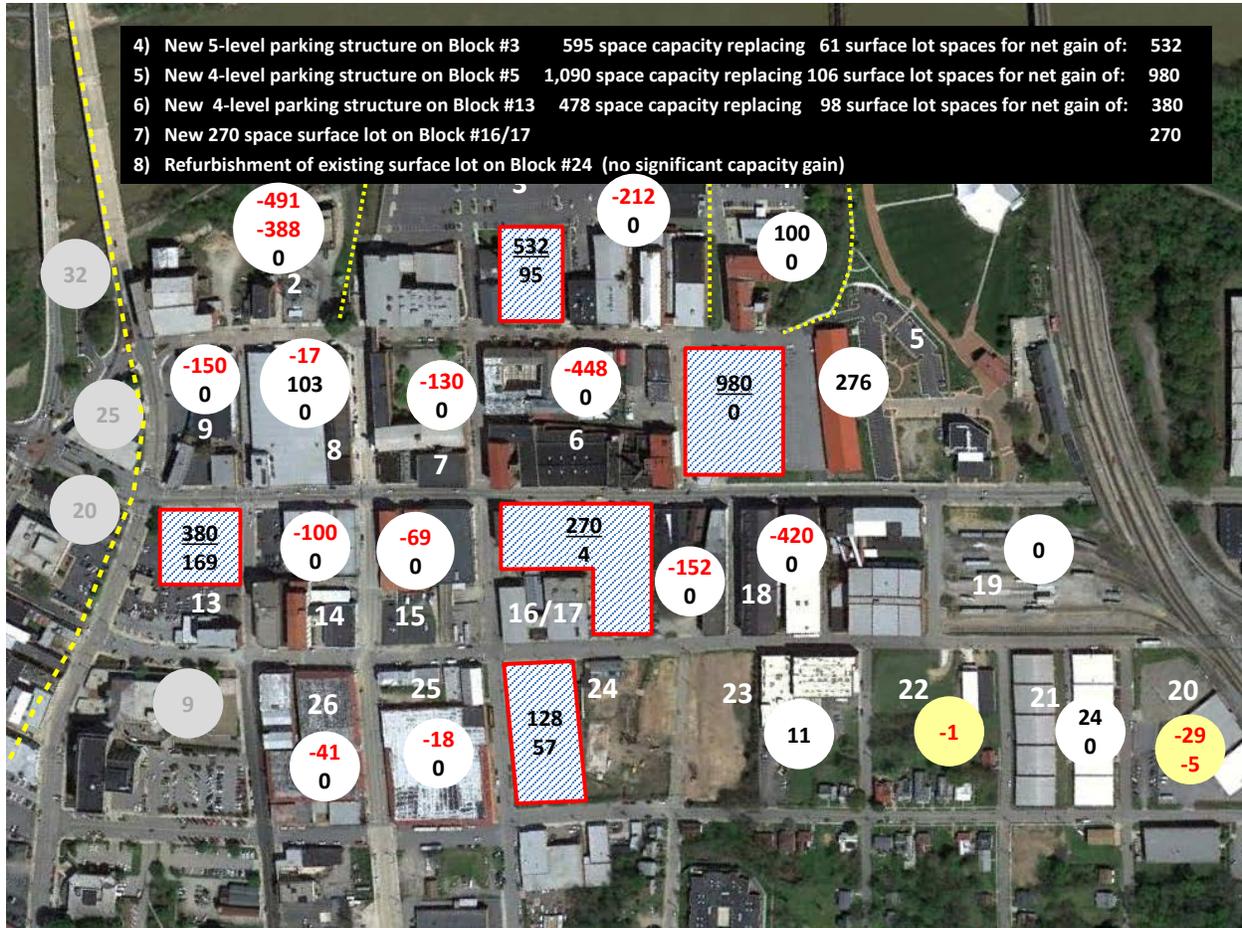


FIGURE 2-25 Scenario After Full Building Activation and Completion of New Parking Development



## SYSTEM FUNDING & FINANCIAL ISSUES

Since there is no paid public parking in Danville, there is no established parking revenue stream to support expansion or operation of new parking facilities, whether surface parking or parking structures. The turnover analysis conducted as a part of this study concluded that there is ample on-street parking availability throughout the downtown area. Parkers exhibited a high degree of compliance with posted time limits. As a result, there is little need for implementation of paid on-street parking (meters) as a means of managing on-street parking resources. That need may arise in the future, as building occupancy and activity in the River District increases, but it is not needed now.

The City provides free public parking in its public surface lots and paid monthly contract parking appears to be limited as a part of the current parking market.

Based on the projections of new parking needs associated with probable near-term development activity and certainly under full activation of existing building space, the City will be facing the challenge of determining how it will address the funding of new parking supplies. Strategies in practice today range from a total “hands off” position, letting existing and new property owners provide for their own parking needs to viewing parking as an essential part of the downtown infrastructure. Cities such as Atlanta, Charlotte and Washington, D.C. have taken the “hands off” approach in terms of providing parking. Boston has placed severe restrictions on new parking, essentially placing a cap on the maximum amount of parking that can be located within the controlled downtown area. No new parking can be developed unless an equal amount of existing parking is removed from the area. Cities such as Raleigh, NC and Norfolk, VA function at the opposite end of the spectrum, providing most of the downtown parking supply and generating substantial revenues from the operation of those facilities.



Smaller communities such as Rock Hill, SC have engaged in creative approaches to funding parking in ways that might be considered for the Danville River District. The Rock Hill program will be discussed later in this section.

### Proactive City Involvement in Parking

Apart from funding considerations, Cities must make a decision on the proper role of the City in providing parking. The “hands off” approach involves no hard costs to the City or the taxpayer. However, it may

ultimately represent a significant cost in terms of missed development opportunities and a stagnant tax base.

A lack of adequate parking support can be very detrimental to development efforts if there is a real or even a perceived parking shortage. Perceptions about a lack of downtown parking can be very stubborn, lingering long after parking needs have actually be met. The City can impose parking minimums to ensure that adequate parking accompanies new development, but that approach is less effective when most of that development activity involves adaptive re-use of existing buildings, as is the case in Danville. Those properties may not have on-site parking or sufficient parking to meet the new type of activity that will be in the reoccupied space. Often, vacant upper floors above retail businesses become new office or residential space, with no parking support. Addition of destination restaurants, with their comparatively high parking generation characteristics, can have a dramatic impact on parking sufficiency.

Many cities still keep parking at arm's length, but many others have come to recognize parking as both a potential impediment to development activity and an economic development tool. The City is in a unique position to be proactive in removing the impediments and creating pathways to new development that are often not possible without direct City involvement.

#### Challenges to Prospective Developers

Developers face a number of challenges in finding ways to make a project physically and financially feasible within a given site.

- In new construction projects, they may not be able to acquire sufficient land to provide adequate on-site parking.
- Because of constraints related to providing ramping systems between floors, it may be difficult to provide on-site structured parking within available site dimensions.
- Doing so may greatly limit other options for developing the property.
- Doing so may also affect the financial feasibility of a project because of the higher cost of creating a building and parking design that will fit on the property and still be efficient.
- Incorporating on-site parking can affect the ability to keep project height within Floor Area Ratio (FAR) limits.

- Adaptive re-use projects can face the most difficult challenges because older buildings often do not have on-site parking or sufficient on-site parking to accommodate the intended new use.
- Small project development can be hindered because individual small project developers cannot achieve parking design efficiencies. The result is an accumulation of inefficient parking (i.e. more expensive per space) vs. what could be achieved in a larger, shared-use facility built by the City. The overarching result is a higher average project cost.

#### Benefits of Direct City Involvement

A number of the challenges just cited can be overcome more readily by a City or a Downtown Development Authority that has the ability to secure land and funding for parking development.

- By satisfying parking demand from multiple demand generators, the City can normally provide parking at a lower actual cost than multiple private parking facilities. Larger parking facilities, whether surface lots or parking structures, typically allow for more efficient designs that lower the overall cost per space provided. This, in turn, lowers the cost of providing parking to developers and other downtown businesses.
- Larger and more efficient shared parking facilities ultimately consume less land area and leave more land available for development.
- If the City requires direct property owner participation in the cost of providing parking, that cost can be adjusted upward or downward as a way for the City to provide an adjustable level of financial support and incentives for development.
- Shared facilities owned and controlled by the City normally increase shared parking opportunities by providing parking for a wide variety of land uses, taking advantage of parking needs from different land uses that do not occur at the same time. Maximizing shared parking lowers the overall investment in downtown parking and resulting parking costs to property owners or the public.
- The City can strategically place key parking supplies to support its planned development efforts, including advance land-banking of optimum parking sites or consolidation of land for parking development.
- It can use eminent domain powers, if necessary, to secure key properties that make development of an efficient public-use parking facility possible.

- The City has a variety of methods available to consolidate funding to support the development and ongoing operating costs of parking facilities. It can use a combination of these revenue sources to meet system costs. An overview of some of those options is provided next.
- If the City is developing the majority of large parking facilities (surface or structured), it is a better position to control the quality and appearance of those facilities based on its master planning and design standards.
- Consolidated (shared) facilities result in less overall land consumption and allow for more downtown green space, related both to the reduced land consumption and the ability to incorporate green space features into the design of a public parking facility.

### Options for Parking System Funding

Options for parking system funding are primarily a function of options available to Cities under state and local law but, within that framework, there are normally a variety of potential revenue sources that can be used in combination to achieve adequate funding support.

- User Fees (parking fees): Fees charged facility users, including both on-street spaces and off-street parking facilities. Fees can be charged on an hourly basis, as flat daily fees, or contracted on a monthly basis. Collection methods range from the simple (sale of monthly parking permits) to high end technologies (automated pay stations that accept cash, credit cards, smart cards, validated tickets, etc.).
- Parking Enforcement Revenue: Revenues generated from parking fines can be used to support parking development and ongoing operating costs if those revenues exceed the actual cost of enforcement.
- Advertising Revenue: Advertising in parking facilities, on parking tickets, on meter poles and on parking system websites are a secondary source of revenue that is growing as new technology and advertising display capabilities expand.
- Special Assessments: Within the designated parking management area, the city (or designated management organization) can implement special assessments to generate funds to pay for parking operations, management, and future construction. The special assessment can be a one-time fee, but because capital investments for parking facility development is normally a “big ticket” expenditure, ongoing fees are common in providing funding for parking facilities and system operations.
- Transfers from Other City Funds: The city may designate other funds to support the public parking system (e.g., other taxes or assessments). In systems that are generating parking revenues, that commitment can take the form of contingency funding to cover any revenue shortfalls, with a core goal of system self-sufficiency. Financial self-sufficiency for parking systems is not a normal expectation or requirement in cities where parking rates are not high enough to cover actual parking development and operating costs,

Financing the construction of future parking facilities could be accomplished in a number of ways. Common options for financing public parking facilities include:

- Bonds: Cities can issue bonds backed by parking revenues, tax revenues or special assessments to finance parking facility construction. The bonds could be either tax-exempt or taxable. Tax-exempt bonds normally result in a lower overall cost because the interest rate on tax exempt bonds is typically lower than rates for taxable bonds. However, use of tax exempt imposes limits on how the parking facility can be used and marketed. Although the tax code provisions are subject to some interpretation, a conservative assumption is that no more than 5% of bond proceeds can be used for purposes other than parking that is available to the general public without restriction. That means the City would not be able to designate a larger portion of the capacity in a parking facility to a single user as a long-term commitment. In contrast, taxable bonds are more expensive, but provide the City with greater flexibility in incorporating non-parking elements into parking structures (e.g. first floor retail space) and making long-term parking commitments as part of a development support strategy.

Parking revenue bonds are not an option at this point for the City of Danville as the existing parking system does not generate revenue to cover bond debt. In the future, the City could pledge parking fee revenue on conjunction with commitment of revenue from other sources in a hybrid bond package.

- Tax Increment Financing (TIF): The city could explore opportunities to fund new public parking construction using tax increment financing or a TIF variation.
- In-Lieu Fees: A "Fee In Lieu of Parking" program (or "In-lieu fees") allows property owners or developers to pay a fee into a common parking development fund in lieu of providing some or all of the on-site parking that is required under the applicable zoning ordinance. It requires a zoning ordinance that includes minimum off-street parking requirements. If the core downtown area is exempted from minimum parking requirements, there is no basis for an In-Lieu Fee program. In-Lieu fees will be discussed in more detail later in this section.
- Federal/State Programs: If a new parking facility incorporates an alternative transportation component (e.g., bus transfer center), or is constructed to support an economic development initiative, there may be an opportunity to secure federal or state funding. However, the two federal programs that were most used in over the past 15 years for funding of parking facility construction, the TEA-21 and ISTA programs, have expired.
- Public/Private Partnership: The formation of a public/private partnership in the construction of a parking facility could allow the city to construct a structure while minimizing funds needed. This

option can work in a number of ways. First, the city and a private developer could split the cost of the parking facility. This would allow the municipality to construct needed spaces while saving on design, equipment, and other consulting/environmental costs. Second, the city could offer land it owns for the construction of a private parking structure that would in turn provide some amount of public parking. In this instance, the city would gain the parking spaces it needs without bearing the full (or any) cost of construction, depending on the value of the land being provided. Finally, the city could incentivize private parking construction by providing a development site with tax abatements or other development incentives. The developer would then be required to provide their own parking, with the municipality in effect subsidizing its construction.

### **In-Lieu Fees**

An in-lieu fee program allows developers to pay the city for the right to not construct a portion or all of the parking required for a property under applicable zoning ordinances. The funds raised through parking in-lieu fees help fund existing and future public parking facilities constructed by the city. The fee can be in the form of a “Fee In-Lieu of Parking” or an impact fee that achieves the same end, which is contribution to a common parking system development and/or operating fund.

The use of in-lieu parking fees can have several advantages:

- It provides developers with an option to providing expensive on-site parking. The cost of purchasing the necessary additional land and funding construction is typically more expensive than paying in-lieu fees for the number of spaces needed.
- Parking in-lieu fees encourage shared parking. As developers stop constructing small private parking facilities, parking is consolidated into larger public parking supplies. This results in larger but more efficient facilities that consume less land (parking structure footprints vs. surface lots) and meet actual parking requirements with fewer spaces.
- As less parking is created, and the parking that is created is consolidated, more space is available for other land uses.
- The city would have more control over where parking resources are located and how they are operated and managed. This can help create a parking system that is easier to understand and use – or more flexible in responding to changing conditions. It also increases the opportunity for more uniform parking operations and management.
- In its purest form, an In-Lieu Fee program requires a zoning ordinance that imposes minimum off-street parking requirements. Otherwise, there is no basis to require payment into the parking fund

in the form of in-lieu fees. However, because financial institutions normally require a developer to provide sufficient parking in order to secure funding, a non-mandatory program may be feasible, particularly if it is financially advantageous to developers. This would take the form of a long-term agreement for the use of City-owned parking, of a duration that would satisfy the financial institution. The fees may be financially advantageous to the developer if:

- o The fee is less than the actual cost of providing parking on the developer's site.
- o The fee is charged on a monthly basis, reducing up-front project costs and pushing those cost beyond the initial lease-up period to when project income streams have reached the intended "stabilized" level.

While the use of in-lieu parking fees can provide many benefits to the city, there are also some drawbacks:

- The location of City parking facilities may be less than optimum for specific destinations. As parking is consolidated into fewer locations, some primary destinations will be located further away than if they provided their own parking. If the City has a clear development plan for future parking, potential contributors are in a better position to make decisions about whether to use the City facilities are positioned to provide the kind of support that is needed for their properties. The developer can then make an informed decision about whether to provide on-site parking or pay the In-Lieu fee to support City facilities.
- As the city creates more public parking facilities, the city will have to cover annual operating, maintenance, and management costs. Unless the City chooses to subsidize parking system costs, both construction and ongoing operating costs must be included in the In-Lieu fee structure. (That will be addressed in more detail in the discussion of the Rock Hill, SC system that follows in this financial issues section.)
- Imposition of minimum parking requirements and an In-Lieu Fee program can shift development interest toward peripheral locations of downtown where more land is available for the development of on-site parking.
- Depending on how the construction of the facility is financed, the city could be limited in how the facility is used to provide parking for private developments. If the facility is funded with tax exempt bonds, only 5% of the facility can be allocated to specific private users. The remaining 95% must be made available for public parking on a first-come, first-served basis.

Fees charged to developers are typically based on the construction cost per parking space. Ideally, the fee would be set at a level that would cover at least the actual cost of construction at current cost levels.

However, some communities charge fees that are lower than the actual cost of constructing new parking. There are three principal reasons for discounting the fee:

- It encourages developers to utilize City facilities rather than build their own. This allows the City to better control the placement of parking within its downtown in a way that is consistent with a master plan and other development objectives.
- It can be used as a direct financial incentive to support new development activity by reducing the cost of the project's parking component.
- It helps preserve downtown land area and achieve higher densities by consolidating parking resources and taking advantage of shared parking opportunities.

The fee can take the form of a one-time charge or periodic payments. The City of Rock Hill, SC has what is, in effect, an In-Lieu Fee program that charges a monthly fee. A brief overview of that program begins on the next page. It represents a direction that the City of Danville may want to consider as the framework for a workable long-term strategy.

**City of Rock Hill, SC - Program Example**

The City of Rock Hill, made a decision a number of years ago to become proactively engaged in supporting existing downtown business and stimulating additional downtown development through the provision and ownership of downtown parking facilities. The City owns one small parking structure, built several years ago, and a number of surface lots. The City’s off-street parking facilities provide approximately 1,500 downtown spaces. The City is presently in the process of developing a second parking structure as part of a public/private partnership project.

The local zoning ordinance includes minimum off-street parking requirements. The downtown area is not exempt from those requirements but is subject to parking ratios that are more appropriate for the downtown core - lower than those required in suburban areas.

**FIGURE 2-26**

**Minimum Parking Requirements  
 Downtown Rock Hill, SC**

City of Rock Hill, SC Downtown Parking Requirements LAND USE	Spaces per 1,000 SF
Professional Office/Services	1.80
Government	1.30
Residential	2.00
Retail	2.00
Restaurant	3.00
Financial Institution	2.20
Educational	0.50
Hotel	0.20
Church	0.30
Recreation/Day Care/Cultural	0.60
Industrial	0.10
Other	0.50

Downtown property owners have the option of meeting these minimum parking requirements on-site, or paying a monthly fee of \$5.00 to the City as an ongoing In-Lieu fee for the number of spaces that cannot be accommodated on-site or that the property owner chooses not to provide on-site. In return, the City provides sufficient parking to support those businesses. The City’s obligation is in the form of license for use rather than any commitment of specific space.

The current monthly fee is sufficient to cover only basic costs such as lighting and clean-up. As part of a recent study for that City, Carl Walker was asked to prepare an analysis of (1) existing fees vs. current costs, (2) fees that would be needed to cover normal periodic parking facility refurbishment and, (3) fees that would also cover construction or replacement costs. The current fee of \$60 per year per space generally

pays for minimal utility and cleaning costs. To cover periodic maintenance costs such as restriping and resealing, the required fees more than doubled. Inclusion of major refurbishment projects for surface lots that involve replacement of pavement moved the cost above \$200 per year per space. Increasing the mix of structured parking spaces within the system further increased that annual O&M (operations and maintenance) cost.

Apart from the advantages of City-owned and broadly shared parking facilities discussed earlier, there are two interesting dynamics identified with this program.

- First, the ability to cover current costs with fees is affected by the relationship between the number of paying participants and the amount of parking actually provided. Because the system currently has a significant surplus of space (more than needed in some areas), the fee income is not sufficient to cover the costs. If and when occupancy levels normalize on the lots, that will change. Unfortunately, the special parking ratios applied to downtown properties is a double-edged sword. One on hand, it helps development by not requiring more parking than is actually needed. On the other hand, property owners are theoretically paying only for what they actually need and use. Any surplus space represents costs that are not covered by fees.
- Second, opportunities to develop structured parking are improved by a system that spreads all costs across the full system, with a uniform fee for non-reserved parking. The exception is an appropriate premium for dedicated space that will be negotiated with the private developer that is involved in the new parking structure project. This is similar to conditions on a large college campus where annual fees are typically well below the \$130 - \$150 per space needed to build structured parking, but where the cost of needed parking structures are spread over parking or transportation fees assessed to the full student population. (*Planning assumptions for the cost of typical parking facilities are included in the APPENDIX.*)

### What Approach Makes Sense for Danville?

If the City of Danville is going to become more actively engaged in providing or helping to provide parking as part of its ongoing downtown development effort, it needs to consider creation of a funding mechanism that can grow with the need that the parking system is intended to satisfy. Because paid parking is not a significant part of the current market in Danville, some form of fees attached directly to development activity would appear to be the best near-term approach. Fees would apply both to new construction and converted uses of existing building space.

A program similar to that used in Rock Hill, may be appropriate in covering both the cost of daily operations and the development of future parking capacity. This would require a change to the existing zoning ordinance to establish minimum off-street parking requirements in the downtown area. The following are the elements that would be anticipated for that program:

- Revision of the zoning ordinance to require on-site parking in all areas of the River District. The ratios in the ordinance should be tailored to the historical demand patterns of a medium-sized downtown rather than suburban levels. Ratios similar to those used by Rock Hill would be appropriate with the exception that the ratio of 2.5 spaces per 1,000 SF for the restaurant category would be suitable only for small cafes or lunch counter establishments that cater primarily to walk-in traffic from surrounding businesses during daytime hours. That ratio would also be appropriate for sit-down restaurants that draw evening drive-in traffic, but have limited drive-in traffic during the day.
- An annual fee of \$100 per space would cover basic utility and clean-up costs for existing parking lots (not structures) and a limited contingency for periodic repair and rehabilitation. An annual fee of approximately \$450 would be needed to cover the construction and operating cost of new lots.
- An annual fee of approximately \$1,800 would be required to cover the cost of construction and ongoing operation of a new multi-level parking structure with an efficient design and "typical" architectural treatments.
- If this fee is applied only to new development, including redevelopment of existing space, income and construction reserves will build slowly over time. But, the City is already absorbing the O&M costs associated with existing municipal parking lots, so any addition income stream represents a positive cash flow and a reduction in costs that must be covered out of the general fund. If new parking facilities are constructed or existing parking lots expanded to meet new development needs, the fees required of those new demand generators can be set to cover the cost of

providing those additional resources. As an alternative, the fees can be set at a lower level as a financial incentive to encourage and facilitate new development. The actual subsidy will be reduced to some degree by additional tax revenues generated by the new development. As discussed earlier, the level of subsidy (discount of actual cost) can be adjusted over time according to the changing need to incentivize new development activity.

- The combination of these two initiatives would establish the basis and mechanism for long-term funding and maintenance of an expanding parking system. It should be expected that the City will be subsidizing the program for some time to come, but that is a controllable development incentive cost. The fee amounts for participants should not be “permanent” but there should be provisions for periodic review and revision of those rates in exchange for not requiring that the full amount be paid up front as a one-time fee. Such a provision would also serve as an incentive for some developers to pay the full one-time fee rather than gamble that parking costs will increase in the future. These are more likely to be build-hold-operate developers rather than those who develop and turn their properties.
- Paid on-street parking (parking meters) would not be appropriate in the River District at this point because of the high level of compliance with posted time limits and the overall availability of on-street parking in virtually all areas of Downtown. Parking meters, although a source of revenue, are intended primarily as a means to control and manage on-street parking to ensure parking availability for short-term stays. That level of control and management may be necessary over time as occupancy levels improve and there is more pressure on parking resources, but it is not needed now.

**APPENDIX**

Pro Forma Cost Estimates for Developing & Operating Structured and Surface Parking Facilities

Inventory & Occupancy Data

Turnover Survey Results

Parking Structure Concepts

<b>BASIC PRO FORMA COST ESTIMATE FOR STRUCTURED PARKING</b>	
\$ 16,000	Construction Cost per Space 20% Soft Costs (design, testing, bond issue)
\$ 3,200	Soft Costs
<b>\$ 19,200</b>	<b>Cost per space with Soft Costs</b>
	20 Year Amortization Period 5.0% Annual interest Rate
<b>\$ 1,541</b>	<b>Annual Debt Service/Annual Cost</b>
<b>\$ 300</b>	<b>Annual Operating Cost per Space</b>
<b>\$ 1,841</b>	<b>TOTAL Annual Cost</b>
<b>\$ 153.39</b>	<b>Monthly Cost / Revenue Requirement per Space</b>

<b>BASIC PRO FORMA COST ESTIMATE FOR SURFACE PARKING</b>	
\$ 3,000	Construction Cost per Space 20% Soft Cost %
\$ 600	Soft Costs
<b>\$ 3,600</b>	<b>Cost per space with Soft Costs</b>
	20 Year Amortization Period 5.0% Annual interest Rate
<b>\$ 289</b>	<b>Annual Debt Service/Annual Cost</b>
<b>\$ 150</b>	<b>Annual Operating Cost per Space</b>
<b>\$ 439</b>	<b>TOTAL Annual Cost</b>
<b>\$ 36.57</b>	<b>Monthly Cost / Revenue Requirement per Space</b>

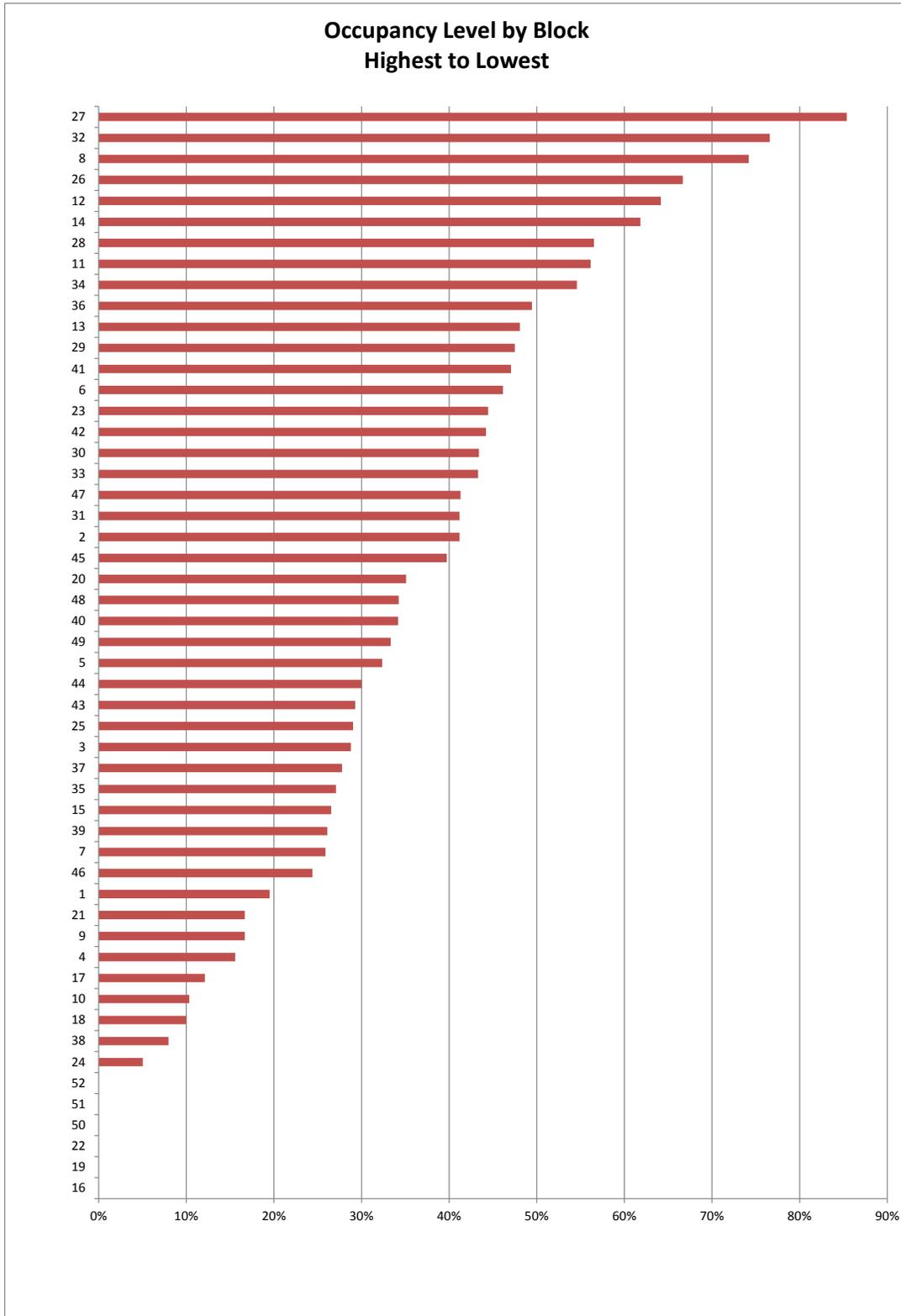
*Note: Interest costs are estimated based a general obligation issue and current market conditions. Interest rates and issue costs may vary based on the type of bonds issued, market conditions, security structure, and other factors relating to the financing structure.*

BLOCK ANALYSIS														
Inventory (Capacity) - CITY LOTS														
Block	Regular	Vis.	H/C	Monthly or Rsv.d.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0	38	3	0	0	0	0	0	0	0	0	0	0	41
2	7	0	0	0	0	0	0	10	0	0	0	0	0	17
3	8	271	8	79	0	0	0	31	0	0	6	0	0	403
4	35	290	21	0	36	0	0	15	0	0	1	0	0	398
5	0	17	2	0	0	15	0	0	0	0	0	0	0	34
6	16	0	2	0	0	0	22	21	0	0	4	0	0	65
7	55	0	1	0	0	0	0	29	0	0	0	0	0	85
8	0	3	0	0	0	0	3	25	0	0	0	0	0	31
9	0	23	1	15	0	0	0	9	0	0	0	0	0	48
10	0	22	0	0	0	0	5	2	0	0	0	0	0	29
11	2	11	0	32	0	0	12	0	0	0	0	0	0	57
12	0	0	2	89	0	0	15	0	0	0	0	0	0	106
13	70	6	2	116	0	0	0	0	13	0	0	0	1	208
14	26	5	2	0	0	0	6	16	0	0	0	0	0	55
15	12	9	0	0	0	9	6	13	0	0	0	0	0	49
16	90	0	0	0	0	0	0	15	0	0	0	0	0	105
17	0	15	0	0	0	0	0	18	0	0	0	0	0	33
18	0	0	0	0	0	0	0	10	0	0	0	0	0	10
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	51	0	0	0	0	0	0	6	0	0	0	0	0	57
21	0	0	0	0	0	0	0	30	0	0	0	0	0	30
22	0	0	0	0	0	0	0	12	0	0	0	0	0	12
23	0	0	5	0	38	0	0	20	0	0	0	0	0	63
24	133	0	0	0	0	0	0	26	0	0	0	0	0	159
25	0	0	0	0	0	0	9	22	0	0	0	0	0	31
26	0	0	0	0	0	9	11	0	0	0	7	0	0	27
27	57	0	7	45	0	0	55	14	0	0	0	0	0	178
28	0	0	0	0	0	0	22	0	1	0	0	0	0	23
29	61	0	0	0	0	0	19	0	0	0	0	0	0	80
30	89	4	10	32	0	0	24	0	0	0	0	0	0	159
31	278	5	3	36	0	0	35	0	0	0	0	0	0	357
32	67	0	1	19	0	0	4	3	0	0	0	0	0	94
33	84	0	2	0	0	0	10	0	0	0	1	0	0	97
34	0	75	13	145	6	0	35	21	0	0	0	0	0	295
35	16	0	2	11	0	0	6	12	0	0	1	0	0	48
36	65	0	0	0	0	0	0	26	0	0	0	0	0	91
37	0	0	0	0	0	0	0	35	0	0	1	0	0	36
38	0	107	0	0	0	0	0	31	0	0	0	0	0	138
39	25	15	1	0	0	0	0	40	7	0	4	0	0	92
40	215	3	6	0	0	9	17	26	0	0	2	0	0	278
41	54	0	0	0	0	0	0	31	0	0	0	0	0	85
42	175	3	3	0	0	0	23	17	11	0	1	0	0	233
43	191	0	2	58	34	0	19	0	0	0	0	0	0	304
44	92	0	2	0	0	20	16	0	0	0	0	0	0	130
45	52	5	3	32	0	6	9	39	0	0	0	0	0	146
46	103	0	0	0	0	0	20	0	0	0	0	0	0	123
47	61	0	2	2	0	0	1	26	0	0	0	0	0	92
48	87	0	0	0	0	0	5	19	0	0	0	0	0	111
49	84	0	0	0	0	9	0	12	0	0	0	0	0	105
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2,361	927	106	711	114	77	409	682	32	0	28	0	1	5,448

BLOCK ANALYSIS														
Occupied														
Block	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0	8	0	0	0	0	0	0	0	0	0	0	0	8
2	5	0	0	0	0	0	0	2	0	0	0	0	0	7
3	8	56	0	25	0	0	0	25	0	2	0	0	0	116
4	3	29	3	0	26	0	0	1	0	0	0	0	0	62
5	0	3	0	0	0	8	0	0	0	0	0	0	0	11
6	4	0	0	0	0	0	8	17	0	0	1	0	0	30
7	8	0	0	0	0	0	0	14	0	0	0	0	0	22
8	0	3	0	0	0	0	0	15	0	5	0	0	0	23
9	0	1	0	1	0	0	0	6	0	0	0	0	0	8
10	0	0	0	0	0	0	2	1	0	0	0	0	0	3
11	1	0	0	29	0	0	2	0	0	0	0	0	0	32
12	0	0	0	57	0	0	11	0	0	0	0	0	0	68
13	41	6	0	42	0	0	0	0	10	0	0	0	1	100
14	14	1	2	0	0	0	6	11	0	0	0	0	0	34
15	1	4	0	0	0	0	1	7	0	0	0	0	0	13
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	2	0	0	0	0	0	2	0	0	0	0	0	4
18	0	0	0	0	0	0	0	1	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	17	0	0	0	0	0	0	3	0	0	0	0	0	20
21	0	0	0	0	0	0	0	5	0	0	0	0	0	5
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	2	0	21	0	0	5	0	0	0	0	0	28
24	0	0	0	0	0	0	0	8	0	0	0	0	0	8
25	0	0	0	0	0	0	2	7	0	0	0	0	0	9
26	0	0	0	0	0	7	7	0	0	1	3	0	0	18
27	57	0	4	32	0	0	45	14	0	0	0	0	0	152
28	0	0	0	0	0	0	12	0	1	0	0	0	0	13
29	28	0	0	0	0	0	10	0	0	0	0	0	0	38
30	47	3	4	10	0	0	5	0	0	0	0	0	0	69
31	90	2	1	26	0	0	26	0	0	2	0	0	0	147
32	52	0	0	15	0	0	3	2	0	0	0	0	0	72
33	31	0	0	0	0	0	10	0	0	1	0	0	0	42
34	0	35	5	80	5	0	18	18	0	0	0	0	0	161
35	5	0	0	2	0	0	1	4	0	0	1	0	0	13
36	35	0	0	0	0	0	0	10	0	0	0	0	0	45
37	0	0	0	0	0	0	0	10	0	0	0	0	0	10
38	0	8	0	0	0	0	0	3	0	0	0	0	0	11
39	7	4	0	0	0	0	0	13	0	0	0	0	0	24
40	79	0	2	0	0	5	0	9	0	0	0	0	0	95
41	29	0	0	0	0	0	0	10	0	1	0	0	0	40
42	92	0	0	0	0	0	8	2	1	0	0	0	0	103
43	47	0	0	25	5	0	12	0	0	0	0	0	0	89
44	34	0	0	0	0	1	4	0	0	0	0	0	0	39
45	7	5	0	23	0	0	7	16	0	0	0	0	0	58
46	23	0	0	0	0	0	7	0	0	0	0	0	0	30
47	22	0	1	1	0	0	0	14	0	0	0	0	0	38
48	35	0	0	0	0	0	0	3	0	0	0	0	0	38
49	35	0	0	0	0	0	0	0	0	0	0	0	0	35
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	857	170	24	368	57	21	207	258	12	11	6	0	1	1,992

BLOCK ANALYSIS														
Block	Empty													
	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0	30	3	0	0	0	0	0	0	0	0	0	0	33
2	2	0	0	0	0	0	0	8	0	0	0	0	0	10
3	0	215	8	54	0	0	0	6	0	-2	6	0	0	287
4	32	261	18	0	10	0	0	14	0	0	1	0	0	336
5	0	14	2	0	0	7	0	0	0	0	0	0	0	23
6	12	0	2	0	0	0	14	4	0	0	3	0	0	35
7	47	0	1	0	0	0	0	15	0	0	0	0	0	63
8	0	0	0	0	0	0	3	10	0	-5	0	0	0	8
9	0	22	1	14	0	0	0	3	0	0	0	0	0	40
10	0	22	0	0	0	0	3	1	0	0	0	0	0	26
11	1	11	0	3	0	0	10	0	0	0	0	0	0	25
12	0	0	2	32	0	0	4	0	0	0	0	0	0	38
13	29	0	2	74	0	0	0	0	3	0	0	0	0	108
14	12	4	0	0	0	0	0	5	0	0	0	0	0	21
15	11	5	0	0	0	9	5	6	0	0	0	0	0	36
16	0	0	0	0	0	0	0	15	0	0	0	0	0	15
17	0	13	0	0	0	0	0	16	0	0	0	0	0	29
18	0	0	0	0	0	0	0	9	0	0	0	0	0	9
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	34	0	0	0	0	0	0	3	0	0	0	0	0	37
21	0	0	0	0	0	0	0	25	0	0	0	0	0	25
22	0	0	0	0	0	0	0	12	0	0	0	0	0	12
23	0	0	3	0	17	0	0	15	0	0	0	0	0	35
24	133	0	0	0	0	0	0	18	0	0	0	0	0	151
25	0	0	0	0	0	0	7	15	0	0	0	0	0	22
26	0	0	0	0	0	2	4	0	0	-1	4	0	0	9
27	0	0	3	13	0	0	10	0	0	0	0	0	0	26
28	0	0	0	0	0	0	10	0	0	0	0	0	0	10
29	33	0	0	0	0	0	9	0	0	0	0	0	0	42
30	42	1	6	22	0	0	19	0	0	0	0	0	0	90
31	188	3	2	10	0	0	9	0	0	-2	0	0	0	210
32	15	0	1	4	0	0	1	1	0	0	0	0	0	22
33	53	0	2	0	0	0	0	0	0	0	0	0	0	55
34	0	40	8	65	1	0	17	3	0	0	0	0	0	134
35	11	0	2	9	0	0	5	8	0	0	0	0	0	35
36	30	0	0	0	0	0	0	16	0	0	0	0	0	46
37	0	0	0	0	0	0	0	25	0	0	1	0	0	26
38	0	99	0	0	0	0	0	28	0	0	0	0	0	127
39	18	11	1	0	0	0	0	27	7	0	4	0	0	68
40	136	3	4	0	0	4	17	17	0	0	2	0	0	183
41	25	0	0	0	0	0	0	21	0	-1	0	0	0	45
42	83	3	3	0	0	0	15	15	10	0	1	0	0	130
43	144	0	2	33	29	0	7	0	0	0	0	0	0	215
44	58	0	2	0	0	19	12	0	0	0	0	0	0	91
45	45	0	3	9	0	6	2	23	0	0	0	0	0	88
46	80	0	0	0	0	0	13	0	0	0	0	0	0	93
47	39	0	1	1	0	0	1	12	0	0	0	0	0	54
48	52	0	0	0	0	0	5	16	0	0	0	0	0	73
49	49	0	0	0	0	9	0	12	0	0	0	0	0	70
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1,414	757	82	343	57	56	202	424	20	-11	22	0	0	3,366

BLOCK ANALYSIS														
Block	% Occupied													
	Regular	Vis.	H/C	Monthly or Rsvd.	Resident	Marked No Time	Marked Timed	Unmarked No Time	Umkd Timed	Illegal	Load Zone	Other	M.Cycle	Total
1	0%	21%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%
2	71%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	41%
3	100%	21%	0%	32%	0%	0%	0%	81%	0%	0%	0%	0%	0%	29%
4	9%	10%	14%	0%	72%	0%	0%	7%	0%	0%	0%	0%	0%	16%
5	0%	18%	0%	0%	0%	53%	0%	0%	0%	0%	0%	0%	0%	32%
6	25%	0%	0%	0%	0%	0%	36%	81%	0%	0%	25%	0%	0%	46%
7	15%	0%	0%	0%	0%	0%	0%	48%	0%	0%	0%	0%	0%	26%
8	0%	100%	0%	0%	0%	0%	0%	60%	0%	0%	0%	0%	0%	74%
9	0%	4%	0%	7%	0%	0%	0%	67%	0%	0%	0%	0%	0%	17%
10	0%	0%	0%	0%	0%	0%	40%	50%	0%	0%	0%	0%	0%	10%
11	50%	0%	0%	91%	0%	0%	17%	0%	0%	0%	0%	0%	0%	56%
12	0%	0%	0%	64%	0%	0%	73%	0%	0%	0%	0%	0%	0%	64%
13	59%	100%	0%	36%	0%	0%	0%	0%	77%	0%	0%	0%	100%	48%
14	54%	20%	100%	0%	0%	0%	100%	69%	0%	0%	0%	0%	0%	62%
15	8%	44%	0%	0%	0%	0%	17%	54%	0%	0%	0%	0%	0%	27%
16	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17	0%	13%	0%	0%	0%	0%	0%	11%	0%	0%	0%	0%	0%	12%
18	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	10%
19	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20	33%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	35%
21	0%	0%	0%	0%	0%	0%	0%	17%	0%	0%	0%	0%	0%	17%
22	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23	0%	0%	40%	0%	55%	0%	0%	25%	0%	0%	0%	0%	0%	44%
24	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	5%
25	0%	0%	0%	0%	0%	0%	22%	32%	0%	0%	0%	0%	0%	29%
26	0%	0%	0%	0%	0%	78%	64%	0%	0%	0%	43%	0%	0%	67%
27	100%	0%	57%	71%	0%	0%	82%	100%	0%	0%	0%	0%	0%	85%
28	0%	0%	0%	0%	0%	0%	55%	0%	100%	0%	0%	0%	0%	57%
29	46%	0%	0%	0%	0%	0%	53%	0%	0%	0%	0%	0%	0%	48%
30	53%	75%	40%	71%	0%	0%	21%	0%	0%	0%	0%	0%	0%	43%
31	32%	40%	33%	72%	0%	0%	74%	0%	0%	0%	0%	0%	0%	41%
32	78%	0%	0%	79%	0%	0%	75%	67%	0%	0%	0%	0%	0%	77%
33	37%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	43%
34	0%	47%	38%	55%	83%	0%	51%	86%	0%	0%	0%	0%	0%	55%
35	31%	0%	0%	18%	0%	0%	17%	33%	0%	0%	100%	0%	0%	27%
36	54%	0%	0%	0%	0%	0%	0%	38%	0%	0%	0%	0%	0%	49%
37	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	28%
38	0%	7%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	8%
39	28%	27%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	26%
40	37%	0%	33%	0%	0%	56%	0%	35%	0%	0%	0%	0%	0%	34%
41	54%	0%	0%	0%	0%	0%	0%	32%	0%	0%	0%	0%	0%	47%
42	53%	0%	0%	0%	0%	0%	35%	12%	9%	0%	0%	0%	0%	44%
43	25%	0%	0%	43%	15%	0%	63%	0%	0%	0%	0%	0%	0%	29%
44	37%	0%	0%	0%	0%	5%	25%	0%	0%	0%	0%	0%	0%	30%
45	13%	100%	0%	72%	0%	0%	78%	41%	0%	0%	0%	0%	0%	40%
46	22%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%	0%	24%
47	36%	0%	50%	50%	0%	0%	0%	54%	0%	0%	0%	0%	0%	41%
48	40%	0%	0%	0%	0%	0%	0%	16%	0%	0%	0%	0%	0%	34%
49	42%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%
50	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
51	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
52	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	36%	18%	23%	52%	50%	27%	51%	38%	38%	0%	21%	0%	100%	37%



TURNOVER DATA

Index	Street	Time Limit	From - To	Side	Block	Sp #	Plate									
							800	900	1000	1100	1200	1300	1400	1500		
1	S Union	2 H	Patton to Main	N	1	1	1	6740	6740	6740	6740	6740	6740	6740	6740	
2	S Union	2 H	Patton to Main	N	1	2	1	X	DJX3	DJX3	6358	6358	X	X	8847	
3	S Union	2 H	Patton to Main	N	1	3	1	X	1792	1792	X	GEAR	GEAR	PYGP	PYGP	
4	S Union	2 H	Patton to Main	N	1	4	1	X	3806	3806	55MW	55MW	5824	STNT	STNT	
5	S Union	2 H	Patton to Main	N	1	5	1	X	6358	X	PPES	PPES	PPES	2220	2220	
6	S Union	2 H	Patton to Main	N	1	6	1	X	47162	47162	47162	4+	4WJS	3684	3684	
7	S Union	2 H	Patton to Main	N	1	7	1	7937	7937	7937	7937	3684	X	6799	6799	
8	S Union	2 H	Patton to Main	N	1	8	1	8850	8850	8850	PENZ	5595	X	4126	4126	
9	S Union	2 H	Main to Spring	N	2	1	1	X	X	X	X	X	X	X	X	
10	S Union	2 H	Main to Spring	N	2	2	1	X	X	8246	X	X	X	X	X	
11	S Union	2 H	Main to Spring	N	2	3	1	X	X	X	X	X	X	X	X	
12	S Union	2 H	Main to Spring	N	2	4	1	X	X	X	X	X	X	X	X	
13	S Union	2 H	Main to Spring	N	2	5	1	X	X	X	X	X	X	X	X	
14	S Union	2 H	Main to Spring	N	2	6	1	X	X	X	X	X	X	X	X	
15	S Union	2 H	Main to Spring	N	2	7	1	X	X	6010	X	X	X	X	X	
16	S Union	2 H	Main to Spring	N	2	8	1	X	X	X	X	2935	X	92601	X	
17	Spring		Union to Memorial	E	3											
18	Spring		Union to Memorial	E	3	0										
19	Spring		Union to Memorial	E	4											
20	Spring	2 H	Memorial to Union	E	4	1	1	X	X	6516	6915	1549	1549	X	X	
21	Spring	2 H	Memorial to Union	E	4	2	1	X	1237	1237	7178	X	6903	6903	X	
22	Spring	2 H	Memorial to Union	E	4	3	1	X	X	X	X	X	X	X	X	
23	Spring	2 H	Memorial to Union	E	4	4	1	X	X	X	X	X	X	X	X	
24	Spring	2 H	Memorial to Union	E	4	5	1	X	3243	X	X	X	6543	6543	X	
25	Spring	2 H	Memorial to Union	E	4	6	1	X	X	X	X	4627	X	X	X	
26	Spring	2 H	Memorial to Union	E	4	7	1	X	X	X	8854	X	X	X	2935	
27	Spring	2 H	Memorial to Union	E	4	8	1	X	5470	X	5144	EDD Y	X	X	X	
28	Spring	2 H	Memorial to Union	E	4	9	1	X	X	X	8621	X	X	8420	7595	
29	Union	2 H	Spring to High	N	5	1	1	X	X	X	X	5039	X	X	X	
30	Union	2 H	Spring to High	N	5	2	1	X	X	3360	3360	X	E216	E216	E216	
31	Union	2 H	Spring to High	N	5	3	1	X	4063	4063	4063	X	8241	X	X	
32	Union	2 H	Spring to High	N	5	4	1	4443	8028	8028	EF72	EF72	X	5154	5154	
33	Union	2 H	Spring to High	N	5	5	1	22VT	KSRC	KSRC	KSRC	9182	5002	5002	X	
34	Union	2 H	Spring to High	N	5	6	1	8YEF	8YEF	8YEF	8YEF	X	2645	2645	9422	
35	Union	2 H	Spring to High	N	5	7	1	1343	1343	1343	7053	X	1271	7420	4063	
36	Union	2 H	Spring to High	N	5	8	1	X	X	7595	7595	4059	X	4480	X	
37	Union	2 H	Spring to High	N	5	9	1	5749	5749	1236	1236	X	X	3856	4480	
38	Union	2 H	Spring to High	N	5	10	1	8603	X	MINI	7361	X	07JB	07JB	X	
39	Union	2 H	Spring to High	N	5	11	1	X	X	4884	4884	9160	9160	4528	4528	
40	Union					NP								6862		
41	Union	2 H	High to Spring	S	6	1	1	X	X	9111	X	X	X	X	D567	
42	Union	2 H	High to Spring	S	6	2	1	X	X	6872	X	105Y	9021	2690	N GOD	
43	Union	2 H	High to Spring	S	6	3	1	X	6974	6974	6974	2428	3428	X	8748	
44	Union	2 H	High to Spring	S	6	4	1	1406	1406	4438	3708	5475	6739	X	3856	
45	Union	2 H	High to Spring	S	6	5	1	CSRC	4147	4147	2475	6739	X	9856	9856	
46	Union	2 H	High to Spring	S	6	6	1	X	3147	9087	X	3330	X	8YEF	X	
47	Union	2 H	High to Spring	S	6	7	1	X	7953	85RD	X	X	X	6229	585L	
48	Union	2 H	High to Spring	S	6	8	1	X	X	X	X	X	X	X	X	
49	Spring	2 H	Union to Floyd	W	8	1	1	X	X	X	X	X	9963	X	X	
50	Spring	2 H	Union to Floyd	W	8	2	1	X	X	X	X	X	X	X	X	
51	Spring	2 H	Union to Floyd	W	8	3	1	X	X	X	X	5645	9013	X	X	
52	Spring	2 H	Union to Floyd	W	8	4	1	X	X	X	X	X	X	X	X	
53	Spring	2 H	Union to Floyd	W	8	5	1	X	X	X	X	X	X	X	X	
54	Spring	2 H	Union to Floyd	W	8	6	1	X	X	X	X	X	X	X	X	
55	Spring	2 H	Union to Floyd	W	8	7	1	X	X	X	X	X	X	X	3663	
56	Spring	2 H	Union to Floyd	W	8	8	1	X	X	MJ76	X	X	X	X	2536	
57	Spring	2 H	Union to Floyd	W	8	9	1				7595	7595				
58	Spring	2 H	Union to Floyd	W	8	10	1						9175	1469	3346	
59	Spring	2 H	Union to Floyd	W	8	11	1									
60	Spring	2 H	Union to Floyd	W	8	12	1									
61	Spring	2 H	Union to Floyd	W	8	13	1									
62	Spring	2 H	Union to Floyd	W	8	14	1									
63	Spring	2 H	Union to Floyd	W	8	15	1									
64	Spring	2 H	Floyd to Union	E	9	1	1									
65	Spring	2 H	Floyd to Union	E	9	2	1									
66	Spring	2 H	Floyd to Union	E	9	3	1									
67	Spring	2 H	Floyd to Union	E	9	4	1									
68	Spring	2 H	Floyd to Union	E	9	5	1									
69	Spring	2 H	Floyd to Union	E	9	6	1	X	7745	7745	7745	7745	7745	7745	7745	

Index	Street	Time Limit	From - To	Side	Block	Sp #	800	900	1000	1100	1200	1300	1400	1500	
70	Spring	2 H	Floyd to Union	E	9	7	1	X	234L	X	X	X	X	X	
71	Spring	2 H	Floyd to Union	E	9	8	1	X	X	X	X	X	X	X	
72	Spring	2 H	Floyd to Union	E	9	9	1	3320	3320	3320	3320	1028	7506	X	7506
73	Spring	2 H	Floyd to Union	E	9	10	1	X	X	X	X	X	X	X	
74	Spring	2 H	Floyd to Union	E	9	11	1	X	X	X	X	X	X	X	
75	Spring	2 H	Floyd to Union	E	9	12	1	X	X	X	X	X	X	X	
76	Spring	2 H	Floyd to Union	E	9	13	1	X	X	X	X	X	X	X	
77	Spring		Floyd to Union	E	NP										
78	Union St		Spring to Main	S								9626	7330	7330	
79	Union St	2 H	Spring to Main	S	10	1	1	X	X	X	X	X	X	X	
80	Union St	2 H	Spring to Main	S	10	2	1	X	X	X	X	5880	5880	5880	
81	Union St	2 H	Spring to Main	S	10	3	1	X	X	X	X	X	X	X	
82	Union St	2 H	Spring to Main	S	10	4	1	X	2808	X	3246	X	3246	X	X
83	Union St	2 H	Spring to Main	S	10	5	1	X	X	X	X	X	X	X	
84	Union St	2 H	Spring to Main	S	10	6	1	X	X	X	X	X	X	X	
85	Union St	2 H	Spring to Main	S	10	7	1	7382	7382	7382	7382	7382	7382	7382	X
86	Union St	2 H	Main to Patton	S	11	1	1	8185	8185	8185	8185	3492	X	540L	5595
87	Union St	2 H	Main to Patton	S	11	2	1	5474	5474	5474	5474	TSNT	6358	6358	WOW
88	Union St	2 H	Main to Patton	S	11	3	1	TSNT	TSNT	TSNT	TSNT	X	2578	2578	2578
89	Union St	2 H	Main to Patton	S	11	4	1	X	5450	5450	5450	3920	X	79AV	79AV
90	Union St	2 H	Main to Patton	S	11	5	1	X	2578	2578	2578	8444X	X	5595	6358
91	Union St	2 H	Main to Patton	S	11	6	1	X	1807	5212	5212	X	8957	8957	5A91
92	Union St	2 H	Main to Patton	S	11	7	1	X	X	X	X	X	X	X	X
93	Union St	2 H	Main to Patton	S	11	8	1	X	8957	4779	8957	8957	1632	1632	1632
94	Union St	2 H	Main to Patton	S	11	9	1	5637	5637	X	X	PYGP	P4GP	5521	X
95	Union St	2 H	Main to Patton	S	11	10	1	4930	4930	4930	X	8405	8405	5457	5457
96	Union St	2 H	Main to Patton	S	11	11	1	4057	4057	X	4154	X	X	X	X

spaces 90      Hours 8      space-hours 720

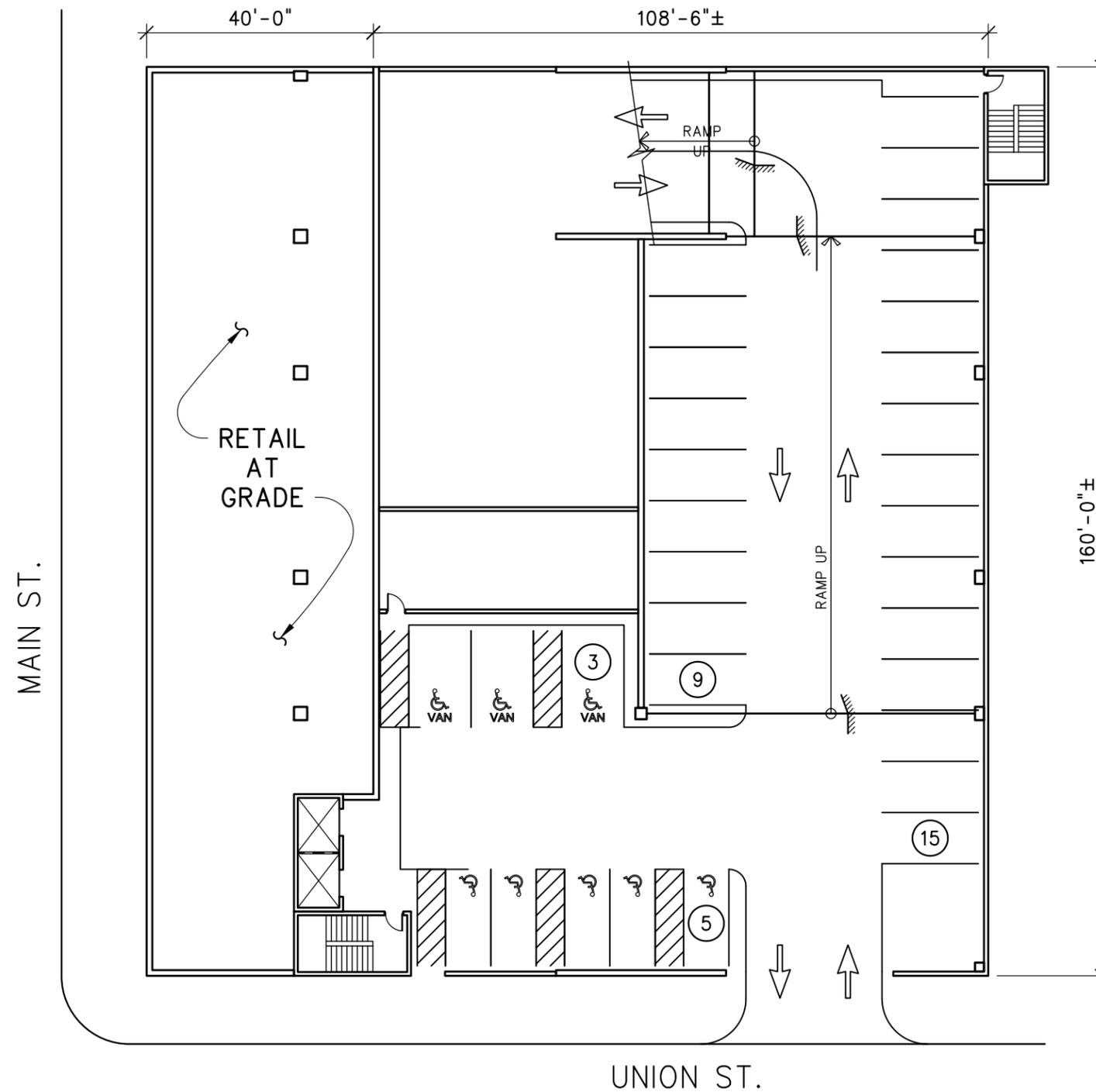
Index	Street	Time Limit	Cross St	From - To	Block	Sp #	800	900	1000	1100	1200	1300	1400	1500	
1	Main	2 H	Memorial	Memorial to Market	W	1	1	X	6786	6786	X	X	7629	6076	
2	Main	2 H	Memorial	Memorial to Market	W	1	2	X	X	X	7260	X	X	3411	
3	Main	2 H	Memorial	Memorial to Market	W	1	3	X	X	X	GRRL	GRRL	X	6955	
4	Main	2 H	Memorial	Memorial to Market	W	1	4	X	X	X	X	1646	8873	8873	
5	Main	2 H	Memorial	Memorial to Market	W	1	5	X	X	X	X	3360	X	X	
6	Main	2 H	Memorial	Memorial to Market	W	1	6	X	X	6370	200L	2018	2018	X	5073
7	Main	2 H	Memorial	Memorial to Market	W	1	7	X	X	X	1662	18HM	6657	X	108L
8	Main	2 H	Memorial	Memorial to Market	W	1	8	1662	1662	1662	BACKHOE	X	8061	X	EQUIPMEN
9	Main	2 H	Market	Market to Union	W	2	1								
10	Main	2 H	Market	Market to Union	W	2	2								
11	Main	2 H	Market	Market to Union	W	2	3								
12	Main	2 H	Construction	Market to Union	W	2	4								
13	Main	2 H	Construction	Market to Union	W	2	5								
14	Main	2 H	Construction	Market to Union	W	2	6								
15	Main	2 H	Construction	Market to Union	W	2	7								
16	Main	2 H	Construction	Market to Union	W	2	8								
17	Main	2 H	Construction	Market to Union	W	2	9								
18	Main	2 H	Union St	Union to Floyd	W	3	1	X	X	X	X	X	X	X	
19	Main	2 H	Union St	Union to Floyd	W	3	2	X	X	X	X	X	X	X	
20	Main	2 H	Union St	Union to Floyd	W	3	3	8044	8044	8044	X2343	X	REID	X	4850
21	Main	2 H	Union St	Union to Floyd	W	3	4	X	X	1458	1458	4746	1378	8992	8992
22	Main	2 H	Union St	Union to Floyd	W	3	5	3312	3312	1794	1794	X	6947	9543	X
23	Main	2 H	Union St	Union to Floyd	W	3	6	6837	6993	9731	X	9872	X	X	X
24	Main	2 H	Union St	Union to Floyd	W	3	7	2TWA	X	X	1256	2376	2376	4OLF	9359
25	Main	2 H	Union St	Union to Floyd	W	3	8	X	2793	2105	2105	1350	1350	X	2973
26	Main	LZ	Floyd	Floyd to Ridge	W	4	1	X	X	X	X	X	X	X	X
27	Main	2 H	Floyd	Floyd to Ridge	W	4	2	X	X	3950	3950	3950	3950	3950	3950
28	Main	2 H	Floyd	Floyd to Ridge	W	4	3	X	X	X	X	2251	2251	X	X
29	Main	2 H	Floyd	Floyd to Ridge	W	4	4	X	X	2251	2251	2745	5592	6729	9290
30	Main	2 H	Floyd	Floyd to Ridge	W	4	5	X	X	62LJN	62LJN	62LJN	X	2251	1794
31	Main	NP	Floyd	Floyd to Ridge	W	4	6	X	X	X	X	X	X	X	X
32	Main	NP	Floyd	Floyd to Ridge	W	4	7	X	X	X	X	X	X	X	X
33	Main	5 M	Ridge	Ridge to Jefferson	W	5	1	X	X	X	9355	8110	7676	1492	7439
34	Main	5 M	Ridge	Ridge to Jefferson	W	5	2	X	X	X	2700	PYGP	X	7535	9467
35	Main	5 M	Ridge	Ridge to Jefferson	W	5	3	X	LEA3	X	112Y	2173	X	8215	
36	Main	HC	Ridge	Ridge to Jefferson	W	5	4	X	X	4945	3707	8234	X		
37	Main	5 M	Ridge	Ridge to Jefferson	W	5	5	X	X	X	3501	X	X		
38	Main	5 M	Ridge	Ridge to Jefferson	W	5	6	X	X	6513	X	X	X		
39	Main	2 H	Ridge	Ridge to Jefferson	W	5	7	X	X	X	X	X	X		

Danville River District Parking Study  
Final Report / September 4, 2013



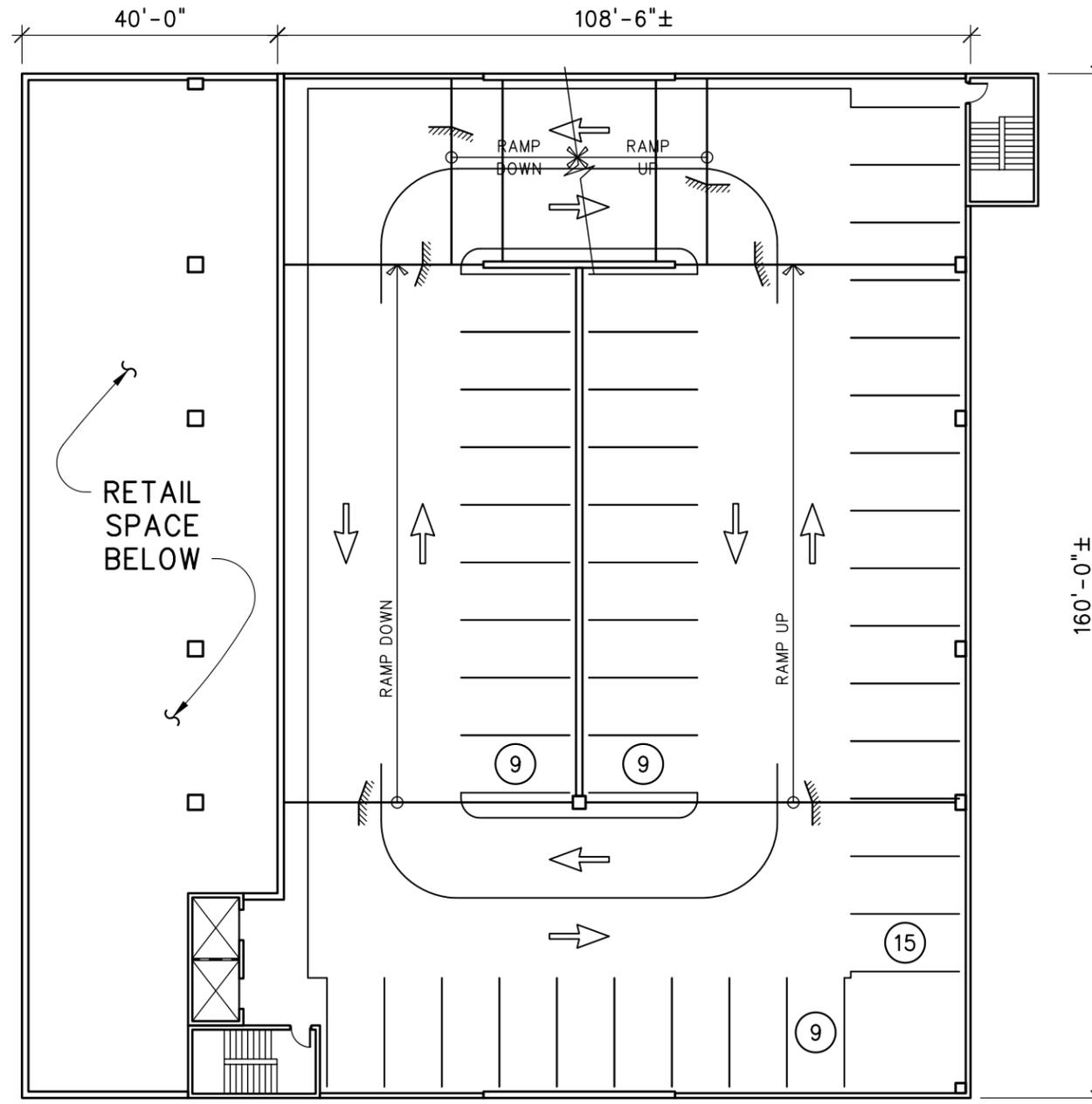
Index	Street	Time Limit	Cross St	From - To	W	Plate									
						Block	Sp #	800	900	1000	1100	1200	1300	1400	1500
40	Main	2 H	Ridge	Ridge to Jefferson	W	5	8	X	X	X	X	5462	SON1	8459	X
41	Main	2 H	Ridge	Ridge to Jefferson	W	5	9	X	8331	1640	7852	X	X	F USE	FUSE
42	Main	2 H	Ridge	Ridge to Jefferson	W	5	10	4997	4997	5258	X	X	7852	7852	7852
43	Main	2 H	Ridge	Ridge to Jefferson	W	5	11	X	MUSE	MUSE	MUSE	MUSE	X	X	X
44	Main	2 H	Ridge	Ridge to Jefferson	W	5	12	X	7623	4997	7623	7623	X	6978	7623
45	Main	2 H	Ridge	Ridge to Jefferson	W	5	13	X	X	8331	X	X	X	X	X
46	Main	2 H	Ridge	Ridge to Jefferson	W	5	14	X	6720	7623	X	1665	1007	X	X
47	Main	2 H	Ridge	Ridge to Jefferson	W	5	15	5729	5729	X	NIN2	X	X	X	X
48	Main	NP	Ridge	Ridge to Jefferson	W	5	16								
49	Main	2 H	Ridge	Ridge to Jefferson	W	5	17	X	X	X	X	X	X	X	X
50	Main	2 H	Ridge	Ridge to Jefferson	W	5	18	X	X	X	X	X	X	X	X
51	Main	2 H	Ridge	Ridge to Jefferson	W	5	19	X	X	X	X	X	X	X	X
52	Main	2 H	Jefferson	Jefferson to Ridge	E	6	1	X	X	X	X	X	X	X	X
53	Main	2 H	Jefferson	Jefferson to Ridge	E	6	2	X	X	X	X	X	X	X	X
54	Main	2 H	Jefferson	Jefferson to Ridge	E	6	3	X	X	X	X	X	X	X	X
55	Main	2 H	Jefferson	Jefferson to Ridge	E	6	4	X	9862	X	X	040C	X	X	X
56	Main	2 H	Jefferson	Jefferson to Ridge	E	6	5	X	X	2834	X	X	X	X	X
57	Main	2 H	Jefferson	Jefferson to Ridge	E	6	6	X	X	X	5083	X	X	5494	X
58	Main	2 H	Jefferson	Jefferson to Ridge	E	6	7	X	4721	7782	7782	7782	7782	6558	X
59	Main	2 H	Jefferson	Jefferson to Ridge	E	6	8	X	X	X	7471	X	X	7782	7782
60	Main	2 H	Jefferson	Jefferson to Ridge	E	6	9	X	6927	6927	X	X	X	6032	6032
61	Main	2 H	Jefferson	Jefferson to Ridge	E	6	10	4749	4749	8923	X	X	3680	X	5362
62	Main	2 H	Jefferson	Jefferson to Ridge	E	6	11	X	X	6032	6032	6032	X	3680	3680
63	Main	2 H	Jefferson	Jefferson to Ridge	E	6	12	X	X	51RH	51RH	PYGP	2KEW	2KEW	9277
64	Main	HC	Jefferson	Jefferson to Ridge	E	6	13	X	X	N&JR	N&JR	N&JR	X	X	X
65	Main	5 M	Jefferson	Jefferson to Ridge	E	6	14	X	X	X	X	X	X	X	X
66	Main	5 M	Jefferson	Jefferson to Ridge	E	6	15	X	X	X	X	X	X	X	X
67	Main	5 M	Jefferson	Jefferson to Ridge	E	6	16	X	X	X	1366	X	X	X	X
68	Main	5 M	Jefferson	Jefferson to Ridge	E	6	17	X	X	X	4334	X	X	X	X
69	Main	5 M	Jefferson	Jefferson to Ridge	E	6	18	X	X	X	06AP	X	X	X	X
70	Main	5 M	Jefferson	Jefferson to Ridge	E	6	19	X	X	X	23	X	X	X	X
71	Main	5 M	Jefferson	Jefferson to Ridge	E	6	20	X	X	7910	YB00	X	X	X	8554
72	Main	5 M	Jefferson	Jefferson to Ridge	E	6	21	X	X	3562	2065	2737	X	X	X
73	Main	HC	Jefferson	Jefferson to Ridge	E	6	22	WCUZ	X	X	7626	7626	X	X	X
74	Main	5 M	Jefferson	Jefferson to Ridge	E	6	23	X	X	X	X	X	X	5327	X
75	Main	2 H	Ridge	Ridge to Floyd	E	7	1	X	7610	6732	6732	6732	62UN	62UN	62UN
76	Main	2 H	Ridge	Ridge to Floyd	E	7	2	3412	3412	3412	3412	9599	3863	3863	9399
77	Main	2 H	Ridge	Ridge to Floyd	E	7	3	X	X	X	6438	6438	X	X	X
78	Main	2 H	Ridge	Ridge to Floyd	E	7	4	3863	3863	3863	3863	3863	X	6732	X
79	Main		Ridge	Ridge to Floyd	E	7	5	X	X	8269	X	8269	X	8269	X
80	Main	2 H	Ridge	Ridge to Floyd	E	7	6	3993	3993	1311	6107	23GH	X	X	2345
81	Main	2 H	Ridge	Ridge to Floyd	E	7	7	X	X	9796	2438	4635	1311	1311	1311
82	Main	2 H	Ridge	Ridge to Floyd	E	7	8	X	6532	S WGN	S WGN	S WGN	X	X	5394
83	Main	2 H	Ridge	Ridge to Floyd	E	7	9		463.5	1GTD	8976	X	1NE1	6215	9214
84	Main	2 H	Ridge	Ridge to Floyd	E	7	10	X	9172	9172	4291	5048	X	5399	X
85	Main	2 H	Floyd	Ridge to Floyd	E	8	1	929P	X	6145	7753	4736	4736	X	1522
86	Main	2 H	Floyd	Ridge to Floyd	E	8	2	4552	9883	6829	6588	1774	X	9909	3232
87	Main	2 H	Floyd	Ridge to Floyd	E	8	3	9246	X	9928	2182	61HK	1124	X	X
88	Main	2 H	Floyd	Ridge to Floyd	E	8	4	8579	X	7005	585	585	X	X	8402
89	Main	2 H	Floyd	Ridge to Floyd	E	8	5	7524	7382	4052	X	3000	X	X	X
90	Main	2 H	Floyd	Ridge to Floyd	E	8	6	7623	X	6258	7548	2795	2795	VMTS	5181
91	Main	2 H	Floyd	Ridge to Floyd	E	8	7	MBOP	6279	6279	6279	X	2107	X	2888
92	Main	2 H	Floyd	Ridge to Floyd	E	8	8	2366	3630	X	X	2163	7027	7027	585
93	Main	2 H	Floyd	Ridge to Floyd	E	8	9	3114	3114	1409	9453	BRPA	X	X	X
94	Main	2 H	Floyd	Ridge to Floyd	E	8	10	5407	5407	5407	5407	5976	1315	X	X
95	Main	2 H	Floyd	Ridge to Floyd	E	8	11	236	X	5116	2231	2801	2801	X	2973
96	Main	2 H	Floyd	Ridge to Floyd	E	8	12	X	47936	ODLY	3400	4233	X	9442	X
97	Main	2 H	Floyd	Ridge to Floyd	E	8	13	X	8272	8272	8272	5912	X	8272	X
98	Main	2 H	Floyd	Ridge to Floyd	E	8	14	4944	4944	4944	DGII	X	X	X	2305
99	Main	2 H	Floyd	Ridge to Floyd	E	8	15	X	X	X	9289	846	9289	9289	9289
100	Main	2 H	Floyd	Ridge to Floyd	E	8	16	X	X	X	5465	X	X	846	846
101	Main	2 H	Floyd	Ridge to Floyd	E	8	17	X	X	79VS	4313	2090	X	POLK	X
102	Main	2 H	Floyd	Ridge to Floyd	E	8	18	X	X	X	X	2023	5039	X	24FP
103	Main	2 H	Floyd	Ridge to Floyd	E	8	19	X	YVUR	X	X	X	X	X	X
104	Main	2 H	Union	Floyd to Union	E	9	1	X	2220	2220	2220	85980	X	X	X
105	Main	2 H	Union	Floyd to Union	E	9	2	X	6799	6799	6799	3118	1252	9353	9353
106	Main	2 H	Union	Floyd to Union	E	9	3	X	6607	1688	X	1233	X	1335	1335
107	Main	2 H	Union	Floyd to Union	E	9	4	4348	X	1843	700D	7918	1826	5739	5222
108	Main	2 H	Union	Floyd to Union	E	9	5	X	X	7201	6511	6511	5356	4382	3411
109	Main	2 H	Union	Floyd to Union	E	9	6	X	5898	X	1207	1BOD	X	X	X
110	Main	2 H	Union	Floyd to Union	E	9	7	X	4972	4972	5597	5368	5368	7895	5731
111	Main	2 H	Union	Floyd to Union	E	9	8	X	X	X	5116	8558	X	X	6677
112	Main	2 H	Union	Floyd to Union	E	9	9	X	X	X	6786	6786	X	1353	FPAK
113	Main	-	Market	Union to Market	E	10									
114	Main	-	Construction	Market to Memorial	E	10									
115	Main	-	Memorial		E	1									

Spaces 102  
Hours 8  
Space Hours 816

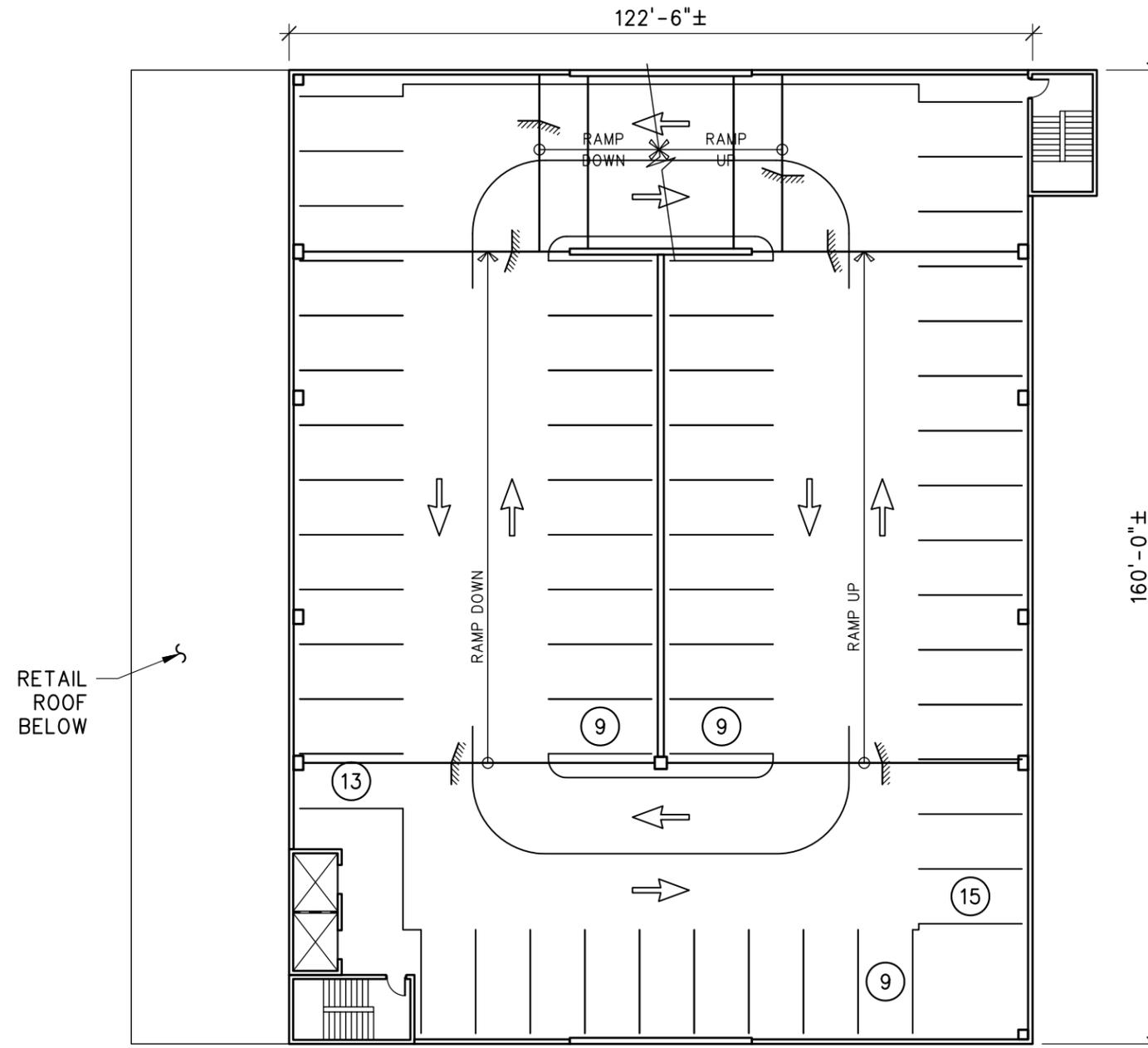


PARKING SUMMARY	
LEVEL	SPACES
7	37
6	55
5	55
4	55
3	55
2	42
1	32
TOTAL	331

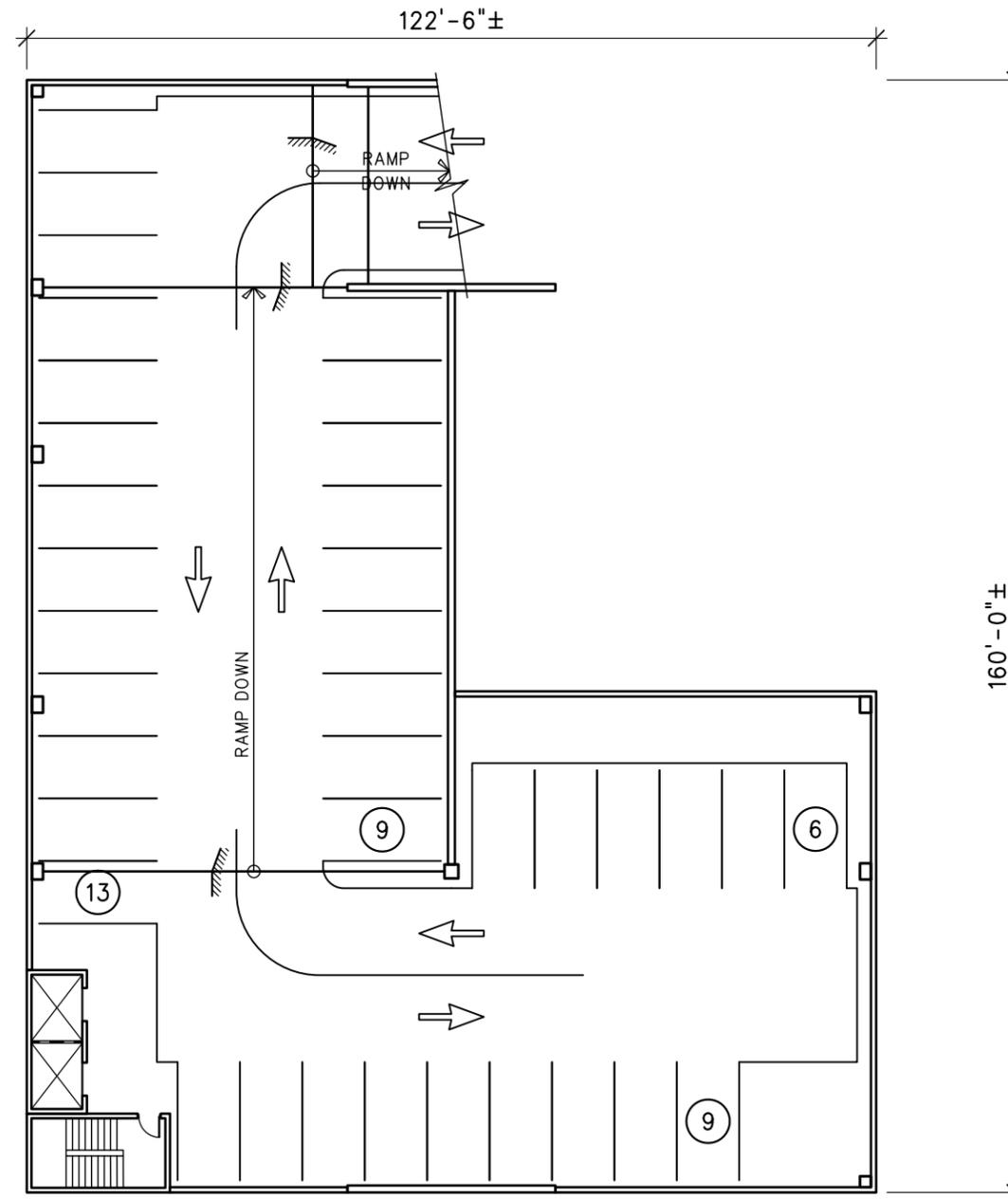
32 PARKING SPACES  
**PARKING PLAN - LEVEL 1**  
 1" = 25'-0"



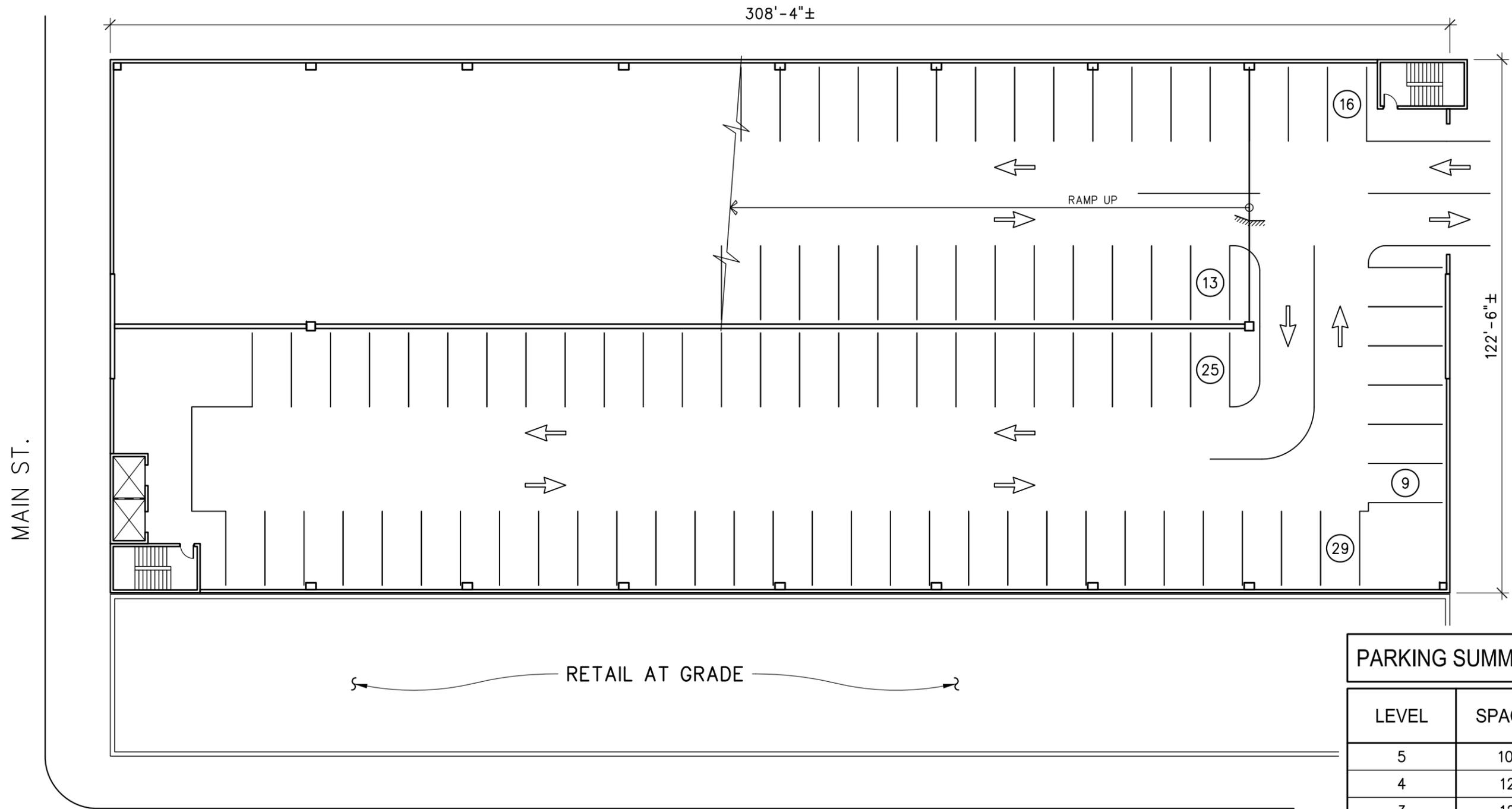
42 PARKING SPACES  
**PARKING PLAN - LEVEL 2**  
 1" = 25'-0"



55 PARKING SPACES  
**PARKING PLAN - LEVELS 3 THRU 6**  
 1" = 25'-0"



37 PARKING SPACES  
**PARKING PLAN - LEVEL 7**  
 1" = 25'-0"



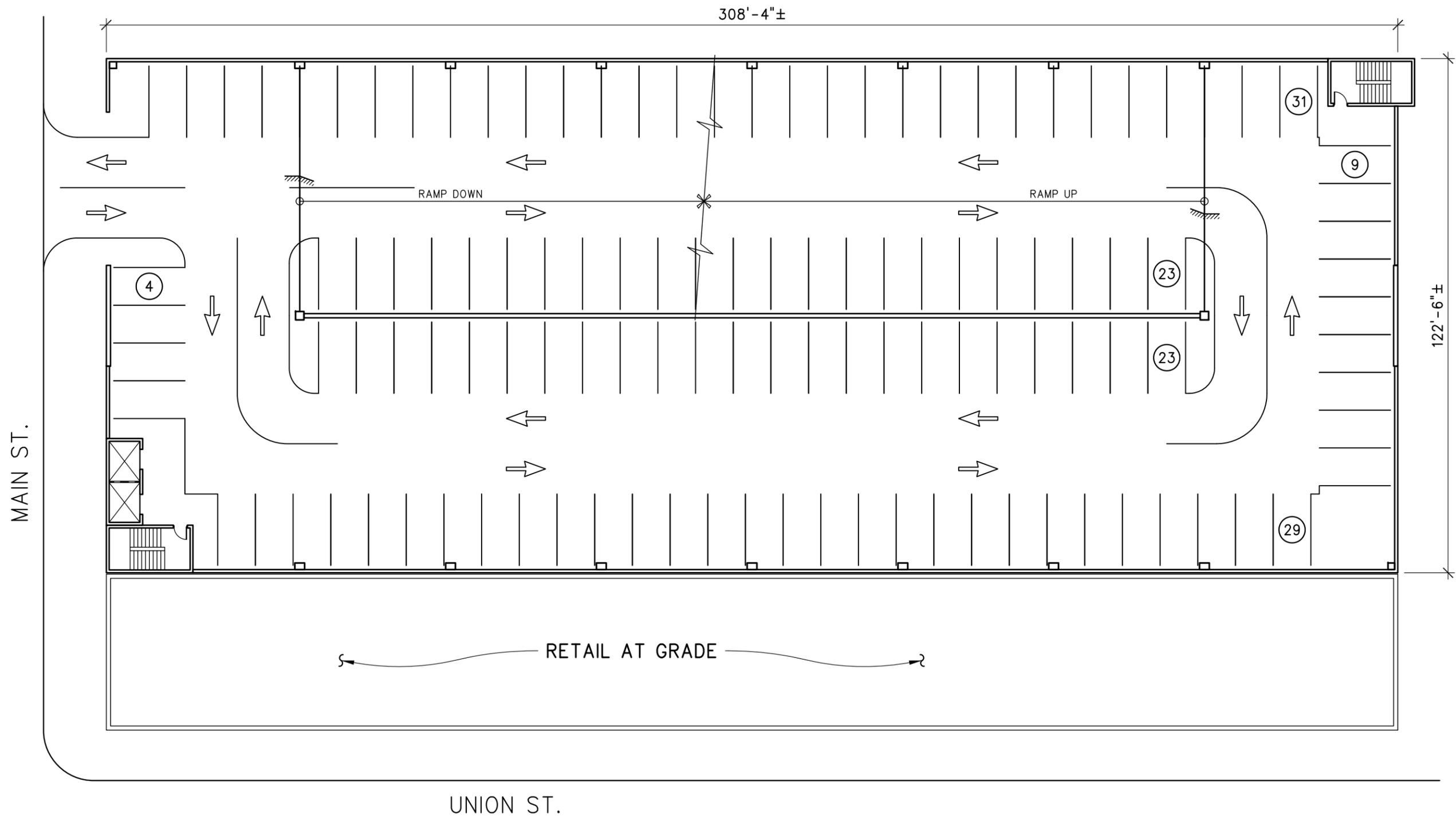
UNION ST.

89 PARKING SPACES

**PARKING PLAN - LEVEL 1**

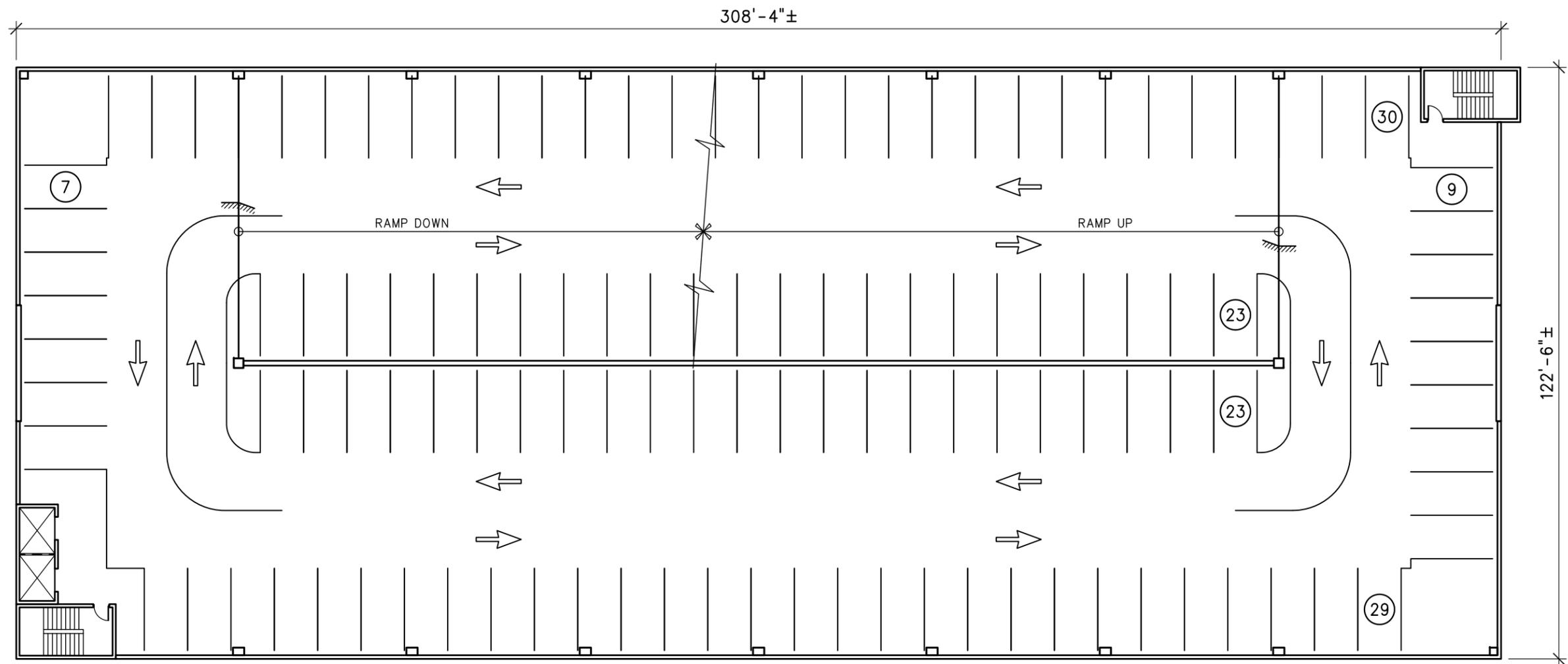
1" = 25'-0"

PARKING SUMMARY	
LEVEL	SPACES
5	102
4	121
3	121
2	119
1	89
TOTAL	552

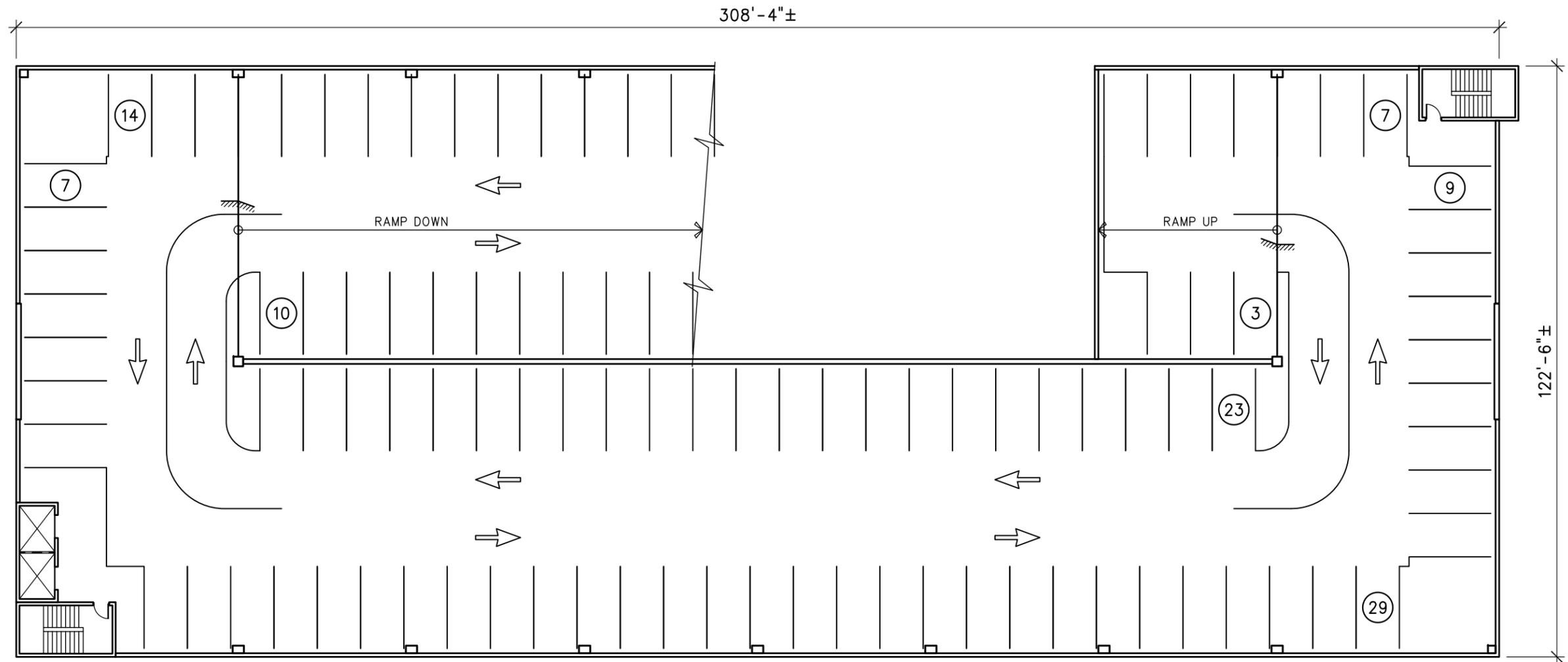


UNION ST.

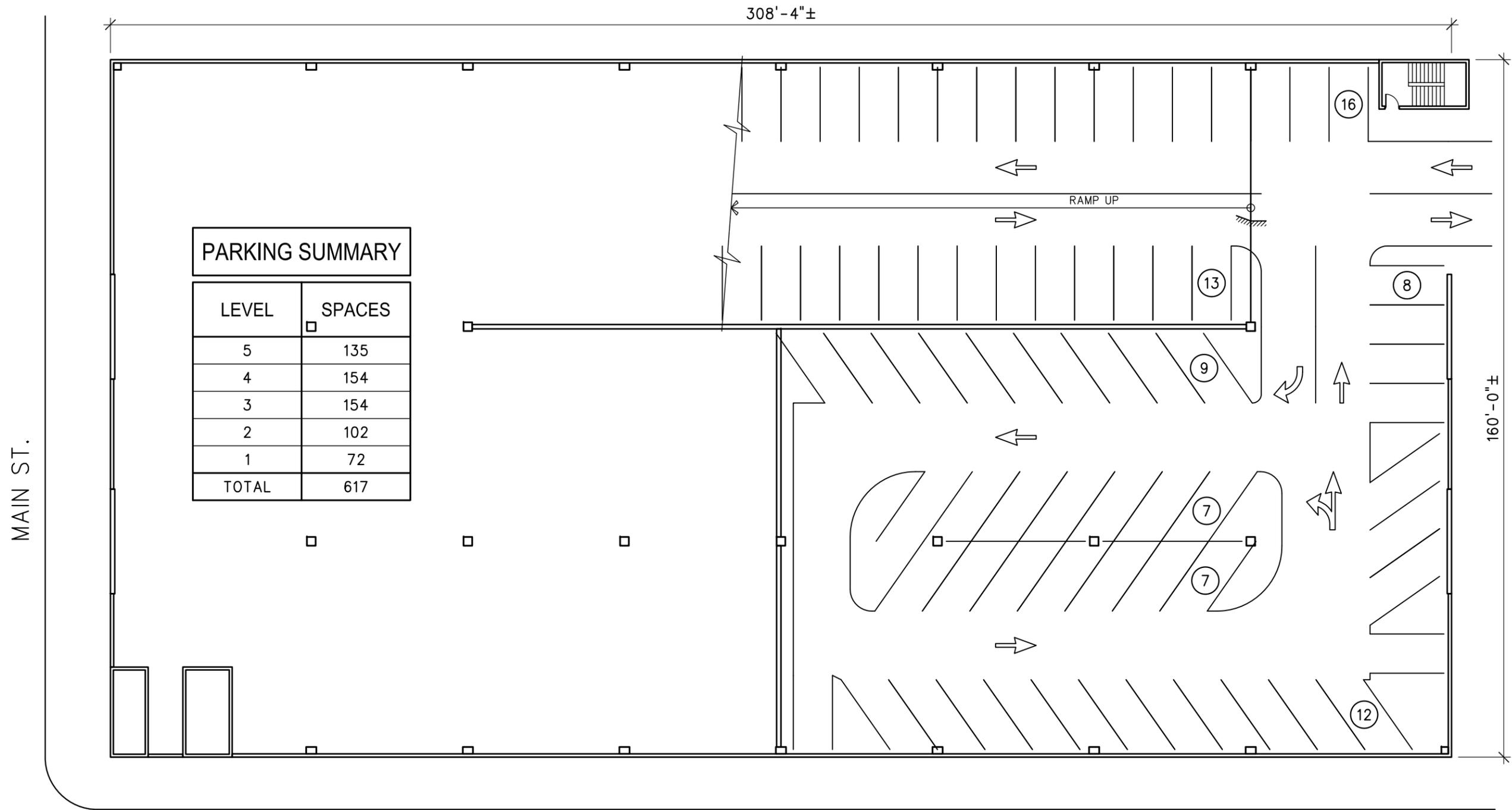
119 PARKING SPACES  
**PARKING PLAN - LEVEL 2**  
 1" = 25'-0"



121 PARKING SPACES  
**PARKING PLAN - LEVELS 3 & 4**  
 1" = 25'-0"



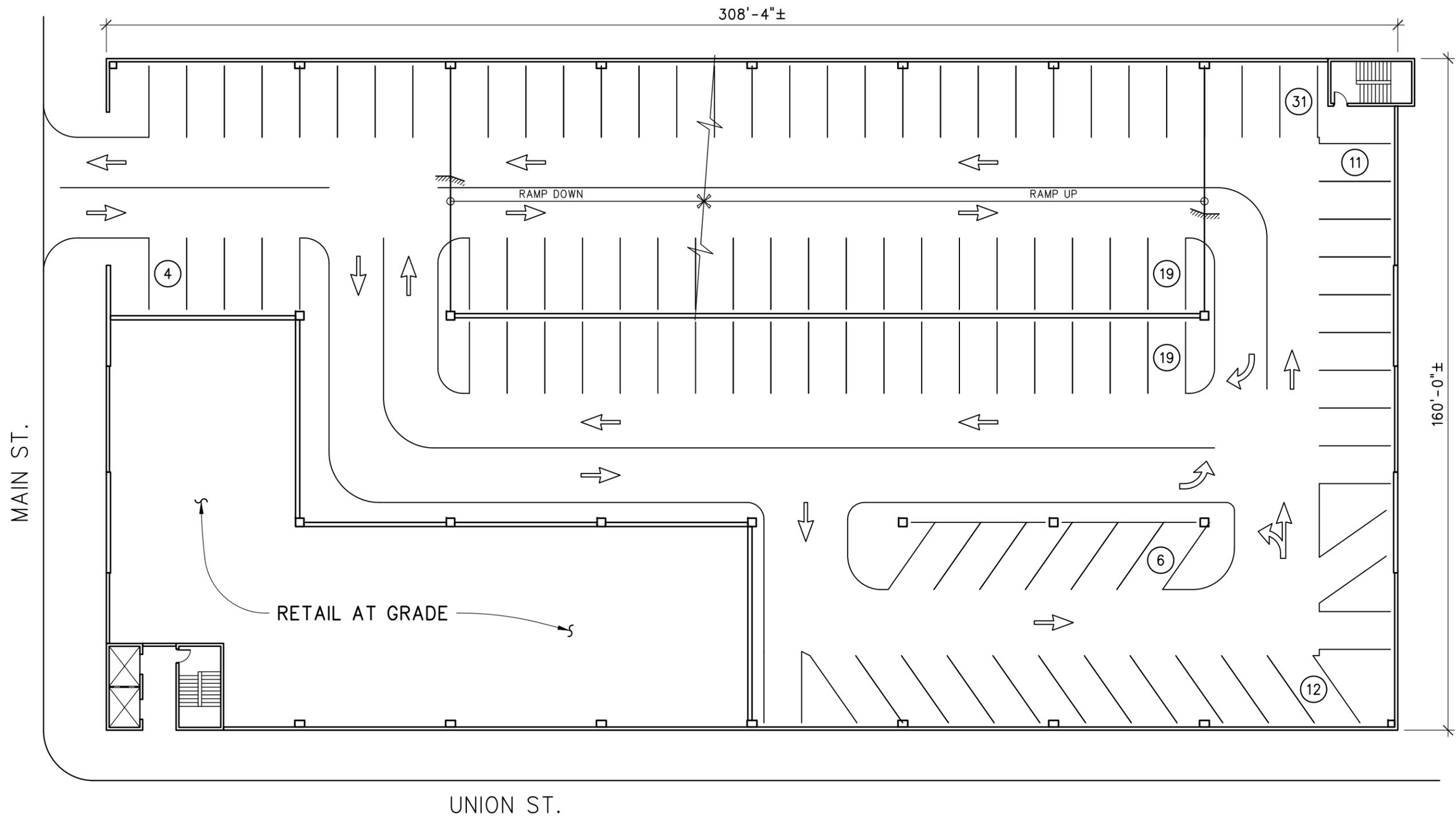
102 PARKING SPACES  
**PARKING PLAN - LEVEL 5**  
 1" = 25'-0"



PARKING SUMMARY	
LEVEL	SPACES
5	135
4	154
3	154
2	102
1	72
TOTAL	617

UNION ST.

72 PARKING SPACES  
**PARKING PLAN - LEVEL 1**  
 1" = 25'-0"

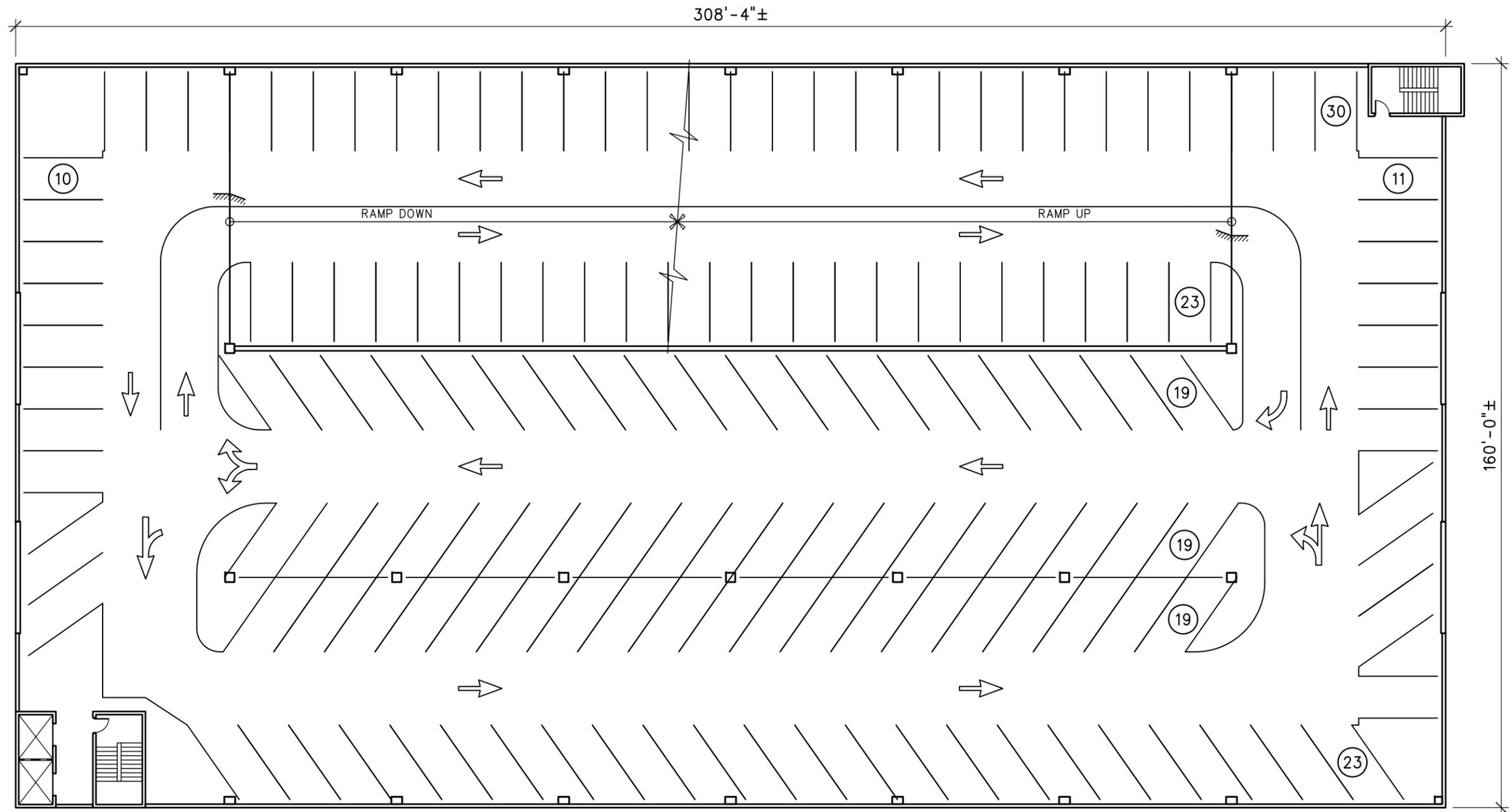


UNION ST.

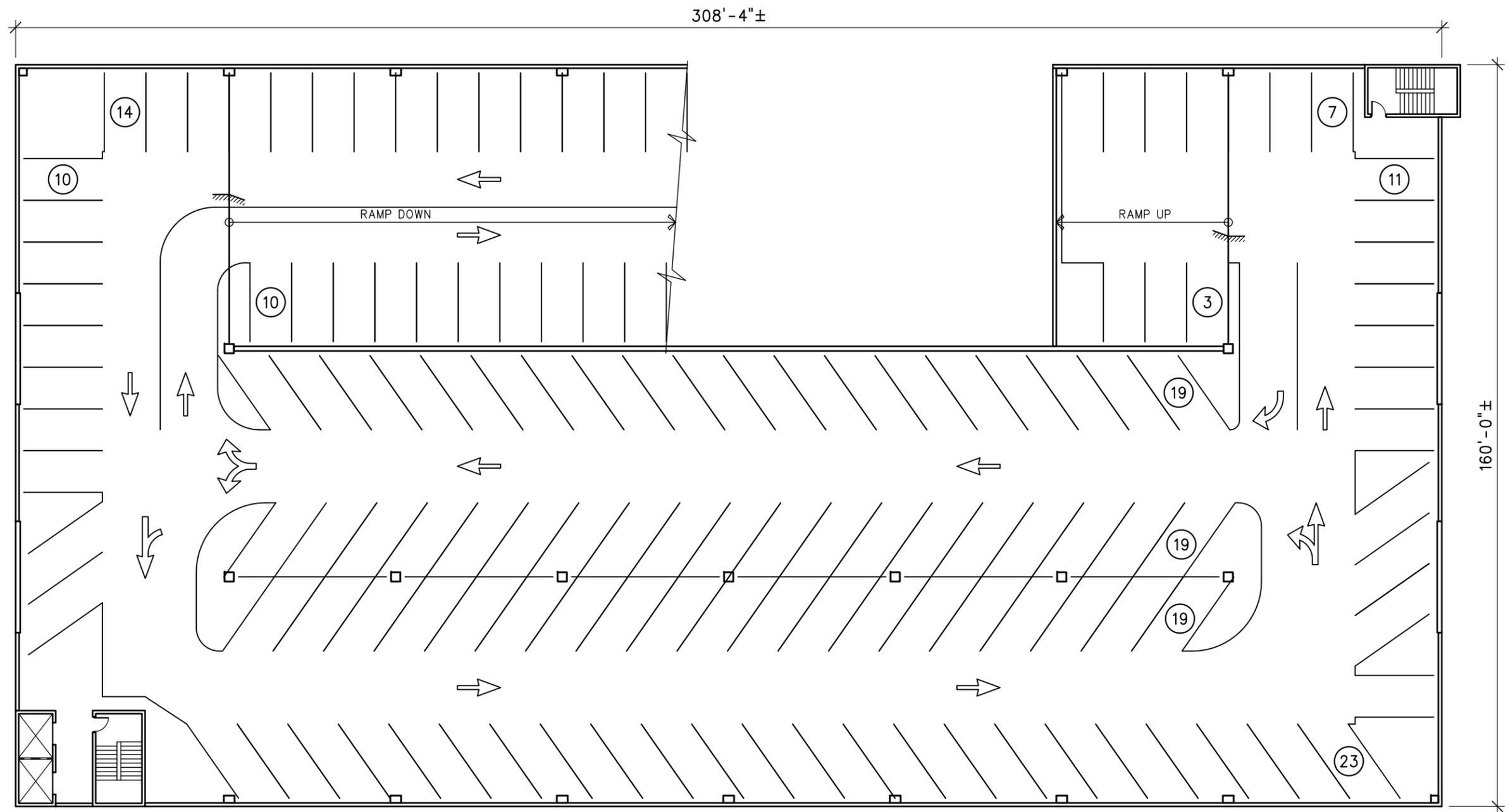
102 PARKING SPACES

**PARKING PLAN - LEVEL 2**

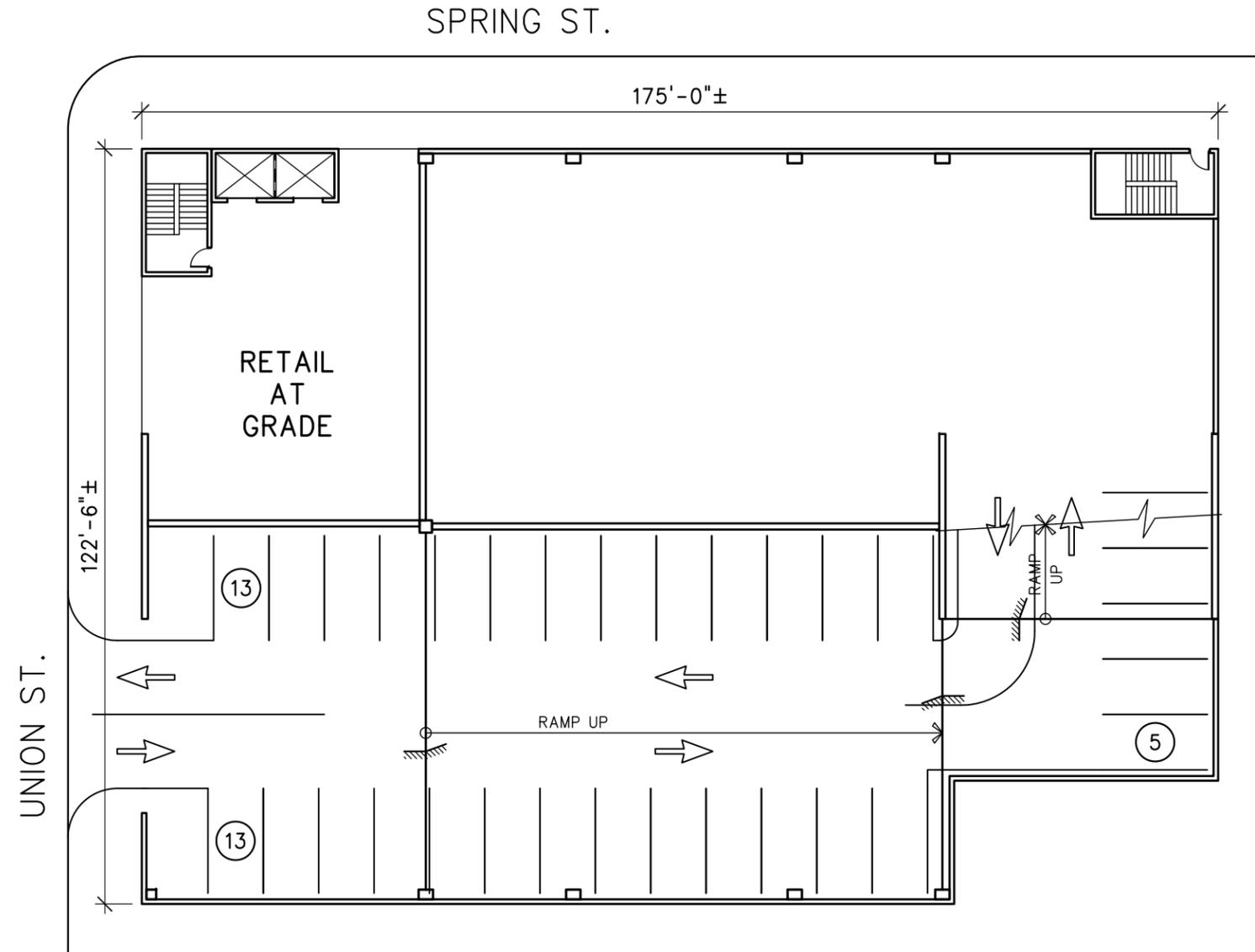
1" = 25'-0"



154 PARKING SPACES  
**PARKING PLAN - LEVELS 3 & 4**  
 1" = 25'-0"

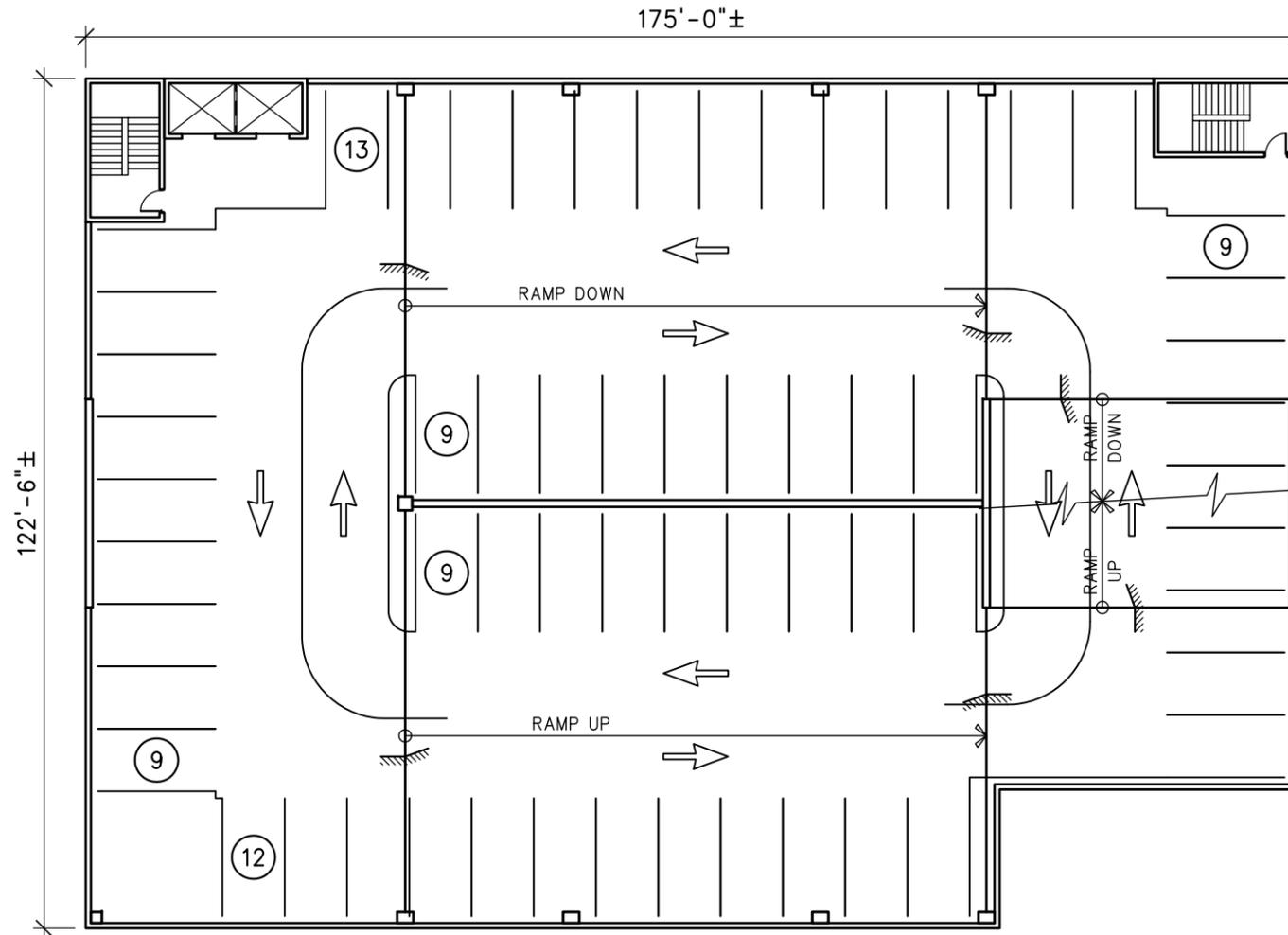


135 PARKING SPACES  
**PARKING PLAN - LEVEL 5**  
 1" = 25'-0"

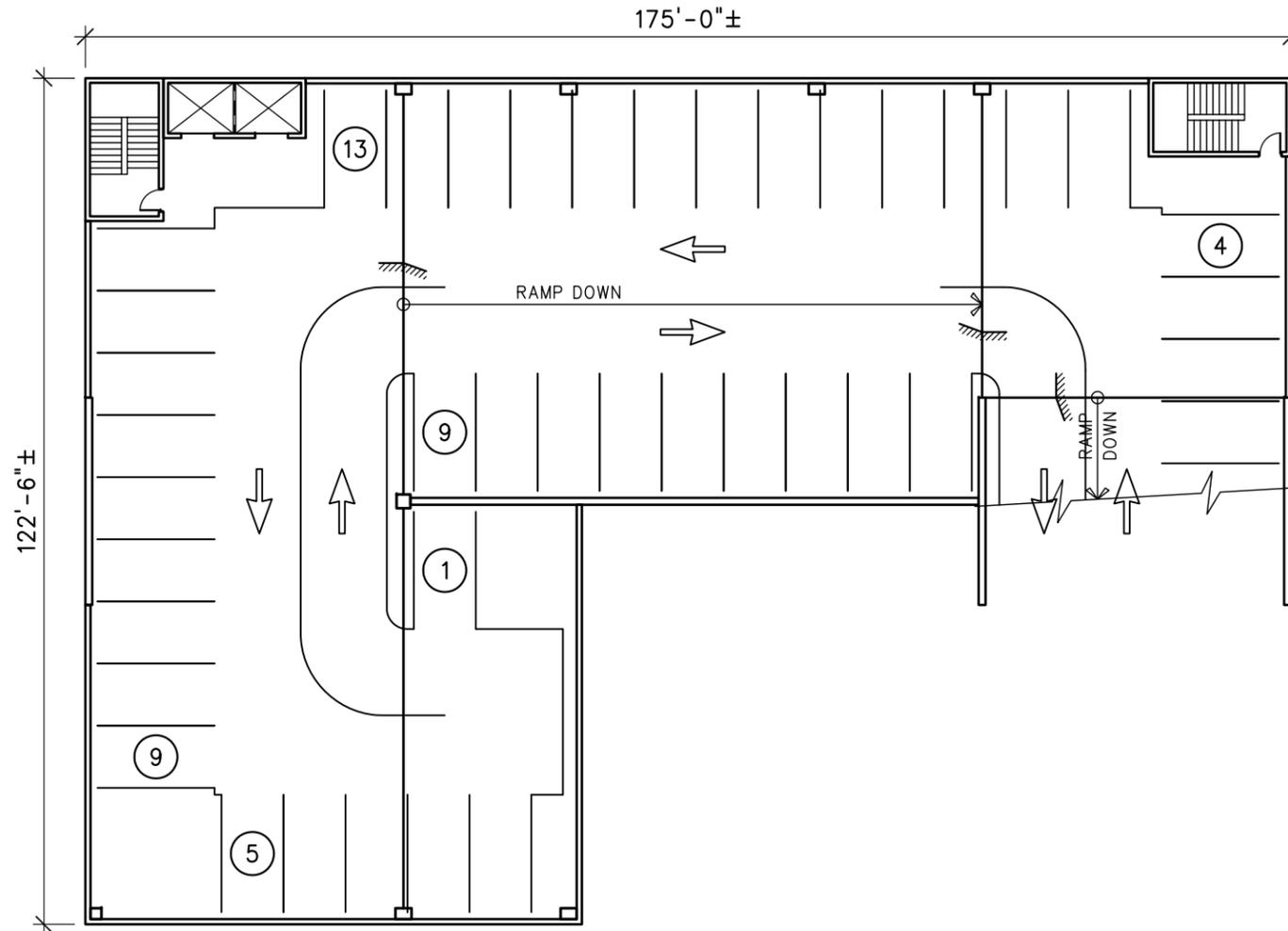


PARKING SUMMARY	
LEVEL	SPACES
7	41
6	61
5	61
4	61
3	61
2	61
1	31
TOTAL	377

31 PARKING SPACES  
**PARKING PLAN - LEVEL 1**  
 1" = 25'-0"



61 PARKING SPACES  
**PARKING PLAN - LEVELS 2 THRU 6**  
 1" = 25'-0"



41 PARKING SPACES  
**PARKING PLAN - LEVEL 7**  
 1" = 25'-0"