

COMPREHENSIVE TRANSPORTATION REVIEW

1550 PENNSYLVANIA AVENUE SE

BZA 18544

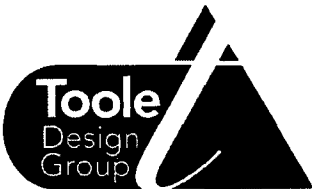
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Prepared for

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1. Introduction

The proposed site is located at 1550 Pennsylvania Avenue, SE, Washington, DC bordered by Pennsylvania Avenue to the southwest, Barney Circle to the southeast, Kentucky Avenue to the northeast, and an alley named Freedom Way¹ to the northwest. The property is zoned C-2-A with an existing used car lot on the site. The proposed development is an 82-unit residential building. See Figure A Site Location.

The building is being constructed with a mixture of efficiency, one-bedroom, and two-bedroom apartments to fill the rapidly growing need for housing for younger adults (aged 20-35) and older adults (50+) who have been rapidly relocating to Washington, D.C. over the past decade². The location of this property is likely to be attractive to potential residents desiring a “car light” urban lifestyle whereupon the need to own a private motor vehicle is reduced or eliminated through provision of high quality public transit, car sharing, walking, and bicycling options. This is an increasingly desired lifestyle of the younger adult population and is likely going to be desirable for those older adults who are choosing to “age in place” in transit rich, walkable communities such as Capitol Hill³.

The property is located two blocks from the Potomac Avenue Metrorail Station within a walkable environment served by several bus routes. The property management team for the property will utilize a Transportation Demand Management (TDM) Plan to actively support and encourage property residents to adopt a car light lifestyle.

For those residents and visitors who choose to drive, the proposed development will have primary vehicle access via Freedom Way, adjacent to Kentucky Avenue. For residents, eight surface parking spaces will be accessible directly off Freedom Way and 22 additional spaces will be provided in an underground garage accessible from a ramp off Freedom Way. Services for the building (maintenance and trash) and routine loading activities by residents will occur in the rear of the property in designated service and loading areas accessed from Freedom Way. Improvements to Freedom Way are proposed to ensure safe and adequate access for the service and loading activities as the existing width of the street is 10 feet. Motor vehicle circulation to the site will be somewhat indirect due to a combination of one-way streets and turn restrictions, in particular the one-way eastbound designation of Kentucky Avenue between Potomac Avenue/15th Street and turn restrictions at Barney Circle.

Given the property’s location within a high-quality multimodal transportation system, the proposed development trips will be able to be accommodated within the City’s existing

¹ The alley was petitioned to be named Freedom Way as there are approximately 3 residences with mailboxes and main entrances off the alleyway. It was necessary for the residents to petition to name the alley to be able to be recognizable addresses for City emergency response services.

² http://www.washingtonpost.com/local/census-young-adults-are-responsible-for-most-of-dcs-growth-in-past-decade/2011/05/04/AFJz5LtF_story.html

³ <http://www.capitolhillvillage.org/>

transportation system and thus improvements to the existing infrastructure are not proposed except within Freedom Way.

2. Roadway Network, Capacity, & Operations

The proposed project will generate low motorized traffic volumes which can be accommodated within the existing roadway network.

2.1 Trip Generation

Several survey resources were analyzed to determine the most appropriate mode share to apply to the Institute of Transportation Engineers Trip Generation Manual to determine peak-hour trips generated by the site.

American Community Survey

The proposed site is located on the border of Census Tract 68.02, adjacent to Census Tracts 69 and 71, therefore the following analysis considers the average mode share for those three census tracts. The 2011 American Community Survey data indicates that 37% of residents commute via a personal vehicle (34% drive alone and 3% carpool). Chart A illustrates the mode split for Census Tracts 68.02, 69, and 71.

WMATA Ridership Survey

The Washington Metropolitan Area Transit Authority's (WMATA) 2005 Development-Related Ridership Survey included 39 sites near 13 Metrorail Stations. The Friendship Heights and U Street/ African-American Civil War Memorial/ Cardozo Metrorail Stations, both classified as 'Suburban - Inside the Beltway,' are most similar to the development surrounding the Potomac Avenue Metrorail Station in density and location. WMATA surveyed two residential sites in Friendship Heights within a half mile of the Metrorail Station and one residential site in U Street within a half mile of the Metrorail Station. To compare, the proposed site is within a quarter mile of the Potomac Avenue Metrorail Station. Over all sites surveyed, WMATA found that the vehicular mode share for residential developments within a half mile of the Metrorail Station is 54%, versus 41% for those within a quarter mile. Thus, the Friendship Heights and U Street survey data is a conservative measure of comparison for the proposed development.

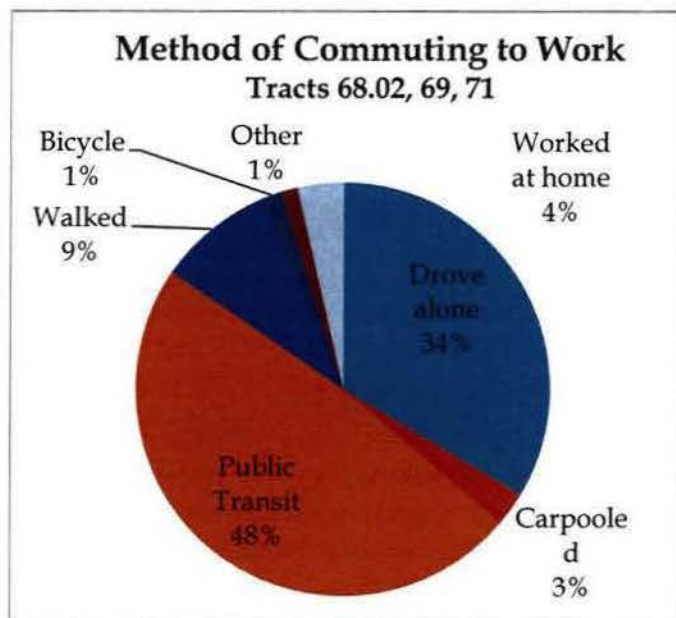


Chart A: Method of Commuting to Work

The WMATA Ridership Survey found that 53%, 57%, and 22% of all trips were made by personal vehicle at the two Friendship Heights and one U Street site, respectively. Of all the 'Suburban - Inside the Beltway' residential sites, 39% of all trips were made by personal vehicle.

TPB Household Travel Survey

The Transportation Planning Board (TPB) at the Metropolitan Washington Council of Governments (COG) led the 2011 and 2012 Geographically-Focused Household Travel Survey of 4,800 households in 14 communities in the DC region. Communities surveyed with similar land use, density, distance to downtown, and transit access include Logan Circle, New York/Rhode Island Avenue NE, and Friendship Heights. Table A illustrates the percentage of residents who drove alone or carpooled for all weekday trips and commuting trips, based on the survey results for these geographic areas.

Geographic Area	% Drove Alone or Carpooled	
	All Weekday Trips	Commuting Trips
Logan Circle	19%	25%
Crystal City	44%	26%
New York/ Rhode Island Ave	56%	56%
Friendship Heights	55%	50%

Table A: Vehicular Mode Share based on the TPB Household Travel Survey

Walk Score

The address of the proposed building has a Walk Score of 68, or 'Somewhat Walkable,' with some amenities within walking distance. The Bike Score is 88, or 'Very Bikeable,' due to the relative flatness of the neighborhood and excellent bicycle lanes. The Transit Score is 78, or 'Excellent Transit' due to the nearby bus and rail stops. Note that the Walk Score is likely not representative of the actual walkability experienced by residents as the scoring is sensitive to proximity to retail. For example 1300 Pennsylvania Avenue's Walk Score is an 89 and 700 Kentucky Avenue is a 78.

Trip Generation Rates

Based on the site's development near several public transportation, walking, and bicycling options, increasing trends in reduced single-occupancy vehicle trips, and this development's target to support a car light urban lifestyle, residents of the proposed building are expected to commute with a similar or higher non-vehicular mode share as the American Community Survey indicates for the surrounding area and as the WMATA Ridership Survey and TPB Household Survey indicates for comparable neighborhoods. The survey data generally indicates that approximately 35-50% of residents use a personal vehicle for all trips. None of the neighborhoods surveyed had a vehicular mode share greater than 57%. Thus, a very conservative estimate for the vehicular mode share is assumed to be 60%.

Applying this factor to the Apartment land use (ITE LU 220) from the 9th Edition of the Institute of Transportation Engineers Trip Generation Manual, an 81-unit building will generate a

maximum of 24 vehicle trips in the peak direction in the peak hour. Table B illustrates the proposed building's trip generation.

Peak Hour	Total Trip Gen (All Modes)	Vehicle Trip Gen (55% Mode Share)	Quantity Entering Site	Quantity Exiting Site
AM	43	26	5	21
PM	63	37	24	13

Table B: Trip Generation for Apartment (ITE LU 220) at 60% Vehicular Mode Share

2.2 Vehicle Site Access

Primary vehicle access to the underground parking garage will be located at a new curb cut on Freedom Way, adjacent to Kentucky Avenue. Freedom Way, the alley between Kentucky Avenue and the 1500 block of Pennsylvania Avenue SE, is one-way southbound and approximately 10-feet wide. At the southernmost end, the alley turns sharply eastward to exit onto Kentucky Avenue. The turn in the alley is not passable for trucks and is very difficult for passenger vehicles to maneuver. Existing city garbage and recycling vehicles back out of the alley or U-Turn on private property to drive the wrong way out of the alley to exit onto Potomac Avenue. Many residents acknowledged in public meetings that they also drive the wrong way to exit the alley due to the tightness of the corner.

Due to the nature of one-way streets in the surrounding neighborhood, vehicle circulation is circuitous. Figure B: Existing Access Entering the Site and Figure C: Existing Access Exiting the Site illustrate routes most drivers will utilize on the surrounding streets. The proposed development will abandon four existing curb cuts, two on Kentucky Avenue and two on Pennsylvania Avenue. Freedom Way will be widened from 10 to 15 feet between the new driveway and Kentucky Avenue to accommodate two-way traffic. The driveway on Freedom Way will allow left turns in from the east and right turns out to the east, as shown in Exhibit 4 and Exhibit 5. Vehicles will not be able to maneuver to turn right into the driveway from the west or left out of the driveway to the west, as shown in Exhibit 6 and Exhibit 7. These exhibits illustrate the vehicular movements using AutoTURN.

3. Bicycle & Pedestrian Facilities

The primary pedestrian entrance for residents and visitors will be located on Pennsylvania Avenue, with two secondary resident entrances on Freedom Way, at the loading platform and at the westernmost end of the building. Additionally, four units on the first floor at the western end of the building will have street-level entrances. Overall, pedestrian facilities in the area are excellent. Almost all streets in the surrounding area have sidewalks in good condition on both sides of the street. Most block lengths are between 200 and 500 feet with good pedestrian connectivity.

The parking garage will have 28 bicycle parking spaces in a separate bicycle storage room accessible via the parking garage. Bicycles may access the garage via the ramp off Freedom

Way The District of Columbia bicycle facility network provides excellent connections to and from the site. Within two blocks of the site, 15th Street and 14th Street have paired one-way bicycle lanes connecting to several other bicycle facilities and points of interest throughout the city. Additionally, Kentucky Avenue and G Street are local, low volume roadways which provide a comfortable bicycle route to the Potomac Avenue Metro One block east of the site is an entrance to the Anacostia Riverwalk Trail, which connects to points along the Anacostia River from South Capitol Street SE to Benning Road, with plans to connect to the Anacostia Tributary Trails in Prince George's County, Maryland

Pedestrian Master Plan

The District of Columbia's 2009 Pedestrian Master Plan states the vision of Washington, DC as "a city where any trip can be taken on foot safely and comfortably, and where roadways equally serve pedestrians, bicyclists, transit users and motorists " This plan illustrates Pennsylvania Avenue SE and 15th Street SE in the study area as streets with moderate pedestrian activity and moderate deficiencies, specifically identifying Pennsylvania Avenue SE as a priority corridor in Ward 6 Recommended improvements include improving and maintaining sidewalks, providing high-visibility crosswalks, improving pedestrian signal timing, and providing leading pedestrian intervals at signals, especially those near Metrorail stations

Bicycle Master Plan

The District of Columbia's 2005 Bicycle Master Plan seeks to "move the District to the next level, creating an even more bicycle friendly city" and serves as a "guide to establishing high-quality bicycle facilities and programs " The plan reports a Bicycle Level of Service (LOS) E for Pennsylvania Avenue SE and Bicycle LOS D for Potomac Avenue SE in the study area due to the lack of specific bicycle facilities and the higher volumes of roadway traffic The plan identifies Pennsylvania Avenue SE as a candidate for new bicycle lanes

Barney Circle and Potomac Avenue Planning Projects

Deficiencies in the bicycle and pedestrian network will likely be addressed through the Potomac Avenue and Barney Circle projects currently underway by DDOT The Barney Circle project includes the now-closed Southeast Freeway from 11th Street SE to Pennsylvania Avenue SE and the intersection of the freeway and Pennsylvania Avenue at the location of the historic Barney Circle The Potomac Avenue project is at the intersection of Potomac Avenue SE and Pennsylvania Avenue SE, two blocks northwest of the project site Both projects are planning geometric improvements to the roadways which will simplify and shorten pedestrian crossings, reduce conflicts with turning motorists and create improved pedestrian crossings with improved signal timing. The Potomac Avenue project is also considering bus stop consolidation along the Pennsylvania Avenue corridor while the Barney Circle project may install a traffic circle which would improve connectivity to and from the project site

Capitol Hill Transportation Study

DDOT's 2006 Capitol Hill Transportation Study supports efforts to improve the pedestrian and bicycle network, including improving ADA compliance and adding new bike lanes proposed in

the Bicycle Master Plan. The identifies hot-spot locations at Barney Circle and the intersection of Potomac Avenue and Pennsylvania Avenue SE and recommendations from the 2005 Middle Anacostia Crossings study.

Anacostia Waterfront Initiative

The District of Columbia is leading a 30-year \$10 billion initiative to improve the Anacostia Waterfront, including providing better facilities for all modes of transportation. The proposed development falls within the program area and has excellent access to the Anacostia Riverwalk Trail, a key multi-modal transportation and recreation element of the Anacostia Waterfront Initiative.

4. Transit Service

The property is located with excellent access to transit facilities. Based on an average of the nearest three census tracts in 2011, 48% of residents in the immediate area commute to work or school via public transit.

Transit Future System Plan

The District of Columbia Department of Transportation developed the 2010 Transit Future System Plan to guide the future of the transit system, with the goal of enhancing mobility and accommodating continued growth in Washington, DC. The plan recommends a Metro Express (limited-stop) bus on Pennsylvania Avenue SE through the study area, which was implemented in 2008.

4.1 Metrorail Service

The property is within 1200 feet of the Potomac Avenue Metrorail Station on the Orange Line and future Silver Line. It is a 4-6 minute walk and 2-3 minute bicycle ride to and from the station. Four bicycle racks are located at the station.

4.2 Bus Service

Several bus routes service the area at 11 bus stops within a quarter mile of the property. Five Metrobus lines and one circulator line run regularly and three additional metrobus lines provide Saturday service in the morning prior to Metrorail operation. Table C inventories the facilities provided at each bus stop including shelter, an ADA-accessible landing pad, and ADA-accessible access between the landing pad and adjacent sidewalk. See the attached Figure D Transit Study Locations, which illustrates the locations of each bus stop. Stops nearest the project site are emphasized in bold.

Stop #	Bus Routes	Shelter?	Landing pad?	Sidewalk access?
1	J11 K11 M6	yes, 2	yes	yes
2	32 34 36 39 A11 circulator	yes	yes	yes
3	32 34 36 39 K11 M6	yes	yes	yes
4	V7 V8 V9	yes	yes	yes
5a	B2 V7 V8 V9	yes	yes	yes
5b	M6	adjacent*	yes	yes
6	B2	yes	yes	yes
7	B2	yes	yes	yes
8	32 34 36 K11 M6 V7 V8 V9	no	yes	yes
9	B2	no	yes	yes
10	B2	no	yes	yes
11**	32 34 36 A11 B2 J13 K11 M6 V7 V8 V9	no	yes	no

*Stop #5b is immediately behind stop #5a, so pedestrians may share the shelter at #5a.

**Stop #11 is adjacent to the project site.

Table C: Bus Stops

Table D describes the bus routes servicing the area, including headways, and weekday hours of operation. Metrobus routes (non-Circulator) run on a timetable, so an estimate of the average headway during the peak period (7 to 9 AM, 5 to 7 PM) is provided. No headways are greater than 20 minutes in the peak hour.

Routes	Average Peak-Hour Headway	Weekend Hours of Operation
32, 36	6 minutes	5 AM - 2 AM
34	20 minutes	5 AM - 12 PM
A11	N/A	Saturday only, prior to Metrorail operation
B2	10 minutes	5 AM - 2 AM
J11, J13	N/A	Saturday only, prior to Metrorail operation
K11	N/A	Saturday only, prior to Metrorail operation
M6	17 minutes	6 AM - 1 AM
V7, V8, V9	11 minutes	5 AM - 2 AM
DC Circulator	10 minutes	6 AM - 9 PM (summer), 6 AM - 7 PM (winter)

Table D: Bus Routes

4.3 Bikeshare Service

There is one Capital Bikeshare station within ¼ mile of the site, at the western corner of the intersection of Potomac Avenue SE and Pennsylvania Avenue SE. This station has 12 docks and users can connect to over 200 stations in Arlington, Alexandria, and the District of Columbia.

4.4 Pedestrian Access to Transit

Pedestrian conditions to access the nearby transit facilities are sufficient. The sidewalks along routes to transit stops were assessed for conformance with Americans with Disabilities Act (ADA) standards.

Figure E Quality of Pedestrian Facilities to Access Transit illustrates the ADA compliance of curb ramps within the pedestrian catchment area. Most of the curb ramps in the area have been updated with flush transitions and flared sides. However, some of these modernized curb ramps are still not ADA compliant. The most common non-compliant elements are too-steep running or cross slopes and/or insufficient clear space at the top of the ramp, both of which are likely due to site constraints. Some modernized ramps did not have detectable warning surfaces.

Figure E Quality of Pedestrian Facilities to Access Transit also illustrates the physical conditions of the pedestrian facilities within the pedestrian catchment area. There are no missing links in the catchment area, however, the pedestrian connection on the north side of the 1500 block of Pennsylvania Avenue SE is substandard. Pedestrians walking along this sidewalk do not consistently have a clear pedestrian path to the Metrorail station and some bus stops. At several times of day during the course of this study, multiple cars were parked within the public space along the block, blocking the clear path for pedestrians along the sidewalk. This block was constructed with row houses with street-level garages accessed via curb cuts. Presently there are nine curb cuts provided to driveways to service the garages. The driveways are located entirely within the public space of the street and extend across the sidewalk between the street and garage. The on-street parking is presently peak-hour restricted from 7:00 AM to 9:30 AM. To avoid the vehicles parked across the sidewalk, the pedestrians must either

- Travel in the street along Pennsylvania Avenue, which does not significantly alter travel time to/from the Metrorail station, but exposes pedestrians to traffic,
- Divert to the opposite side of Pennsylvania Avenue, which adds approximately 3-7 minutes of travel time, depending on signal timing at the two Pennsylvania Avenue crossings, or
- Divert to Kentucky Avenue and Potomac Avenue, which adds about 3 minutes of travel time.

4.5 Potential Transit Improvements

The existing conditions for transit facilities are acceptable given the proposed development, however, bus stop consolidation and improving the pedestrian path could improve transit conditions in the surrounding area.

Bus Stop Consolidation

The Barney Circle project and Potomac Avenue project, as mentioned in section 3, Bicycle & Pedestrian Facilities, will study bus-stop consolidation and relocation in the area. There appears to be potential to consolidate several bus stops in the neighborhood, particularly those closest to the Potomac Avenue Metrorail Station, without reducing transit service. The 2010 Service Evaluation Study included Metrobus route B2, but made no recommendation on changes to the route or bus stop locations. The 2008 Metrobus 30s Line Study reported that "there may be some potential to consolidate some of the very closely based stops along the route." Bus stop #11 is not currently coupled with a stop across the street. Bus stops #5a, #5b, and #11 may be

suitably consolidated to the location of stop #5a, which presently has a shelter, adequate landing pad, sidewalk access, and a concrete bus pad. The Applicant will remain in communication with DDOT regarding any potential bus stop consolidation efforts.

Pedestrian Path Improvement

Enforcement by the Department of Public Works will likely be necessary to prevent motor vehicles from parking on the public space and blocking the pedestrian path. As these residents likely are under the impression parking within the public space is permissible if they perceive this space as their driveway, it may be helpful to provide an alternative street option for these residents. One potential solution would be to convert this block face to full-time residential permit parking. This appears feasible from a lane balance perspective as Pennsylvania Avenue operates with four northwest-bound travel lanes in this roadway section, while the approaching roadway section operates with three travel lanes across the John Phillip Sousa Bridge.

5. Site Access & Loading

The following describes the proposed site access and loading plan. The Applicant will work closely with DDOT to ensure that the design of the site access and loading meet current standards.

5.1 Site Access

Primary vehicle access to the underground parking garage will be located off of Freedom Way, adjacent to Kentucky Avenue. The proposed development will abandon four existing curb cuts, two on Kentucky Avenue and two on Pennsylvania Avenue. Additionally, eight surface parking spaces will be accessible directly off Freedom Way.

Freedom Way is presently one way southbound along its entire stretch, from Potomac Avenue to Kentucky Avenue. Freedom Way is 10 feet wide to accommodate one-way southbound traffic along its length. A sharp turn at the southern end of the alley adjacent to the project site is very difficult for passenger vehicles to navigate. Residents who park on Freedom Way informed the Applicant that they frequently travel the wrong way on Freedom Way, including exiting the alley at the intersection of Potomac Avenue, G Street, 15th Street, and Kentucky Avenue, to avoid this turn in the alley. The Applicant proposes to improve this turn by widening the alley into the Applicant's property, improving safety and access along Freedom Way.

The proposed development will also widen the alley and convert it to two-way operation between the garage ramp and Kentucky Avenue. The attached Exhibits 4 and 5 illustrate how a passenger vehicle can maneuver into and out of the parking garage to and from the eastern side of the alley. At public meetings hosted by the local ANC Commissioner Brian Flahavan to discuss the proposed project, residents expressed concern that the new building would increase traffic on Freedom Way, which presently serves fewer than three vehicles per hour. A passenger car traveling westbound in the alley cannot maneuver into the garage, as shown in Exhibit 6. While there is potential for up to 8 additional vehicle trips to access the surface parking spots

located adjacent to the alley, it is unlikely these trips will randomly occur. Thus given the low traffic volume now on Freedom Way, an additional 2-3 trips per day are not likely to result in operational problems within the alley. Moreover, correction of the sharp-turn deficiency will allow users to complete their southbound movement and exit the alley at Kentucky Avenue, reducing conflicts from the existing two-way alley use. To further ensure one-way operation of the alley and to reduce the likelihood residents of 1550 Pennsylvania Avenue who utilize the underground garage would use the alley, the garage entrance was designed to restrict wrong-way travel movements into or out of the garage. Vehicles accessing the garage will need to use other routes to connect to Kentucky Avenue and the southern entrance of Freedom Way. Left turns from the garage ramp into the alley are prohibited and also not feasible for a passenger vehicle, as shown in Exhibit 7.

Primary pedestrian access will be at the main entrance door on Pennsylvania Avenue, with two secondary entrances on Freedom Way and two unit-specific entrances on Pennsylvania Avenue. Primary bicycle access will be on Freedom Way via the ramp to the parking garage, where bicycle parking will be provided. Figure F Site Access illustrates the access locations for all modes and the one-way restrictions on Freedom Way.

There are several site constraints which limit potential parking-garage access locations. The Applicant reviewed DDOT's design standards as stated in the DDOT Design and Engineering Manual and determined this garage location to be optimal given the site conditions. The following other options were considered:

- *Curb cut on Kentucky Avenue, adjacent to Freedom Way* – Two immediately adjacent curb cuts creates poor conditions for pedestrians walking along the sidewalk and does not meet DDOT's goals of minimizing curb cuts by locating access points on alleys when possible.
- *Curb cut on Kentucky Avenue, 60 feet from the intersection with Freedom Way* – The curb cut would be approximately 70 feet from the intersection with Barney Circle. With upcoming changes to Barney Circle and existing volumes of 250 to 400 westbound motorists traveling along Barney Circle during the peak hour, this option would likely increase conflicts associated with Barney Circle, a significantly busier street than Kentucky Avenue or Freedom Way.
- *Curb cut further west on Freedom Way* – In this position, motorists accessing the parking garage would be more likely to use Freedom Way, which presently serves no more than 3 motorists per hour adjacent to the proposed site. Additional traffic would cause safety concerns as the alley is narrow with poor sight distance at turns. Additionally, a significant portion of the underground parking would be lost with the reconfiguration of the parking garage ramp.
- *Curb cut on Pennsylvania Avenue SE* – Due to the high volume of motorists, additional curb cuts on Pennsylvania Avenue SE would decrease safety for all users and are not preferred.

Based on these options, the present location of the curb cut is the optimal solution. Though the curb cut is within 60 feet of the intersection of Kentucky Avenue and Freedom Way, this intersection is extremely low volume and not expected to raise safety issues.

5.2 Truck Loading

Based on the District of Columbia Zoning Regulations for the C-2-A district, a 55-foot loading berth with 200-square-foot loading platform and one 20-foot service/delivery space is required for this residential building. The Applicant is requesting relief from the 55-foot loading berth regulation, with a proposal to provide a 30-foot loading berth with 200 square foot loading platform. The loading berth, platform, and service/delivery spaces are proposed to be located on Freedom Way. Both the proposed loading berth and platform are at grade, flush with Freedom Way. Building management intends to schedule move in and move out to avoid conflict. The building is primarily composed of one-bedroom and efficiency units, some residences having two bedrooms. Such two-bedroom units typically require a 22- to 24-foot truck which would adequately fit in a 30-foot loading dock. Based on the loading needs of these residences and the limited quantity of two-bedroom units, a 30-foot loading dock will adequately serve the needs of the proposed development.

Trucks currently cannot navigate the sharp turn at the southern end of the alley. The Applicant will widen the alley into their private property to allow truck access for loading. The attached Exhibits 2 and 3 illustrate the necessary truck maneuvers required for a 24-foot "UHaul" truck to access the loading dock. The truck may enter Freedom Way at Potomac Avenue in the north, back into the loading berth, and pull out of Freedom Way at Kentucky Avenue. A truck will not need to back across public space.

5.3 Trash Collection Access

Presently, DC Department of Public Works trash collection trucks cannot navigate the sharp turn at the southern end of the alley. Trucks must make a difficult U-turn north of this point and drive the wrong way out the alley. By widening the alley onto their property, the Applicant allows DPW trash trucks and private trash collection trucks to proceed through the alley. The attached Exhibit 1 illustrates how a 30-foot trash truck can turn the corner at the southern end of Freedom Way. This enables the truck to enter Freedom Way at Potomac Avenue in the north, access the trash dumpster, and exit at Kentucky Avenue in the south. The truck will not need to back across public space.

6. Parking

The 30 proposed parking spaces on site are located in the parking garage and in surface spaces, with both accessible from Freedom Way, as shown in Figure F Site Access.

The District of Columbia Zoning Regulations for a C-2-A district require one parking space for every two units in a residential building. Therefore, this 82-unit building requires 41 parking spaces. The Applicant is requesting a relief of 11 parking spaces so that the building may only

provide 30 parking spaces. The proposed development will include 28 covered and secure bicycle parking spaces, which is eight more than the requirement of one bicycle space per three units.

6.1 Parking Demand

The proposed development is expected to generate little parking demand, based on land use, development density, transit availability and convenience, bicycle and pedestrian facility availability, and resident demographics. The following factors contribute to the expected low parking rate:

- The proposed building is close to numerous transit facilities including one Metrorail station, 11 bus stops, and one Capital Bikeshare Station within ¼ mile of the site, as described in section 4, Transit Service.
- Residents have excellent access to carshare services. The proposed building is within a reasonable walking distance of four zipcar vehicles and, as discussed in the Transportation Demand Management Plan, the Applicant will pursue having an additional zipcar vehicle located on site. Additionally, car2go vehicles, which do not have designated spaces, are regularly available within a short walk.
- Based on 2011 American Community Survey data for the nearest three census tracts, 33% of residents in the neighborhood do not have a vehicle available and 66% commute via an alternative to a single-occupancy vehicle, such as public transit, bicycling, walking, or telecommuting.
- The proposed site has excellent bicycle and pedestrian facility access and connectivity, as described in section 3, Bicycle & Pedestrian Facilities.
- The proposed residential building will target residents seeking an urban, “car-light” lifestyle, including the elderly who may be incapable of or uncomfortable with driving, and young adults, who drive less than prior generations.
 - In 2009, 16 to 34 year olds drove 23% less, biked 24% more, and walked 16% more than in 2001, based on a 2012 study by the Frontier Group and U.S. PIRG Education Fund. The trend is expected to continue given increasing fuel costs, better transit options, and a growing interest in the urban lifestyle.
 - In the NoMa neighborhood of DC where several residential buildings were recently constructed, a residential survey conducted by the NoMa Business Improvement District (BID), found that only 18% of residents commute by personal vehicle. Contrasting that, 57% of residents still own a car, with 71% of those parking their car in their residential building. It is likely that this phenomenon resulted from a combination of over-building parking facilities in the neighborhood and the higher than average incomes reported by the residents.
- Transportation Demand Management (TDM) strategies, which will be described in section 7, Transportation Demand Management.

Existing parking policy is based on land use and travel demand characteristics from 1958, when urban planners valued reducing on-street parking in favor of off-street parking. Since that time, current urban planning principles have shifted such that on-street parking is acceptable as part of urban life and beneficial for traffic calming. The Zoning Commission is currently conducting

a review of the existing zoning regulations and developing new regulations better aligned with current best practices in planning, including emphasizing transit, walking, and bicycling, particularly in urban areas such as the area surrounding the proposed site. The proposed zoning regulations for this project location recommend removal of the parking minimum due to proximity to Metro.

6.2 Existing On-Street Parking Availability

To determine and document on-street parking supply in the vicinity of the site, an on-street parking inventory was conducted. The inventory considered spaces within a reasonable and convenient walking distance of the site. The capacity of each block was determined by the number of cars parked and empty spaces during a near-capacity parking period or, on blocks which did not have a near-capacity parking period, by assuming each parallel parking space is 20 feet long.

Parking on almost all blocks has a two-hour limit from 7 AM to 6 30 PM from Monday through Friday, with Zone 6 Residential Permit Parking (RPP) holders excepted. Parking on Pennsylvania Avenue is prohibited Monday through Friday from 7 AM to 9 30 AM on the north side and from 4 PM to 6 30 PM on the south side. Some metered one-hour parking is provided on the 1400 block of Pennsylvania Avenue. Unmetered one-hour parking is also provided on 15th Street south of Pennsylvania Avenue adjacent to commercial properties.

Parking inventory was performed on two weekday (Tuesday – Thursday) mid-day periods (12 – 2 PM), two weekday evenings (7 – 9 PM), one weekday overnight period (11 PM – 2 AM), two weekend afternoons (2 – 4 PM), two weekend evenings (7 – 9 PM), and three weekend overnight periods (11 PM – 2 AM).

The attached Figures G illustrates the existing parking capacity by block in the area surrounding the proposed site. Figures H.1 to H.6 show parking availability by spaces available on each block by time of day. Figures I.1 to I.6 show parking availability by percent availability on each block by time of day. Availability is averaged over multiple dates studied.

Midday and Afternoon Parking Availability

During the weekday midday and weekend afternoon periods observed, parking availability was high, particularly on the weekday.

Evening Parking Availability

On weekday and weekend evenings, over a dozen parking spaces are available on Kentucky Avenue on the same block as the proposed site. There is also significant availability on the surrounding streets.

Overnight Parking Availability

During the overnight periods observed, many blocks in the surrounding area had significant decreases in parking availability from the evening period. However, there were still an average of 8 spaces on the weekday and 12 spaces on the weekend available on Kentucky Avenue on the

same block as the proposed site. Approximately 60 spaces were available on the street within a 1-2 block walk of the proposed site during the weekend and weekday observation periods. Therefore, there is still significant on-street parking available for residents of the surrounding area of the proposed project.

Overall Parking Assessment

Based on the observed on-street parking occupancy and discussions with the Advisory Neighborhood Commission, it appears that the majority of vehicles parked on street belong to residents of the neighborhood. It does not appear that a significant volume of commuters are parking in the neighborhood to access their workplaces or Metrorail. The period of most concern within the community is for residential parking overnight. A relatively large quantity of available on-street parking spaces were observed overnight during the study periods. Based on this data, additional parking spaces are available on the street within a very short walk of the proposed development and thus should additional parked vehicles be generated by this development, there appears to be adequate on-street capacity to handle a modest increase.

6.3 Parking Mitigation

Further, as discussed in section 4, Transit Service, cars presently park in driveways along the north side of the 1500 block of Pennsylvania Avenue SE, blocking the pedestrian path to the Potomac Avenue Metrorail Station and other transit facilities. Converting this block face to full-time residential permit parking, if feasible, would provide the residents in these townhomes with convenient parking on the street in front of their homes rather than in the driveway and would add approximately 13 spaces, in addition to the 9 spaces occupied by the townhouse residents, immediately adjacent to the proposed development.

Additional on-street spaces could potentially be added to the street network by reducing parking restrictions near intersections which exceed current DDOT requirements (40 feet approaching intersections, 25 feet departing intersections, 10 feet from alleys, 5 feet from driveways). Removal of existing curb cuts at the proposed site also contributes to providing additional on-street spaces. The following locations were identified, as shown on the Figure J Potential Additional On-Street Parking Capacity.

- 1500 block of Pennsylvania Avenue, north side, 5 spaces
- 800 block of Kentucky Avenue, west side, 3 spaces
- 800 block of Kentucky Avenue, east side, 1 space
- 700 block of Kentucky Avenue, east side, 1 space
- 700 block of 16th Street, west side, 1 space
- 700 block of 16th Street, east side, 1 space
- 1600 block of Potomac Avenue, south side, 1-3 spaces

Additionally, on the west side of the 700 block of 15th Street it appears that three (3) additional parking spaces on the northern end and four (4) additional spaces on the southern end could be added by rerouting the B2 Metrobus. The existing route appears to have been established as a mitigation to the existing awkward circulation pattern for transit buses through the intersection.

of Potomac Avenue and Pennsylvania Avenue SE. A re-route would not decrease transit service to the area and is expected to be considered in the Potomac Avenue Study, as mentioned in section 4, Transit Service.

7. Safety

The Applicant requested crash reports from the District Department of Transportation, but did not receive them in time for submission with this Comprehensive Transportation Review.

8. Streetscape & Public Realm

In accordance with District of Columbia policy, the Applicant will rehabilitate the streetscape infrastructure between the curb and property lines, including sidewalks, pedestrian ramps, trees, tree boxes and bike racks. The Applicant will work closely with DDOT to ensure that the design of the public realm meets current standards and will substantially upgrade the appearance and functionality of the streetscape for public users needing to access the property or circulate around it.

Public Realm Manual

The District of Columbia's Public Realm Design Manual helps business owners, developers, and residents appropriately use the public space by setting forth the design elements and policies. The Applicant will utilize this manual for streetscape and public realm rehabilitations.

DDOT Design and Engineering Manual

The District of Columbia Department of Transportation's 2009 Design and Engineering Manual sets forth standards for project construction documents. The Applicant will utilize the manual for construction documents.

9. Transportation Demand Management Plan

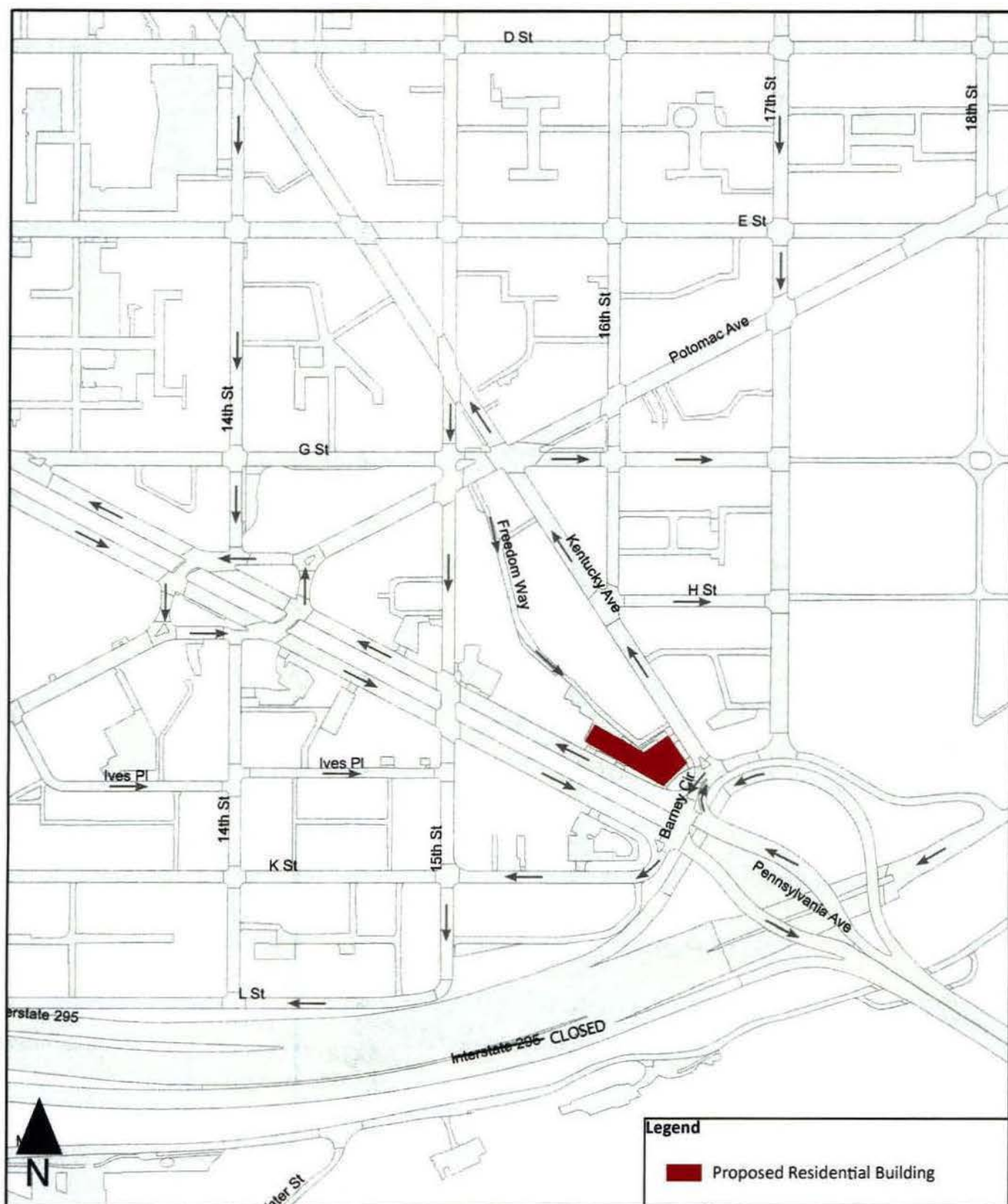
Transportation Demand Management (TDM) integrates programs, services, and physical elements to achieve higher rates of sustainable transportation use and reduce single-occupancy vehicle trips. TDM strategies promote use of public transit, bicycling, and walking, especially during peak travel periods.

The proposed development will meet all of the expected TDM measures as outlined in DDOT's 2010 Incorporation of Transportation Demand Management into the Development Review Process for developments requiring a variance and generating fewer than 100 vehicle trips during the peak hour, as described in the attached TDM plan. The Applicant will post all TDM commitments online, publicize availability, and allow the public to see what commitments have been promised.

Transportation Demand Management Plan

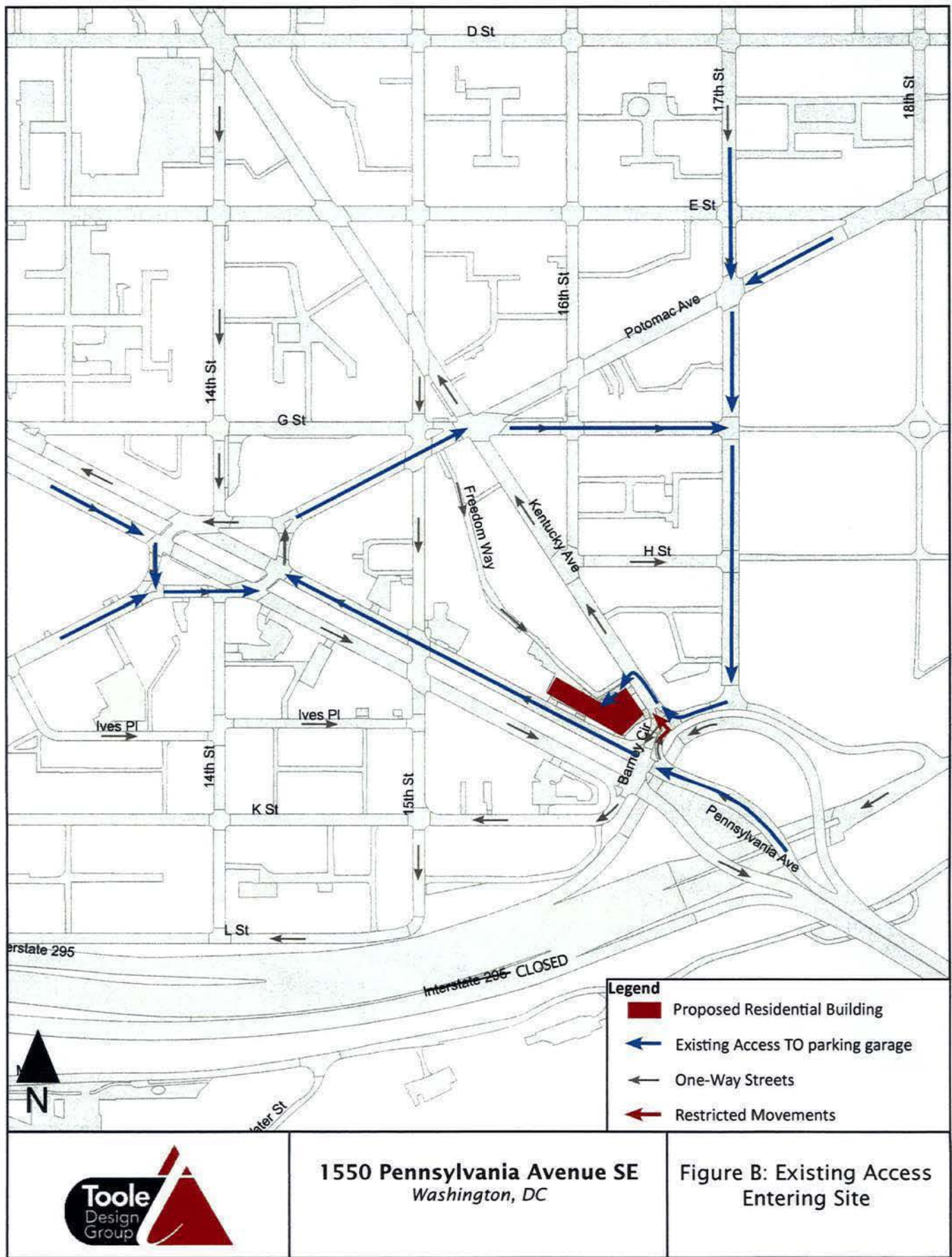
The Applicant shall establish a transportation demand management (TDM) program that includes the following

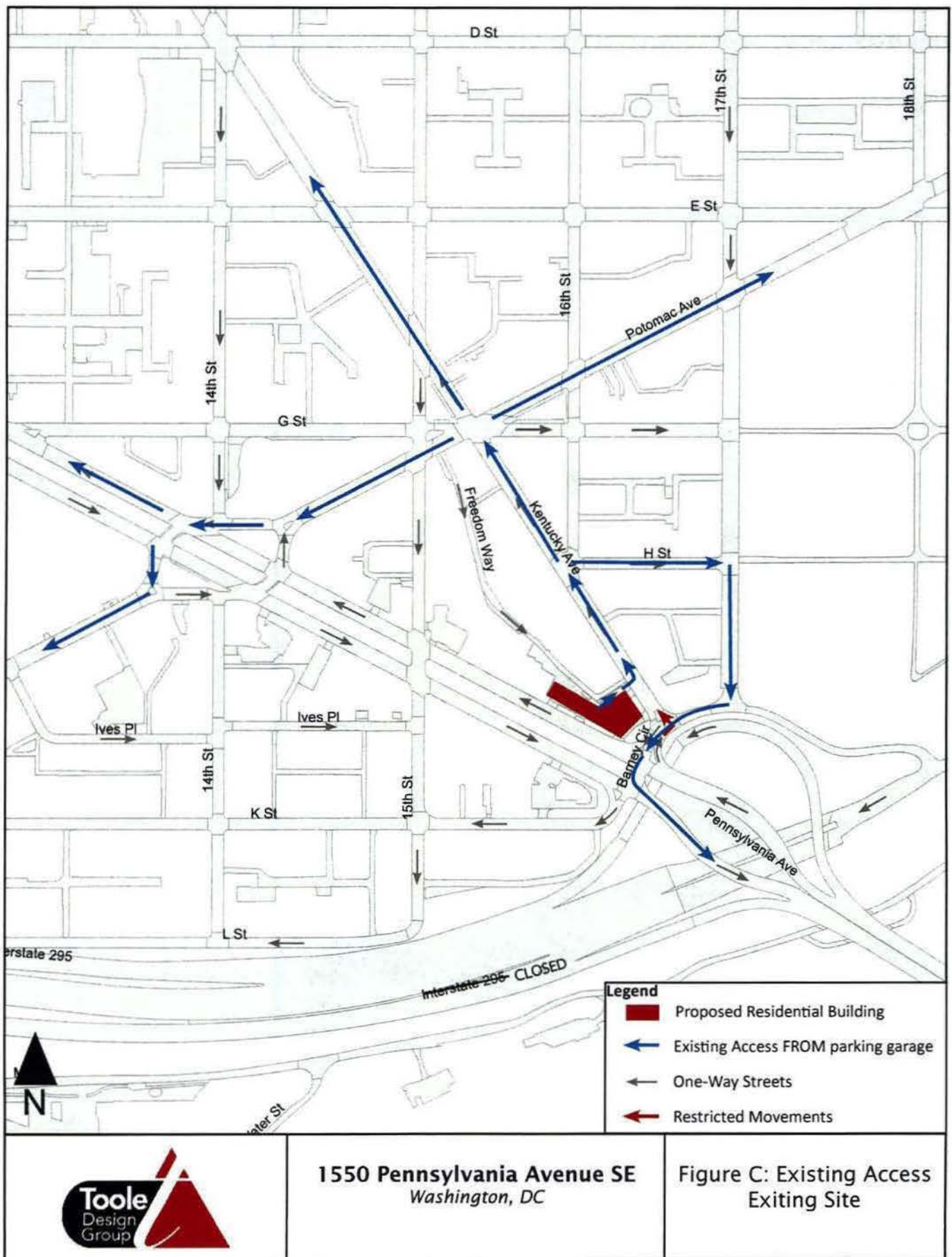
- 1 During construction, the Applicant will maintain or coordinate relocation of any existing bus stops
- 2 Significant bicycle parking will be provided on-site Bicycle parking for the residents will be provided on the ground floor or in the garage
- 3 The Applicant will unbundle all costs related to the parking spaces from the sales price or lease amount of each residential unit
- 4 The Applicant will designate a Transportation Management Coordinator who will expand internal marketing efforts for alternative transportation
- 5 The Applicant will designate a Loading Coordinator for the site to coordinate residential move-in/ move-out All residents shall be required to notify the Loading Coordinator of move-in/ move-out dates
- 6 The property website will include links to CommuterConnections.com and goDCgo.com
- 7 The building shall manage parking to reflect the urban nature of the District of Columbia, with parking located on the alley and in an underground facility accessible off the alley
- 8 No truck idling shall be permitted
- 9 The Applicant will coordinate with a car sharing service to determine the feasibility of locating a car sharing vehicle on site The final determination on whether and how many car sharing vehicles will be located in the adjacent public space will be made by the car sharing service and DDOT.
- 10 The Applicant will provide to each initial residential lessee or purchaser, either (i) a SmarTrip card with a value of \$75, or (ii) a one-year membership to Capital Bikeshare or a subsidy to a car sharing service (valued at \$75)

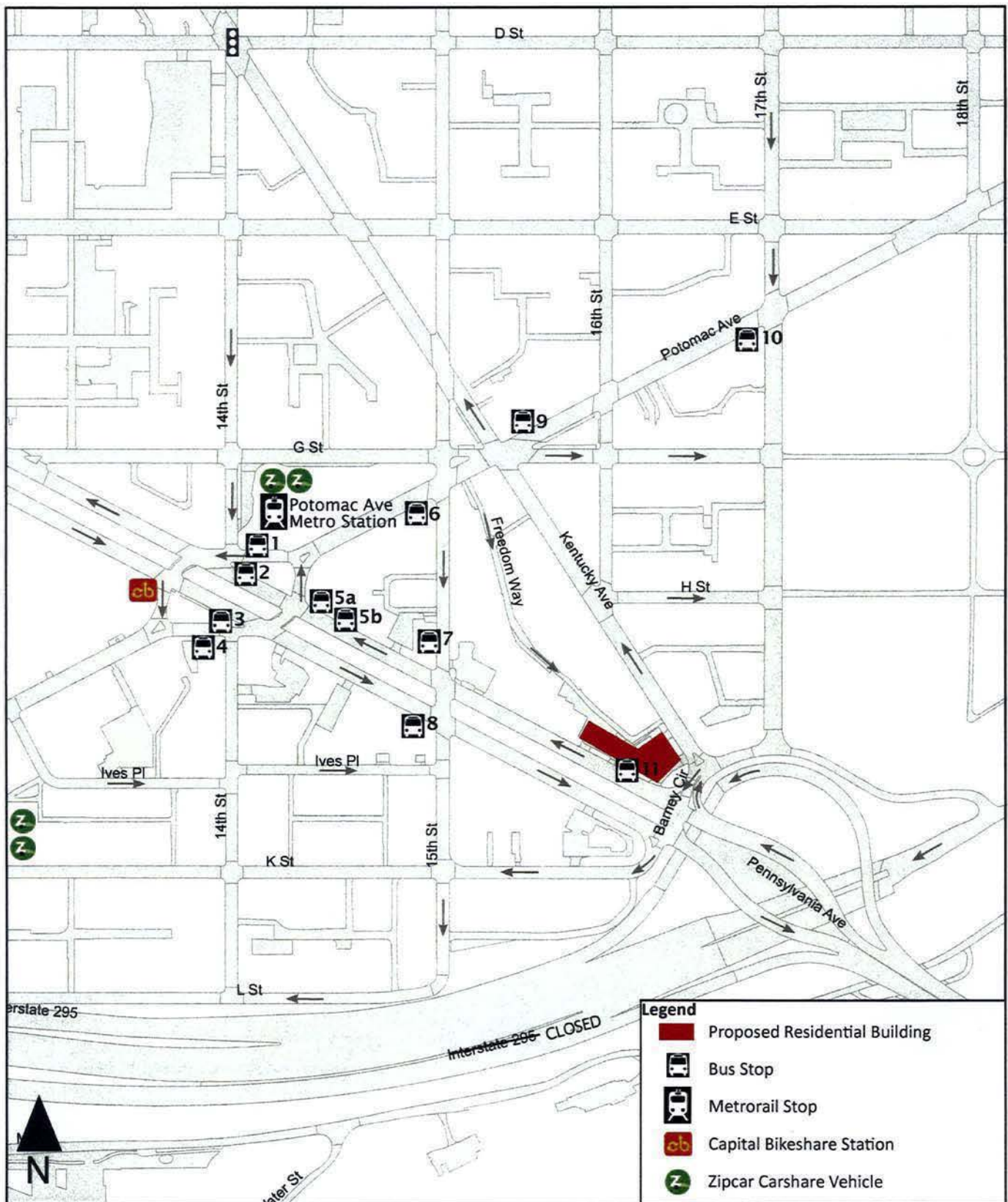


1550 Pennsylvania Avenue SE
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Figure A: Site Location

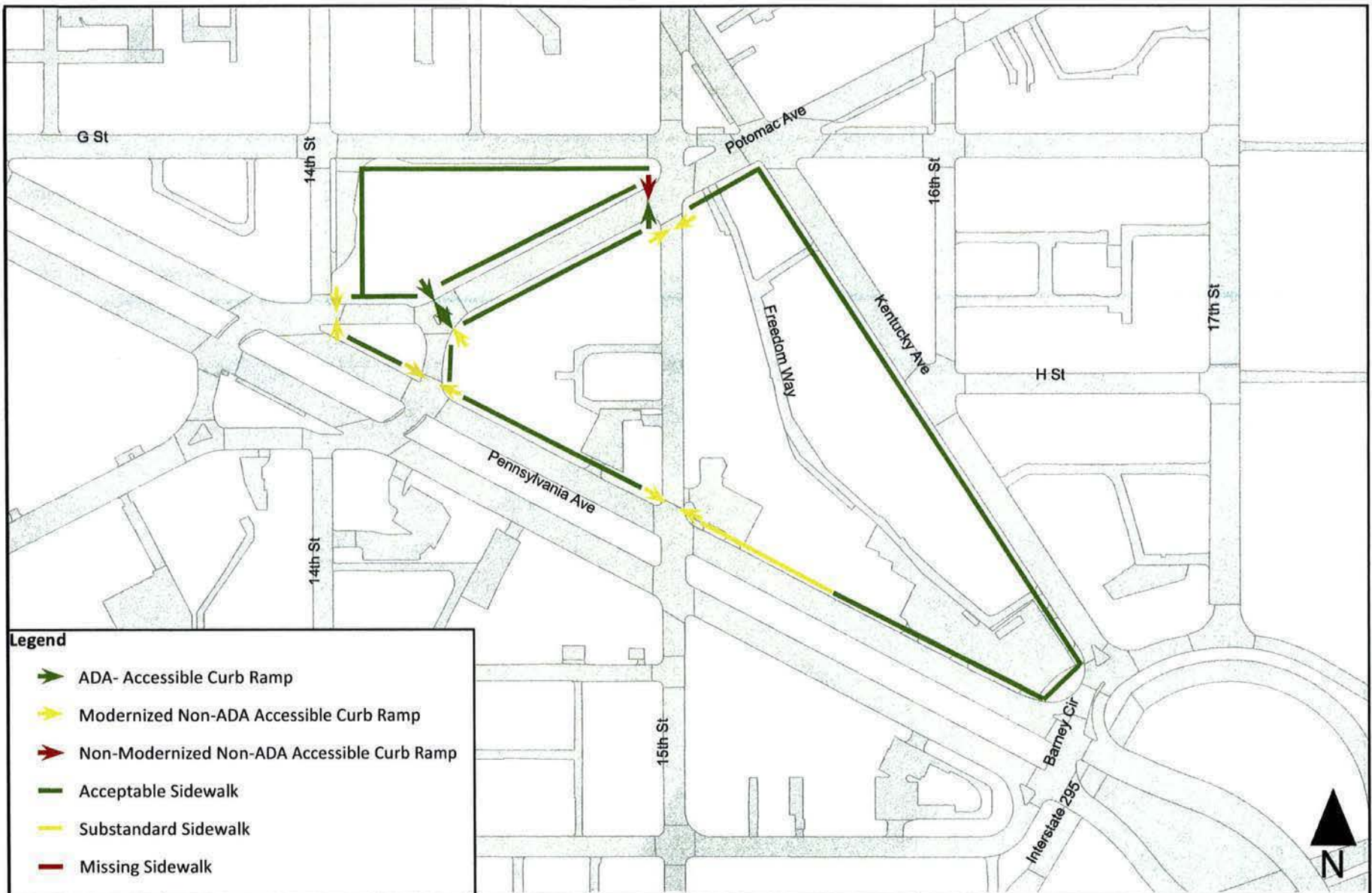






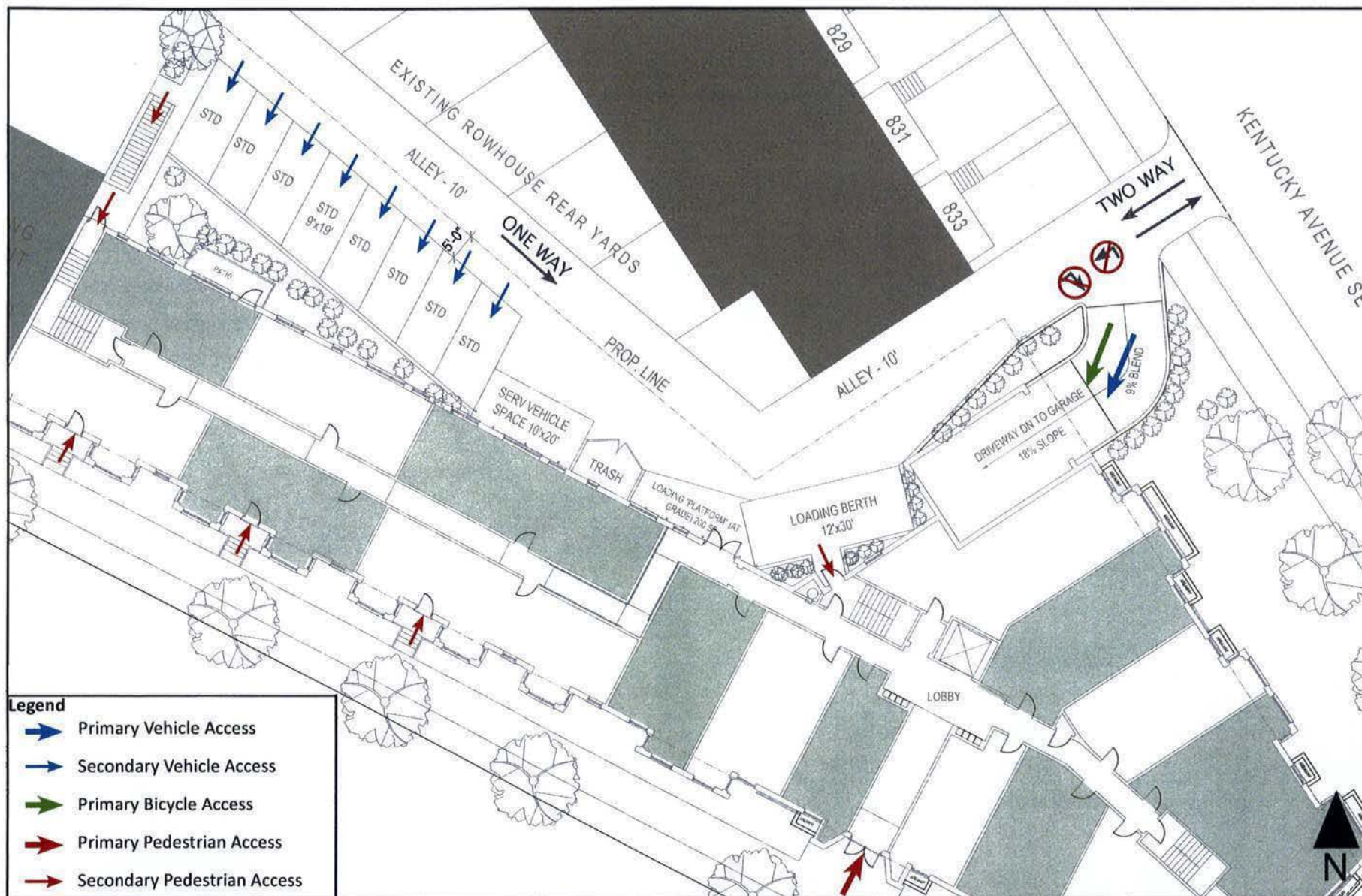
1550 Pennsylvania Avenue SE
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Figure D: Transit Study Locations



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Figure E: Quality of Pedestrian Facilities to Access Transit

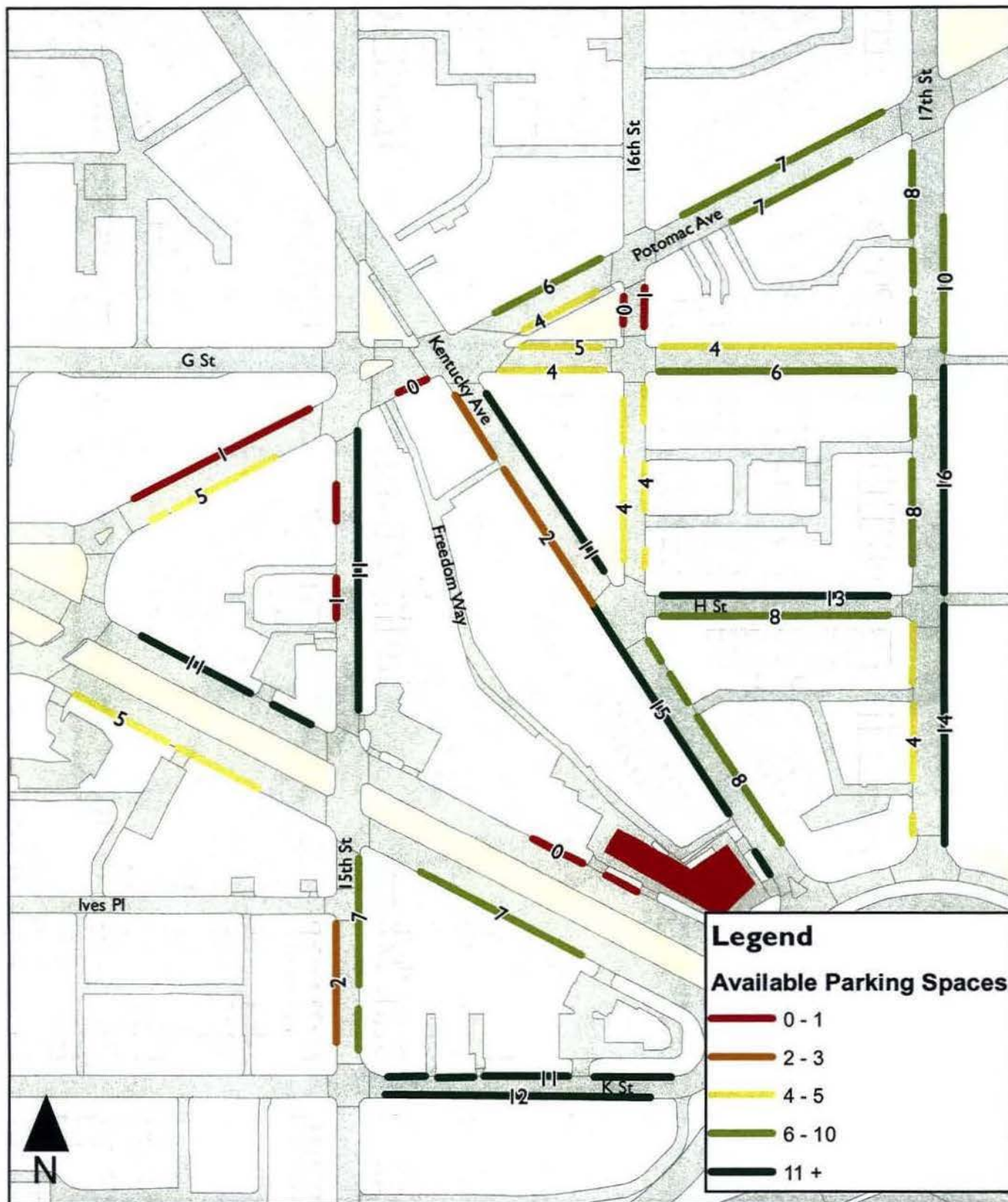


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Figure F: Site Access

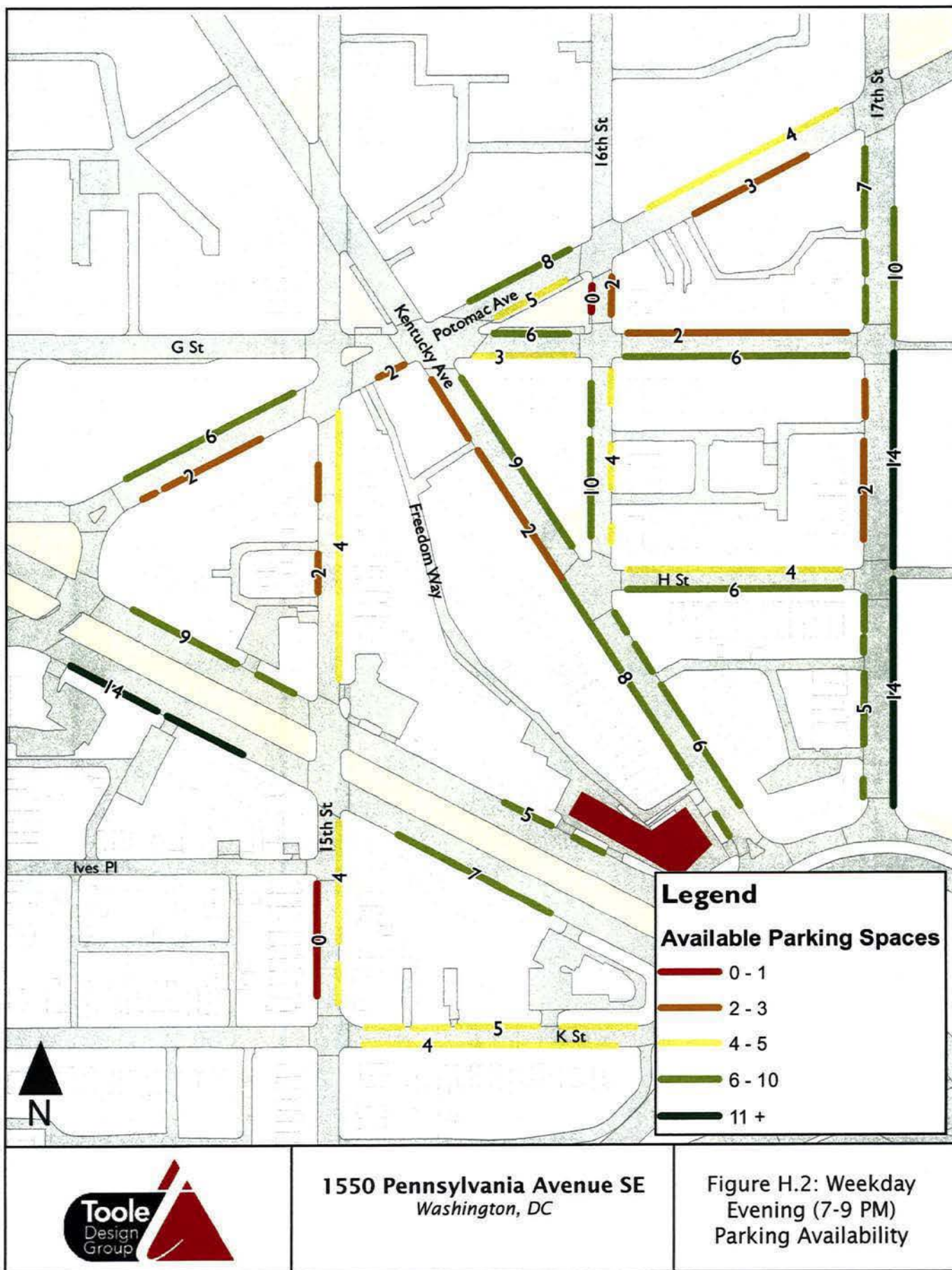


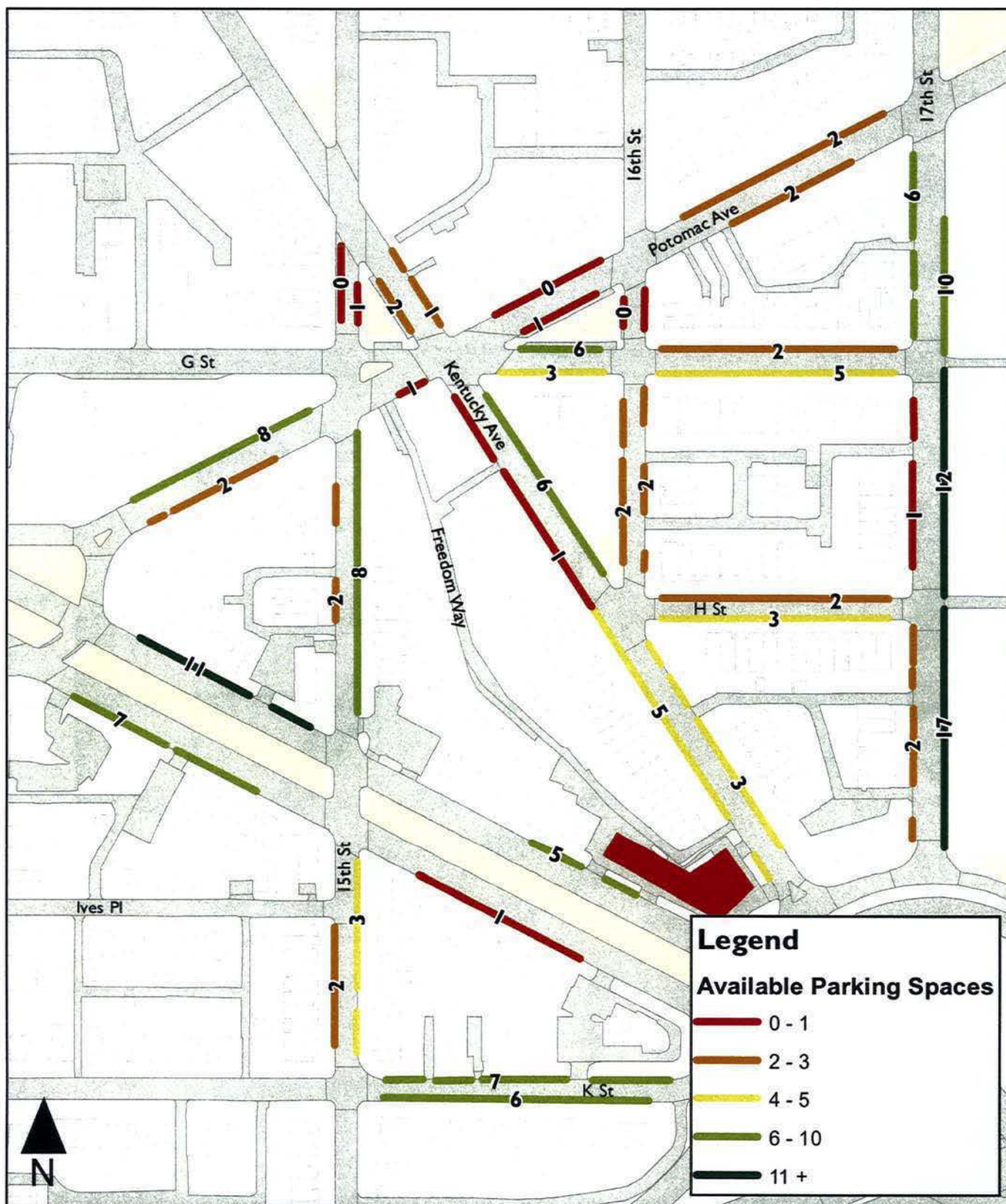
Figure G: Existing On-Street Parking Capacity



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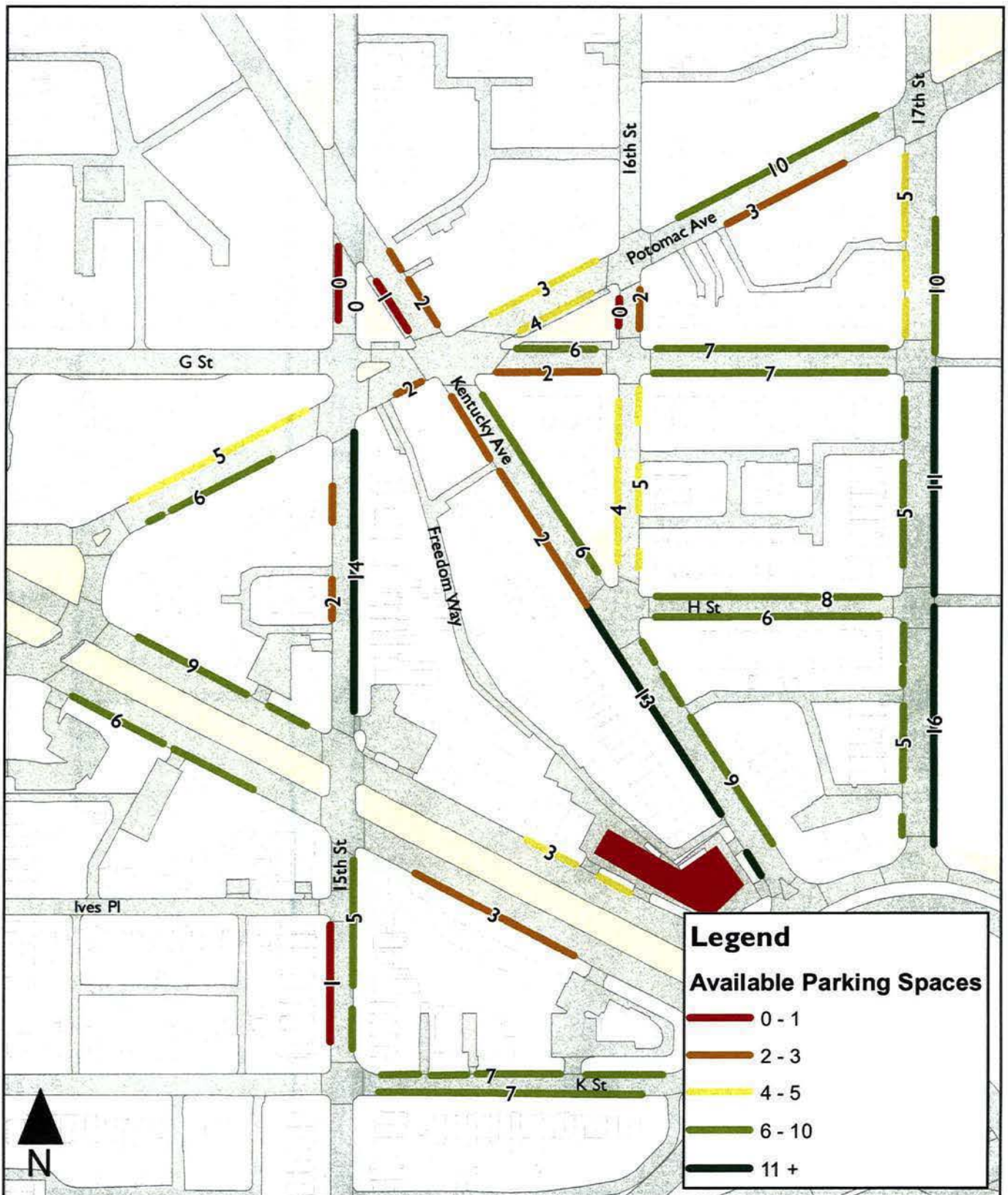
Figure H.1: Weekday
Midday (12-2 PM)
Parking Availability





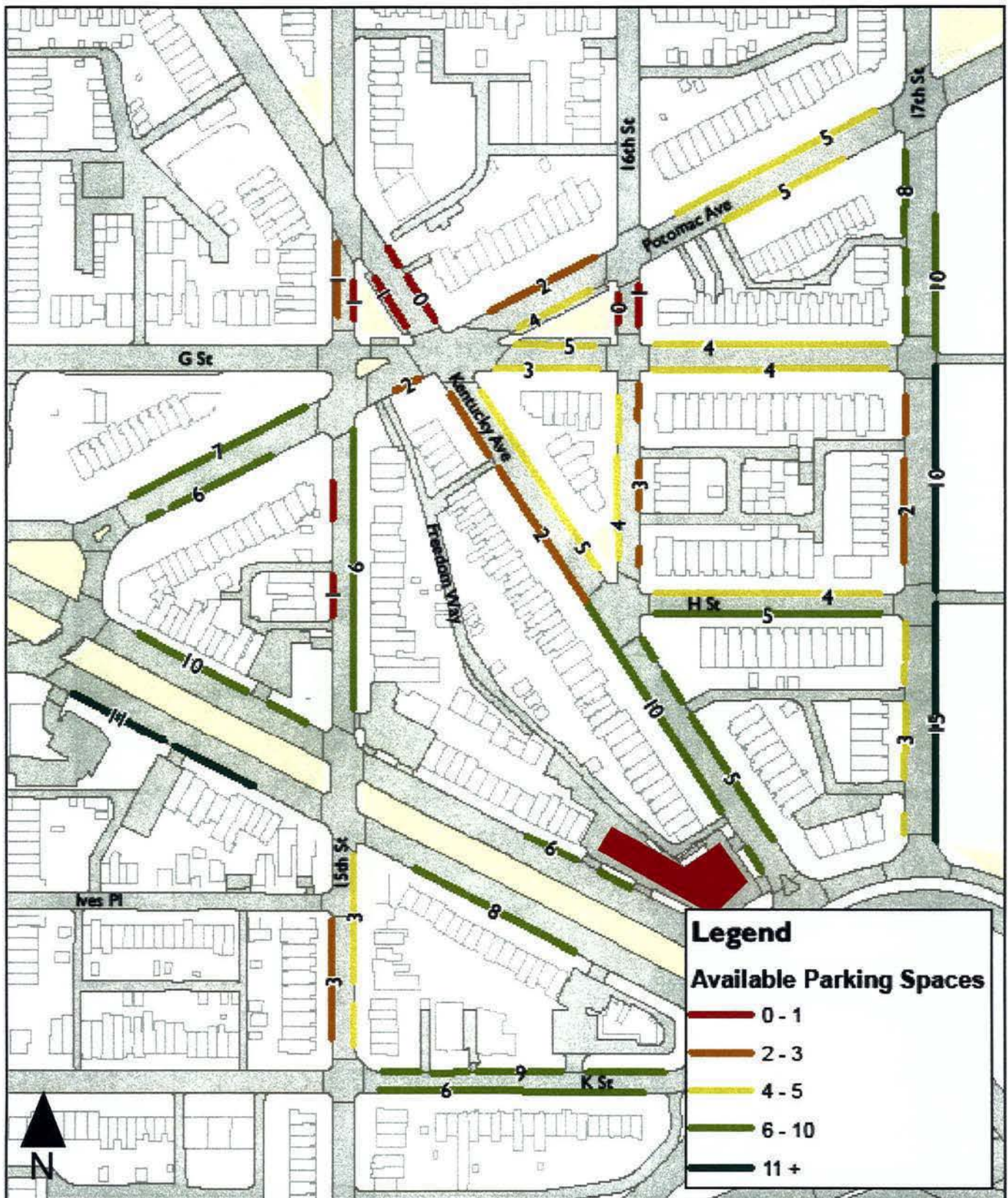
1550 Pennsylvania Avenue SE
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Figure H.3: Weekday Overnight (11 PM - 2 AM) Parking Availability



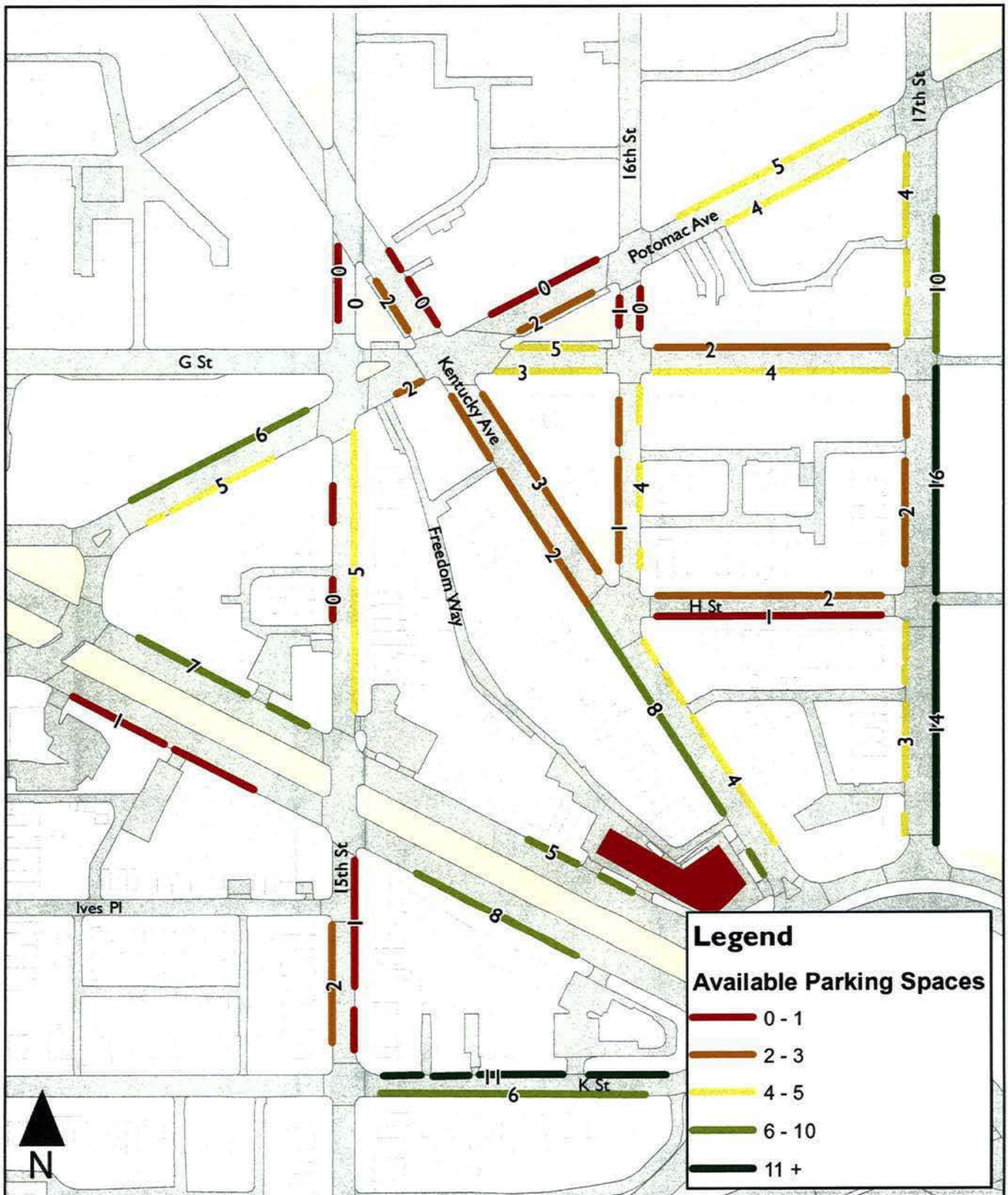
1550 Pennsylvania Avenue SE
Washington, DC

**Figure H.4: Weekend
Afternoon (2-4 PM)
Parking Availability**



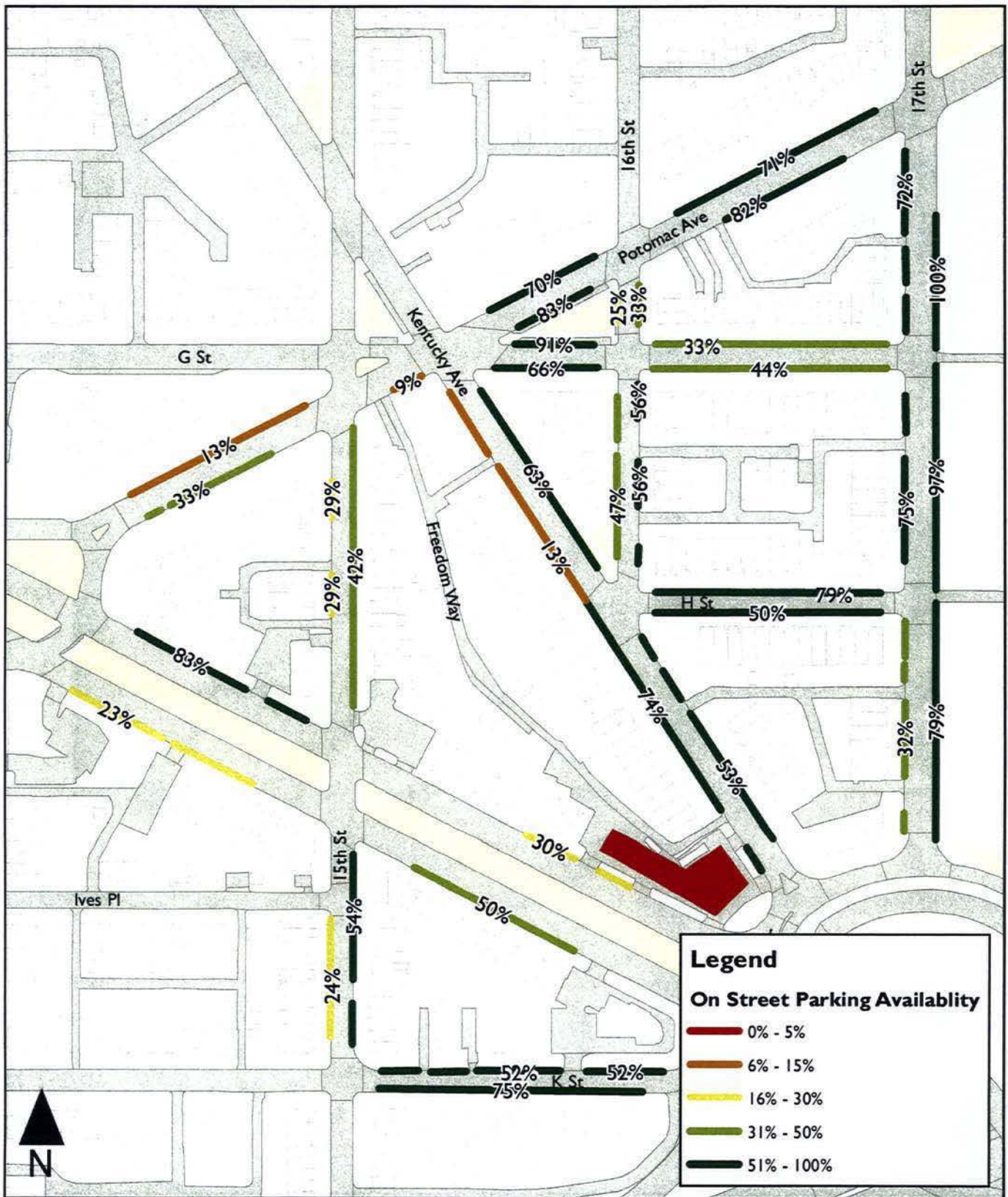
1550 Pennsylvania Avenue SE
Washington, DC

Figure H.5: Weekend Evening (7-9 PM) Parking Availability



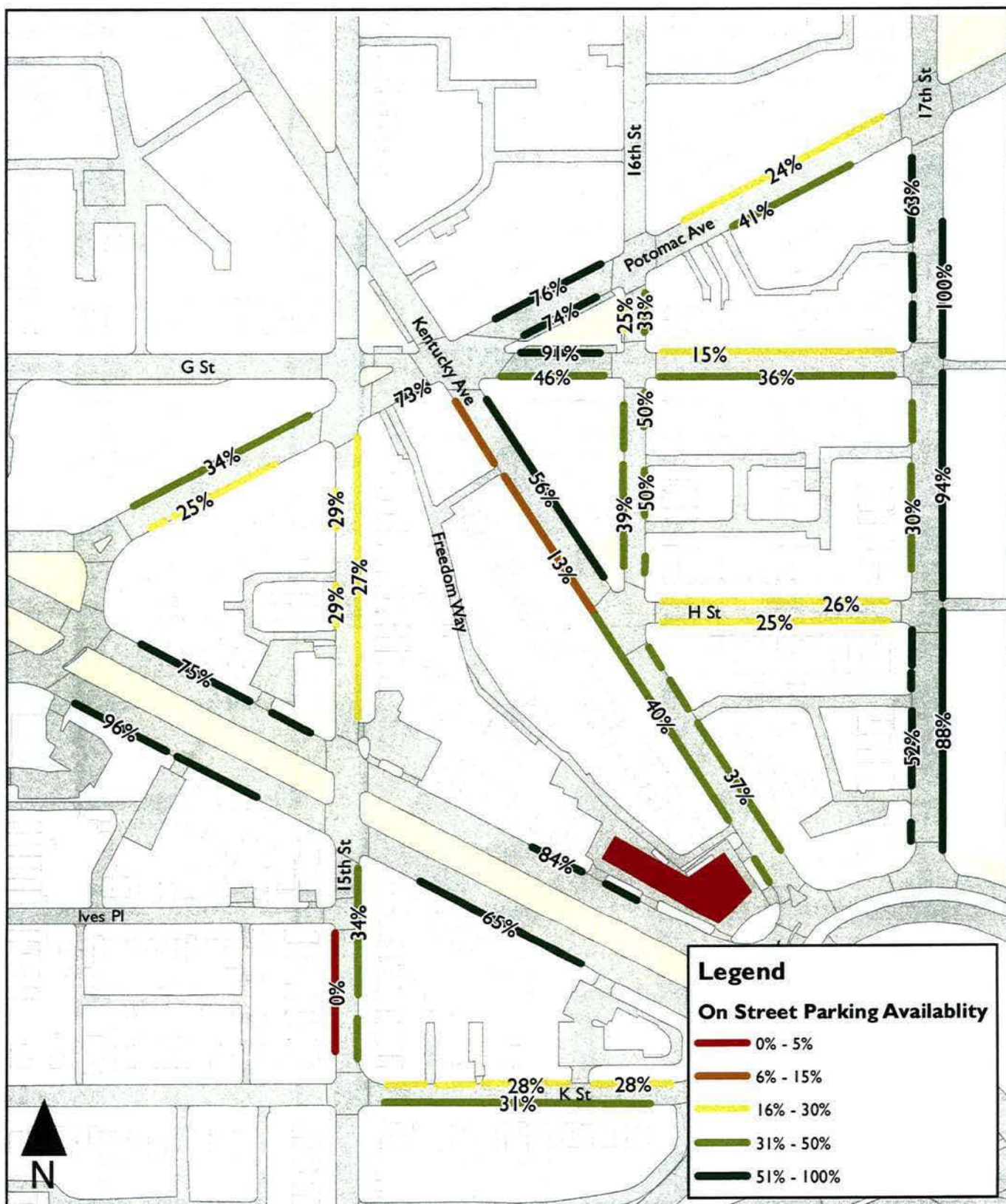
1550 Pennsylvania Avenue SE
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Figure H.6: Weekend Overnight (11 PM - 2 AM) Parking Availability



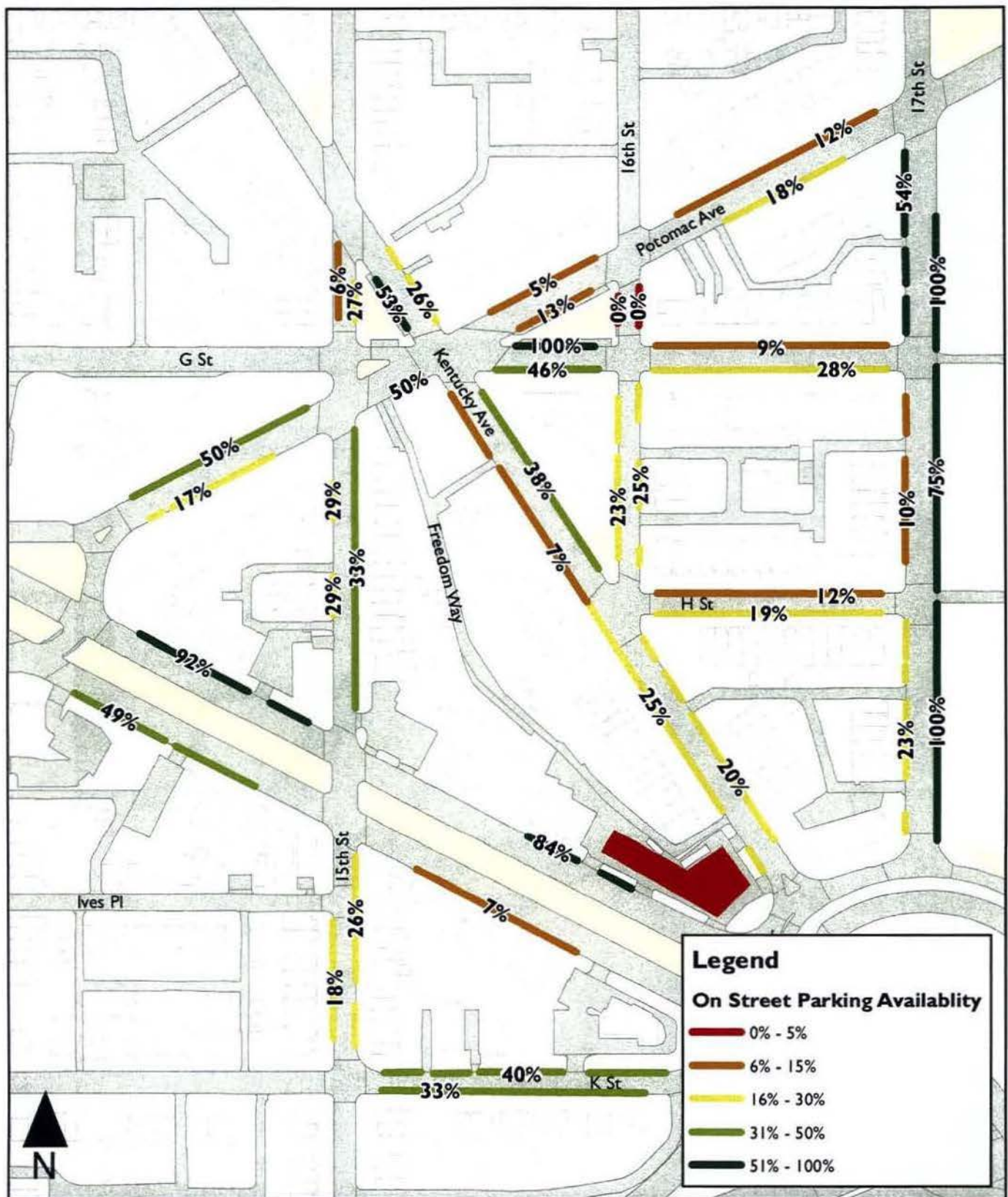
1550 Pennsylvania Avenue SE
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Figure I.1: Weekday
 Midday (12-2 PM)
 Parking Availability Rate



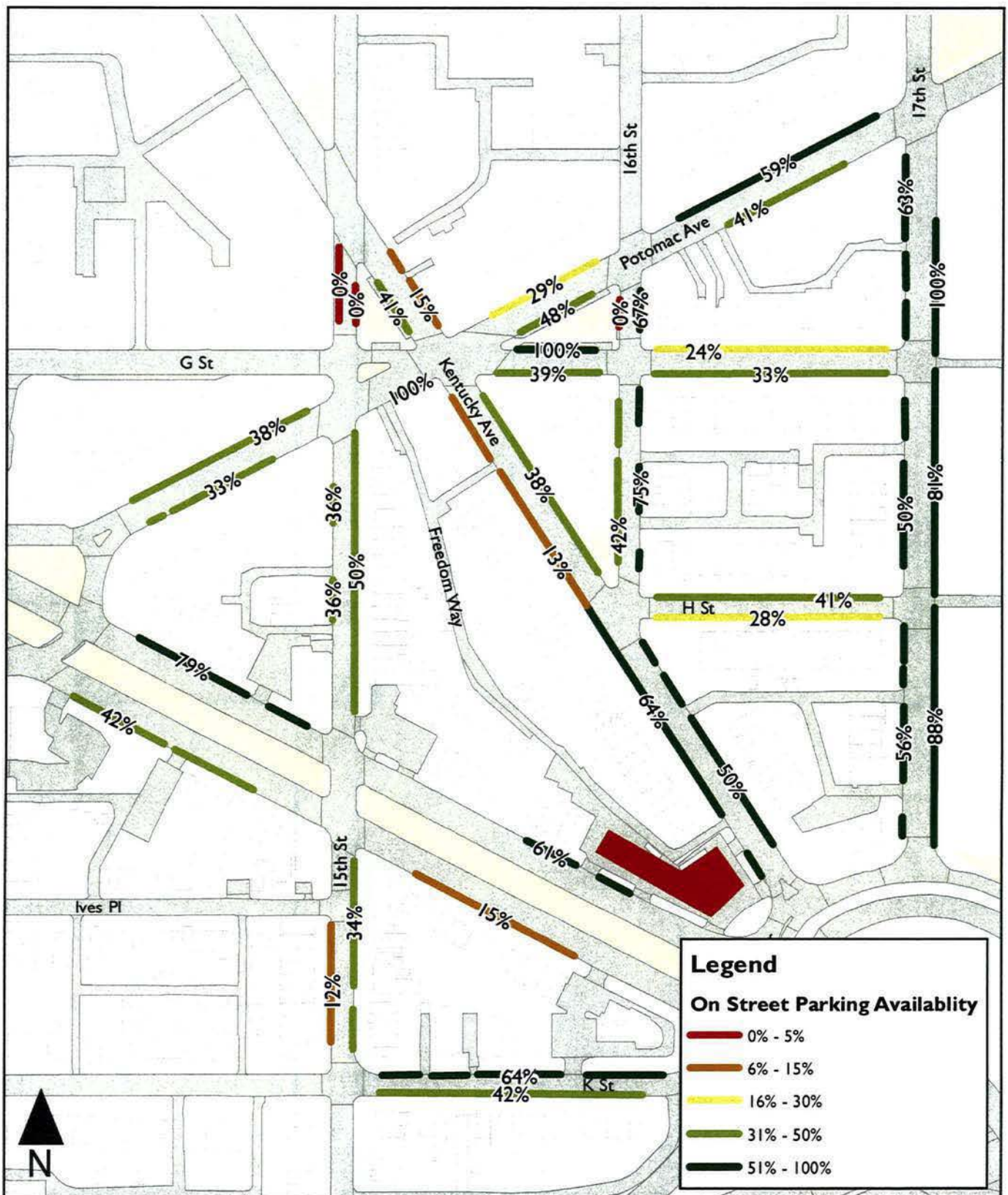
1550 Pennsylvania Avenue SE
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Figure I.2: Weekday
Evening (7-9 PM)
Parking Availability Rate



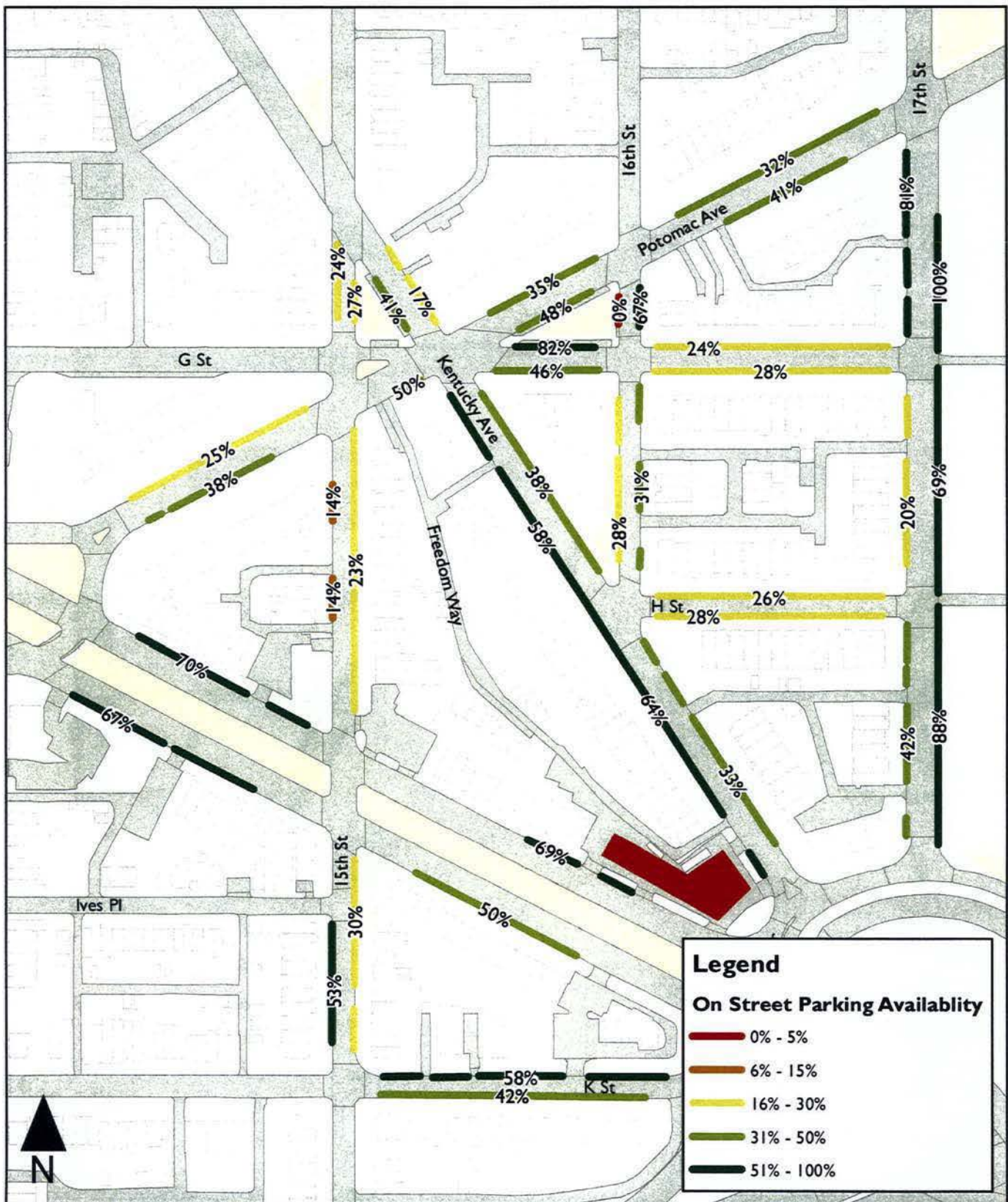
1550 Pennsylvania Avenue SE
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Figure I.3: Weekday
Overnight (11 PM - 2 AM)
Parking Availability Rate



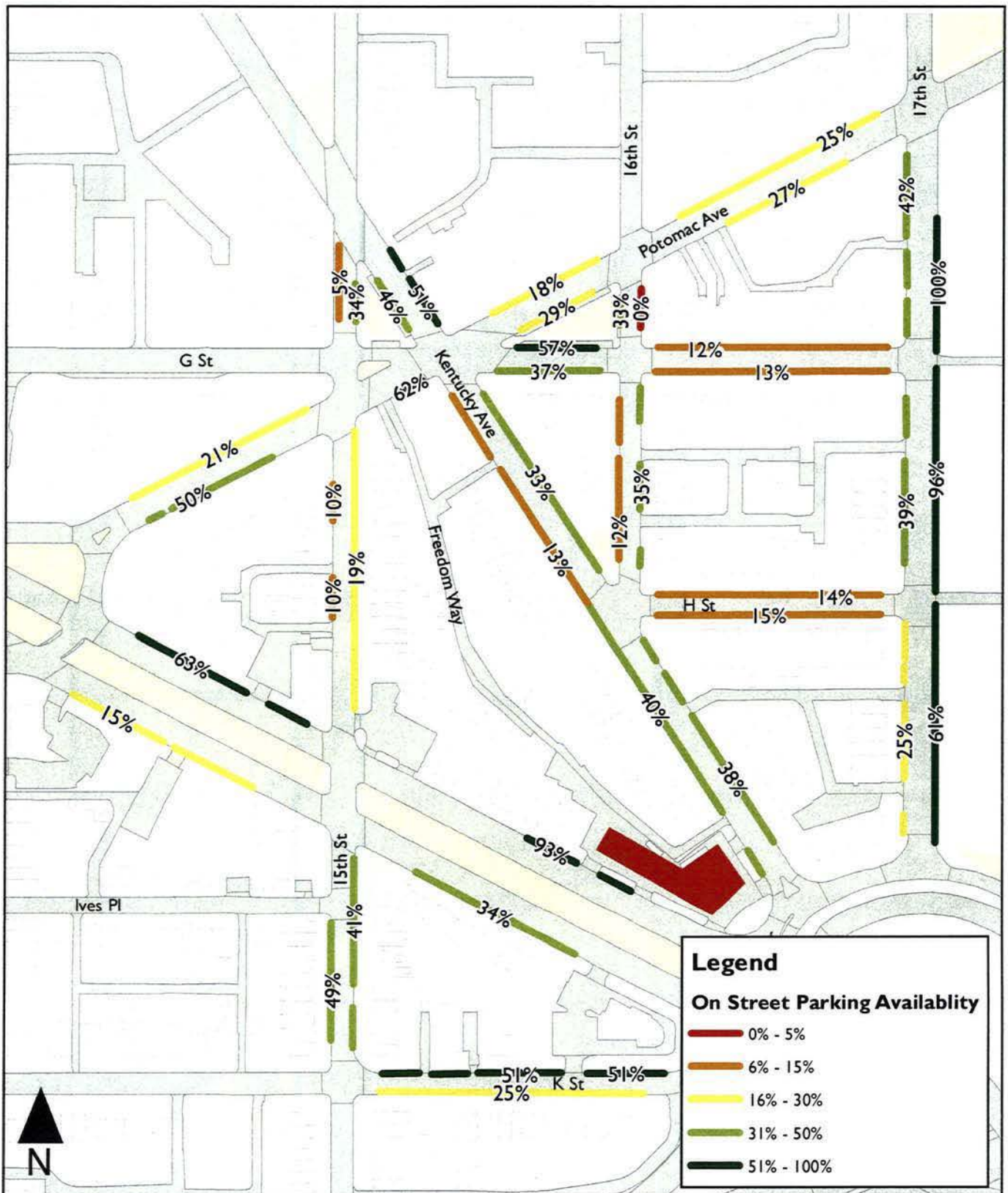
1550 Pennsylvania Avenue SE
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**Figure I.4: Weekend
 Afternoon (2-4 PM)
 Parking Availability Rate**



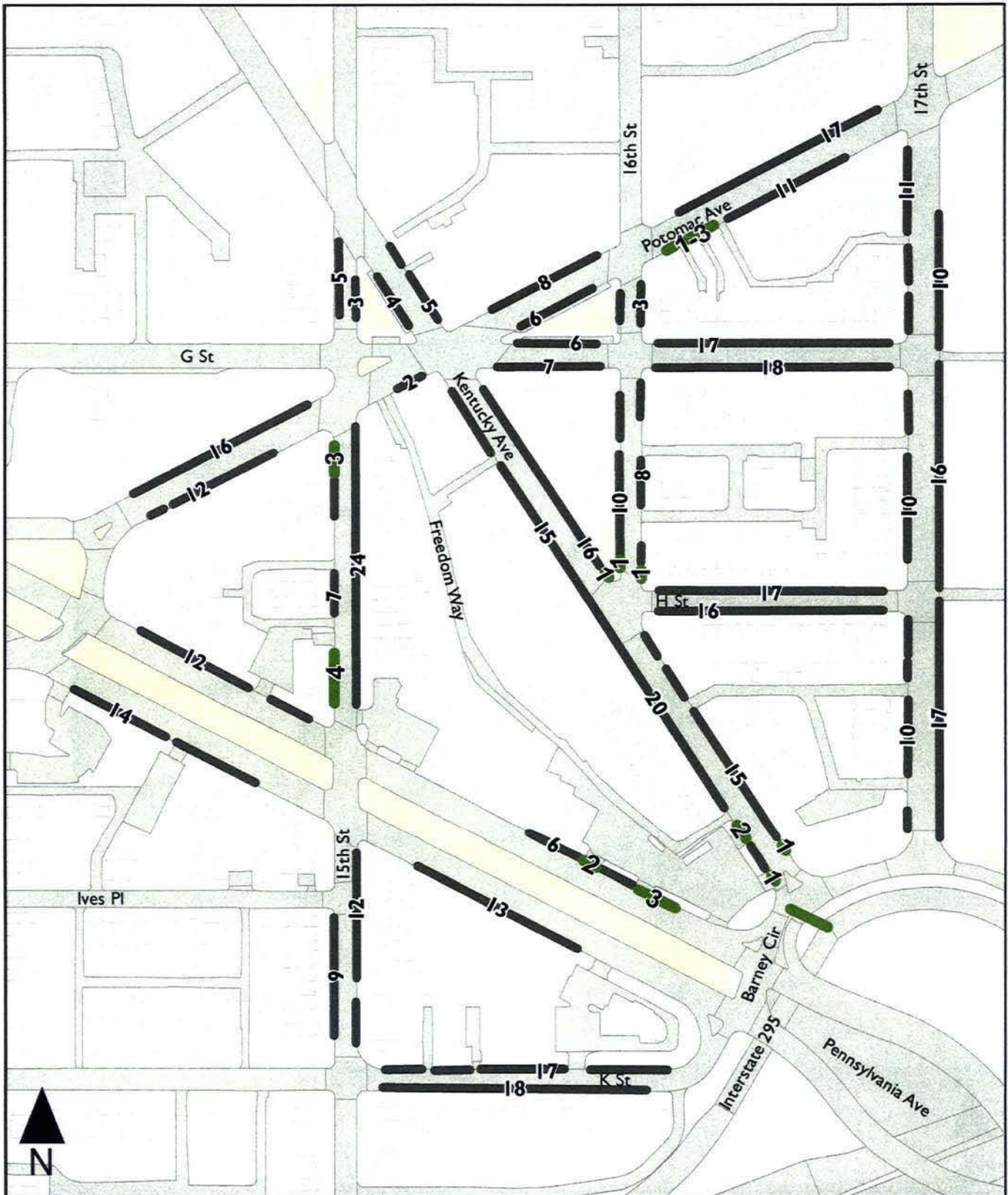
1550 Pennsylvania Avenue SE
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Figure I.5: Weekend
Evening (7-9 PM)
Parking Availability Rate



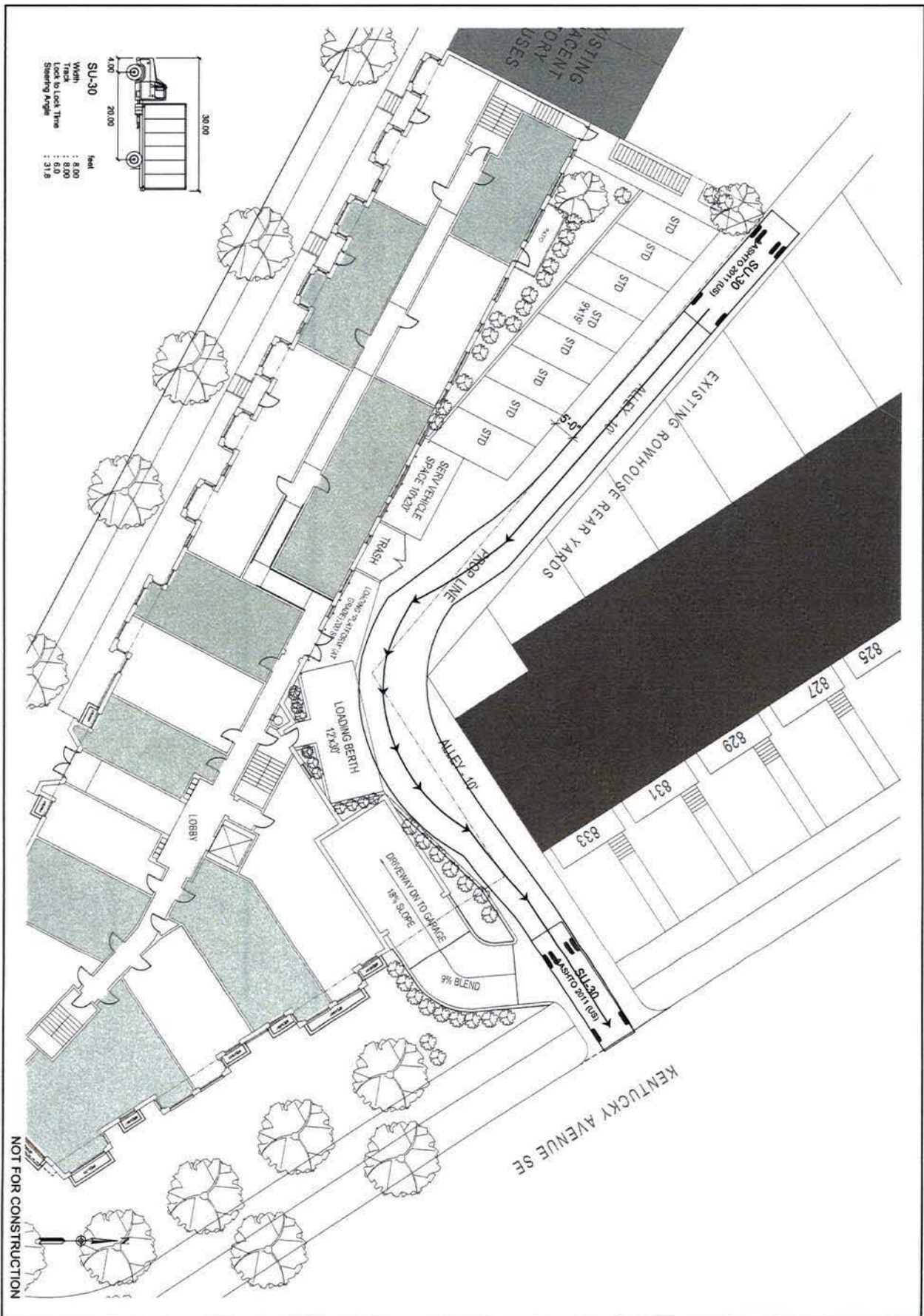
1550 Pennsylvania Avenue SE
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Figure I.6: Weekend Overnight (11 PM - 2 AM) Parking Availability Rate



1550 Pennsylvania Avenue SE
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Figure J: Potential
Additional On-Street
Parking Capacity



SHEET NUMBER
 1 of 7

EX.1
 DRAWING NUMBER

AUTOTURN SU

REVIEW

MARCH 02, 2013

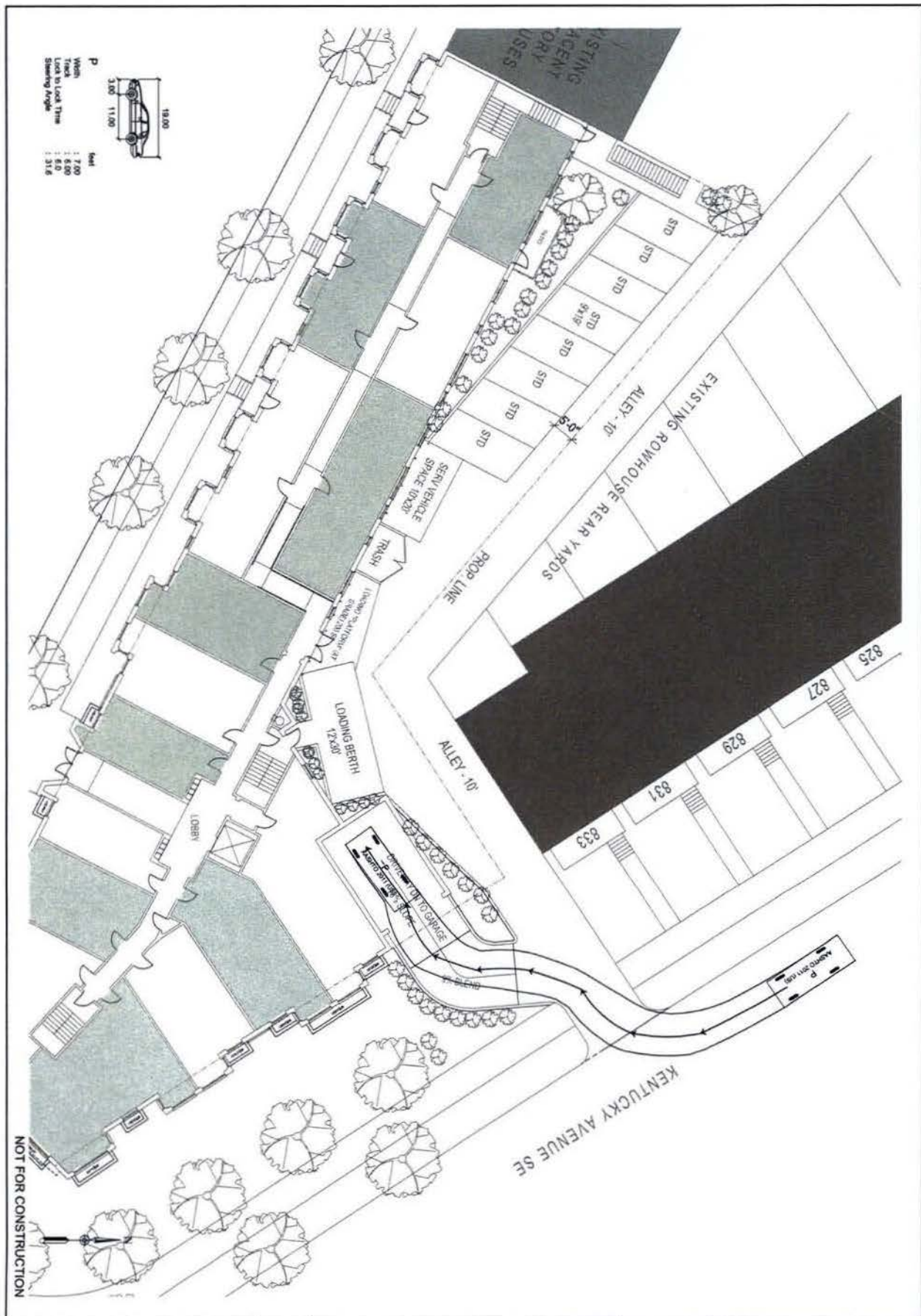
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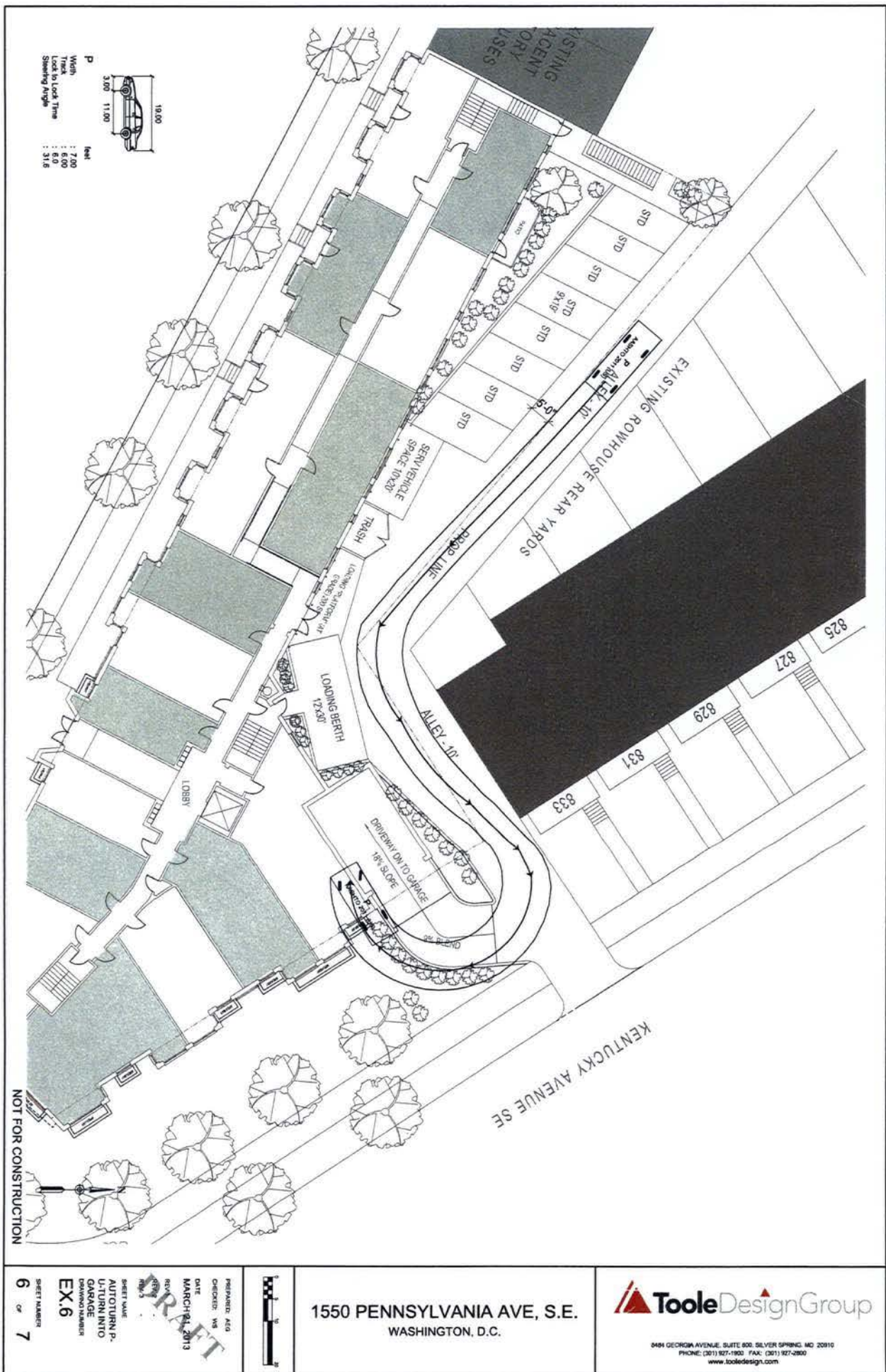
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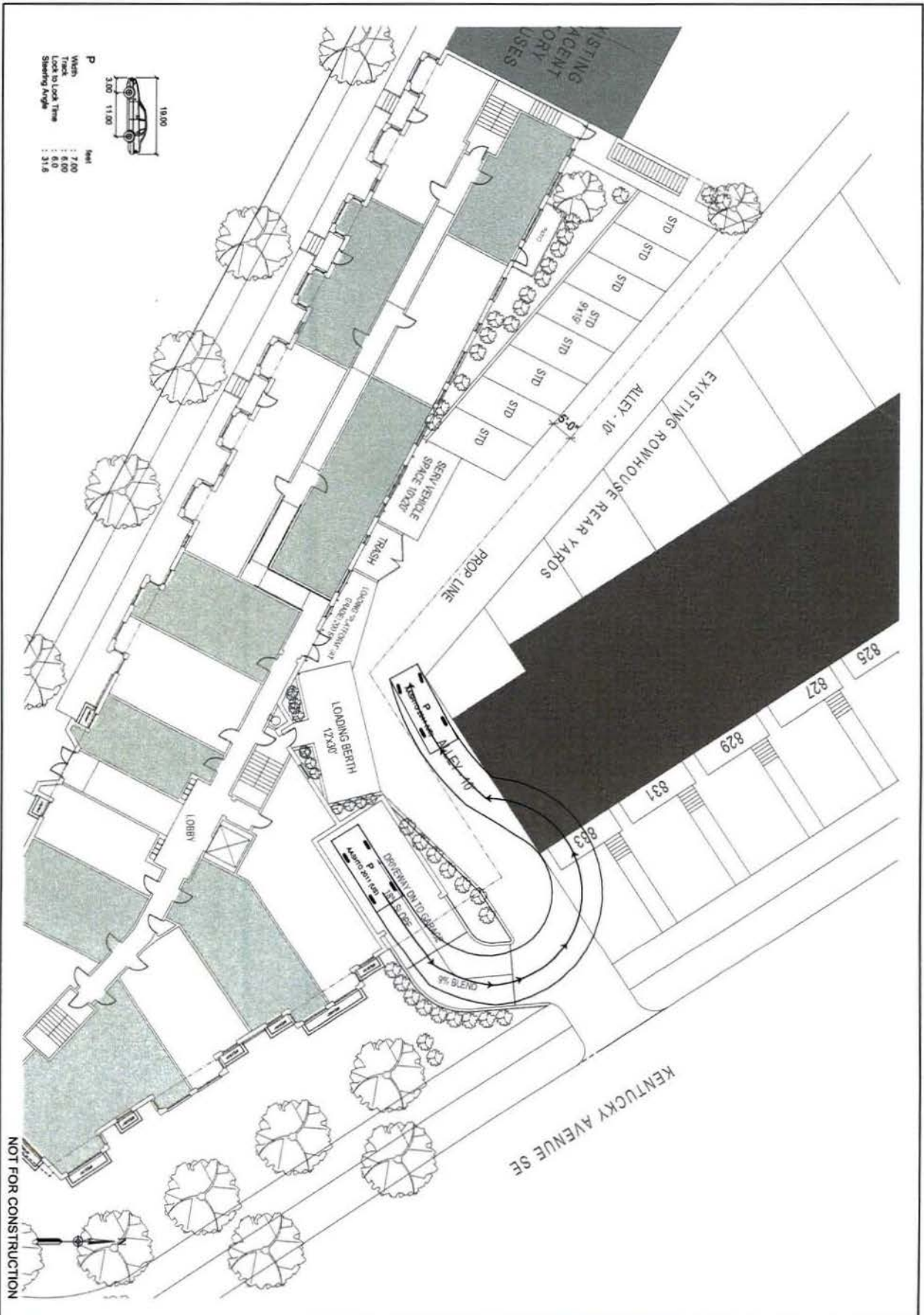




PREPARED: AG
 DATE: MARCH 21, 2013
 CHECKED: MS
 REVIEWED: MS
 SHEET NAME: AUTOTURN P-UTURN INTO GARAGE
 DRAWING NUMBER: EX.6
 SHEET NUMBER: 6 of 7

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PREPARED: AEG
 CHECKED: VAS
 DATE: MARCH 21, 2013
 DRAWN BY: S
 SHEET NAME: AUTOTURN P- U-TURN OUT OF GARAGE
 EX. 7
 SHEET NUMBER: 7 OF 7

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