

TRAFFIC IMPACT ASSESSMENT - PLANNED UNIT DEVELOPMENT APPLICATION FOR KELSEY GARDENS RESIDENTIAL DEVELOPMENT, NORTHWEST, WASHINGTON, D.C.

(Application No. 08-04)

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November 20, 2008

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1.0 INTRODUCTION

1.1 Study Background and Purpose

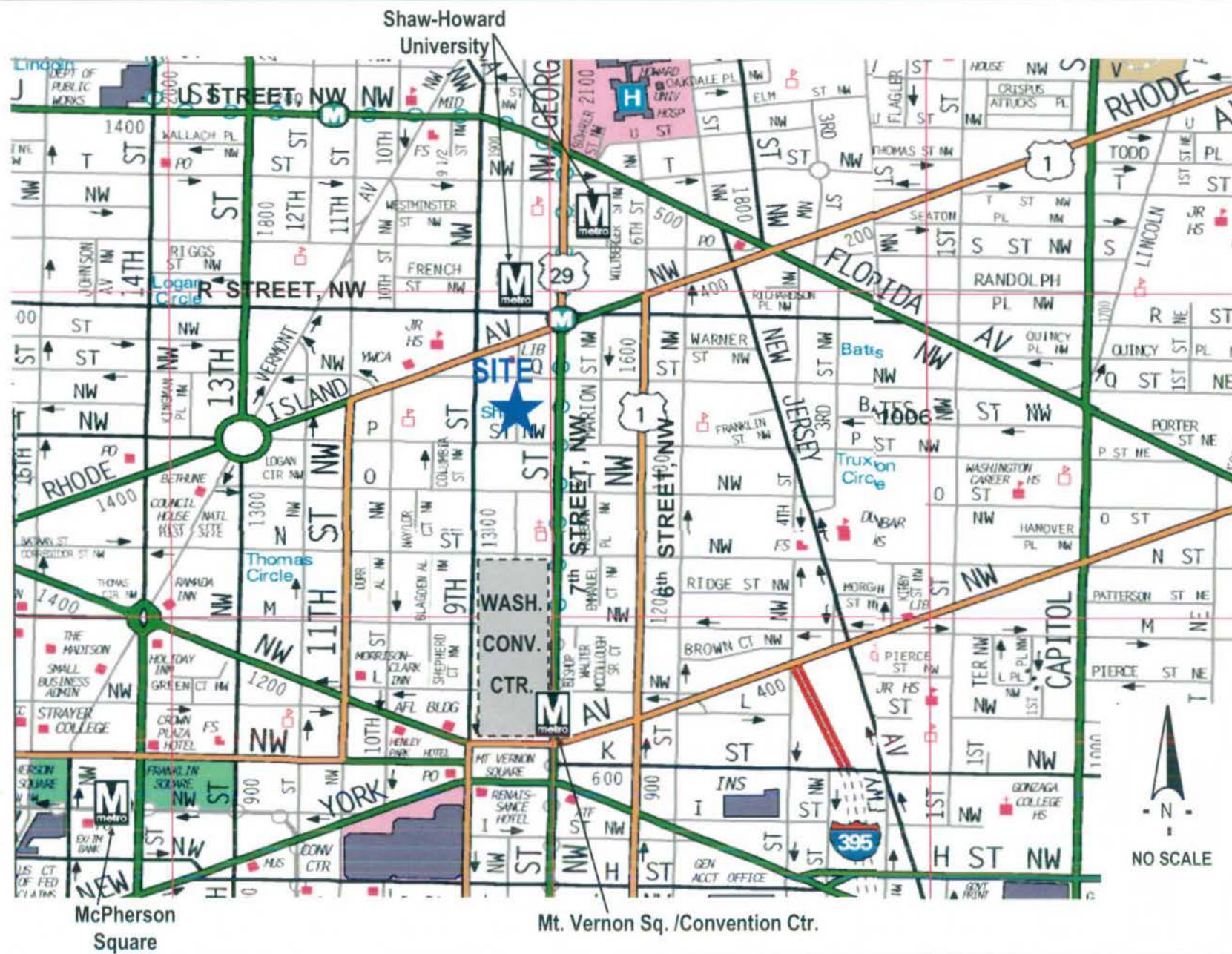
Kelsey Gardens Property Company has applied to the City for approval to develop a mixed residential retail development to an existing residential site started along the west side of 7th Street (between P and Q Streets) in Northwest Washington DC. The application process has progressed to the public hearing phase, with the hearing held by the Zoning Commission on October 30, 2008. The issues at hand pertained to the following.

- a) **Parking Provisions:** The plan provides excess parking spaces (184 spaces provided; 90 spaces required). *[This issue was raised by DDOT, with concern that the extra parking spaces would likely lead to increased vehicle trip generation.]*
- b) **Neighborhood On-Street Parking:** Members of the community expressed concerns that any decrease in the proposed parking would exacerbate perceived parking shortages within the local area. *[This issue was raised by the Advisory Neighborhood Commission in their oral and written testimony.]*
- c) **Transportation Management Plan (TMP):** The development proposal did not include a Transportation Management Plan that reflects the City's current policies. *[DDOT is of the view that the site is favorably situated within proximity to two metro rail stations and surface bus routes along 7th Street, and that these should be appropriately exploited.]*
- d) **Parking & Loading Access:** The plans should consider locating the parking and loading access through a new curb cut located along the north side of P Street between 7th street and the public alley immediately to the west. *[This issue was raised by members of the adjacent residential community.]*

In addition to Item (a) and the above, DDOT noted the need for a fully documented "Transportation Impact Statement." For ease of reference a copy of the DDOT referral report, and ANC letters are include in Appendix A.

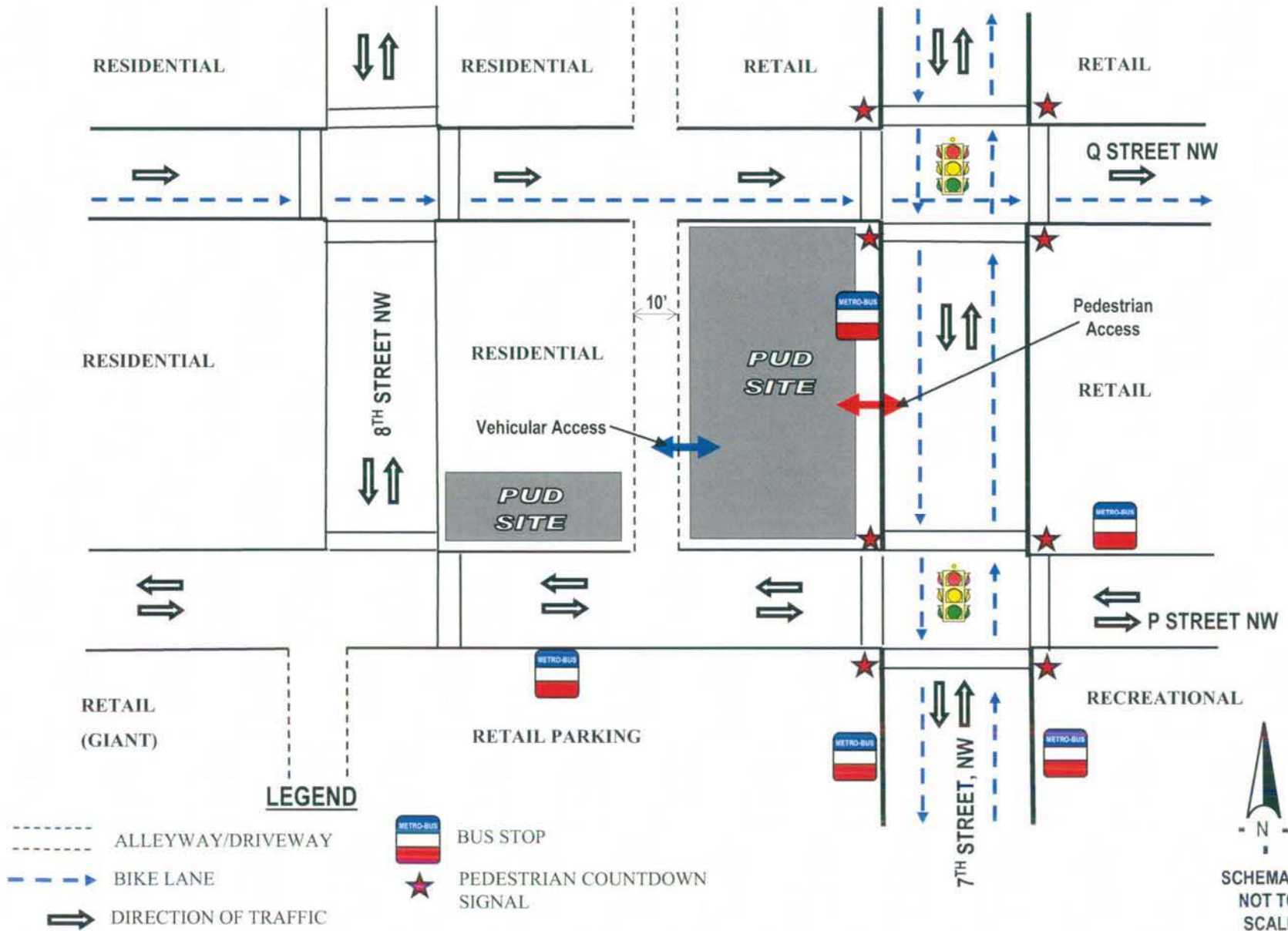
At the request of the applicant, this report is prepared in response to the transportation-related issues, which arose during the public hearing. It is relevant to note that the subject property is currently improved with nine (9) residential "buildings" with 54 multifamily housing units, of which 50 are currently vacant. Approximately 30 parking spaces are also provided on the site.

This report addresses the specific items listed above and includes additional data and analysis that are typical for DDOT's Traffic Impact Assessment Guidelines. In order to facilitate the presentation which follows, Exhibit 1 shows the site location. Exhibit 2 shows the site layout and access plan.



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Exhibit 1: Site Location Map
Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.



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Exhibit 2: Site Layout and Access
Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.

1.2 **Report Organization and Summary**

This report is organized into five (5) sections. The current section presents the background and context for the study. Section 2 evaluates existing roadway and traffic conditions. Section 3 addresses the other development activity in the vicinity and the impact of those developments on the study area. Section 3 also analyzes the traffic impact of the Applicant's development proposal, and assesses related site access, circulation, parking and loading provisions. ***This section also presents responses to the specific issues which arose from the public hearings.*** Section 4 discusses the Applicant's proposed Transportation Management Plan; and Section 5 summarizes the study findings and makes recommendations, where appropriate, to mitigate any potential transportation impacts identified.

The study area intersections currently operate at acceptable Levels of Service, during both the morning and afternoon peak hours and this situation would continue upon build-out of the proposed development in the future. The study finds that the proposed development would be adequately accommodated by the existing transportation system. This considers general accessibility by the various modes of transportation, particularly transit and access to the site by non-vehicular modes.

In addition to the above factors, this study finds the following:

- a) Considering that the site is now occupied with 54 apartment units, the next increase in vehicular trip generation will be quite small. The vehicular trips generated by the site will not significantly impact the levels of service of the adjacent roadway intersections.
- b) Pedestrian movements generated by the development would be easily accommodated on the adjacent roadway network, including pedestrian activity attracted to the adjacent Metro Stations and Bus Route stops within the area.
- c) The site plan provides for bicycle storage facilities and easy access to bicycle routes along R Street, Q Street and 7th Street.
- d) The alleyway that runs along the Square is planned to be widened to 20 feet, on the southern half of the site. This would facilitate loading and circulation of the project generated traffic. This study finds that there will not be any operational issues, for the traffic along the alleyway, due to the subject development.

The project will upgrade pedestrian sidewalks and related amenities along the frontage of the property, where necessary or identified as part of the public space permitting process. The development should therefore, not result in any public infrastructure cost or undertaking on the part of the City, and would not adversely impact the adjacent neighborhood. The development would also include an effective Transportation Management Plan appropriate for its size and location. The basis for this conclusion is provided in the remaining sections of this report.

2.0 EXISTING ROADWAY AND TRAFFIC CONDITIONS

2.1 Study Area Roadway Network

As noted in reports by both the Office of Planning and DDOT, the subject property is well served by a number of arterials and collector roadways, facilitating access to the Downtown/Central Employment Area and other sections of the City and beyond. These roadways include 7th Street/Georgia Avenue, 9th Street, Rhode Island Avenue and Q Street, all of which are designated as arterials on the City's roadway network. Immediate access is also provided via P Street, a collector roadway, abutting the Square to the south, and by Q Street, a minor collector abutting the property to the north. Exhibit 3 shows the functional classification for the area roadways.

Exhibit 2 (on page 3) shows the site, and the immediate access opportunities. The Applicant proposes to widen the alleyway to 20 feet along its entire length, and to provide for parking and loading access from this alley.

Considering the issues raised by DDOT, and the projected low level of vehicular trip generation, a study area roadway network consisting of two (2) adjacent signalized intersections was identified for evaluation. These intersections are as follows:

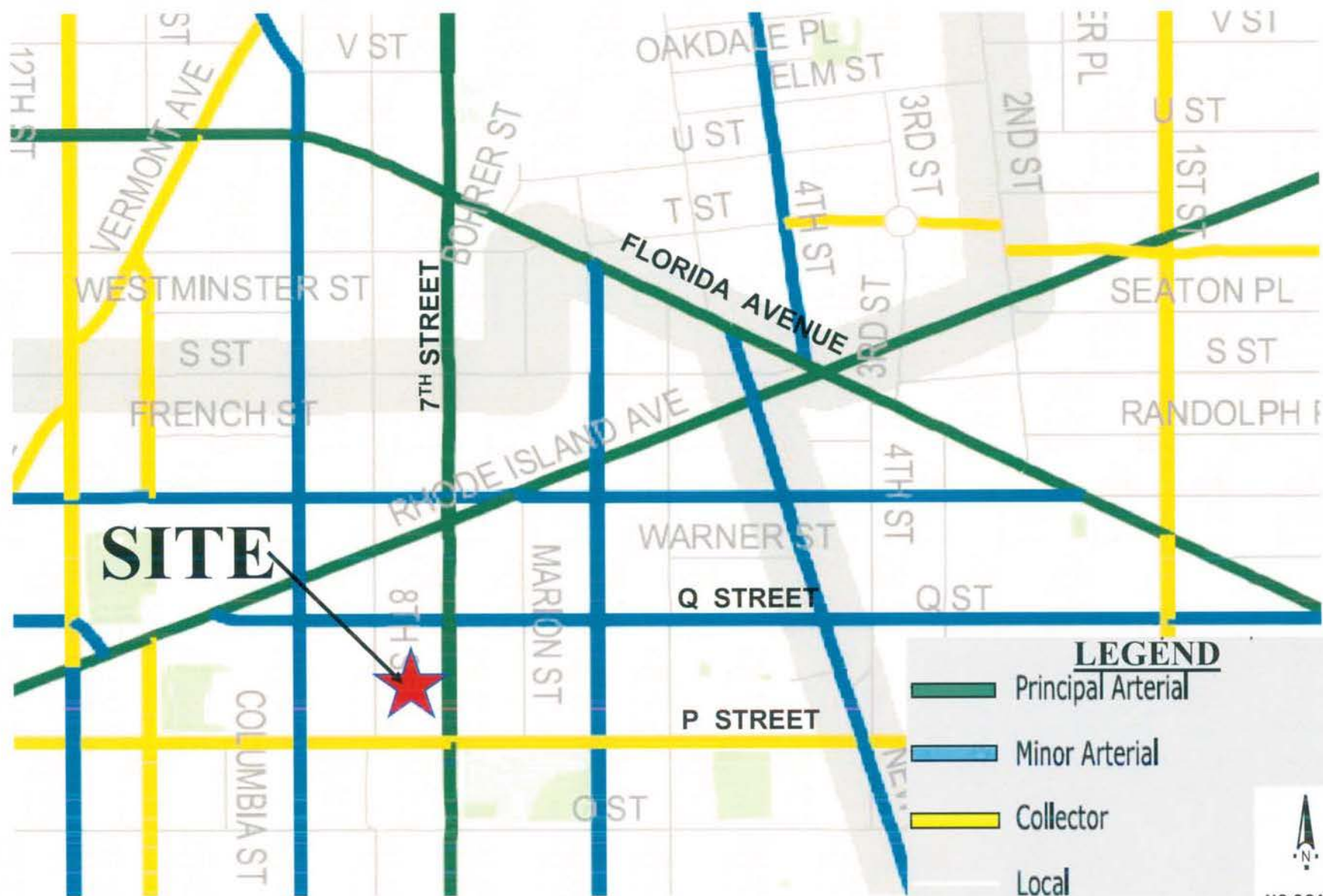
- a) 7th Street at Q Street, NW(Signalized); and
- b) 7th Street at P Street, NW (Signalized).

The general physical characteristics and service functions of the key study area roadways are summarized below:

- **7th Street/Georgia Avenue NW:** This roadway is classified as a Principal Arterial and runs in the north-south direction. It serves approximately 14,600 vehicles per average weekday. Two on-street bicycle lanes run in each direction along this roadway. (See Exhibit 2).
- **Q Street NW:** This roadway is classified as a Minor Arterial and serves one-way eastbound traffic flow. Approximately 12,000 vehicles use this roadway per average weekday. An eastbound bicycle lane is also provided.
- **P Street:** This roadway is classified as a Collector and runs in the east-west direction. It serves approximately 8,800 vehicles per average weekday.

Generalized observations were also made of traffic operations at the intersection of 8th Street with P Street and with Q Street, and within the alleyway serving the square. These are discussed later in the report, along with parking within the local area.

The site is served by a number of transit routes, including Routes 70, 71 and 79 along 7th Street/Georgia Avenue; G2 along P Street and 79 and G8 along 9th Street. It is also noteworthy that the 7th Street/Georgia Avenue corridor is recognized as being the most prominent transit corridor in the City. It is important to note that sidewalks are provided along all roadways in the vicinity of the site and the signalized intersections are equipped with pedestrian countdown signals and crosswalks, which serve to enhance both pedestrian and vehicular flow and promote safety. The layout of the study area roadway network, as well as the lane configuration and traffic control devices provided at the adjacent intersections, are illustrated in Exhibit 4.



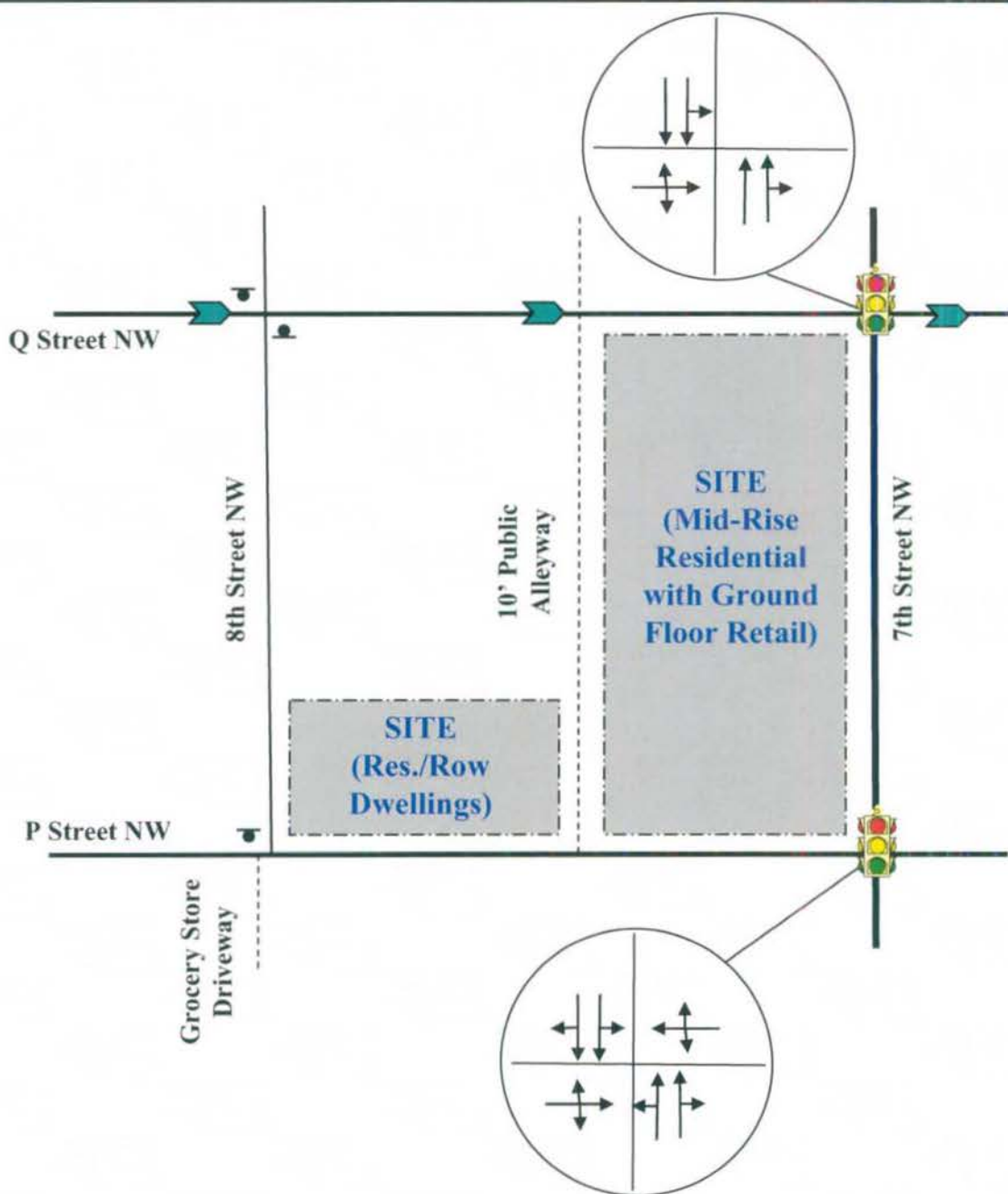
Source: District Department of Transportation

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Exhibit 3: Functional Classification for Area Roadways

**Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.**



Legend

- LANE USAGE
- ➡ ONE WAY TRAFFIC
- PUBLIC ALLEYWAY
- ⊥ STOP SIGN



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**Exhibit 4: Existing Lane Configuration and
Traffic Control Devices**

**Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.**

2.2 Existing Vehicular Traffic Situation

In order to assess current traffic operating conditions, field observations were made of the weekday traffic flow conditions within the defined study area, during the morning and afternoon peak periods. In addition, peak period turning movement counts were undertaken at the study area intersections on a typical weekday. Exhibit 5 shows the morning and afternoon peak hour traffic volumes for the study intersections. The turning movement count summaries are included in Appendix B.

The peak hour vehicular traffic volumes were analyzed using the Highway Capacity Manual (HCM) capacity analysis procedures, in accordance with the DDOT requirements. The results show that the study area intersections currently operate at quite acceptable Levels of Service¹ during both the morning and afternoon peak hours. Table 1 presents the summary of the capacity analysis results for the existing traffic situation. Capacity analysis worksheets are presented in Appendix C.

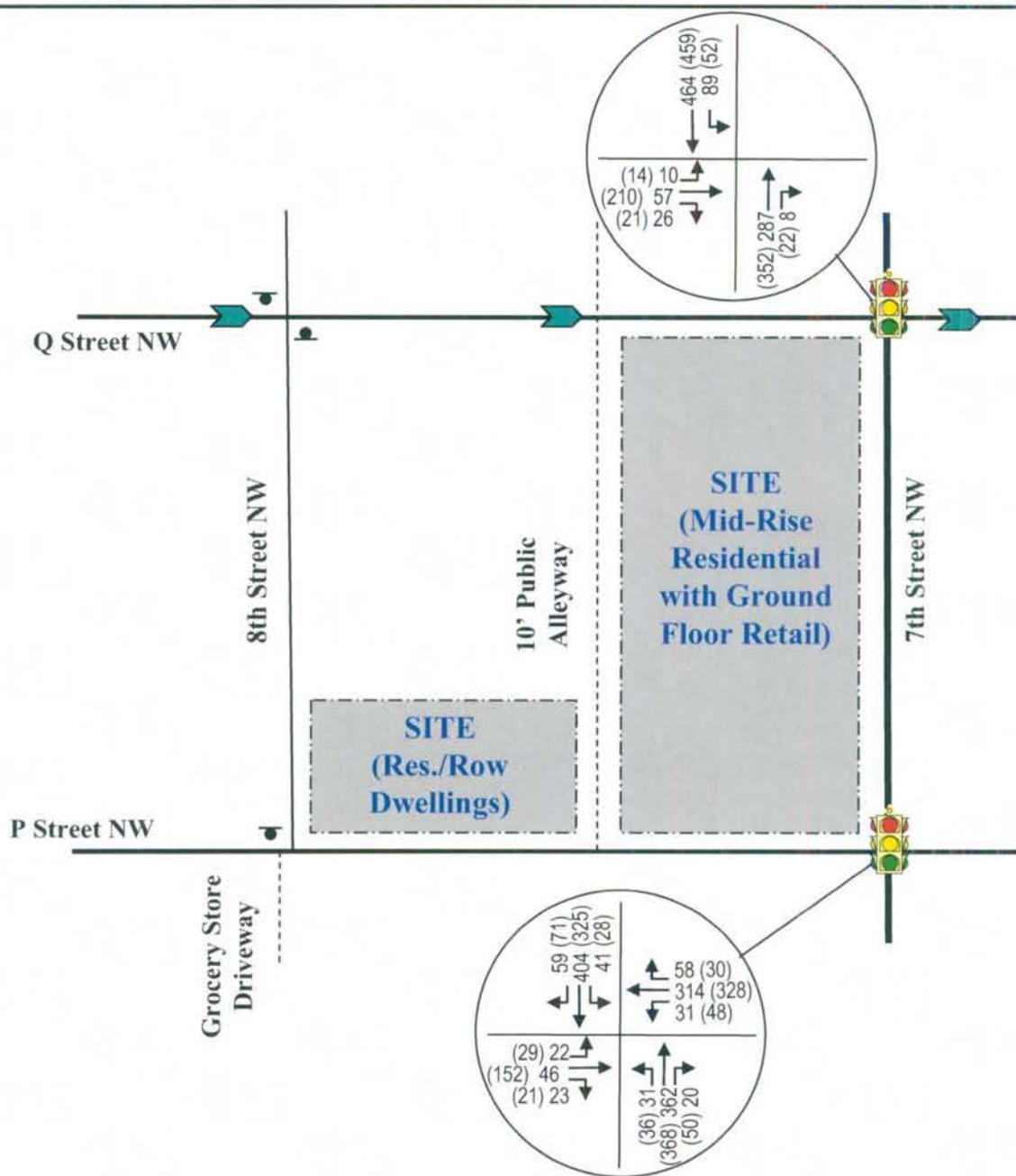
TABLE 1
SUMMARY OF CAPACITY ANALYSIS RESULTS --
EXISTING VEHICULAR TRAFFIC SITUATION

Intersection	AM Peak Hour		PM Peak Hour	
	Level of Service	Avg. Delay (Sec/Veh)*	Level of Service	Avg. Delay (Sec/Veh)*
1) 7 th Street @ Q Street, NW (Signalized)	A	4.4	A	6.4
2) 7 th Street @ P Street, NW (Signalized)	B	12.6	B	10.4

* Secs/Veh. = Average Control Delay Seconds per Vehicle

Source: O. R. George & Associates

¹ "Level of Service" is a qualitative measure describing operational conditions within a traffic stream or at an intersection, and reflects their perception by drivers and other roadway users. Principal considerations are factors such as speed and travel time, delay, and freedom of maneuver, traffic interruptions, comfort, convenience and safety. Current engineering practice defines six (6) Levels of Service (A-F), with "A" representing best operating conditions, and Level of Service "F" representing the worst conditions. Level of Service D is generally considered by the District of Columbia as the minimum acceptable conditions for planning and design purposes.



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Exhibit 5: Existing Peak Hour Vehicular Traffic Volumes

**Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.**

2.3 Existing Pedestrian and Bicycle Traffic Situation

As noted in the agency reports, the development is surrounded by a very strong bicycle and pedestrian network, and excellent transit service. Pedestrian and bicycle volumes were counted as part of the intersection turning movement counts cited earlier. The observed pedestrian activity at the study area intersections was low to moderate. Exhibit 6 shows typical pedestrian volumes within the impacted local area.

The level of service measure for pedestrians at signalized intersections is the average delay experienced by a pedestrian. Highway Capacity Manual (HCM) quotes “*Research indicates that the average delay of pedestrians at signalized intersection crossings is not constrained by capacity, even when pedestrian flow rates reach 5,000 pedestrians/hour*”. Therefore, the delay is calculated based on the HCM equation using the Cycle Length of the signal and the effective green time available for pedestrians. Table 2 presents the summary of the capacity analysis results for the existing pedestrian traffic situation. All the pedestrians experience Levels of Service “B”.

TABLE 2
SUMMARY OF CAPACITY ANALYSIS RESULTS -
EXISTING PEDESTRIAN TRAFFIC SITUATION

Intersection	Street Name	Type	Cycle Length (C)	Pedestrian Green Time (G)	Average Pedestrian Delay (d_p^*)	Level of Service
1) 7th Street @ Q Street, NW	7th Street	Major	100	54	10.6	B
	Q Street	Minor	100	38	19.2	B
2) 7th Street @ P Street, NW	7th Street	Major	100	54	10.6	B
	P Street	Minor	100	38	19.2	B

* Seconds per Pedestrian

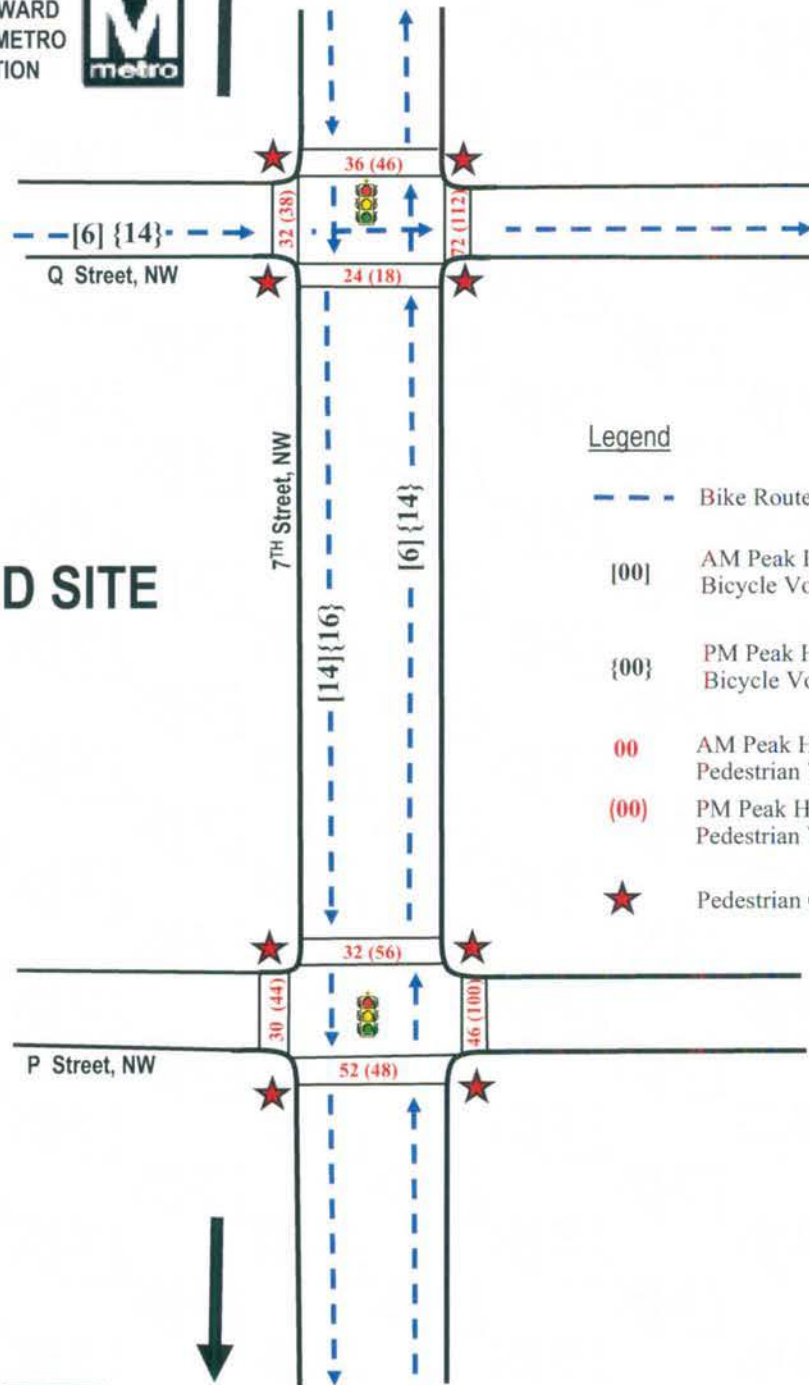
Source: O. R. George & Associates

Regarding Bicycle movements, the site is well served with designated bicycle routes along 7th Street (2-way) and with one-way routes along R Street and Q Street. A Smartbike station is located near the intersection of 7th Street and T Street. Bicycle volumes observed on bike lanes in the vicinity are (on average) less than 16 per hour. Typical bicycle volumes within the impacted local area are shown on Exhibit 6. The traffic signals in the area all operate with 100 second cycles, which compiles to 36 cycles per hour. Given the very low volumes noted, less than 1 or 2 bicycles would utilize the intersection during any cycle. Even allowing for some peaking, no operational or capacity constraints would be encountered.

TO HOWARD
SHAW METRO
STATION



PUD SITE



TO MT. VERNON
SQUARE METRO
STATION



SCHEMATIC
NOT TO
SCALE

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**Exhibit 6: Existing Peak Hour Pedestrian
and Bicycle Volumes**

**Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.**

2.4 Existing Parking Situation

This study made an assessment of existing on-street and other publicly accessible parking within an approximate 3- to 5-minute walking distance from the subject projects. The area considered is illustrated in Exhibit 7. This exhibit also shows the locations and classification of parking within the defined area. The majority of the parking is regulated under the City's Residential Parking Permit (RPP) program. This restricts parking within designated areas to 2-hour limits expect for Zone 2 permit holder. The existing parking supply can be broadly summarized as follows:

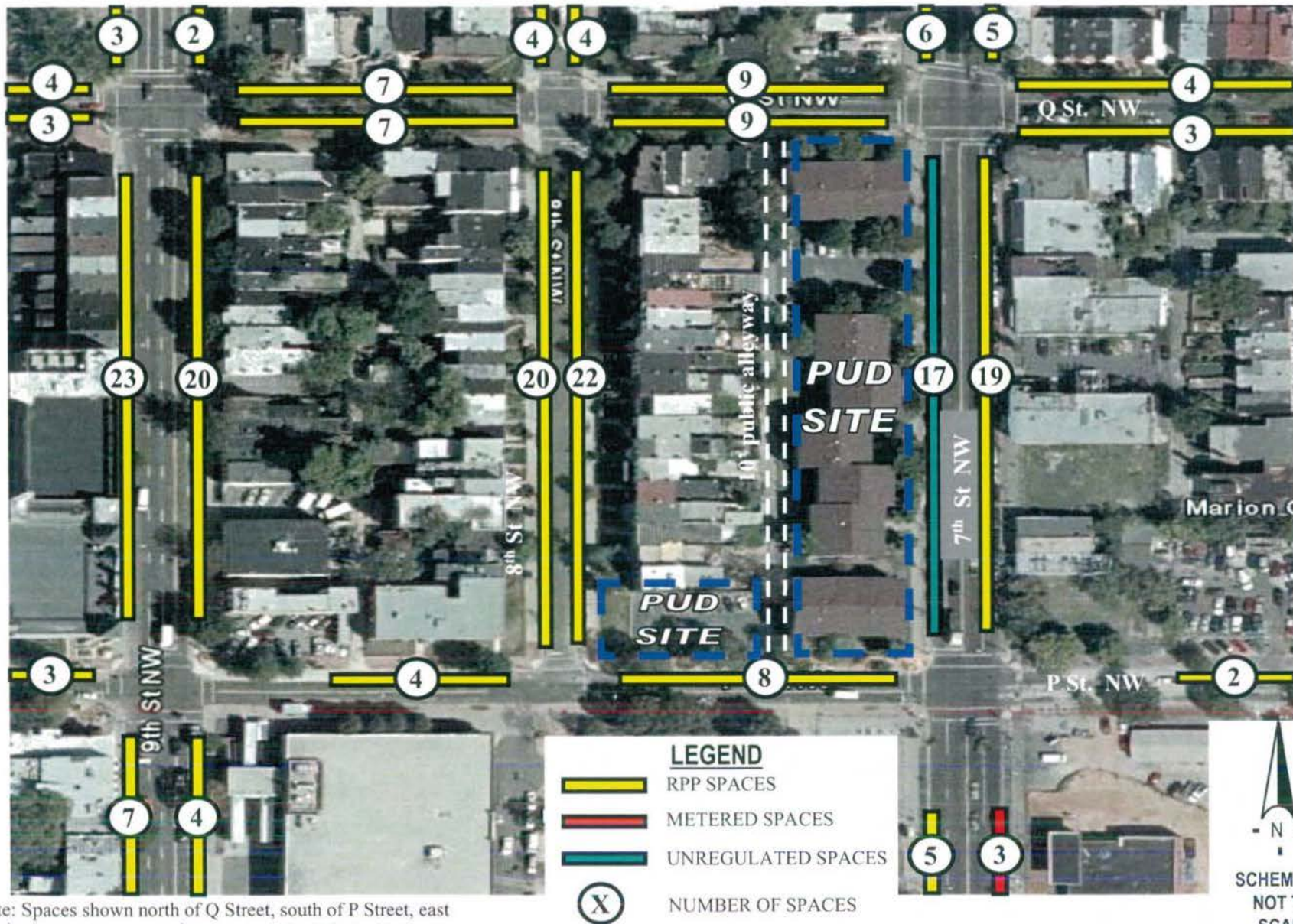
- a) Residential Parking Permit (RPP) spaces: 207 Spaces
 - b) Metered Parking (2-hour limits): 3 Spaces
 - c) Unregulated parking: 17 Spaces
- Total: 227 Spaces

Except for the metered parking which are delineated, the number of spaces are approximate. These spaces are illustrated in Exhibit 7.

In order to assess the current levels of parking demand, this study undertook a survey of occupied spaces during peak daytime hours and during nighttime hours, which would reflect the peak parking demand. The results of the survey are summarized in the table following:

- a) Total on-street parking = 227 Spaces
- b) Maximum daytime usage = 146 Spaces
(10:00 AM - 2:00 PM) (64 Percent)
- c) Maximum nighttime usage = 98 Spaces
(9:00 - 11:00 PM and 4:30 - 6:00 AM) (43 Percent)

It is important to note that the usage survey does not include significant off-street spaces within the area, such as the Giant Food Store customer parking and for the approximately 40 existing spaces within the subject property. Parking will be addressed further in Section 3.4, which responds to the specific aspect of the parking issue raised by DDOT.



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Exhibit 7: Parking Inventory
Kelsey Gardens Planned Unit Development
Northwest, Washington, D.C.

3.0 FUTURE TRAFFIC SITUATION

3.1 Local Area Development Activity

The area surrounding the development is undergoing a rapid transit oriented development. The largest planned development in the vicinity is the “Giant/O Street Market”, which is located within the square bounded by P Street on the north, 7th Street on the east, O Street on the south, and 9th Street on the west, in the Mount Vernon/Convention Center area of the City. This development is a mixed-use commercial and residential development consisting of 680 residential units, 69,000 square feet of retail uses and a 210-room hotel. The development also proposes 580 parking spaces. The O Street Market PUD application included a fully-documented traffic study, which concluded the following:

- a) The overall development would have minimal impact on the local area, due to the development mix, traffic mode shares, and internal trip satisfaction.
- b) The residential portion of the development (the largest component) would generate an average of approximate 0.2 vehicle trips per dwelling unit.

The findings of that study were accepted by the City as part of the Zoning Commission approval of the development.

3.2 Proposed Development Plan

As discussed earlier, the subject development will consist of 272 residential units in an 8-story residential building with approximately 14,500 square feet of retail space and seven (7) residential (with basement flats) or office row house units. Two hundred thirty-one (231) parking spaces are proposed in an underground garage.

Immediate vehicular access is provided off the adjacent alleyway, which will be widened to 20 Ft, throughout its length. The main pedestrian entrance is provided off 7th Street and facilitates easy access to the public transport facilities. Exhibit 2 on page 3 shows the site layout and access location.

It is also relevant to restate that the subject development is situated approximately one block from the Shaw-Howard Metrorail Station and four blocks away from Mt. Vernon Square Metrorail Station. The property location and accessibility factors provide strong Transit Oriented Development characteristics, fully in keeping with the Transportation Element of the City’s Comprehensive Plan. This in turn greatly reduces vehicle trip generation, as is discussed in Section 3.3 following.

3.3 Trip Generation and Site Access

The City typically requires that the trip rates recommended by the Institute of Transportation Engineers (ITE) be utilized in conducting traffic impact assessments. As such, the trip estimates for the proposed development were based on the current ITE Trip Generation Manual (7th Ed., 2003). It is important to note that the ITE rates are for stand-alone suburban sites, which have little (or no) public transportation services, or significant opportunities for weekday work trips via alternative modes. Accordingly, the rates were adjusted to reflect the location and setting of the property.

Considering the location and setting of the site, this study assumed that there would be a high level of transit, bicycle and walk trips. A conservative reduction factor of sixty percent (60%) was assumed for all non-vehicular modes of transportation. Additionally, the proposed residential replaces the existing 54 apartment units currently on the site. To present a worst case scenario, trips credits for the existing residential units were not applied. The trips generated by the approximately 14,500 square feet of retail area are not considered, as this retail would complement the residential uses in the building. Moreover, in an urban setting, it is common for a mid-rise apartment building to include some retail space.

TABLE 3
PROJECTED PEAK HOUR TRIP GENERATION –
KELSEY GARDENS RESIDENTIAL DEVELOPMENT

Trip Rates	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Trips per Mid-Rise Apt. Unit <i>[ITE Land Use Code 223]</i>	0.09	0.21	0.30	0.23	0.16	0.39
Trips per Row Dwelling Unit <i>[ITE Land Use Code 231]</i>	0.17	0.5	0.67	0.45	0.33	0.78
Trip Generation						
• Trip/272 Mid-Rise Apt. Units	24	57	82	63	43	106
• Trip/7 Row Dwelling Units (with basement flats)	1	4	5	3	2	5
Total Trips (With 60% adjustment factor)	10	24	34	26	18	44

Note: Adjustment for the 54 units currently on the property is not shown in the above table.

Source: ITE Trip Generation Manual (2003), and O. R. George & Associates.

The vehicle trips noted in Table 3 would be well distributed in various directions, and using the various roadways serving the area. By observation, it is clear that this level of vehicle trip generation will have no appreciable impact on traffic operations and safety within the local area.

3.4 Parking and Loading Evaluation

The development proposes 206 spaces to serve the 272 apartment units and 7 row dwellings (each with a basement flat). Twenty-five spaces would serve the retail uses. This exceeds the number of spaces required. The Applicant has noted in its Application statement that this parking is needed to satisfy its marketing program and its management of the apartment units. As noted earlier the District Department of Transportation expressed concern that the excess parking spaces are likely to increase vehicle trip generation from the development. The following is submitted in response:

- a) Area Parking Shortage: In a recent study,² the City's Office of Planning determined that the vehicle ownership within the local area was quite high, and among the highest within the City. This often leads to extreme parking shortages, a situation that is exacerbated by parking demand created by the Convention Center, which has no off-street parking.
- b) Impact on Vehicle Trip Generation: Recent trends in urban revitalization and demographic shifts strongly indicate that urban residents rely heavily on transit, bicycle, and walk modes as attractive alternatives to auto use. In support of a recent PUD case,³ surveys were conducted of five (5) apartment complexes at various locations within the City, in general proximity to Metrorail Stations. The results showed that trip generation from all sites generated substantially less vehicle trips than recommended by ITE. A copy of Table 5 extracted from the Traffic Impact Study report is included as Appendix D.

With respect to the loading facilities, the site proposals are summarized in Table 4 below.

TABLE 4
REQUIRED VS PROPOSED LOADING FACILITIES
KELSEY GARDENS RESIDENTIAL DEVELOPMENT

<u>Loading Facility</u>	<u>Required</u>	<u>Provided</u>
<u>Residential:</u>		
55-Ft Berth	One	✓
20-Ft Loading Space	One	None*
200 SF Platform	One	✓
<u>Retail:</u>		
30-Ft Berth	One	✓
100 SF Platform	One	✓

* Relief requested as part of the PUD application.

Source: Lessard Group Inc.

In keeping with DDOT's requirements, truck tracking diagrams were developed to confirm the accessibility of the loading facilities. The diagrams were prepared for both a 55-Ft WB-50 type truck, as well as for a 30-Ft single unit truck. The diagrams are included in Appendix E. While the diagrams confirm that both vehicle types can access the loading facilities, it is worthy of note that the access would be further facilitated by the fact that the 30-Ft truck type is likely to be the dominant vehicle type accessing the loading dock. The

² "Final Draft - Washington Convention Center Area Strategic Development Plan," Office of Planning, February, 2005.

³ Planned Unit Development for Union Place (Zoning Commission Case No. 05-36A, 2007)

predominance of this type of truck is due to the fact that a vast majority of move-in/move-outs for apartment units would require the use of 30-Ft (Single Unit) trucks, or smaller.

It is also relevant to note that the issue of potentially providing the loading access off P Street was raised by some residents. The City requires that driveway access to loading facilities must be a minimum of 60 Ft from any adjacent street or alleyway. The distance between 7th Street and the alleyway is approximately 102-Ft, which does not allow for such loading access. Beyond this fact, maneuvering of vehicles into and out of the loading dock would adversely impact pedestrian activity as well as traffic operations at the 7th Street/P Street intersection.

This study also undertook a survey of traffic using the alley. The data shows that current traffic volumes using the alleyway are quite low ranging from 35 to 56 vehicles over an entire 24-hour period day. The heaviest hour recorded was 14 vehicles. These are typical for alleyways; and while there will be some increase with the development of the site, they present no issues with respect to access to the garage or the loading area. Automatic Traffic Recorder (ATR) data for the alleyway is also included in Appendix B.

4.0 TRANSPORTATION MANAGEMENT PLAN

The City's current policies emphasize vehicle trip reduction as one of its major objectives for enhancing the urban environment. In support of this objective, the City encourages developments to incorporate Transportation Management Plans (TMP) with the goal of reducing vehicle trip generation, particularly during the weekday peak hours. The data presented in Section 3.0 of this report indicates that the Kelsey Gardens Apartments will generate approximately 30 vehicle trips during the peak hours (when adjusted for the existing residential units on the site). In keeping with this policy, the apartment proposes the following as the principal elements of its Transportation Management Plan:

- a) Resident Transportation Coordinator (RTC): Designate one of its site employees to serve as the Resident Transportation Coordinator. This person's duties would principally be to provide information to residents (particularly those incoming) regarding transit opportunities and schedules, the location of SmartBike stations and regarding parking policies below that are part of the agreed TMP, and generally encourage non-private auto usage, and will have related information prominently displayed in its offices, community rooms, and other appropriate common space.
- b) Preferred Parking Allocation: The RTC will encourage residents to participate in ride sharing with other residents of Kelsey Gardens, those participating will be assigned to preferentially-located spaces (i.e., close to elevators, entrances, etc.).
- c) Car Sharing: The Kelsey Gardens management will negotiate an arrangement with ZipCar or other similar organization for allocation of two (2) spaces within its garage for car sharing purposes. The RTC will also publicize this as part of the information designation noted in Item (a).
- d) SmartBike Station: The Applicant is of the strong view that the site design presented to the Zoning Commission would not accommodate a SmartBike station within the premises. Furthermore, providing such a station within the public space along either P Street or 7th Street would compromise the pedestrian experience, which the plan seeks to achieve. Locating such a station within the garage would also not be feasible based on convenience and security considerations. However, the Applicant is prepared to discuss the matter further with DDOT, if necessary.
- e) Residential Parking Permit Program Exclusion: The Applicant agrees to exclude the building residents from RPP eligibility, and will pursue the process with the responsible DDOT staff.

In addition to the above specific items, the Applicant's management will maintain liaison with the DDOT staff as needed in order to ensure the continued effectiveness of the TMP.

5.0 SUMMARY AND CONCLUSION

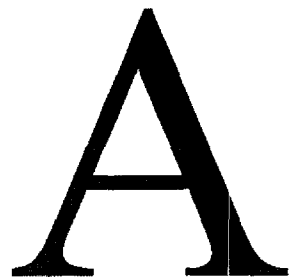
Based on the foregoing data, analyses and discussion, this study has shown that the proposed development can be accommodated by the local area transportation system and would not create any adverse traffic impacts on the local area. Principal findings supporting this conclusion are as follows:

- a) Existing levels of service within the area are quite acceptable (at Level of Service B or better during the morning and afternoon peak hours).
- b) The site is projected to generate less than 35 vehicle trips during the weekday peak hours; and these trips would be well distributed via the alleyway serving Square 421, and similarly dispersed along the major arterials and collectors serving the area.
- c) The provision of loading and parking access off the P Street is not a feasible option due to safety and operational constraints. Also, this does not concur with the DDOT's "Proposed Curb Cut and Driveway Policy". Moreover, this would hinder the pedestrian safety and movement along the P Street.
- d) The proposal is for a transit oriented development, which takes advantage of its proximity to Metrorail and Metrobus service. Easy access is also provided for pedestrian and bicycle modes of travel.
- e) The development proposal for 206 parking spaces to serve the 272 mid-rise apartments and the 7 row dwellings (each with a flat) computes to a parking ratio of 0.72 spaces per residential unit, and this appears to be quite reasonable. The parking is further justified due to the extreme shortage of parking spaces in the neighborhood and the lack of public parking at the Convention Center.
- f) The Applicant would implement a Transportation Management Plan (TMP) to mitigate the impact of the project.

As planned, the proposed development should not adversely impact any transportation-related amenities. Additionally, the proposed Transportation Management Plan would constitute a significant amenity for the area. The proposal would therefore satisfy the City's requirements for adequate public transportation facilities, and comply with the City's criteria for Planned Unit Developments.

<<<<<:~::~>>>>>

APPENDIX



DDOT Referral Report, and ANC Letters

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DISTRICT DEPARTMENT OF TRANSPORTATION

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[REDACTED]
[REDACTED]

Transportation Policy and Planning Administration

Memorandum

TO: Zoning Commission (ZC)

FROM: Karina Ricks, Associate Director
District Department of Transportation

DATE: October 17, 2008 ✓

SUBJECT: Zoning Commission Case # 08-14 (Kelsey Gardens)
1500 block of 7th Street, N.W.

2008 OCT 21 AM 10:29

RECEIVED
J.C. OFFICE OF ZONING

APPLICATION

Kelsey Gardens Property Company, LLC (Applicant) seeks to construct a new mixed-use building in the 1500 block of 7th Street, NW, between P and Q Streets. In addition to the PUD and map amendment, the application requires several areas of zoning relief. The proposal consists of a 90 foot tall mixed use building with about 14,500 square feet of retail and 261 residential units and seven rowhouses for residential or office use with 10,122 square feet.

RECOMMENDATION IN BRIEF

DDOT agrees with the applicant's request for the special exception. DDOT has met with the applicant and provided recommendations included in the use of the alley to the parking entrance and for loading. DDOT believes widening the alley to twenty (20) feet, on the southern half of the site, will indeed provide better access to the residential and retail portions. However, DDOT remains interested in viewing a more robust transportation impact statement from the applicant. That information should include projected parking inventories at neighboring development sites, existing levels of service for surrounding intersections and how the development aligns with recommendations from the District of Columbia Pedestrian Master Plan.

ZONING COMMISSION
District of Columbia

CASE NO. 08-14

EXHIBIT NO. 45

DDOT ANALYSIS

The applicant's proposal shows a total of 184 underground parking spaces. If the spaces are deeded parking spaces, DDOT prefers deed restriction be considered with the underground parking upon project completion. Leasing arrangements involving the parking spaces may result in additional vehicle trips. The number of spaces exceeds the required 90 spaces by over 100%, which may create excessive vehicle trips and congestion in the neighborhood. This development is also surrounded by a very strong bicycle and pedestrian network, and excellent transit service, which makes the need for this abundance of parking spaces all the more questionable.

DDOT requests the applicant consider allocating carsharing spaces in the underground parking inventory. We believe there should be a minimum of 5 carsharing spaces among the projected inventory for the project. Additionally, the developer shall pay for the initial carsharing application fee and annual fee for one year for all residents or proprietors inside of the residential and retail development to encourage carsharing use.

The developer shall provide a 24 hour publicly accessible Smartbikes station (requires a 6' by 30' pad) inside of the development project. The actual placement of the Smartbike station can be negotiated with DDOT upon project approval. SmartBikes memberships for 1 year (\$40 annually) will be included for residents and proprietors by the developer. This feature complements the bicycle lanes along 7th Street, Q Street and R Street, as well as the other bicycle-friendly residential streets.

The development site is less than 3/10ths of a mile from the Mt. Vernon Square/Convention Center Metro station and Shaw-Howard University Metro station. Also, the 70 series Metro buses run directly adjacent to the site on 7th Street NW. The developer shall provide SmartTrip cards to all residents and business owners upon move-in to the new property.

DDOT believes the development address should be excluded from the residential permit parking (RPP) system in the District of Columbia. The residents of the building will have the opportunity to park personal vehicles in the underground garage facility and therefore should not additionally burden the neighborhood curbside parking inventory.

DDOT strongly recommends the Commission require the above noted measures, approved by DDOT, for the applicant to receive the planned unit development exception and desired zoning relief.

SUMMARY AND RECOMMENDATION

The District Department of Transportation recommends the new development for approval if the applicant provides the described steps for increased multi-modal transportation uses.

DDOT requests the applicant to provide a more substantial transportation impact study for the development in order for the agency to better understand the impact it may have on the neighborhood.

APPENDIX

B

Turning Movement Count Summaries

O. R. George & Associates, Inc.

10210 Greenbelt Road, Suite 310

Lanham, MD 20706-2218

Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By: ORGA-NB

Board : D1-0758

City/County: Washington, D.C.

Weather : Cold/Rain/Wet

File Name : 7th@Qst

Site Code : 14270758

Start Date : 11/6/08

Page No : 1

Groups Printed- Passenger Vehicles - Trucks - Buses

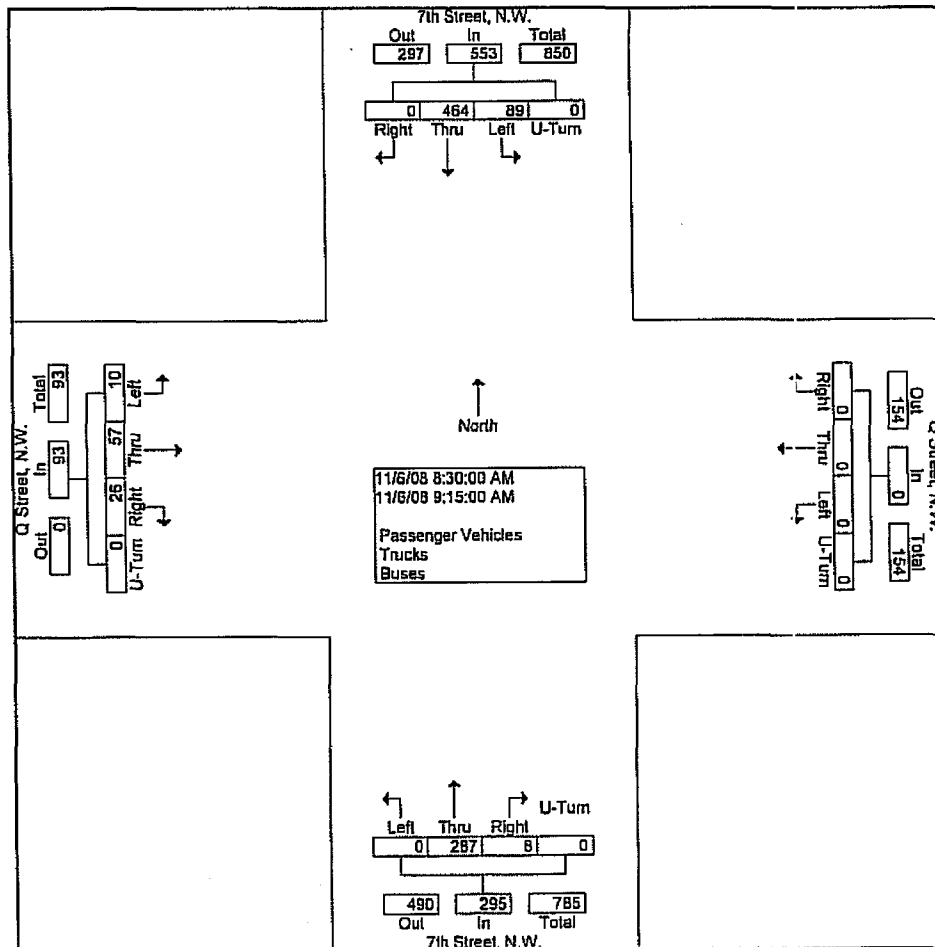
End Time	7th Street, N.W. From North					7th Street, N.W. From South					Q Street, N.W. From East					Q Street, N.W. From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
07:45 AM	19	122	0	0	141	0	75	1	0	76	0	0	0	0	0	2	8	3	0	13	230
08:00 AM	23	114	0	0	137	0	68	2	0	70	0	0	0	0	0	3	14	2	0	19	226
Total	42	236	0	0	278	0	143	3	0	146	0	0	0	0	0	5	22	5	0	32	456
08:15 AM	25	125	0	0	150	0	57	5	0	62	0	0	0	0	0	4	6	1	0	11	223
08:30 AM	29	120	0	0	149	0	66	1	0	67	0	0	0	0	0	1	11	5	0	17	233
08:45 AM	26	119	0	0	147	0	78	2	0	80	0	0	0	0	0	5	13	11	0	29	256
09:00 AM	14	109	0	0	123	0	68	4	0	72	0	0	0	0	0	2	19	7	0	28	223
Total	96	473	0	0	569	0	269	12	0	281	0	0	0	0	0	12	49	24	0	85	935
09:15 AM	18	116	0	0	134	0	75	1	0	76	0	0	0	0	0	2	14	3	0	19	229
09:30 AM	21	102	0	0	123	0	77	3	0	80	0	0	0	0	0	2	9	3	0	14	217
Total	39	218	0	0	257	0	152	4	0	156	0	0	0	0	0	4	23	6	0	33	446
04:15 PM	16	121	0	0	137	0	96	8	0	104	0	0	0	0	0	2	49	4	0	55	296
04:30 PM	10	124	0	0	134	0	83	6	0	89	0	0	0	0	0	3	37	4	0	44	267
04:45 PM	13	102	0	0	115	0	70	5	0	75	0	0	0	0	0	1	44	6	0	51	241
05:00 PM	9	114	0	0	123	0	87	6	0	93	0	0	0	0	0	7	46	8	0	61	277
Total	48	461	0	0	509	0	336	25	0	361	0	0	0	0	0	13	176	22	0	211	1081
05:15 PM	15	115	0	0	130	0	93	7	0	100	0	0	0	0	0	2	50	4	0	56	286
05:30 PM	19	128	0	0	147	0	84	4	0	88	0	0	0	0	0	2	68	2	0	72	307
05:45 PM	9	102	0	0	111	0	88	5	0	93	0	0	0	0	0	3	46	7	0	56	260
06:00 PM	8	117	0	0	125	0	86	7	0	93	0	0	0	0	0	3	35	9	0	47	265
Total	51	462	0	0	513	0	351	23	0	374	0	0	0	0	0	10	199	22	0	231	1118
Grand Total	276	1850	0	0	2126	0	1251	67	0	1318	0	0	0	0	0	44	469	79	0	592	4036
Approch %	13.0	87.0	0.0	0.0		0.0	94.9	5.1	0.0		0.0	0.0	0.0	0.0		7.4	79.2	13.3	0.0		
Total %	6.8	45.8	0.0	0.0	52.7	0.0	31.0	1.7	0.0	32.7	0.0	0.0	0.0	0.0	0.0	1.1	11.6	2.0	0.0	14.7	

O. R. George & Associates, Inc.
 10210 Greenbelt Road, Suite 310
 Lanham, MD 20706-2218
 Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By: ORGA-NB
 Board : D1-0758
 City/County: Washington, D.C.
 Weather : Cold/Rain/Wet

File Name : 7th@Qst
 Site Code : 14270758
 Start Date : 11/6/08
 Page No : 2

	7th Street, N.W. From North					7th Street, N.W. From South					Q Street, N.W. From East					Q Street, N.W. From West					
End Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour From 07:45 AM to 01:00 PM - Peak 1 of 1																					
Intersection 08:30 AM																					
Volume	89	464	0	0	553	0	287	8	0	295	0	0	0	0	0	10	57	26	0	93	941
Percent	16.1	83.9	0.0	0.0		0.0	97.3	2.7	0.0		0.0	0.0	0.0	0.0		10.8	61.3	28.0	0.0		
08:45																					
Volume	28	119	0	0	147	0	78	2	0	80	0	0	0	0	0	5	13	11	0	29	256
Peak Factor																					0.919
High Int. 08:30 AM						08:45 AM					7:30:00 AM					08:45 AM					
Volume	29	120	0	0	149	0	78	2	0	80	0	0	0	0	0	5	13	11	0	29	
Peak Factor	0.928					0.922										0.802					

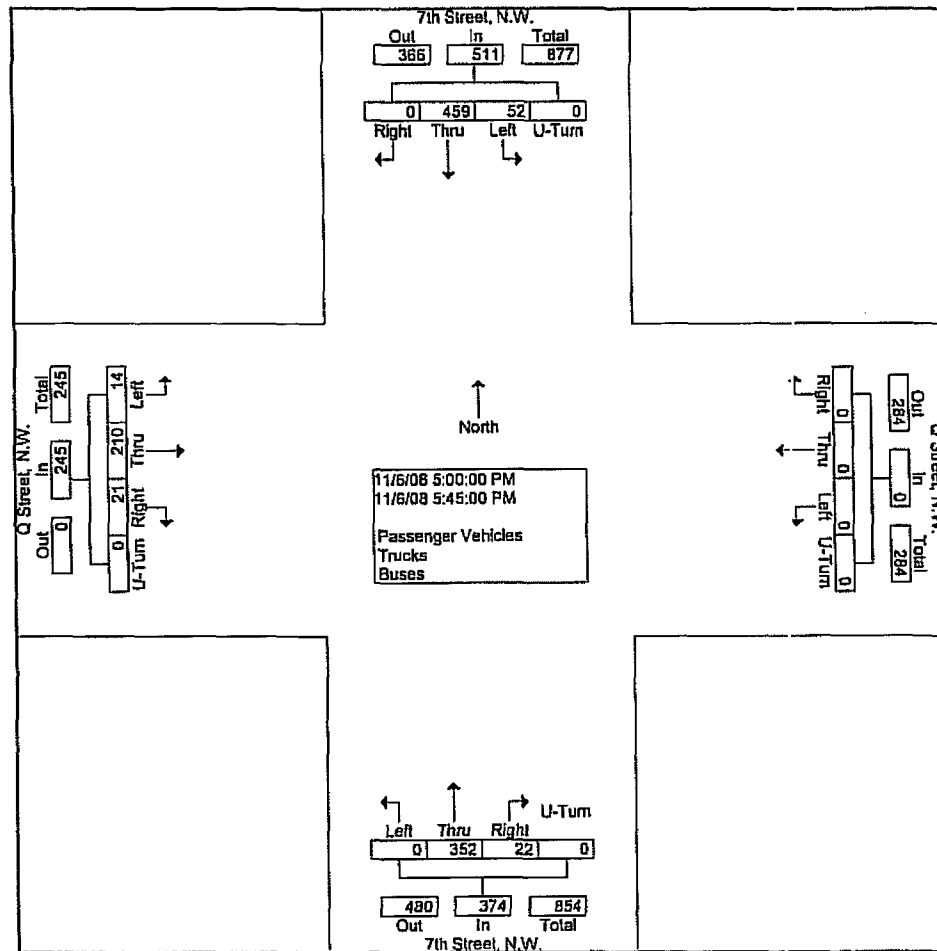


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File Name : 7th@Qst
 Site Code : 14270758
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 Page No : 3

	7th Street, N.W. From North					7th Street, N.W. From South					Q Street, N.W. From East					Q Street, N.W. From West					
End Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour From 01:15 PM to 05:00 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	52	459	0	0	511	0	352	22	0	374	0	0	0	0	0	14	210	21	0	245	1130
Percent	10.2	89.8	0.0	0.0		0.0	94.1	5.9	0.0		0.0	0.0	0.0	0.0		5.7	85.7	8.6	0.0		
05:30																					
Volume	19	128	0	0	147	0	84	4	0	88	0	0	0	0	0	2	68	2	0	72	307
Peak Factor																					0.920
High Int. 05:30 PM						05:15 PM										05:30 PM					
Volume	19	128	0	0	147	0	93	7	0	100	0	0	0	0	0	2	68	2	0	72	
Peak Factor	0.869					0.935					0.851										



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Lanham, MD 20706-2218

Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By: ORGA-MO

Board : D4-2239

City/County: Washington, D.C.

Weather : Cold/Rain/Wet

File Name : 7th@Pst

Site Code : 12242239

Start Date : 11/6/08

Page No : 1

Groups Printed- Passenger Vehicles - Trucks - Buses

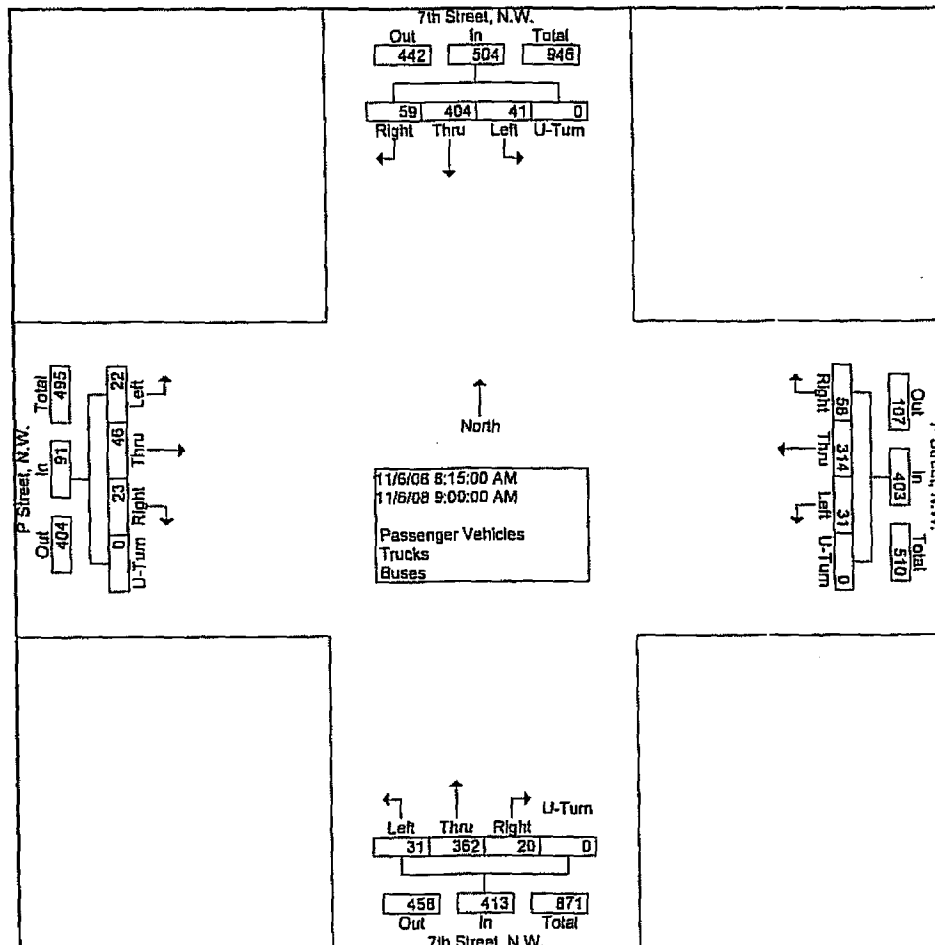
End Time	7th Street, N.W. From North					7th Street, N.W. From South					P Street, N.W. From East					P Street, N.W. From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
07:45 AM	8	103	7	0	118	3	87	1	0	91	3	59	8	0	70	6	13	5	0	24	303
08:00 AM	9	98	9	0	116	10	98	3	0	111	5	76	12	0	93	5	19	2	0	26	346
Total	17	201	16	0	234	13	185	4	0	202	8	135	20	0	163	11	32	7	0	50	649
08:15 AM	10	105	13	0	128	2	73	7	0	82	8	71	15	0	94	6	12	1	0	19	323
08:30 AM	11	104	14	0	129	6	80	4	0	90	6	66	14	0	86	8	15	5	0	28	333
08:45 AM	12	102	14	0	128	9	111	3	0	123	3	82	17	0	102	5	10	11	0	26	379
09:00 AM	8	93	18	0	119	14	98	6	0	118	14	95	12	0	121	3	9	6	0	18	376
Total	41	404	59	0	504	31	362	20	0	413	31	314	58	0	403	22	46	23	0	91	1411
09:15 AM	7	100	16	0	123	5	78	3	0	86	3	74	7	0	84	4	12	4	0	20	313
09:30 AM	5	88	12	0	105	8	80	2	0	90	2	47	10	0	59	3	13	4	0	20	274
Total	12	188	28	0	228	13	158	5	0	176	5	121	17	0	143	7	25	8	0	40	587
04:15 PM	9	88	21	0	118	12	79	14	0	105	16	91	12	0	119	22	43	9	0	74	416
04:30 PM	6	91	18	0	115	8	67	9	0	84	9	83	9	0	101	19	25	4	0	48	348
04:45 PM	8	74	11	0	93	16	58	8	0	82	11	84	6	0	101	24	30	5	0	59	335
05:00 PM	7	75	14	0	96	13	86	15	0	114	10	73	11	0	94	16	31	4	0	51	355
Total	30	328	64	0	422	49	290	46	0	385	46	331	38	0	415	81	129	22	0	232	1454
05:15 PM	7	83	17	0	107	11	103	14	0	128	15	93	6	0	114	8	34	6	0	48	397
05:30 PM	9	93	19	0	121	4	72	8	0	84	12	79	8	0	99	4	39	8	0	51	355
05:45 PM	5	74	21	0	100	8	107	13	0	128	11	83	5	0	99	1	48	3	0	52	379
06:00 PM	3	59	25	0	87	4	79	10	0	93	13	82	4	0	99	8	23	3	0	34	313
Total	24	309	82	0	415	27	361	45	0	433	51	337	23	0	411	21	144	20	0	185	1444
Grand Total	124	1430	249	0	1803	133	1356	120	0	1609	141	1238	156	0	1335	142	376	80	0	598	5545
Approch %	6.9	79.3	13.8	0.0		8.3	84.3	7.5	0.0		9.2	80.7	10.2	0.0		23.7	62.9	13.4	0.0		
Total %	2.2	25.8	4.5	0.0	32.5	2.4	24.5	2.2	0.0	29.0	2.5	22.3	2.8	0.0	27.7	2.6	6.8	1.4	0.0	10.8	

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 10210 Greenbelt Road, Suite 310
 Lanham, MD 20706-2218
 Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By: ORGA-MO
 Board : D4-2239
 City/County: Washington, D.C.
 Weather : Cold/Rain/Wet

File Name : 7th@Pst
 Site Code : 12242239
 Start Date : 11/6/08
 Page No : 2

	7th Street, N.W. From North					7th Street, N.W. From South					P Street, N.W. From East					P Street, N.W. From West					
End Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour From 07:45 AM to 01:00 PM - Peak 1 of 1																					
Intersection 08:15 AM																					
Volume	41	404	59	0	504	31	362	20	0	413	31	314	58	0	403	22	46	23	0	91	1411
Percent	8.1	80.2	11.7	0.0		7.5	87.7	4.8	0.0		7.7	77.9	14.4	0.0		24.2	50.5	25.3	0.0		
08:45 Volume	12	102	14	0	128	9	111	3	0	123	3	82	17	0	102	5	10	11	0	26	379
Peak Factor																					0.931
High Int. 08:30 AM						08:45 AM					09:00 AM					08:30 AM					
Volume	11	104	14	0	129	9	111	3	0	123	14	95	12	0	121	8	15	5	0	28	
Peak Factor	0.977										0.839					0.833					0.813



O. R. George & Associates, Inc.

10210 Greenbelt Road, Suite 310

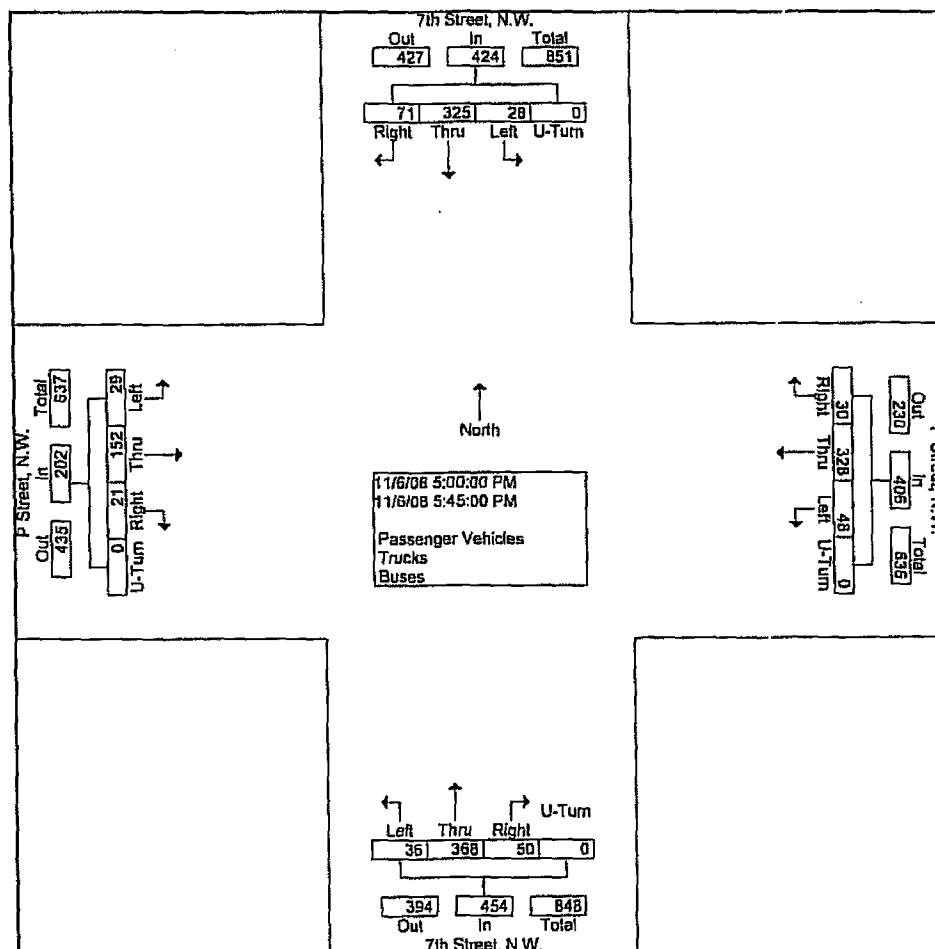
Lanham, MD 20706-2218

Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By: ORGA-MO
Board : D4-2239
City/County: Washington, D.C.
Weather : Cold/Rain/Wet

File Name : 7th@Pst
Site Code : 12242239
Start Date : 11/6/08
Page No : 3

	7th Street, N.W. From North					7th Street, N.W. From South					P Street, N.W. From East					P Street, N.W. From West					Int. Total
End Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
Peak Hour From 01:15 PM to 06:00 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	28	325	71	0	424	35	368	50	0	454	48	328	30	0	406	29	152	21	0	202	1486
Percent	6.6	76.7	16.7	0.0		7.9	81.1	11.0	0.0		11.8	80.8	7.4	0.0		14.4	75.2	10.4	0.0		
05:15																					
Volume	7	83	17	0	107	11	103	14	0	128	15	93	6	0	114	8	34	6	0	48	397
Peak Factor																					0.936
High Int. 05:30 PM						05:15 PM					05:15 PM					05:45 PM					
Volume	9	93	19	0	121	11	103	14	0	128	15	93	6	0	114	1	48	3	0	52	
Peak Factor	0.876					0.887					0.890					0.971					



O.R. George & Associates, Inc.

Page 1

City : Washington, D.C.
County :
Location: Alley, North of P Street, N.W.

10210 Greenbelt Rd, Suite 310
Lanham, MD 20706
Tel: (301) 794-7700 Fax: (301) 794-4400

Site Code: LOC1
Station ID:

Latitude: 0' 0.000 Undefined

Start Time	10-Nov-08		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound
12:00 AM	*	*	0	0	0	0	0	0	0	0	*	*	*	*	0	0
01:00	*	*	1	1	0	0	0	0	0	0	*	*	*	*	0	0
02:00	*	*	0	0	0	0	0	0	1	1	*	*	*	*	0	0
03:00	*	*	0	0	0	0	0	0	0	0	*	*	*	*	0	0
04:00	*	*	1	1	0	0	0	0	0	0	*	*	*	*	0	0
05:00	*	*	0	0	0	0	0	0	0	0	*	*	*	*	0	0
06:00	*	*	0	0	0	0	0	0	1	1	*	*	*	*	0	0
07:00	*	*	0	2	2	3	0	0	0	0	*	*	*	*	0	1
08:00	*	*	0	0	2	3	1	1	4	4	*	*	*	*	2	2
09:00	*	*	0	2	2	2	0	0	0	0	*	*	*	*	0	1
10:00	*	*	0	0	2	2	2	4	*	*	*	*	*	*	1	2
11:00	*	*	0	0	2	5	6	6	*	*	*	*	*	*	3	4
12:00 PM	*	*	4	5	2	2	6	6	*	*	*	*	*	*	4	4
01:00	4	4	2	2	0	1	0	0	*	*	*	*	*	*	2	2
02:00	2	2	0	0	1	1	2	2	*	*	*	*	*	*	1	1
03:00	8	6	3	3	4	4	2	2	*	*	*	*	*	*	4	4
04:00	2	2	0	1	3	3	4	4	*	*	*	*	*	*	2	2
05:00	0	0	0	1	2	4	1	2	*	*	*	*	*	*	1	2
06:00	2	2	1	1	2	2	1	1	*	*	*	*	*	*	2	2
07:00	2	1	0	0	0	0	0	0	*	*	*	*	*	*	0	0
08:00	1	1	1	1	0	0	0	0	*	*	*	*	*	*	0	0
09:00	0	0	0	0	0	0	0	0	*	*	*	*	*	*	0	0
10:00	2	2	1	1	0	0	0	0	*	*	*	*	*	*	1	1
11:00	0	0	0	0	0	0	0	0	*	*	*	*	*	*	0	0
Lane Day	23	20	14	21	24	32	25	28	6	6	0	0	0	0	23	28
	43		35		56		53		12		0		0		51	
AM Peak			01:00	07:00	07:00	11:00	11:00	11:00	08:00	08:00					11:00	11:00
Vol.			1	2	2	5	6	6	4	4					3	4
PM Peak	15:00	15:00	12:00	12:00	15:00	15:00	12:00	12:00							12:00	12:00
Vol.	8	6	4	5	4	4	6	6							4	4

Comb. Total 43 35 56 53 12 0 0 51

ADT ADT 48 AADT 48

O.R. George & Associates, Inc.

Page 1

City : Washington, D.C.
County :
Location: Alley, South of Q Street, N.W.

10210 Greenbelt Rd, Suite 310
Lanham, MD 20706
Tel: (301) 794-7700 Fax: (301) 794-4400

Site Code: LOC2
Station ID:

Latitude: 0' 0.000 Undefined

Start Time	10-Nov-08		Tue		Wed		Thu		Fri		Sat		Sun		Average Day	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	0	3	0	0	0	1	0	*	*	*	*	*	0	1
12:15	*	*	0	0	0	1	0	2	0	*	*	*	*	*	0	1
12:30	*	*	0	3	0	1	0	0	1	*	*	*	*	*	0	1
12:45	*	*	1	1	0	2	0	0	0	*	*	*	*	*	0	1
01:00	*	1	0	1	0	1	0	0	0	*	*	*	*	*	0	1
01:15	*	0	1	0	0	0	0	0	0	*	*	*	*	*	0	0
01:30	*	2	0	0	0	0	0	0	0	*	*	*	*	*	0	0
01:45	*	1	0	1	0	0	1	0	0	*	*	*	*	*	0	0
02:00	*	1	0	0	0	1	0	0	0	*	*	*	*	*	0	0
02:15	*	2	0	0	0	1	0	1	0	*	*	*	*	*	0	1
02:30	*	1	0	0	0	0	0	0	0	*	*	*	*	*	0	0
02:45	*	0	0	1	0	0	0	1	0	*	*	*	*	*	0	0
03:00	*	3	0	1	0	0	0	0	0	*	*	*	*	*	0	1
03:15	*	0	0	0	0	0	0	1	0	*	*	*	*	*	0	0
03:30	*	1	0	0	0	2	0	0	0	*	*	*	*	*	0	1
03:45	*	0	0	0	0	1	0	0	0	*	*	*	*	*	0	0
04:00	*	1	1	0	0	1	0	0	0	*	*	*	*	*	0	0
04:15	*	0	0	1	0	1	0	0	0	*	*	*	*	*	0	0
04:30	*	0	0	0	0	0	0	1	0	*	*	*	*	*	0	0
04:45	*	1	0	0	0	0	0	0	0	*	*	*	*	*	0	0
05:00	*	1	0	1	0	0	0	0	0	*	*	*	*	*	0	0
05:15	*	1	0	1	0	0	0	1	0	*	*	*	*	*	0	1
05:30	*	1	0	0	0	1	0	0	0	*	*	*	*	*	0	0
05:45	*	0	0	1	0	0	0	1	0	*	*	*	*	*	0	0
06:00	*	1	0	0	0	0	0	0	0	*	*	*	*	*	0	0
06:15	*	0	0	0	1	1	0	0	0	*	*	*	*	*	0	0
06:30	*	0	0	0	0	0	0	0	0	*	*	*	*	*	0	0
06:45	*	0	0	0	0	0	0	0	0	*	*	*	*	*	0	0
07:00	*	1	2	0	2	0	0	1	0	*	*	*	*	*	1	0
07:15	*	0	0	1	2	0	0	0	0	*	*	*	*	*	0	0
07:30	*	0	0	0	0	0	0	0	1	*	*	*	*	*	0	0
07:45	*	0	0	0	1	0	0	0	0	*	*	*	*	*	0	0
08:00	*	0	0	0	0	0	0	0	0	*	*	*	*	*	0	0
08:15	*	0	1	0	2	0	0	0	0	*	*	*	*	*	1	0
08:30	*	1	1	0	2	1	0	0	1	*	*	*	*	*	1	0
08:45	*	0	0	0	1	0	1	0	0	*	*	*	*	*	0	0
09:00	*	1	1	0	2	0	0	0	1	*	*	*	*	*	1	0
09:15	*	0	1	0	3	0	0	0	1	*	*	*	*	*	1	0
09:30	*	0	0	0	3	0	0	0	0	*	*	*	*	*	1	0
09:45	*	1	1	0	0	1	0	0	0	*	*	*	*	*	0	0
10:00	*	0	0	0	0	0	1	0	0	*	*	*	*	*	0	0
10:15	*	0	0	0	1	0	0	0	0	*	*	*	*	*	0	0
10:30	*	0	0	1	2	0	0	0	*	*	*	*	*	*	1	0
10:45	*	1	0	0	0	0	0	0	*	*	*	*	*	*	0	0
11:00	*	0	0	0	3	0	0	1	*	*	*	*	*	*	1	0
11:15	*	0	0	1	3	1	2	0	*	*	*	*	*	*	2	0
11:30	*	0	0	0	2	0	0	0	*	*	*	*	*	*	1	0
11:45	*	0	0	0	1	0	0	0	*	*	*	*	*	*	0	0
Total	0	23	10	18	31	17	5	11	5	0	0	0	0	0	11	9
Day Total	23		28		48		16		5		0		0		20	
% Splits	0.0%	100.0%	35.7%	64.3%	64.6%	35.4%	31.3%	68.8%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	55.0%	45.0%
Peak		01:30	08:15	12:00	08:45	00:15	10:30	12:00	08:30						10:30	12:00
Vol.		6	3	7	9	5	2	3	3						4	4
P.H.F.		0.750	0.375	0.583	0.750	0.625	0.250	0.375	0.750						0.500	1.000

ADT ADT 31 AADT 31

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APPENDIX

C

Capacity Analysis Worksheets –
Existing Traffic Situation

SHORT REPORT													
General Information							Site Information						
Analyst	NSKB						Intersection	7th Street @ PStreet					
Agency or Co.	ORGA						Area Type	All other areas					
Date Performed	11/06/2008						Jurisdiction						
Time Period	AM Peak						Analysis Year	2008					
Volume and Timing Input													
	EB			WB			NB			SB			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Num. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0	
Lane group		LTR			LTR			LTR			LTR		
Volume (vph)	22	46	23	31	314	58	31	362	20	41	404	59	
% Heavy veh	0	5	0	0	5	0	5	5	5	5	5	5	
PHF	0.81	0.81	0.81	0.83	0.83	0.83	0.84	0.84	0.84	0.97	0.97	0.97	
Actuated (P/A)	P	P	P	P	P	P	P	P	P	P	P	P	
Startup lost time		2.0			2.0			2.0			2.0		
Ext. eff. green		2.0			2.0			2.0			2.0		
Arrival type		5			5			5			5		
Unit Extension		3.0			3.0			3.0			3.0		
Ped/Bike/RTOR Volume	52	4	0	32	6	0	46	6	0	30	12	0	
Lane Width		12.0			12.0			10.0			10.0		
Parking/Grade/Parking	N	0	N	N	0	Y	N	0	Y	N	0	Y	
Parking/hr						2			8			8	
Bus stops/hr		6			6			6			6		
Unit Extension		3.0			3.0			3.0			3.0		
Phasing	EW Perm	02	03	04	NS Perm	06	07	08					
Timing	G = 38.0	G =	G =	G =	G = 54.0	G =	G =	G =					
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =					
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0							
Lane Group Capacity, Control Delay, and LOS Determination													
	EB			WB			NB			SB			
Adj. flow rate		112			485			492			519		
Lane group cap.		559			571			1398			1542		
v/c ratio		0.20			0.85			0.35			0.34		
Green ratio		0.38			0.38			0.54			0.54		
Unif. delay d1		20.8			28.4			13.1			12.9		
Delay factor k		0.50			0.50			0.50			0.50		
Increm. delay d2		0.8			14.6			0.7			0.6		
PF factor		0.591			0.591			0.217			0.217		
Control delay		13.1			31.4			3.5			3.4		
Lane group LOS		B			C			A			A		
Apprch. delay		13.1			31.4			3.5			3.4		
Approach LOS		B			C			A			A		
Intersec. delay		12.6		Intersection LOS							B		

C-1

SHORT REPORT													
General Information							Site Information						
Analyst	NSKB						Intersection	7th Street @ P Street					
Agency or Co.	ORGA						Area Type	All other areas					
Date Performed	11/06/2008						Jurisdiction						
Time Period	PM Peak						Analysis Year	2008					
Volume and Timing Input													
	EB			WB			NB			SB			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Num. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0	
Lane group	LTR			LTR			LTR			LTR			
Volume (vph)	29	152	21	48	328	30	36	368	50	28	325	71	
% Heavy veh	0	2	0	0	2	0	2	2	2	2	2	2	
PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	
Actuated (P/A)	P	P	P	P	P	P	P	P	P	P	P	P	
Startup lost time		2.0			2.0			2.0			2.0		
Ext. eff. green		2.0			2.0			2.0			2.0		
Arrival type		5			5			5			5		
Unit Extension		3.0			3.0			3.0			3.0		
Ped/Bike/RTOR Volume	48	8	0	56	16	0	100	4	0	44	4	0	
Lane Width		12.0			12.0			10.0			10.0		
Parking/Grade/Parking	N	0	N	N	0	Y	N	0	Y	N	0	Y	
Parking/hr						2			8			8	
Bus stops/hr		6			6			6			6		
Unit Extension		3.0			3.0			3.0			3.0		
Phasing	EW Perm	02	03	04	NS Perm	06	07	08					
Timing	G = 38.0	G =	G =	G =	G = 54.0	G =	G =	G =					
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =					
Duration of Analysis (hrs) = 0.25							Cycle Length C = 100.0						
Lane Group Capacity, Control Delay, and LOS Determination													
	EB			WB			NB			SB			
Adj. flow rate		209			428			509			488		
Lane group cap.		617			570			1409			1567		
v/c ratio		0.34			0.75			0.36			0.31		
Green ratio		0.38			0.38			0.54			0.54		
Unif. delay d1		22.1			26.9			13.1			12.7		
Delay factor k		0.50			0.50			0.50			0.50		
Increm. delay d2		1.5			8.8			0.7			0.5		
PF factor		0.591			0.591			0.217			0.217		
Control delay		14.5			24.7			3.6			3.3		
Lane group LOS		B			C			A			A		
Apprch. delay	14.5			24.7			3.6			3.3			
Approach LOS	B			C			A			A			
Intersec. delay	10.4			Intersection LOS						B			

SHORT REPORT													
General Information						Site Information							
Analyst	NSKB					Intersection	7th Street @ Q St						
Agency or Co.	ORGA					Area Type	All other areas						
Date Performed	11/06/2008					Jurisdiction							
Time Period	AM Peak					Analysis Year	2008						
Volume and Timing Input													
	EB			WB			NB			SB			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Nun. of Lanes	0	1	0	0	0	0	0	2	0	0	2	0	
Lane group		LTR						TR			LT		
Volume (vph)	10	57	26					287	8	89	464		
% Heavy veh	5	5	5					5	5	5	5		
PHF	0.80	0.80	0.80					0.92	0.92	0.93	0.93		
Actuated (P/A)	P	P	P					P	P	P	P		
Startup lost time		2.0						2.0			2.0		
Ext. eff. green		2.0						2.0			2.0		
Arrival type		5						5			5		
Unit Extension		3.0						3.0			3.0		
Ped/Bike/RTOR Volume	24	4	0	36			72	0	0				
Lane Width		11.0						10.0			10.0		
Parking/Grade/Parking	Y	0	N	N		N	N	0	Y	N	0	Y	
Parking/hr	8								8			8	
Bus stops/hr		0						0			6		
Unit Extension		3.0						3.0			3.0		
Phasing	EB Only	02	03	04	NS Perm	06	07	08					
Timing	G = 38.0	G =	G =	G =	G = 54.0	G =	G =	G =					
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =					
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0							
Lane Group Capacity, Control Delay, and LOS Determination													
	EB			WB			NB			SB			
Adj. flow rate		115						321			595		
Lane group cap.		541						1605			1572		
v/c ratio		0.21						0.20			0.38		
Green ratio		0.38						0.54			0.54		
Unif. delay d1		20.9						11.9			13.3		
Delay factor k		0.50						0.50			0.50		
Increm. delay d2		0.9						0.3			0.7		
PF factor		0.591						0.217			0.217		
Control delay		13.3						2.9			3.6		
Lane group LOS		B						A			A		
Apprch. delay		13.3						2.9			3.6		
Approach LOS		B						A			A		
Intersec. delay		4.4		Intersection LOS							A		

SHORT REPORT												
General Information						Site Information						
Analyst	NSKB					Intersection	7th Street @ Q St					
Agency or Co.	ORGA					Area Type	All other areas					
Date Performed	11/06/2008					Jurisdiction						
Time Period	PM Peak					Analysis Year	2008					
Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	0	0	0	2	0	0	2	0
Lane group		LTR						TR			LT	
Volume (vph)	14	210	21					352	22	52	459	
% Heavy veh	2	2	2					2	2	2	2	
PHF	0.85	0.85	0.85					0.94	0.94	0.87	0.87	
Actuated (P/A)	P	P	P					P	P	P	P	
Startup lost time		2.0						2.0			2.0	
Ext. eff. green		2.0						2.0			2.0	
Arrival type		5						5			5	
Unit Extension		3.0						3.0			3.0	
Ped/Bike/RTOR Volume	18	12	0	46			112	10	0			
Lane Width		11.0						10.0			10.0	
Parking/Grade/Parking	Y	0	N	N		N	N	0	Y	N	0	Y
Parking/hr	8								8			8
Bus stops/hr		0						0			6	
Unit Extension		3.0						3.0			3.0	
Phasing	EB Only	02	03	04	NS Perm	06	07	08				
Timing	G = 38.0	G =	G =	G =	G = 54.0	G =	G =	G =				
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0						
Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
Adj. flow rate		288						397			588	
Lane group cap.		577						1636			1619	
v/c ratio		0.50						0.24			0.36	
Green ratio		0.38						0.54			0.54	
Unif. delay d1		23.7						12.2			13.2	
Delay factor k		0.50						0.50			0.50	
Increm. delay d2		3.1						0.4			0.6	
PF factor		0.591						0.217			0.217	
Control delay		17.1						3.0			3.5	
Lane group LOS		B						A			A	
Apprch. delay		17.1						3.0			3.5	
Approach LOS		B						A			A	
Intersec. delay		6.4		Intersection LOS							A	

APPENDIX

D

Extracts from Union Place PUD Application
Trip Generation Comparison Table

TABLE 5
TRIP GENERATION RATE COMPARISON
FOR MULTI-FAMILY/APARTMENT DEVELOPMENTS

<u>Survey Site Trip/Rate Basis</u>	<u>Trip Generation Rates (Trips per Unit)</u>					
	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>		
	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
• Institute of Transportation Engineers – Trips Per High-Rise Condo Unit (ITE Code 232)	0.06	0.28	0.34	0.24	0.14	0.38
1) Meridian at Gallery Place - 450 Mass. Avenue, NW (462 units/416 parking spaces)	0.02	0.09	0.11	0.05	0.02	0.07
2) 555 Mass. Avenue - 555 Massachusetts Avenue, NW (246 units/176 parking spaces)	0.04	0.17	0.21	0.09	0.05	0.14
<i>Average Trip Rates</i>	<i>0.03</i>	<i>0.13</i>	<i>0.16</i>	<i>0.08</i>	<i>0.04</i>	<i>0.12</i>
Comparison with ITE Rate	(-50%)	(-54%)	(-53%)	(-67%)	(-71%)	(-68%)
• Institute of Transportation Engineers – Trips Per High-Rise Apt. Unit (ITE Code 222)	0.07	0.23	0.30	0.21	0.14	0.35
1) Mass. Court Apts. - 300 Massachusetts Avenue, NW (371 units/305 parking spaces)	0.09	0.05	0.14	0.03	0.08	0.11
Comparison with ITE Rate	(+29%)	(-78%)	(-53%)	(-86%)	(-43%)	(-69%)
• Institute of Transportation Engineers – Trips Per Mid-Rise Apt. Unit (ITE Code 223)	0.09	0.21	0.30	0.23	0.16	0.39
1) Park Triangle Apts. - 1375 Kenyon Street, NW (117 units/parking not available)	0.03	0.19	0.22	0.15	0.07	0.22
2) The Ellington Apts. - 1301 U Street, NW (190 units/176 parking spaces)	0.03	0.20	0.23	0.05	0.05	0.10
<i>Average Trip Rates</i>	<i>0.03</i>	<i>0.20</i>	<i>0.23</i>	<i>0.10</i>	<i>0.06</i>	<i>0.16</i>
Comparison with ITE Rate	(-67%)	(-5%)	(-23%)	(-57%)	(-63%)	(-59%)

APPENDIX

E

Truck Tracking Diagrams

8TH STREET N.W.

P STREET N.W.

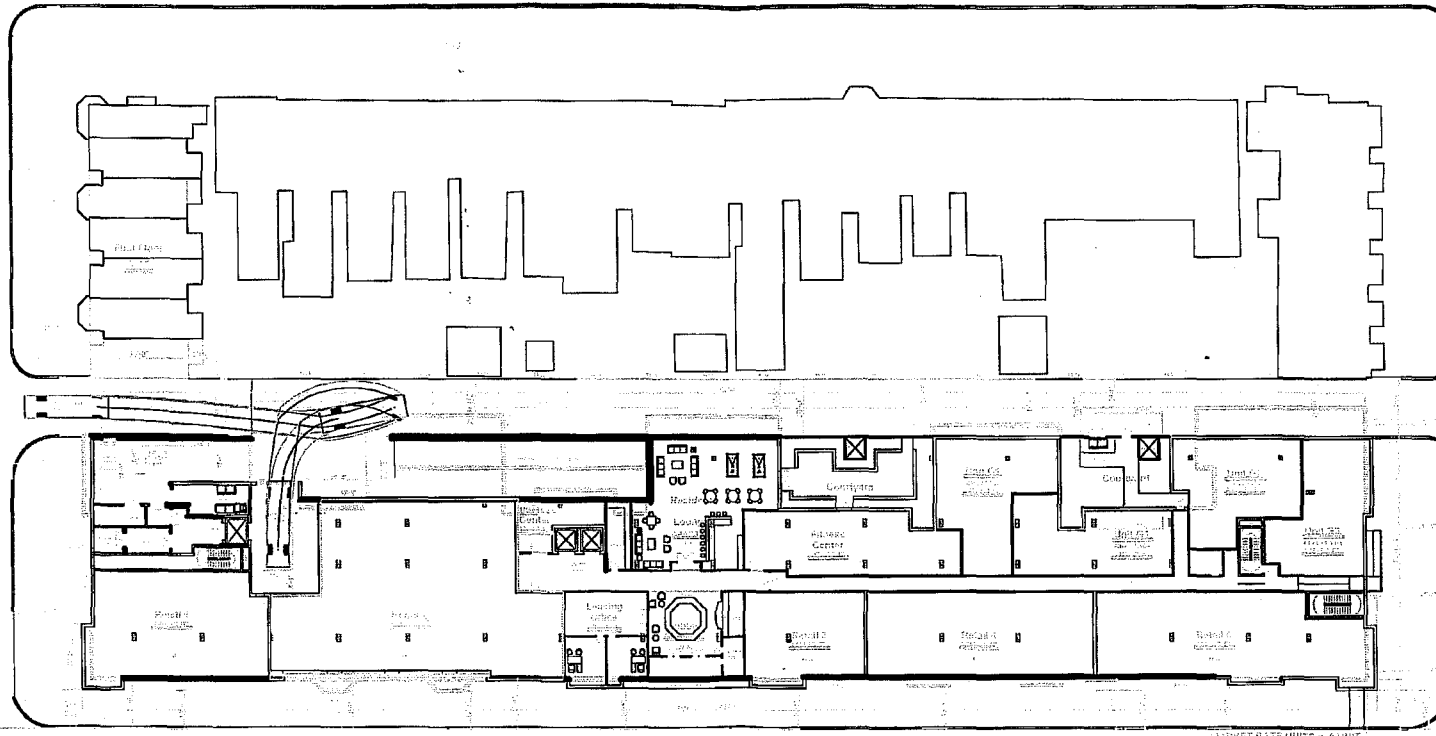
Q STREET N.W.

7TH STREET N.W.

**KELSEY GARDENS PUD APPLICATION
TRACKING DIAGRAM FOR SU TRUCK
(INBOUND MOVEMENT)**



MARKET RATE UNITS = 6 UNITS
AFFORDABLE UNITS = 4 UNITS
TOTAL = 10 UNITS



8TH STREET N.W.

P STREET N.W.

Q STREET N.W.

7TH STREET N.W.

**KELSEY GARDENS PUD APPLICATION
TRACKING DIAGRAM FOR SU TRUCK
(OUTBOUND MOVEMENT)**

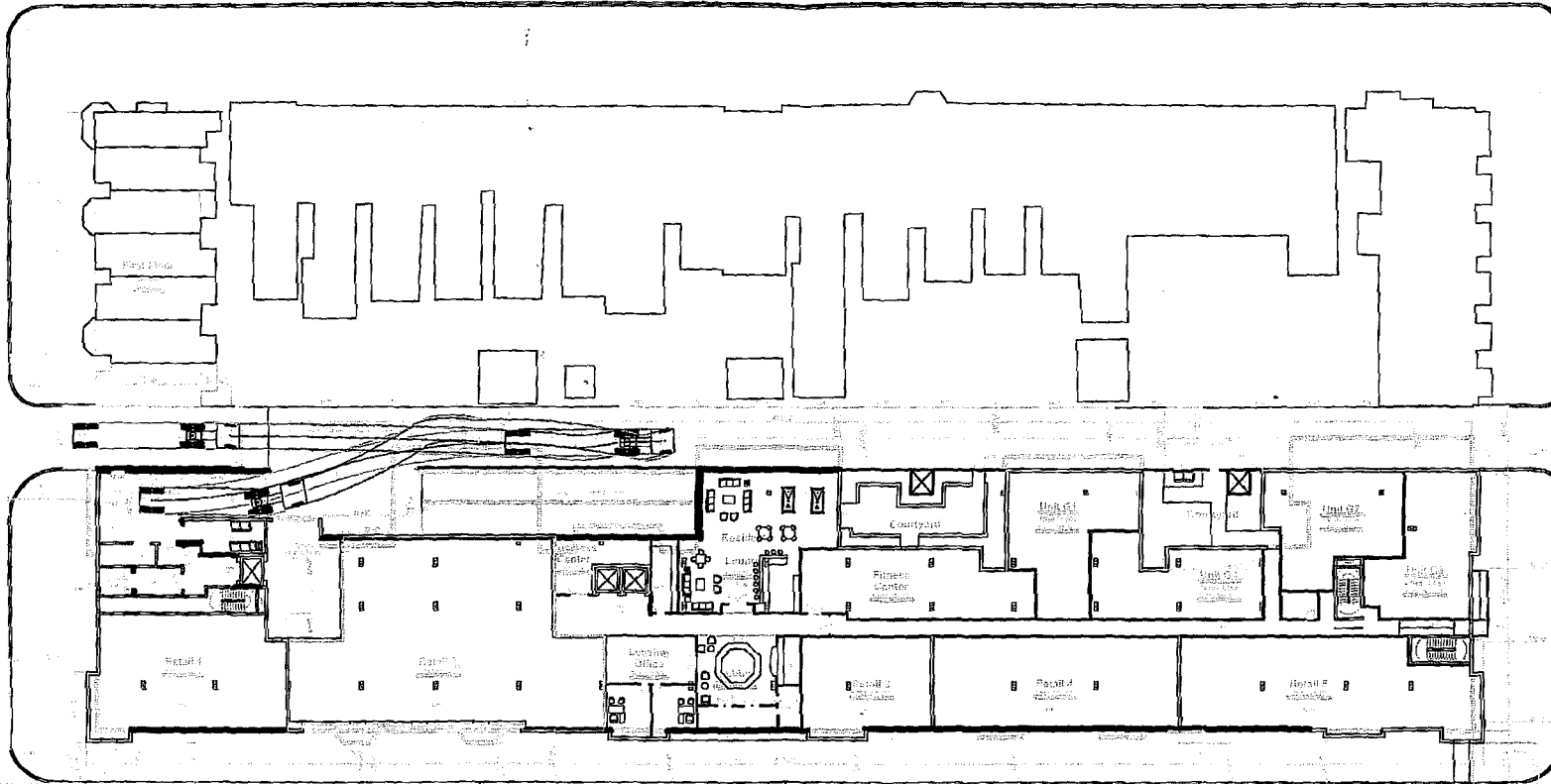


APPROXIMATELY 600 FT
APPROXIMATELY 400 FT
TOTAL 1,000 FT

8TH STREET N.W.

P STREET N.W.

Q STREET N.W.



7TH STREET N.W.

**KELSEY GARDENS PUD APPLICATION
TRACKING DIAGRAM FOR WB 50 TRUCK
(INBOUND MOVEMENT)**



8TH STREET N.W.

P STREET N.W.

Q STREET N.W.

7TH STREET N.W.

**KELSEY GARDENS PUD APPLICATION
TRACKING DIAGRAM FOR WB 50 TRUCK
(OUTBOUND MOVEMENT)**



MARKET RENT UNITS - 5 UNITS
AFFORDABLE UNITS - 22 UNITS
TOTAL - 27 UNITS