Lower West End Traffic Study

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For:

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DISTRICT DEPARTMENT OF TRANSPORTATION

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1. INTRODUCTION

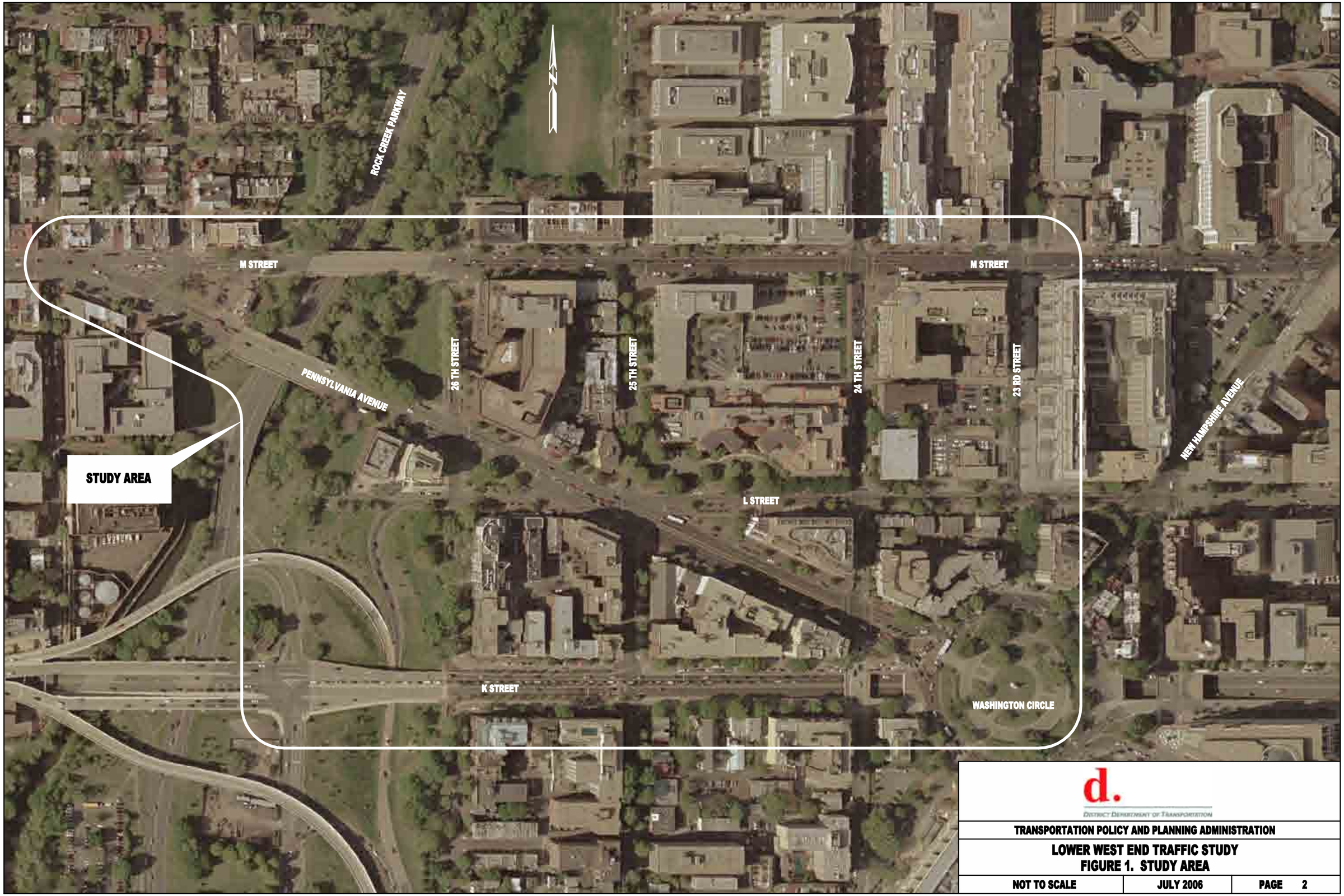
The District Department of Transportation (DDOT) initiated this Lower West End Traffic Study to address existing traffic congestion and other transportation and traffic safety concerns in the Lower West End of the District of Columbia. There are several current construction projects in this neighborhood such as the construction of a new mixed-use condominium building located on L Street. This neighborhood is located between Georgetown and downtown and receives a significant amount of commuter traffic. The study area is bounded by 29th Street in the west, 23rd Street in the east, and extends from K Street to M Street. See **Figure 1** for the location of the study area.

This study will identify short-term solutions to traffic congestion and other transportation and traffic safety concerns. Input from the neighborhood and identification of traffic problems will serve as the basis for developing the proposed improvement options. Long-term transportation system modifications are being addressed in other concurrent transportation studies, including the Whitehurst Freeway Deconstruction Study.

2. HOUSING AND TRAVEL CHARACTERISTICS

The primary modes of commuter travel are walking and public transportation. For the year 2000, the US Census reported that of the total number of commuters traveling to work, 51% chose to walk, 27% chose public transportation and 22% chose other modes including automobile. The US Census also reported that 53% of the occupied housing units in the study area did not have a vehicle. The second highest group, representing 41%, had only one vehicle. The mean travel time for commuters traveling to work was 18.

Given the information above, it can be concluded that the study area includes a significant amount of pedestrian activity from local residents during the peak hours. Pedestrian activity is further intensified by non-local pedestrians who travel to the study area from other locations. Many of their final destinations are nearby work places and public transportation facilities such as bus stops and train stations. It does not appear that local residents are significantly contributing to current vehicular traffic conditions on the roadways during peak hours, due to the large percentage of them who do not have cars. Furthermore, many of them choose to walk and use public transportation during the peak hours.



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LOWER WEST END TRAFFIC STUDY
FIGURE 1. STUDY AREA

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2.1 Public Transportation Systems

Metro Bus Facilities

A review of Washington Metropolitan Area Transit Authority (WMATA) bus information revealed that eleven Metro bus routes serve three major corridors within the study area. They are Pennsylvania Avenue, K Street and 23rd Street. In 2003, buses carried an average daily ridership of nearly 31,000 riders per day along these corridors. Approximately 70% of this ridership occurred along Pennsylvania Avenue. Average daily ridership information for bus routes in the study area during years 2000 to 2003 is provided in **Table 1**. These bus routes have several stops in the study area, which are used by residents and commuters.

Table 1. Bus Routes

Major Corridors in Project Area	Bus Routes	Average Daily Ridership			
		2000	2001	2002	2003
Pennsylvania Avenue	30,32,34,35,36	24,004	22,954	22,228	21,243
	38B	NA	NA	NA	NA
	D5	441	378	396	329
23rd Street	H1	521	612	580	687
	L1	4,513	4,977	4,741	4,440
	N3	4,068	509	4,597	4,240
Total		33,546	29,467	32,542	30,939

* Data for the Circulator bus route was unavailable at the time of this study.

3. EXISTING TRANSPORTATION FEATURES

3.1 Roadway Systems

The study area is located in the northwest section of Washington D.C, in the West End neighborhood. It is bounded by 29th Street to the west, 23rd Street in the east, K Street to the south and M Street to the north and the Pennsylvania Avenue at K Street intersection in Washington Circle. Major roadway corridors within the study area are:

- Pennsylvania Avenue
- L Street
- M Street
- 23rd, 24th, 25th, and 26th Streets
- K Street

Field investigations were performed in April 2004 and November 2005 to determine roadway characteristics of each of the corridors listed above. Roadway characteristics include roadway geometry, parking conditions, traffic control and pedestrian facilities. Due to the complexity of some of the intersections in the study area, the majority of these characteristics were included in

the traffic section of the report. The study intersections and parking conditions are summarized in **Figure 2**.

Pennsylvania Avenue

Pennsylvania Avenue is a six-lane undivided principal arterial that consists of three lanes in each direction. It traverses the study area on a diagonal alignment in the northwest to southeast directions. Pennsylvania Avenue terminates at M Street, just east of the intersection of M and 28th Streets, and splits into two segments that extend from opposite sides of Washington Circle. The posted speed limit is 25 mph. Pennsylvania Avenue spans over the Rock Creek and Potomac Parkways between 26th Street and 28th Street by way of a 300 foot long bridge.

All six of the study intersections on Pennsylvania Avenue are signalized and include pedestrian crosswalks with countdown pedestrian signals on each leg. According to DDOT, 2002 AADT volumes for Pennsylvania Avenue range from 23,500 vehicles per day between Washington Circle and L Street to 34,000 vehicles per day between L and M Streets.

Long traffic queues were observed on Pennsylvania Avenue at the eastbound left turn onto L Street and on eastbound Pennsylvania Avenue at 24th Street and at Washington Circle.

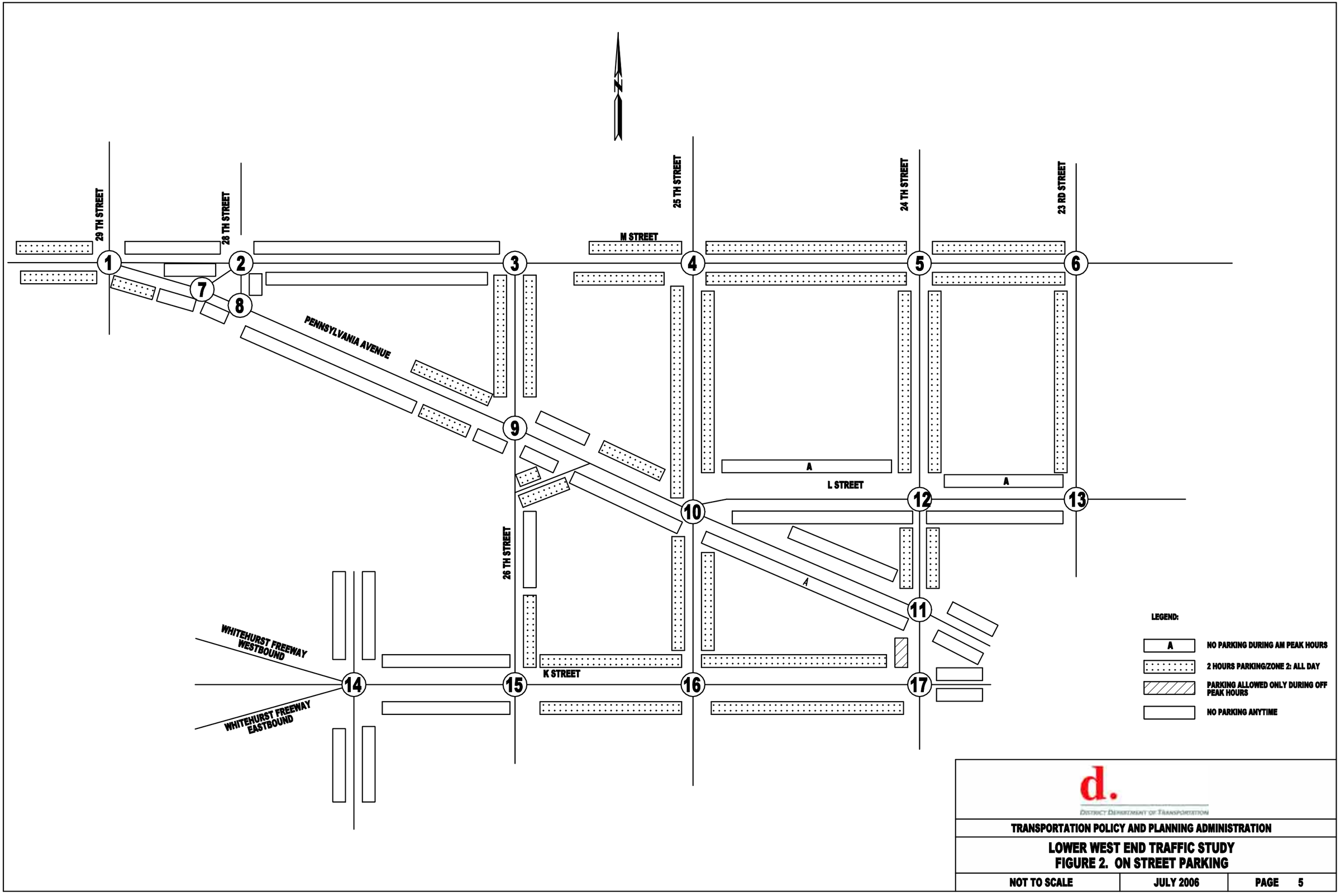
K Street

K Street is a four-lane principal arterial that traverses the study area on an east-west alignment. Between 27th Street and 25th Street, K Street consists of a four-lane divided roadway with no parking. From 25th Street to Washington Circle, K Street consists of a four lane divided roadway that goes underneath Washington Circle to points east of the study area. K Street access ramps are provided from Washington Circle to 25th Street consisting of two lanes in each direction with parking allowed during off peak hours. The K Street access ramps form intersections at the following locations: K Street and 25th Street, 24th Street and Pennsylvania Avenue. Pedestrian crossings on K Street are provided at 24th Street, 25th Street and 26th Street. K Street also forms an intersection at 27th Street and the beginning of the Whitehurst Freeway. According to DDOT, 2002 AADT volume for K Street is 32,000 vehicles per day.

Long traffic queues were observed on westbound K Street from 27th Street to Washington Circle. Considerable queues were observed at the westbound K Street access ramp and K Street at the 25th Street intersection. The queue on the K Street access ramp spilled back to 24th Street and into Washington Circle.

L Street

L Street is a three-lane, one-way minor arterial that traverses the study area on an easterly alignment. Between 26th Street and Pennsylvania Avenue, L Street consists of one eastbound lane and one westbound lane with parking on both sides of the street.



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LOWER WEST END TRAFFIC STUDY
FIGURE 2. ON STREET PARKING

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L Street converges with Pennsylvania Avenue for approximately one-half block, and continues on an easterly alignment east of 25th Street. Between 23rd Street and 25th Street, L Street consists of three eastbound lanes. The posted speed limit is 25 mph.

All three study intersections on L Street are signalized and include pedestrian crosswalks on each leg with countdown pedestrian signals. According to DDOT, 2002 AADT volumes range from 1,500 vehicles per day west of Pennsylvania Avenue to 12,500 vehicles per day between Pennsylvania Avenue and 23rd Street.

Parking and sidewalks have been temporarily removed by the construction of the Columbia House Apartments on the north side of L Street. Pedestrians were observed waiting in the street at the 25th Street and L Street corner. Pavement markings were missing along L Street between 25th Street and 24th Street. Some of the brick sidewalk on the south side of L Street was patched with asphalt and was uneven. The pavement on L Street between 25th Street and 24th Street was cracked and patched.

M Street

M Street is a four-lane, one-way minor arterial that traverses the study area in a westerly direction. Between 26th and 29th Streets, M Street consists of four westbound travel lanes with shared through/turn lanes in the outside lanes. It spans over Rock Creek and Potomac Parkways by way of a 285 foot long bridge, between 26th and 28th Streets. West of 29th Street, M Street converts to a six-lane two-way roadway. The posted speed limit is 25 mph.

All six of the study intersections on M Street are signalized and include pedestrian crosswalks with countdown pedestrian signals on each leg. According to DDOT, 2002 AADT volumes range from 22,800 vehicles per day west of Pennsylvania Avenue to 10,300 and 14,200 vehicles per day east of Pennsylvania Avenue.

Some parking along M Street has been temporarily removed due to the construction of the Columbia House Apartments. M Street pavement consists of large areas of cracked pavement, patches and missing pavement markings. The sidewalk along the south side of M Street between 25th Street and 24th Street is partially close due to the construction of the Columbia House Apartments. Pedestrians were observed walking in the street on the south side of M Street between 25th Street and 24th Street where the sidewalk was closed.

23rd Street

23rd Street is a three-lane, one-way principal arterial that traverses the study area in a southerly direction. At the southern limit, 23rd Street splits into two segments that extend from opposite sides of Washington Circle. The posted speed limit is 25 mph.

The two study intersections on 23rd Street are signalized and include pedestrian crosswalks with countdown pedestrian signals on each leg. According to DDOT, 2002 AADT volumes range from 13,300 vehicles per day between Washington Circle and L Street to 16,600 vehicles per day between L and M Streets.

24th Street, 25th Street, and 26th Street

Similar characteristics were recorded for 24th Street, 25th Street, and 26th Street. Each corridor is a four-lane, two-way, undivided collector roadway that traverses the study area in a north/south direction and consists of one through lane in each direction with parking on both sides of the streets. The posted speed limit is 25 mph.

26th Street was recently converted from a one-way to a two-way road between Pennsylvania Avenue and M Street in 2004. This allows vehicles traveling southbound on 26th Street (north of M Street) to continue through to Pennsylvania Avenue and proceed to destinations south and east. Prior to 2004, motorists had to make a u-turn at M Street and 28th Street to head east into downtown Washington D.C. Traffic volumes on southbound 26th Street at Pennsylvania Avenue were low and the signal phasing accommodated all turning movements. Some conflicts between pedestrians and turning vehicles were observed at the Pennsylvania Avenue and 26th Street intersection. Vehicles stopping in the crosswalks were observed on northbound and southbound 26th Street at Pennsylvania Avenue.

All of the study intersections on 24th, 25th and 26th Streets are signalized and include pedestrian crosswalks and countdown pedestrian signals on each leg. According to DDOT, 2002 AADT volumes are 5,000 vehicles per day for 24th Street and 4,000 vehicles per day for 25th Street between Pennsylvania Avenue and M Street. AADT data for 26th Street were not available.

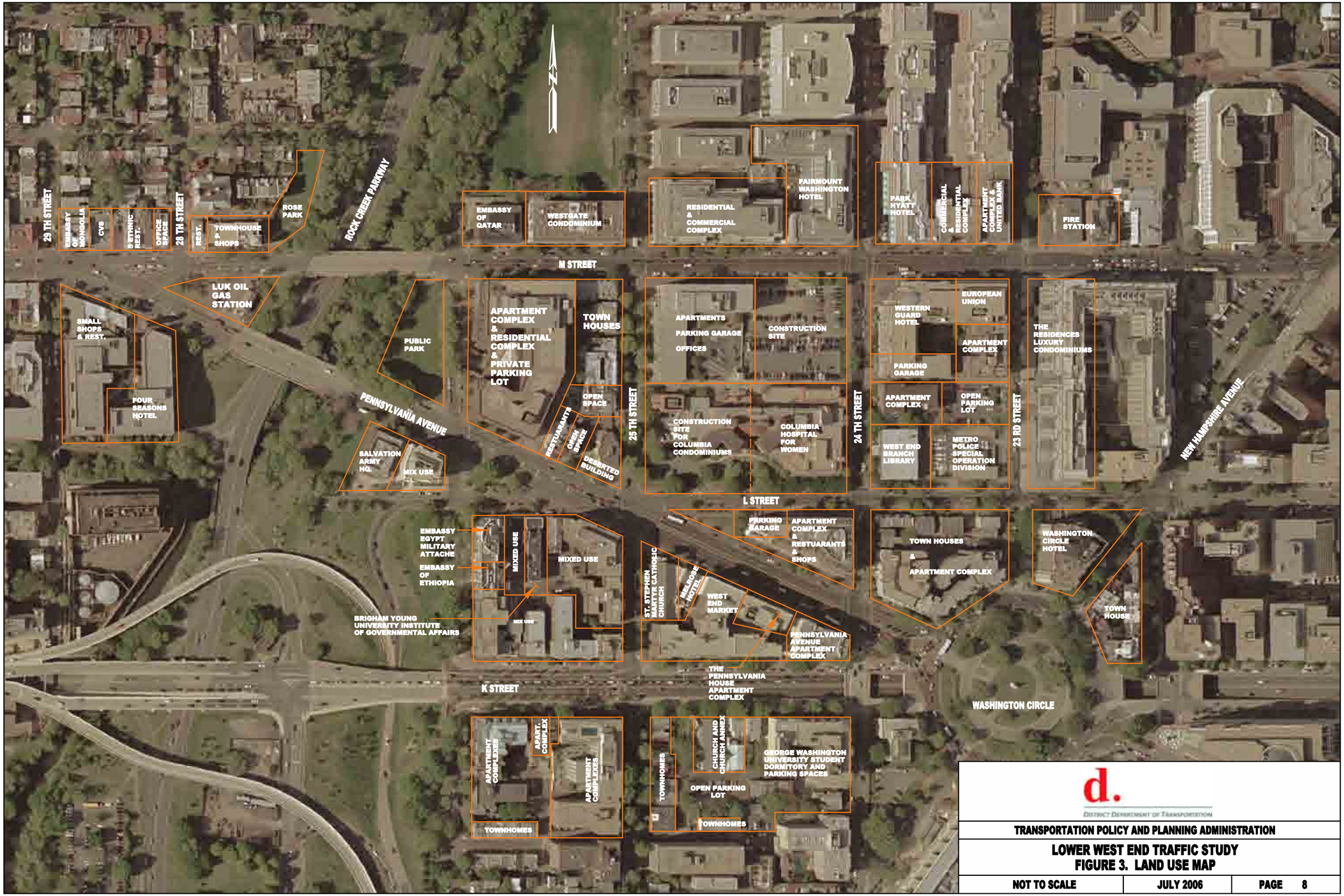
4. LAND USE AND FUTURE DEVELOPMENTS

4.1 Existing Land Use

A variety of land uses are included in the study area and are shown in **Figure 3**. Land uses include the following types:

- Residential,
- Commercial,
- Institutional,
- Public, and
- Open space.

The majority of residential land uses consists of multi-unit dwellings with 20 or more units. They are primarily located along M Street, 23rd Street and 26th Street and include town houses, apartment complexes and condominium buildings.



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LOWER WEST END TRAFFIC STUDY
FIGURE 3. LAND USE MAP

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Commercial land uses include a number of restaurants, shops and mid- to high-priced hotels located primarily along Pennsylvania Avenue and M Street. Hotels include:

- Washington Suites,
- Fairmount Washington,
- Park Hyatt Hotel,
- Western Guard Hotel,
- Washington Circle Hotel,
- Melrose Hotel, and
- The Four Seasons Hotel.

Institutional land uses include religious, hospital and educational facilities in the study area. They include:

- St. Stephen Martyr Catholic Church,
- George Washington Hospital,
- Columbia Hospital for Women, and
- George Washington University.

George Washington University (GWU) is located just south of the study area. It is comprised of approximately 90 buildings that rest on 43 acres in Foggy Bottom, which is adjacent to the study area. More than 19,000 students attend GWU. The George Washington University Medical Center (GWUMC) is comprised of the University Hospital, the Medical Faculty Associates, the School of Medicine and Health Sciences, and the School of Public Health and Health Services. GWUMC is a major employer in the study area, with more than 3,000 employees. Additionally, more than 12,000 patients are admitted each year to the University Hospital, and another 43,000 patients are seen in the Emergency Department.

Public and open space uses include the Metro Police Special Operations Division facility located on the northwest corner of 23rd Street and L Street, a public park located on 26th Street, between Pennsylvania Avenue and M Street, and small areas of vacant land on 25th Street, Pennsylvania Avenue and Washington Circle.

Other specific land uses in the study include several embassies. They are:

- Embassy of Ethiopia,
- Embassy of Mongolia,
- Embassy of Qatar,
- Embassy of Spain, and the
- Embassy of the Arab Republic of Egypt.

4.2 Future Development and Other Relevant Transportation Studies

A new development is being constructed at the former Columbia House for Women (2425 L Street NW, between 24th and 25th Streets). The site will be converted into 200 condominium apartment units and 28,000 square feet of retail space on the ground level. It is scheduled to be

completed in 2008. Columbia House Apartments I will consist of 142 residential units and Columbia House Apartments II will consists of 213 units.

Several other studies in the area were examined to determine if they would affect traffic patterns or volumes in the study area. All the following studies were examined and determined not to affect the study area:

- Kennedy Center for Performing Arts (Completion of improvements to the parking garage, but no funding for major access improvements and does not impact this study.)
- Theodore Roosevelt Bridge (A long term improvement project and not included in this study.)
- Juarez Circle (Visual improvements to the circle and do not impact this study.)
- Redevelopment of the property in the southeast quadrant of Washington Circle, between 23rd Street and Pennsylvania. (Finalized plans were not available at the time of this study.)
- Whitehurst Freeway Deconstruction Study (A long term study that overlaps the Lower West End Study area on M Street, Pennsylvania Avenue and K Street. Because of the potentially significant changes in the transportation system, consideration of long term improvement options is deferred to this study.)

5. TRAFFIC OPERATIONS

5.1 Traffic Data

Intersection turning movement counts were collected during a three week period in February 2004 between the hours of 6:30 AM to 9:30 AM and from 3:30 PM to 6:30 PM at the following intersections in the study area:

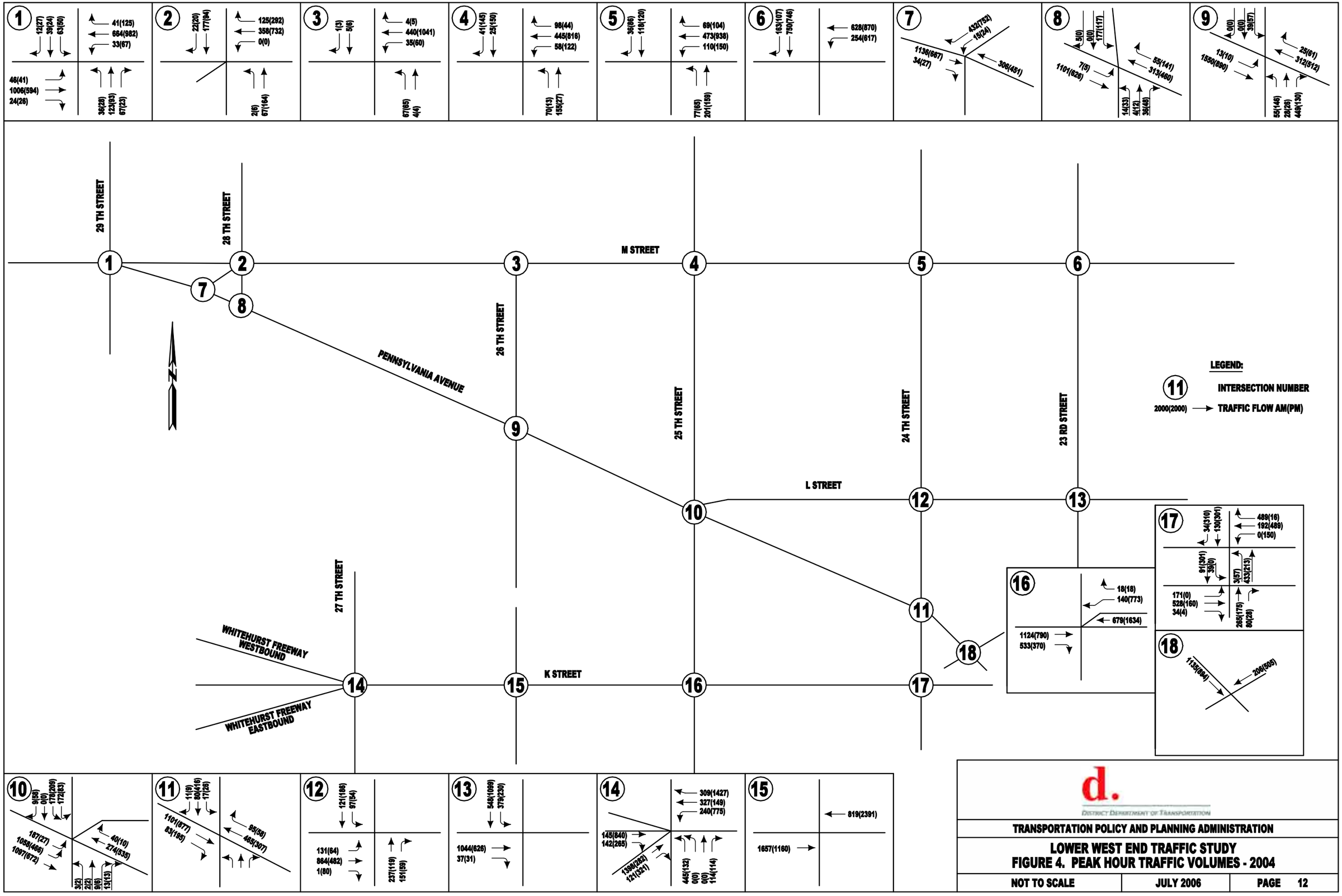
- Pennsylvania Avenue and 29th Street,
- Pennsylvania Avenue and 28th and M Streets,
- Pennsylvania Avenue and 26th Street,
- Pennsylvania Avenue and 25th and L Streets,
- M Street and 26th Street,
- M Street and 25th Street, and
- K Street and 27th Street (added November 15, 2005).

Additional traffic data was obtained from recent transportation studies conducted in the area. Data used from these studies were for the following intersections:

- M Street and 24th Street,
- M Street and 23rd Street,
- Pennsylvania Avenue and 24th Street,
- L Street and 24th Street,
- L Street and 23rd Street,
- K Street and 26th Street,

- K Street and 25th Street,
- K Street and 24th Street, and
- K Street and 27th Street.

The November 15th count conducted in 2005 was used to determine if the data collected from previous studies was still applicable. The November 15th count was found to be lower than data from previous studies. The AM count was three percent lower than the previous study and the PM count was 18 percent lower than the previous study. No changes were made to the data from the previous studies or to the counts conducted in February of 2004. The peak hour traffic volumes are shown in **Figure 4**. The lane configurations of each intersection are shown in **Figure 5**.



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LOWER WEST END TRAFFIC STUDY
FIGURE 4. PEAK HOUR TRAFFIC VOLUMES - 2004

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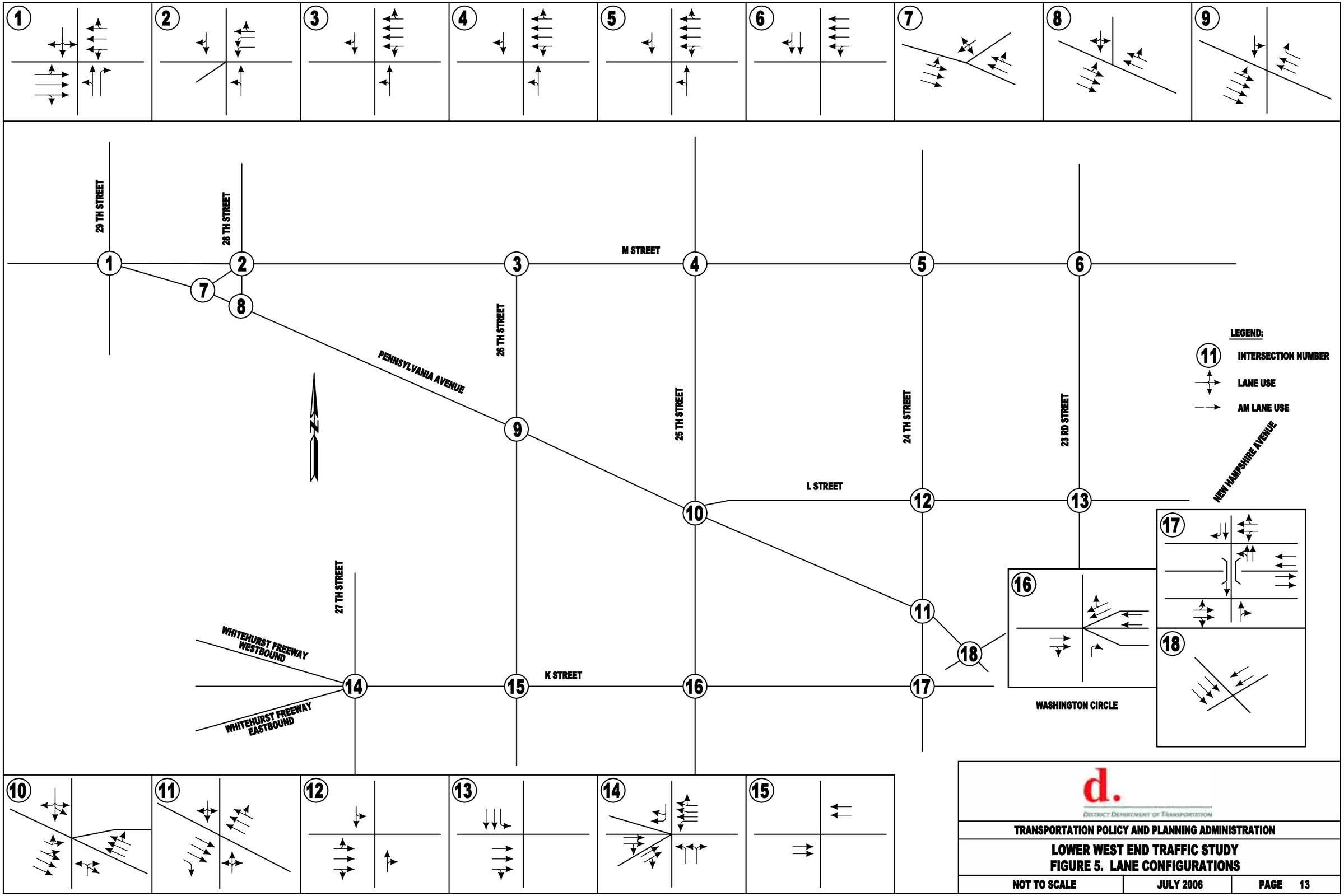

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LOWER WEST END TRAFFIC STUDY
FIGURE 5. LANE CONFIGURATIONS

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5.2 Capacity Analysis

The traffic data discussed above and existing signal timings were used to assess the existing and future operation of key intersections in the study area. SYNCHRO was used to implement the procedures found in the 2000 *Highway Capacity Manual* to analyze each intersection. A capacity analysis is an objective assessment of the operation of an intersection based on a number of factors including peak hour traffic volumes, number of lanes, use of lanes, presence of parking, presence of trucks and approach grades. The result of a capacity analysis is level of service (LOS), which ranges from A (best) to D (minimum desirable) to F (failing or breakdown). The capacity analysis also provides a measure of delay (seconds per vehicle). Capacity analysis results for this study are summarized in **Table 2**.

Table 2. Capacity Analysis Summary – Existing Conditions

Location	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
1. M Street and 29th Street	B	12.8	B	19.4
2. M Street and 28th Street	C	26.9	B	11.6
3. M Street and 26th Street	A	8.3	A	8.1
4. M Street and 25th Street	C	26.0	C	23.5
5. M Street and 24th Street	C	22.3	C	24.8
6. M Street and 23rd Street	C	20.4	C	20.8
7. Pennsylvania Avenue and M Street	B	16.2	C	21.9
8. Pennsylvania Avenue and 28th Street	A	8.9	B	12.9
9. Pennsylvania Avenue and 26th Street	B	13.8	B	12.0
10. Pennsylvania Avenue, 25th Street and L Street	D	51.9	F	93.1
11. Pennsylvania Avenue and 24th Street	D	43.9	C*	23.1
12. L Street and 24th Street	C	20.7	C	21.9
13. L Street and 23rd Street	B	16.2	B	13.4
14. K Street, 27th Street and Whitehurst Freeway	F	124.5	F	489.7
15. K Street and 26th Street	N/A	N/A	N/A	N/A
16. K Street and 25th Street	B	13.6	C*	25.8
17-A. WB K Street and 24th Street	B	13.8	B*	10.0
17-B. EB K Street and 24th Street	B	18.0	A*	9.3
18. K Street, Pennsylvania Avenue and Washington Circle	C	22.6	D*	23.1

* Analysis does not account for traffic queue spillback from K Street and 27th Street.

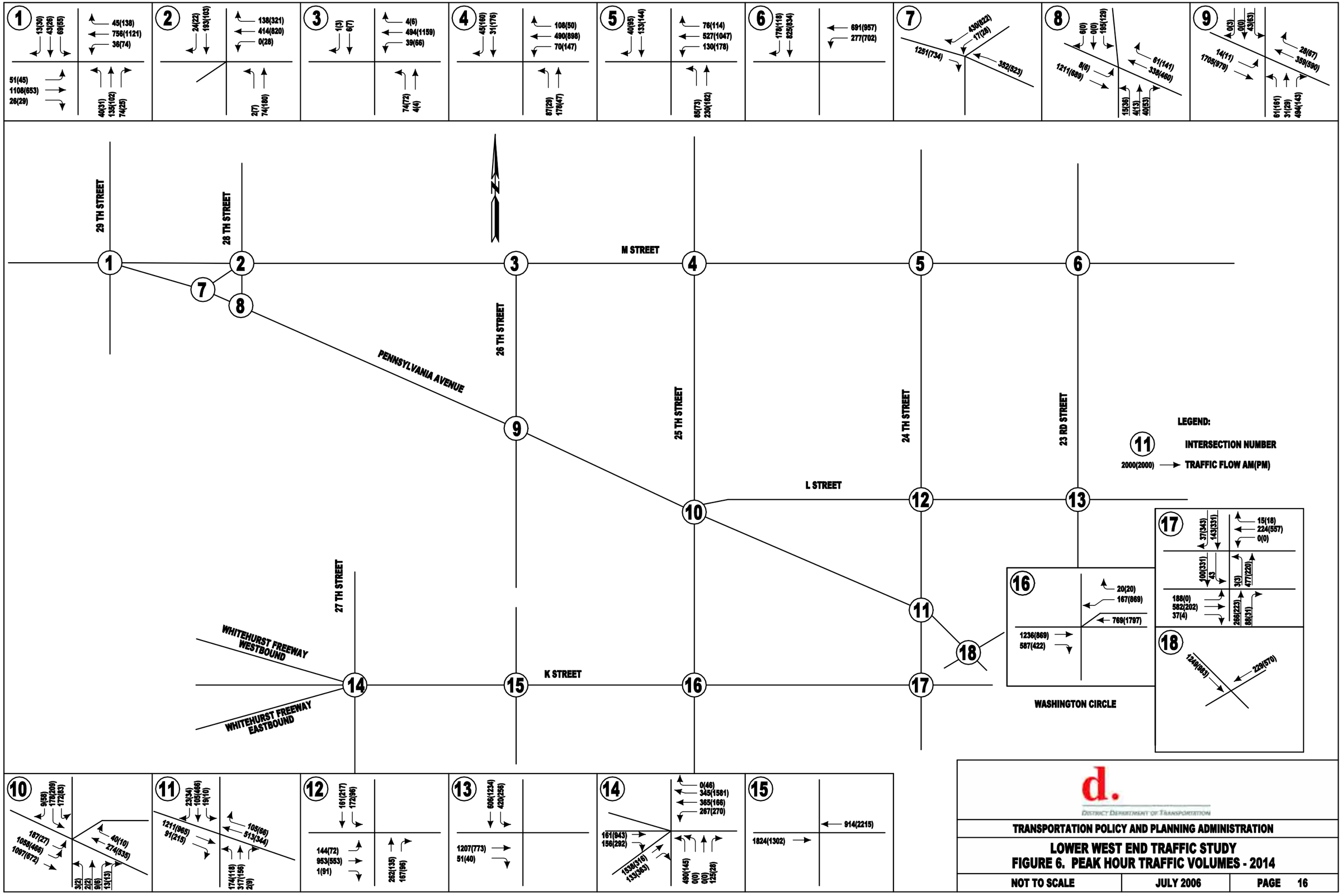
Most of the intersections in the study area are operating at LOS D or better with the exception of the following intersections:

- K Street at 24th Street (Delays are caused from westbound K Street queues from 27th Street),
- K Street at Pennsylvania Avenue and Washington Circle (Delays are caused from westbound K Street queues from 27th Street),

- K Street at 25th Street (Delays are caused from westbound K Street queues from 27th Street),
- K Street at Whitehurst Freeway, and
- Pennsylvania Avenue at L Street and 25th Street.

Traffic volumes for the future year of 2014 were developed by expanding the existing traffic volumes using a growth rate of one percent per year and adding an estimate of traffic volumes to be generated by the local development currently under construction. The future peak hour turning movements (2014) are shown in **Figure 6**. The capacity analysis results for the future year are summarized in **Table 3**. The analysis of traffic volumes was performed to determine if there are going to be future capacity problems at intersections in the study area. The results of the capacity analysis indicate that most intersections will operate at LOS E or better. The following intersections continue to operate poorly:

- K Street at 24th Street (Delays are caused from westbound K Street queues from 27th Street),
- K Street at Pennsylvania Avenue and Washington Circle (Delays are caused from westbound K Street queues from 27th Street),
- K Street at 25th Street (Delays are caused from westbound K Street queues from 27th Street),
- K Street at Whitehurst Freeway, and
- Pennsylvania Avenue at L Street and 25th Street.



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LOWER WEST END TRAFFIC STUDY
FIGURE 6. PEAK HOUR TRAFFIC VOLUMES - 2014

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Table 3. Capacity Analysis Summary – Future (2014) Conditions				
Location	**AM Peak**		**PM Peak**	
	LOS	**Delay**	**LOS**	**Delay**
1. M Street and 29th Street	B	13.4	C	21.0
2. M Street and 28th Street	C	27.7	C	26.7
3. M Street and 26th Street	A	8.9	A	8.8
4. M Street and 25th Street	C	26.5	C	25.2
5. M Street and 24th Street	C	23.8	C	26.2
6. M Street and 23rd Street	C	21.6	C	22.6
7. Pennsylvania Avenue and M Street	B	16.6	C	22.8
8. Pennsylvania Avenue and 28th Street	A	8.9	B	14.0
9. Pennsylvania Avenue and 26th Street	B	14.3	B	12.2
10. Pennsylvania Avenue, 25th Street and L Street	E	66.8	F	136.5
11. Pennsylvania Avenue and 24th Street	E	57.4	C*	24.2
12. L Street and 24th Street	C	33.8	C	22.4
13. L Street and 23rd Street	B	18.0	B	17.0
14. K Street, 27th Street and Whitehurst Freeway	F	220.5	F	656.4
15. K Street and 26th Street	N/A	N/A	N/A	N/A
16. K Street and 25th Street	B	14.4	C*	32.9
17-A. WB K Street and 24th Street	B	13.8	B*	10.7
17-B. EB K Street and 24th Street	B	18.8	B	13.4
18. K Street, Pennsylvania Avenue at Washington Circle	C	22.9	E*	60.8

* Analysis does not account for traffic queue spillback from K Street and 27th Street.

5.3 Accidents

Accident reports were reviewed for the three-year period, January 1, 2001 to December 31, 2003. A total of 237 accidents and 75 injuries occurred in the study area during the period. Of the total, the highest number of accidents and injuries occurred at the intersection of 28th Street and Pennsylvania Avenue, totaling 40 and 22, respectively. Side-swipes were the predominant collision type at this location. The second and third highest number of accidents occurred at the intersections of M Street and 24th Street with a total of 32 and Washington Circle and 23rd Street with a total of 28. Accidents are summarized in the **Table 4**.

The accident rates per million entering vehicles the intersection were calculated using the major corridor ADT and the accident data. The accident rate is used to compare accident locations with different traffic volumes. The intersection with the highest accident rate was 24th Street and M Street with 2.06 accidents per million entering vehicles. The intersections with the second and third highest accident rate were 28th Street and Pennsylvania and 28th Street and M Street. It is not surprising the M Street and 28th Street intersection would be among the highest ranking intersections due to the close proximity of both of these intersections to each other. Accident rates are shown in **Table 5**.

Table 4. Accident Summary			
Location	**Total Accidents**	**Total Injuries**	**Predominate Collision Type**
L Street and 24th Street	8	1	Side Swipe (3)
M Street and 23rd Street	11	1	Side Swipe (6)
M Street and 24th Street	32	5	Parked (12)
M Street and Pennsylvania Avenue	1	1	Rear End (1)
23rd Street and L Street	12	3	Rear End (7)
25th Street and M Street	12	1	Side Swipe (5)
25th Street and Pennsylvania Avenue	14	7	Side Swipe (5)
26th Street and M Street	2	0	Not Available
26th Street and Pennsylvania Avenue	22	18	Right (5)
28th Street and M Street	14	2	S. Swipe/Parked. (5)
28th Street and Pennsylvania Avenue	40	22	Side Swipe (13)
Washington Circle and 23rd Street	28	3	Side Swipe (16)
Washington Circle and Pennsylvania Avenue	18	5	Side Swipe (9)
Pennsylvania Avenue and 23rd Street	3	1	Side Swipe (2)
Pennsylvania Avenue and 24th Street	15	4	S. Swipe/R. End (4)
Pennsylvania Avenue and L Street	5	1	Parked (2)
Total	237	75	

Table 5. Accident Rates						
ACCIDENT RATES						
Location	**Total Accidents**	**Number Years**	**ADT**	**Rate (MEV)**	**Rate Rank**	**Accident Rank**
M Street and 24th Street	32	3	14200	2.06	1	2
28th Street and Pennsylvania Avenue	40	3	34000	1.07	2	1
28th Street and M Street	14	3	14200	0.90	3	5
25th Street and M Street	12	3	14200	0.77	4	7
M Street and 23rd Street	11	3	14200	0.71	5	9
23rd Street and L Street	12	3	16600	0.66	6	7
26th Street and Pennsylvania Avenue	22	3	34000	0.59	7	3
L Street and 24th Street	8	3	12500	0.58	8	10
Pennsylvania Avenue and 24th Street	15	3	23500	0.58	9	4
25th Street and Pennsylvania Avenue	14	3	34000	0.38	10	5
Pennsylvania Avenue and L Street	5	3	34000	0.13	11	11
26th Street and M Street	2	3	14200	0.13	12	13
Pennsylvania Avenue and 23rd Street	3	3	23500	0.12	13	12
M Street and Pennsylvania Avenue	1	3	34000	0.03	14	14

MEV = [(no. of accidents) * (10^6)] / [(ADT) *(no. of years) * (365 days per year)]

6. IMPROVEMENT OPTIONS

6.1 Neckdowns

The installation of pedestrian neckdowns, which extend the sidewalk or curb line out into the parking lane, and reduces the effective street width, is a possible improvement option to conflicts between pedestrians and turning vehicles at intersections. This extension of the curb reduces the length of the pedestrian crossing, thus reducing the pedestrian crossing time and increases the visibility of the pedestrian. Neckdowns also help to reduce motor vehicle speeds at the intersection as the roadway width is reduced. The neckdowns also provide suitable areas for curb ramps. The neckdowns should only be installed in locations where there is on-street parking. Neckdown locations would be coordinated with WMATA to ensure that the neckdown does not interfere with bus movements to and from bus stops. See **Figure 7** for the proposed neckdown at Pennsylvania Avenue and 26th Street.

Possible installation locations include:

- 26th Street and Pennsylvania Avenue
  - Northwest Corner (Pennsylvania Avenue)
  - Southwest Corner (Pennsylvania Avenue)
  - Southeast Corner (Pennsylvania Avenue)

- M Street at 26th, 25th, 24th, and 23rd streets.

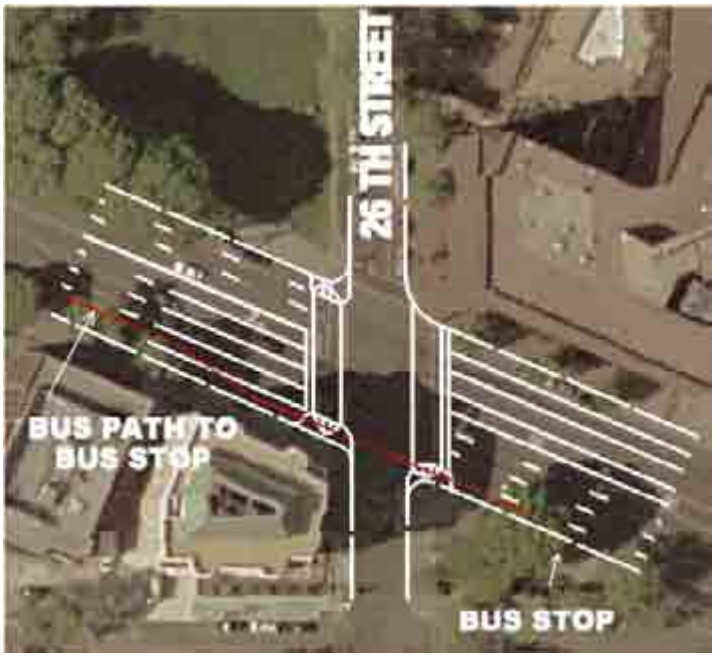

Figure 7. Proposed Neckdown at Pennsylvania Avenue and 26th Street.

Neckdowns could be added at all crossing locations on M Street to provide shorter pedestrian crossings. Currently the outside lane is used for parking 24 hours a day. The proposed neckdown at 26th and Pennsylvania Avenue would cost approximately $48,000. A neckdown on M Street would cost approximately $36,000.

6.2 Countdown Pedestrian Signals

Countdown pedestrian signals give the pedestrian information about the amount of time that is available for them to cross the roadway. It has been found that there is generally an increase in pedestrian safety when countdown pedestrian signals are installed at intersections and that there is a decrease in the number of pedestrian and motor vehicle conflicts. Countdown pedestrian signals have been recently installed at all intersections in the study area.

6.3 Signing

Additional signing is an inexpensive solution to increasing safety at an intersection. Additional signs or the use of a larger sign to alert motorists to restrictions or warnings are recommended. Signs that can be installed include: "NO TURN ON RED", "STOP HERE ON RED", AND "TURNING TRAFFIC MUST YIELD TO PEDESTRIANS".

Locations include:

Northbound 26th Street at Pennsylvania Avenue:

Currently several "NO TURN ON RED" sign are posted at the intersection. A "RIGHT TURN YIELD TO PEDESTRIANS" sign is located on the far side of the intersection and may not be visible to a right turning motorist until they reach the intersection. See **Figures 8** and **9** on page 21 for the existing signing on 26th Street at Pennsylvania Avenue. It is recommended that a R10-15 "TURNING TRAFFIC MUST YIELD TO PEDESTRIANS" sign be installed on northbound 26th Street before Pennsylvania Avenue. An additional "STOP HERE ON RED" sign can be added on northbound and southbound 26th Street at Pennsylvania Avenue at the stop line. Vehicles stopped in the crosswalks were observed at this location.

The addition of these signs would provide additional information to motorists at this intersection. Most motorists at this intersection are coming from I-66 and are accustomed to traveling at high speeds. Additional signing would alert the motorists to expect pedestrians and to reduce their speed.

Eastbound L Street at Pennsylvania Avenue (between 26th Street and 25th Street):

A R1-6 "CITY LAW YIELD TO PEDESTRIANS IN CROSSWALKS" should be installed on eastbound L Street approaching Pennsylvania Avenue. Many motorists were observed looking at eastbound Pennsylvania Avenue traffic and were not paying attention to the crosswalk. The intersection of L Street and Pennsylvania Avenue is controlled with a yield sign on the eastbound L Street approach. The installation of the new signs would cost approximately $725.00. The proposed signing is shown in **Figure 10**.

Figure 8. Northbound 26th Street approaching Pennsylvania Avenue.

Figure 9. "Right Turn Yield to Pedestrians" and "No Turn on Red" signs on northbound 26th Street.

PENNSYLVANIA AVENUE

26TH STREET

NO TURN ON RED

NO TURN ON RED

RIGHT TURN YIELD TO PEDESTRIANS

NO STANDING OR PARKING ANY TIME

DO NOT ENTER

ONE WAY

STOP HERE ON RED

R10-6A
24"X30"

DO NOT ENTER

ONLY ONLY

RELOCATE LANE USE SIGN TO LIGHT POLE

NO STANDING OR PARKING ANY TIME

TURNING TRAFFIC MUST YIELD TO PEDESTRIANS

R10-15
30"X36"

ONE WAY

STOP

DO NOT ENTER

YIELD

DON'T BLOCK INTERSECTION

ALL WAY

STOP

STOP

ALL WAY

ONE WAY

STOP

ALL WAY

CITY LAW

YIELD

TO

WITHIN CROSSWALK

R1-6
36"X12"

YIELD

LEGEND

- EXISTING SIGN POLE
- EXISTING SIGNAL/ LIGHT POLE
- PROPOSED SIGN POLE
- EXISTING SIGN (NO TURN ON RED)
- PROPOSED SIGN (STOP HERE ON RED)

BY:Aaron Hottenstein Division: Transportation

FILE: M:\2002\01\02\87.cldrawings\Signing-4.dgn

PLOTTED: "01:06 PM on Thursday, June 29, 2006"

d.
DISTRICT DEPARTMENT OF TRANSPORTATION

TRANSPORTATION POLICY AND PLANNING ADMINISTRATION

LOWER WEST END TRAFFIC STUDY
FIGURE 10. PROPOSED 26TH AND L STREET SIGNING

NOT TO SCALE	JULY 2006	PAGE 22

6.4 Pedestrian Signal Timings

Field investigations indicated that the pedestrian signal timings were adequate for an average person to cross the street. At Pennsylvania Avenue and 26th Street it was observed that there were 34 seconds displayed on the countdown signal for the Pennsylvania Avenue crossing. The required time for a pedestrian to cross Pennsylvania Avenue is approximately 22 seconds.

A review of the 2003 pedestrian signal timings at the study intersections showed that the total WALK and FLASHING DON'T WALK times were long enough for pedestrians walking at a speed of 4 feet per second (The Manual on Uniform Traffic Control Devices' (MUTCD) recommended walking speed). The pedestrian countdown signals also provide pedestrians with the time remaining for them to safely cross the street.

The Institute of Transportation Engineers' recommended practice for pedestrian signal timings suggests that the FLASHING DON'T WALK phase be equal to the distance of the pedestrian crossing divided by the pedestrian walk speed of 4 feet per second. This allows a pedestrian that has just left the curb to complete the crossing with the FLASHING DON'T WALK signal. Reviews of the 2003 FLASHING DON'T WALK times showed that the following intersections did not have sufficient FLASHING DON'T WALK times:

- Pennsylvania Avenue and 29th Street,
- Pennsylvania Avenue and 28th and M Streets,
- Pennsylvania Avenue and 25th and L Streets,
- M Street and 26th Street,
- M Street and 25th Street,
- K Street and 27th Street
- M Street and 23rd Street,
- L Street and 24th Street, and
- L Street and 23rd Street.

DDOT Traffic Services Administration should review the signal timings and make the necessary adjustments to the WALK and FLASHING DON'T WALK phases.

A leading pedestrian interval (LPI) could be added at intersections with a high volume of pedestrians, or with conflicting turning movements. The LPI gives the pedestrian an advance WALK signal before the motorists get a green light thus making pedestrians in the crosswalk more visible to motorists. Advance WALK signals have been shown to reduce conflicts for pedestrians in several major cities in the United States. The Pennsylvania Avenue at 26th Street intersections currently has a five second LPI to cross Pennsylvania Avenue.

An exclusive pedestrian phase could also be considered to provide a safe pedestrian crossing when there are many high-volume conflicting turning movements at an intersection. This phase would allow pedestrians to cross all approaches of the intersection without vehicles entering the intersection. The addition of an exclusive pedestrian phase may however, reduce the ability to provide adequate traffic signal coordination along arterial streets.

At this time additional LPI phases and exclusive pedestrian phases are not recommended for implementation in the study area because an LPI is best used at locations with heavy right turn movements (such as at 26th Street and Pennsylvania Avenue) and an exclusive pedestrian phase would take time away from the traffic signal phases and require adjustments to signal coordination timings in the study corridor.

6.5 Pavement Marking Upgrades

New pavement markings and new crosswalk pavement markings may make a crossing location more visible to motorists. Several locations in the study area have faded crosswalk pavement markings. The installation of new pavement markings described below would cost approximately $17,000. This cost does not include milling and overlay of the intersections.

Crosswalks locations to be restriped include:

- M Street at 26th Street (all approaches),
- M Street at 25th Street (all approaches),
- M Street at 24th Street (all approaches),
- M Street at 23rd Street (all approaches),
- L Street and 24th Street (new markings on the west leg), and
- Pennsylvania Avenue, L Street and 25th Street (all approaches).

Roadway pavement markings (lane lines) to be restriped include:

- M Street from 23rd Street to 26th Street (**Figure 11**),
- L Street from 25th Street to 24th Street,
- 25th Street from M Street to Pennsylvania Avenue, and
- 24th Street from M Street to Pennsylvania Avenue.

Figure 11. M Street requires pavement markings.

6.6 Roadway Resurfacing

Roadways in the area are suffering deterioration due to age and construction activity. Additionally, cracks in the pavement and patches create tripping hazards for pedestrians. The cost for resurfacing the proposed roadways and to install new pavement markings would be approximately $49,000. Locations that require resurfacing are as follows:

- L Street from 25th Street to 24th Street should be resurfaced after completion of the construction of the Columbia House Apartments.
- M Street should be resurfaced from 23rd Street to 26th Street after construction of the Columbia House Apartments. M Street pavement conditions are shown in **Figure 12**.

Figure 12. M Street at 25th Street, poor pavement condition.

6.7 Capacity Improvements

Capacity improvements such as adding turn lanes are limited by the density of the surrounding development and roadway geometries.

Capacity improvements were examined at K Street and 27th Street and Whitehurst Freeway. An additional westbound left turn lane on K Street and an additional eastbound through lane on the Whitehurst Freeway approach were examined. These capacity improvements, are expected to change the LOS to E during the AM peak hour were found not to change the LOS during the PM peak hour. The addition of the westbound left-turn lane on K Street would require the widening of the K Street bridge crossing the I-66 exit ramp to 26th Street and an exit ramp to westbound

Whitehurst Freeway. The additional eastbound through lane would require K Street to be widened from 27th Street to Street 25th to accommodate the additional through lane. The cost and time for development of these improvements should be examined by DDOT Project Development Team #1 and be addressed as part of the Whitehurst Freeway Deconstruction Study.

The heavy westbound left turn and through volumes create long queues along K Street that extend to Washington Circle during the PM peak hour. These queues cause K Street at 24th Street and Pennsylvania Avenue at 24th Street and the Pennsylvania Avenue, K Street at Washington Circle intersections to operate poorly. Eliminating the queues from westbound K Street at 27th Street would reduce congestion on westbound K Street. Traffic patterns need to be examined to determine the destination of the westbound K Street left turning movement onto 27th Street. It appears that an alternative connection to Rock Creek/Potomac Parkway or I-66 could further reduce congestion on westbound K Street. The development and study of alternatives at this intersection are outside the scope of this study and would be better accommodated within the Whitehurst Freeway Study.

The Pennsylvania Avenue and L Street and 25th Street intersection currently operate at LOS F during the PM peak hour. Changes to the intersection signal timing may improve the LOS to C. Signal timing changes are shown in **Table 6**. However, any changes at this intersection must also be coordinated with adjacent Pennsylvania Avenue signals to ensure that system operations along Pennsylvania Avenue are not compromised. Other improvements to the intersection consist of changing southbound 25th Street from one lane to two lanes resulting in a LOS of D during the PM peak. This change would require the removal of on street parking during the PM peak hour.

Table 6. Pennsylvania Avenue/L Street/25th Street PM Peak Period Signal Timings

Phase	**Existing** 100 Second Cycle	**Proposed** **100 Second Cycle**
Eastbound and Westbound Pennsylvania Avenue	G = 41	G = 18
	Y= 4	Y= 4
Eastbound Pennsylvania Avenue Through and Left Turn Movements	G = 18	G = 26
	Y= 4	Y= 4
Northbound and Southbound 25th Street	G = 27	G = 44
	Y= 4	Y= 4
	LOS F	LOS C
	Delay 93.1	Delay 31.9

6.8 Parking

Parking in the study area is regulated with several different types of parking zones as detailed previously. The AM peak period has the most restrictive parking requirements to allow additional travel lanes to be used during the morning peak hour. A field review was conducted to determine if additional parking spaces could be provided in the study area. There were several sites where additional parking could be added, however, these locations have embassies of foreign countries as the adjacent land use. Parking is typically prohibited in front of embassies

for security concerns and is unlikely to be allowed. Two to three additional parking spaces could be provided along Pennsylvania Avenue from just east of the Pennsylvania Bridge over Rock Creek/Potomac Parkway to 26th Street. Adding parking spaces on the south side of L Street between 25th and 24th streets would reduce L Street to one travel lane.

A considerable number of residential parking spaces have been eliminated along the construction site of the Columbia House Apartments. All efforts should be made to restore the parking along the Columbia House Apartments as quickly as possible. The completion of the Columbia House Apartments and associated underground parking garage will also provide additional parking.

6.9 Pedestrian Behavior and Education Programs

It was also observed during one field visit that pedestrians would cross Pennsylvania Avenue between K Street and 24th Street. Pedestrians should cross Pennsylvania Avenue only at the 24th Street intersection, or they should navigate their way through Washington Circle to the appropriate pedestrian crossing. One solution to directing these pedestrians is to install decorative fencing along the sidewalk or medians to prohibit pedestrians from entering the roadway. Several locations for the fence can be considered as shown in **Figure 13**. The installation of a decorative fence can range from $3,600 to $19,800

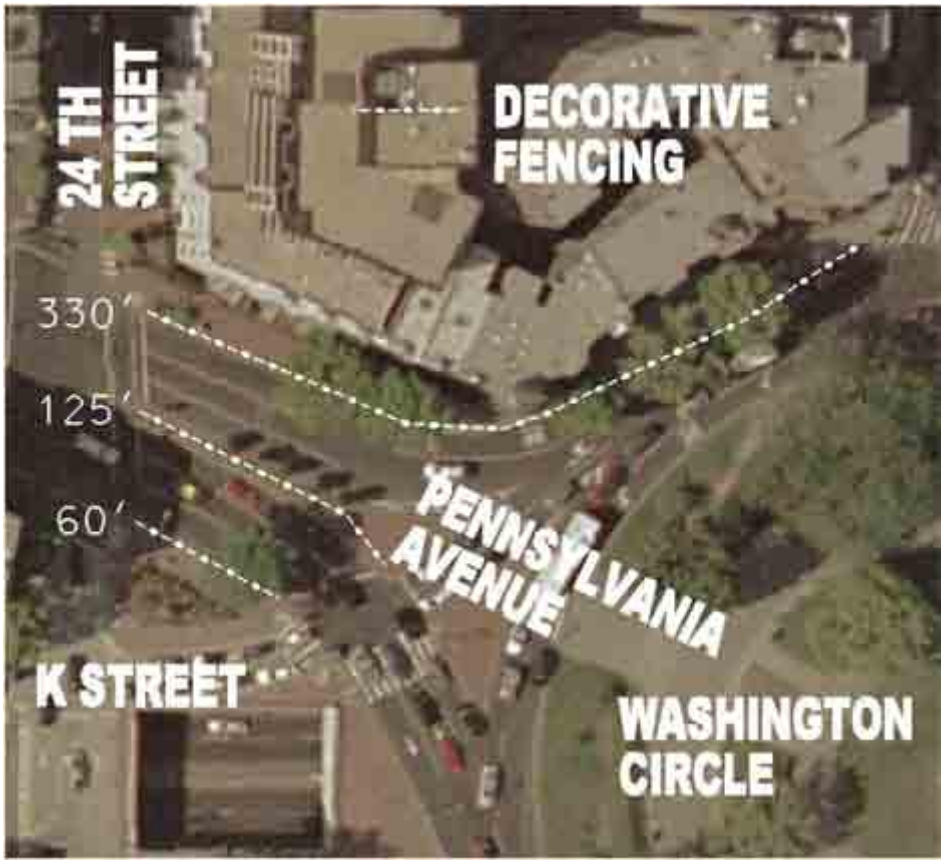

Figure 13. Decorative fencing along Pennsylvania Avenue at K Street.

A targeted pedestrian and driver education program would be beneficial for all residents and drivers. The pedestrian education program could consist of mailing informational brochures to residences or radio and television announcements. The driver education program could also consist of informational brochure sent to businesses or radio and television announcements. Pedestrians and drivers need to be reminded that they are sharing the roadway and all individuals should be cautious when entering the roadway or traveling through any area where pedestrians can be expected. Things that pedestrians and drivers should remember are listed below (Source: http://www.walkinginfo.org/ee/safety.htm).

"Things to remember as a pedestrian:

- Be predictable. Stay off freeways and restricted zones. Use sidewalks where provided. Cross or enter streets where it is legal to do so.
- Where no sidewalks are provided, it is usually safer to walk facing road traffic.
- Make it easy for drivers to see you - dress in light colors and wear reflective material in the evening. It might be wise to carry a flashlight in very dark areas.
- Buy "workout" clothes that incorporate reflective materials and that are highly visible.
- Be wary. Most drivers are nice people, but don't count on them paying attention. Watch out - make eye contact to be sure they see you!
- Alcohol and drugs can impair your ability to walk safely, just like they do a person's ability to drive.
- Use extra caution when crossing multiple lanes and higher speed streets.

Things to remember as a driver:

- You can encounter pedestrians anytime and anywhere - even in places where they are not supposed to be found.
- Pedestrians can be very hard to see - especially in bad weather or at night. You must keep a lookout and slow down if you can't see clearly.
- Stop for pedestrians who are in a crosswalk, even if it is not marked. When you stop for a pedestrian in a crosswalk, stop well back so that drivers in the other lanes can also see the pedestrian in time to stop.
- Cars stopped in the street may be stopped to allow a pedestrian to cross. Do not pass if there is any doubt!
- Don't assume that pedestrians see you or that they will act predictably.

- When you are turning, you often will have to wait for a "gap" in traffic. Beware that while you are watching for that "gap", pedestrians may have moved into your intended path.

- Be especially attentive around schools and in neighborhoods where children are active. Drive there like you would like people to drive in front of your own home!"

7. SUMMARY AND RECOMMENDATIONS

The area known as the Lower West End located in Washington D.C. was studied to determine short-term improvements that could be implemented (within 12 months) to improve traffic operations and safety. A total of seventeen intersections were included in this study.

Most of the intersections are expected to operate at LOS D or better. Long traffic queues from westbound K Street at the 27th Street intersection create traffic congestion at K Street and 25th Street, K Street and 24th Street and K Street, 24th Street and Pennsylvania Avenue intersections. To reduce this congestion, a long term improvement to the K Street and 27th Street intersection is required. Additional capacity improvements at this intersection cannot be completed within twelve months. The capacity improvements at this intersection should be addressed in the Whitehurst Freeway Deconstruction Study.

Short-term improvements that can be made in the study area include the resurfacing of M Street, 25th Street, 24th Street and L Street, new pavement markings on M Street, L Street and crosswalk locations listed previously, and additional regulatory and warning signing on northbound 26th approaching Pennsylvania Avenue. Neckdowns could be installed at 26th Street and Pennsylvania Avenue, to reduce the pedestrian crossing time.

The Columbia House Apartment construction has impacted the community by eliminating on street parking and sidewalks along the construction site (almost one city block, all sides). The additional traffic associated with the construction activity does not seem to impact signal operations as most of the construction vehicles are not using the street during the peak hours. The Lower West End will benefit from restoration of parking spaces and sidewalks around the Columbia House Apartments and the additional parking garage when the construction is completed. All resurfacing activities and installation of new pavement markings should be implemented after construction of the Columbia House Apartments is completed.

A summary of short term recommendations is provided in Table 7.

Table 7. Task Matrix		
Task/Project Description	**Responsible Administration**	**Notes**
6.1 Neckdowns at:	TSA	
Pennsylvania Ave and 26th Street		
M Street at 26th Street		
M Street at 25th Street		
M Street at 24th Street		
M Street at 23rd Street		
6.2 Countdown Pedestrian Signals	TSA	Already Implemented.
6.3 Signing	TSA	
26th Street at Pennsylvania Avenue		
6.4 Pedestrian Signal Timings	TSA	Already Implemented
6.5 Pavement Marking Upgrades	TSA	
Crosswalks: M at 26th,25th,24th,23rd		
L Street at 24th		
Pennsylvani Ave at L and 25th		
Roadway Pavement Markings		
M Street from 23rd to 26th		
L Street from 25th to 24th		
25th Street from PA Ave to M St.		
24th Street from PA Ave to M St		
6.6 Roadway Resurfacing	IPMA	
L Street from 25th to 24th		
M Street from 23rd to 26th		
6.7 Capacity Improvements		
Additional Capacity	IPMA	
Signal Timing at L, Pennsylvania and 25th.	TSA	
6.8 Parking	TSA	
6.9 Pedestrian Behviour		
Decorative Fencing at PA Ave and K Street	IPMA	
Pedestrian and Driver Education Program	TPPA	

APPENDIX A - Bus Route Details

Pennsylvania Avenue Line (Route 30, 32, 34, 35,36)

Routes 30, 32, 34, 35, 36 operate 24 hours a day on weekdays, weekends and holidays. WMATA records revealed that Routes 30,32,34,35 and 36 carried the highest total ridership for the entire Washington D.C metropolitan area for the past three years.

Routes begin at the Friendship Heights Metro Station and terminate at Southern Avenue and Naylor Road Metro Stations. Routes enter the study area at the intersection of Pennsylvania Avenue and M streets and continue eastward along Pennsylvania Avenue until they reach Washington Circle. WMATA records indicate that headways average 3 minutes during the AM and PM peak hours in both directions. Records also indicate higher bus boardings during the PM peak hours at the intersection of Pennsylvania Ave at 28th Street and higher alightings during the AM peak hours at the intersection of Pennsylvania Ave at L Street.

Ballston – Farragut Square Line (38B)

Route 38B operates 24 hours a day on weekdays, weekends and holidays. It begins at the Farragut North Metro Station and terminates at the Ballston Metro Station in Arlington County Virginia. Route 38B enters the study area at Washington Circle and continues westward along Pennsylvania Avenue until the intersection of Pennsylvania Avenue and M Street. WMATA records revealed that headways average 15 minutes during the AM and PM peak hours. Records also indicate higher bus boardings and alightings during the AM peak hours at the intersection of Pennsylvania Ave at 28th Street.

MacAuthur Blvd – Georgetown Line (D5)

Route D5 operates on weekdays during AM and PM peak hour periods only. It begins at Massachusetts and Westbard Avenues in Maryland and terminates at Farragut Square. Route D5 enters the study area at Washington Circle and continues westward along Pennsylvania Avenue until the intersection of Pennsylvania Avenue and M Street. WMATA records revealed that headways average 20 and 25 minutes during AM and PM peak hours respectively. Records also revealed that while bus boardings were low, alightings were highest during the AM peak hours at the intersection of Pennsylvania Ave at L Street.

Brookland – Potomac Park Line (H1)

Route H1 operates on weekdays during AM and PM peak hour periods only. It begins at the Brookland/Catholic University Metro Station and terminates at Potomac Park. Route H1 enters the study area at M Street and 23rd Street and continues southward along 23rd Street until it reaches Washington Circle. WMATA records indicated that headways average 20 minutes during AM and PM peak hour periods. Records also indicated that while bus boardings were low, the highest number of passengers alighted buses during the AM peak hour period at the intersection of M Street and 23rd Street.

Connecticut Avenue Line (L1)

Route L1 provides limited operation on weekdays during the AM and PM peak hours. It begins in Potomac Park and terminates at Chevy Chase Circle in Maryland. Route L1 enters the study area at M Street and 23rd Street and continues southward along 23rd Street until it reaches Washington Circle. WMATA records indicate an average headway of 15 minutes during the AM peak hour period. Records also indicated that while bus boardings were low, the highest number of passengers alighted buses during the AM peak hour period at the intersection of 23rd and L Streets.

Massachusetts Avenue Line (N3)

Route N3 provides limited operation on weekdays during the AM and PM peak hours. It operates between the Friendship Heights Metro Station and Federal Heights. Route N3 enters the study area at M Street and 23rd Street and continues southward along 23rd Street until it reaches Washington Circle. WMATA records indicate an average headway of 25 minutes during the AM peak hour period. Records also indicated that while bus boardings were low, the highest number of passengers alighted buses during the AM peak hour period at the intersection of 23rd Street and L Street.

Circulator

The Circulator operates on M Street, Pennsylvania Avenue and K Street and goes to Union Station. The Circulator operates from 7 AM to 9PM with headways of 10 minutes. The circulator is the new bus service in the area and ridership information was not available for this study.

APPENDIX B - Parking Details

Pennsylvania Avenue

There are a variety of parking conditions along Pennsylvania Avenue between Washington Circle and 29th Street. They are described as follows:

- No parking is allowed on either side of Pennsylvania Avenue, between Washington Circle and 24th Street, at any time.

- One-hour metered parking is allowed on the south side of Pennsylvania Avenue, between 24th Street and 25th Street, during off-peak hours. Parking is not allowed during weekday peak hours of 7:00 AM to 9:30 AM. All-day metered parking is allowed on the north side of Pennsylvania Avenue, between 24th Street and 25th Street.

- Metered parking is allowed on the north side of Pennsylvania Avenue, between 25th Street and 26th Street, during off-peak hours. Parking is not allowed during weekday peak hours of 7:00 AM to 9:30 AM and 4:00 PM to 6:30 PM.

- Two-hour metered parking is allowed on both sides of Pennsylvania Avenue, between 26th Street and 28th Street, during off-peak hours. Parking is not allowed during weekday peak hours of 7:00 AM to 9:30 AM and 4:00 PM to 6:30 PM.

- Parking is allowed at all times on the south side of Pennsylvania Avenue only, between 28th Street and 29th Street.

L Street

Parking conditions along L Street between 23rd Street and 26th Street are described as follows:

- No parking is allowed during the day on the south side of L Street, between 23rd Street and 24th Street. Two hour parking is allowed from 7:00 AM to 6:30 PM. One-hour metered parking is allowed on the north side from 9:30 AM to 6:30 PM. Parking is not allowed during peak hours of 7:00 AM to 9:30 AM and 4:00 PM to 6:30 PM.

- No parking is allowed on the south side of L Street, between 24th Street and 25th Street. Two-hour metered parking is allowed on the north side during off-peak hours. Parking is not allowed on the north side during the peak hours of 7:00 AM to 9:30 AM. The parking on the north side of the street has been temporarily removed due the construction of the Columbia House Apartments.

- Parking is allowed on both sides of L Street between 25th Street and 26th Street.

M Street

There are a variety of parking conditions along M Street between 26th Street and 29th Street. They are described as follows:

- Two-hour metered parking is allowed during the day from 7:00 AM to 6:30 PM on the north and south sides of M Street, between 23rd Street and 24th Street. Free parking is allowed after 6:30 PM.

- Metered parking is allowed during the day from 7:00 AM to 6:30 PM on the north and south sides of M Street, between 24th Street and 25th Street. Free parking is allowed after 6:30 PM. Off-street parking consisting of a public parking lot on the south side of the street.

- Sections of metered parking and non-metered parking exist on the south side of M Street, between 25th Street and 26th Street, and metered parking exists on the north side.

- No parking is allowed on either side of M Street, between 26th Street and 28th Street.

23rd Street

Parking conditions along 23rd Street are described as follows:

- Permit parking is allowed on the east side of 23rd Street, while no parking is allowed on the west side of the street, between Washington Circle and L Street.

- No parking is allowed on the east side of 23rd Street, between L Street and M Street from 7:00 AM to 9:30 AM and from 4:00 PM to 6:30 PM. Two hour parking is allowed on the east side of 23rd Street from 9:30 AM to 4:00 PM. A private parking lot that serves a condominium complex is located on this side. Metered parking is allowed during non-peak hours on the west side of 23rd Street, between L Street and M Street. Off-street parking consisting of a public parking lot is also provided on his side of the street.

24th Street, 25th Street, and 26th Street

Parking conditions along these streets are described as follows:

- Some two hour metered and permit parking is allowed during the day on the east side of 24th Street. A public parking lot is also located on this side. Metered parking is allowed on the west side of 24th Street, during off-peak hours. Parking is not allowed during peak hours of 7:00 AM to 9:30 AM and 4:00 PM to 6:30 PM on the west side.

- Two hour parking from 7:00 AM to 8:30 PM is allowed on both sides of 25th Street, between L Street and M Street.

- Two hour metered and non-metered parking is allowed during day on the east side of 26th Street, between Pennsylvania Avenue and M Street. Two-hour non-metered is allowed on the west side of the street from 7:00 AM to 8:30 PM.

APPENDIX C – Turning Movement Data

24th Street & M Street

24th Street at M Street

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

PROJECT: Columbia Hgts
W&A JOB NO: 2091
INTERSECTION: 24th & M street
LOCATION: Wash D.C.

DATE: 04/10/2003
DAY:
WEATHER:
COUNTED BY:
INPUTED BY: Liz

SOUTHBOUND ROAD: 24th St
NORTHBOUND ROAD: 24th St
WESTBOUND ROAD: M St.
EASTBOUND ROAD: M St.

Turning Movements

Time Period	Southbound 24th Street				Westbound M Street				Northbound 24th Street				Eastbound M Street				North & South	East & West	Total	PHF	Time Period
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15				2				47				17				0	19	47	66		6:00-6:15
6:15-6:30				[illegible]				51				23				0	29	51	80		6:15-6:30
6:30-6:45				20				64				32				0	52	64	116		6:30-6:45
6:45-7:00				20				90				40				0	60	90	150		6:45-7:00
7:00-7:15				18				111				51				0	69	111	180		7:00-7:15
7:15-7:30				27				133				67				0	94	133	227		7:15-7:30
7:30-7:45				26				148				54				0	80	148	228		7:30-7:45
7:45-8:00				6				129				55				0	61	129	190		7:45-8:00
8:00-8:15				37				140				63				0	100	140	240		8:00-8:15
8:15-8:30				41				168				75				0	116	168	284		8:15-8:30
8:30-8:45				43				172				66				0	109	172	281		8:30-8:45
8:45-9:00				33				172				74				0	107	172	279		8:45-9:00
3 Hour Totals	69	210	0	279	159	1,022	244	1,425	0	443	177	620	0	0	0	0	899	1,425	2,324		
1 Hour Totals																					
6:00-7:00	10	38	0	48	24	181	47	252	0	84	31	115	0	0	0	0	163	252	415	0.68	6:00-7:00
6:15-7:15	12	52	0	64	36	221	59	316	0	107	42	149	0	0	0	0	213	316	529	0.73	6:15-7:15
6:30-7:30	17	68	0	85	49	278	71	398	0	128	65	193	0	0	0	0	278	398	676	0.74	6:30-7:30
6:45-7:45	21	70	0	91	63	308	81	452	0	154	61	215	0	0	0	0	306	452	758	0.86	6:45-7:45
7:00-8:00	23	54	0	77	66	366	87	521	0	158	69	227	0	0	0	0	304	521	825	0.90	7:00-8:00
7:15-8:15	29	67	0	96	64	396	90	550	0	165	74	239	0	0	0	0	335	550	885	0.92	7:15-8:15
7:30-8:30	29	81	0	110	69	418	98	585	0	172	75	247	0	0	0	0	357	585	942	0.83	7:30-8:30
7:45-8:45	33	94	0	127	89	407	103	609	0	181	78	259	0	0	0	0	386	609	995	0.88	7:45-8:45
8:00-9:00	36	118	0	154	69	473	110	652	0	201	77	278	0	0	0	0	432	652	1,084	0.95	8:00-9:00
AM Peak 8:00-9:00	36	118	0	154	69	473	110	652	0	201	77	278	0	0	0	0	432	652	1,084	0.95	**AM Peak 8:00-9:00**
PM																					
4:00-4:15				49				166				26				0	75	166	241		4:00-4:15
4:15-4:30				52				192				40				0	92	192	284		4:15-4:30
4:30-4:45				62				201				47				0	109	201	310		4:30-4:45
4:45-5:00				62				231				46				0	108	231	339		4:45-5:00
5:00-5:15				60				228				40				0	100	228	[illegible]		5:00-5:15
5:15-5:30				59				209				57				0	116	209	325		5:15-5:30
5:30-5:45				65				290				60				0	125	290	415		5:30-5:45
5:45-6:00				53				301				57				0	110	301	411		5:45-6:00
6:00-6:15				36				310				56				0	92	310	402		6:00-6:15
6:15-6:30				52				291				51				0	103	291	394		6:15-6:30
6:30-6:45				52				251				47				0	99	251	350		6:30-6:45
6:45-7:00				61				211				42				0	103	211	314		6:45-7:00
3 Hour Totals	200	466	0	666	275	2,262	374	2,911	0	400	169	569	0	0	0	0	1,235	2,911	4,146		
1 Hour Totals																					
4:00-5:00	58	170	0	225	79	613	94	790	0	112	47	159	0	0	0	0	384	790	1,174	0.87	4:00-5:00
4:15-5:15	56	154	0	209	77	664	101	852	0	122	51	173	0	0	0	0	412	852	1,264	0.93	4:15-5:15
4:30-5:30	56	190	0	246	103	677	117	897	0	124	56	190	0	0	0	0	436	897	1,305	0.94	4:30-5:30
4:45-5:45	72	177	0	249	100	746	103	949	0	145	55	200	0	0	0	0	452	993	1,440	0.87	4:45-5:45
5:00-6:00	[illegible]	[illegible]	0	240	107	[illegible]	143	1,058	0	161	53	214	0	0	0	0	454	1,058	1,512	0.91	5:00-6:00
5:15-6:15	[illegible]	[illegible]	0	211	135	[illegible]	146	1,140	0	155	57	212	0	0	0	0	443	1,140	1,583	0.95	5:15-6:15
5:30-6:30	36	120	0	206	104	938	150	1,192	0	159	65	224	0	0	0	0	430	1,192	1,622	0.98	5:30-6:30
5:45-6:45	71	120	0	193	98	911	144	1,153	0	144	67	211	0	0	0	0	404	1,153	1,557	0.95	5:45-6:45
6:00-7:00	[illegible]	[illegible]	0	201	[illegible]	[illegible]	107	[illegible]	0	[illegible]	[illegible]	[illegible]	0	0	0	0	[illegible]	[illegible]	[illegible]	[illegible]	6:00-7:00
PM Peak 5:30-6:30	36	120	0	206	104	938	150	1,192	0	159	65	224	0	0	0	0	430	1,192	1,622	0.98	**PM Peak 5:30-6:30**

24TH STREET & L STREET

24th Street and L Street

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

PROJECT Columbia Heights
W&A JOB NO. 2097.
INTERSECTION 24th Street and L Street.
LOCATION Washington, D.C.

DATE 04/10/2003
DAY
WEATHER
COUNTED BY
INPUTED BY Agan.

SOUTHBOUND ROAD 24th St
NORTHBOUND ROAD 24th St.
WESTBOUND ROAD ~~L St~~ L St
EASTBOUND ROAD ~~L St~~ L St.

Turning Movements

Time Period	Southbound 24th Street 1 Right	2 Thru	3 Left	Total	Westbound L Street 4 Right	5 Thru	6 Left	Total	Northbound 24th Street 7 Right	8 Thru	9 Left	Total	Eastbound L Street 10 Right	11 Thru	12 Left	Total	North & South	East & West	Total	PHF	Time Period
AM																					
6:00-6:15				16				0				22				60	42	60	102		6:00-6:15
6:15-6:30				18				0				28				74	41	74	115		6:15-6:30
6:30-6:45				20				0				24				110	45	110	155		6:30-6:45
6:45-7:00				27				0				36				150	33	150	228		6:45-7:00
7:00-7:15				29				0				77				169	136	169	274		7:00-7:15
7:15-7:30				24				0				85				216	103	213	329		7:15-7:30
7:30-7:45				30				0				74				210	104	210	314		7:30-7:45
7:45-8:00				40				0				89				242	129	242	371		7:45-8:00
8:00-8:15				37				0				84				216	141	216	357		8:00-8:15
8:15-8:30				50				0				99				257	148	257	405		8:15-8:30
8:30-8:45				62				0				99				257	161	257	418		8:30-8:45
8:45-9:00				49				0				107				266	156	266	422		8:45-9:00
3 Hour Totals	0	241	170	411	0	0	0	0	328	526	0	854	14	1,341	285	2,240	1,265	2,240	3,505		
1 Hour Totals																					
6:00-7:00	0	49	21	70	0	0	0	0	44	97	0	141	9	336	57	402	211	402	613	0.64	6:00-7:00
6:15-7:15	0	80	24	104	0	0	0	0	69	117	0	186	11	424	68	508	278	508	786	0.71	6:15-7:15
6:30-7:30	0	81	101	182	0	0	0	0	94	149	0	243	10	642	85	650	425	650	1,075	0.76	6:30-7:30
6:45-7:45	0	95	47	142	0	0	0	0	103	189	0	292	7	657	91	755	434	755	1,189	0.89	6:45-7:45
7:00-8:00	0	71	92	163	0	0	0	0	135	191	0	326	4	741	97	842	489	842	1,331	0.87	7:00-8:00
7:15-8:15	0	87	84	171	0	0	0	0	126	196	0	322	1	778	110	889	493	889	1,382	0.92	7:15-8:15
7:30-8:30	0	102	75	177	0	0	0	0	109	236	0	345	1	823	109	933	522	933	1,455	0.90	7:30-8:30
7:45-8:45	0	119	90	209	0	0	0	0	151	219	0	370	1	839	102	972	579	972	1,551	0.93	7:45-8:45
8:00-9:00	0	121	97	218	0	0	0	0	151	237	0	388	1	864	131	996	606	996	1,602	0.95	8:00-9:00
AM Peak 8:00-9:00	0	121	97	218	0	0	0	0	151	237	0	388	1	864	131	996	606	996	1,602	0.95	AM Peak 8:00-9:00
PM																					
4:00-4:15				74				0				40				126	114	126	240		4:00-4:15
4:15-4:30				70				0				43				152	113	152	265		4:15-4:30
4:30-4:45				66				0				51				141	117	141	258		4:30-4:45
4:45-5:00				80				0				33				155	115	155	270		4:45-5:00
5:00-5:15				64				0				42				152	126	162	288		5:00-5:15
5:15-5:30				62				0				43				159	102	159	261		5:15-5:30
5:30-5:45				64				0				48				159	113	159	272		5:30-5:45
5:45-6:00				61				0				48				142	107	142	249		5:45-6:00
6:00-6:15				64				0				30				165	87	165	252		6:00-6:15
6:15-6:30				67				0				50				160	111	160	271		6:15-6:30
6:30-6:45				88				0				58				129	134	129	263		6:30-6:45
6:45-7:00				62				0				40				103	102	103	205		6:45-7:00
3 Hour Totals	0	822	207	829	0	0	0	0	181	321	0	502	156	1,386	221	1,763	1,331	1,763	3,094		
1 Hour Totals																					
4:00-5:00	0	220	70	290	0	0	0	0	51	105	0	156	31	401	42	574	481	574	1,055	0.96	4:00-5:00
4:15-5:15	0	217	68	285	0	0	0	0	55	103	0	158	42	482	76	640	471	640	1,111	0.94	4:15-5:15
4:30-5:30	0	246	60	306	0	0	0	0	50	102	0	152	48	478	70	596	482	596	1,077	0.93	4:30-5:30
4:45-5:45	0	215	78	293	0	0	0	0	55	103	0	158	60	504	71	635	456	635	1,091	0.96	4:45-5:45
5:00-6:00	0	201	70	271	0	0	0	0	51	116	0	167	78	487	62	627	448	627	1,075	0.95	5:00-6:00
5:15-6:15	0	197	64	261	0	0	0	0	52	116	0	168	73	470	70	613	439	613	1,052	0.95	5:15-6:15
5:30-6:30	0	213	64	277	0	0	0	0	53	116	0	169	80	442	64	586	446	586	1,032	0.96	5:30-6:30
5:45-6:45	0	197	67	264	0	0	0	0	54	131	0	185	78	405	71	554	449	554	1,003	0.94	5:45-6:45
6:00-7:00	0	183	69	252	0	0	0	0	52	133	0	185	68	417	77	562	437	562	999	0.91	6:00-7:00
PM Peak 4:45-5:45	0	215	78	293	0	0	0	0	55	103	0	158	60	504	71	635	456	635	1,091	0.96	PM Peak 4:45-5:45

PENN AVENUE @ 35TH STREET / L STREET

Change These in The Preferences Window
Select File/Preferences in the Main Screen
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File Name : PENNAV
Site Code : 0000000
Start Date : 02/10/20
Page No : 1

Groups Printed- Unshifted

Start Time	25th Street From North						Penn Ave From East					25th Street From South					Penn Ave From West					
	Right Penn	Thru	Left Penn	Left L St	Ped 25th	Peds L St	Right L St	Right 25th	Thru	Left 25th	Peds	Right Penn	Right L St	Thru	Left Penn	Peds	Right 25th	Thru	Left 25th	Left L St	Peds	Int. Tot
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	2	2	5	5	5	11	0	4	33	0	2	2	1	0	0	14	0	51	10	147	1	29
07:45 AM	0	0	7	5	7	9	0	2	32	0	1	2	3	1	1	13	0	69	22	182	6	36
Total	2	2	12	10	12	20	0	6	65	0	3	4	4	1	1	27	0	120	32	329	7	65
08:00 AM	3	9	7	13	7	11	0	1	41	0	1	3	2	0	0	22	0	82	22	158	2	38
08:15 AM	1	3	9	8	9	15	0	5	45	0	4	3	2	0	0	24	0	122	28	166	15	45
08:30 AM	1	3	13	8	13	9	0	7	72	0	6	0	1	1	1	41	0	163	35	204	11	58
08:45 AM	4	7	14	15	14	14	0	5	61	0	11	1	0	0	1	48	0	212	30	242	18	69
Total	9	22	43	44	43	49	0	18	219	0	22	7	5	1	2	135	0	579	115	770	46	212
09:00 AM	0	6	35	11	35	25	0	6	69	0	7	3	1	1	0	55	0	257	40	254	16	82
09:15 AM	2	4	34	12	34	18	0	11	71	0	8	3	1	1	1	93	0	278	52	262	29	97
09:30 AM	1	9	40	16	40	34	0	3	64	0	12	4	2	0	0	86	0	275	37	293	14	93
09:45 AM	1	11	42	28	42	40	0	11	77	0	11	1	4	1	1	67	0	283	43	257	26	94
Total	4	30	151	67	151	117	0	31	281	0	38	11	8	3	2	301	0	1093	172	1066	85	367
10:00 AM	5	6	32	16	32	15	0	15	62	0	7	5	2	0	1	53	0	261	55	246	21	83
10:15 AM	1	12	26	20	26	22	0	10	89	0	5	5	2	0	1	35	0	206	31	232	6	72
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	6	18	58	36	58	37	0	25	151	0	12	10	4	0	2	88	0	467	86	478	27	156
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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File Na[illegible] : PENNAV
Site Code : 0000000
Start Date : 02/10/20
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Groups Printed- Unshifted

	25th Street From North						Penn Ave From East					25th Street From South					Penn Ave From West					
Start Time	Right Penn	Thru	Left Penn	Left L St	Ped 25th	Peds L St	Right L St	Right 25th	Thru	Left 25th	Peds	Right Penn	Right L St	Thru	Left Penn	Peds	Right 25th	Thru	Left 25th	Left L St	Peds	Int. Tota
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	2	21	22	21	12	21	0	2	86	0	4	4	0	0	1	45	0	177	10	110	8	54
04:45 PM	3	29	23	29	10	17	0	8	78	0	10	2	1	0	2	62	0	188	6	118	6	59
Total	5	50	45	50	22	38	0	10	164	0	14	6	1	0	3	107	0	365	16	228	14	113
05:00 PM	2	5	34	26	10	31	0	5	72	0	5	1	1	1	1	69	0	149	9	126	10	65
05:15 PM	3	0	22	20	6	27	0	2	94	0	9	6	0	0	1	74	0	179	4	134	10	69
05:30 PM	4	0	25	20	18	21	0	6	90	0	13	4	2	1	0	77	0	177	7	121	13	69
05:45 PM	6	0	30	27	10	36	0	0	81	0	4	3	1	1	2	83	0	156	8	135	19	80
Total	15	5	111	93	44	115	0	13	337	0	31	14	4	3	4	303	0	661	28	516	52	234
06:00 PM	8	0	34	25	17	37	0	0	84	0	14	3	2	1	0	115	0	168	6	126	13	85
06:15 PM	10	0	42	22	17	48	0	0	101	0	16	0	4	0	0	100	0	182	5	109	14	87
06:30 PM	12	0	59	20	12	65	0	4	130	0	8	2	0	0	0	113	0	164	1	131	20	74
06:45 PM	13	0	61	25	17	47	0	2	123	0	21	3	3	1	1	114	0	189	10	129	15	77
Total	43	0	196	92	63	197	0	6	438	0	59	8	9	2	1	442	0	703	22	495	62	263
07:00 PM	15	0	39	20	15	37	0	2	137	0	10	4	2	0	0	125	0	156	6	106	26	70
07:15 PM	18	0	50	18	4	42	0	2	145	0	14	4	1	1	1	125	0	163	10	100	19	71
Grand Total	117	127	705	430	412	652	0	113	1937	0	203	68	38	11	16	1653	0	4307	487	4088	338	1570
Apprch %	4.8	5.2	28.9	17.6	16.9	26.7	0.0	5.0	86.0	0.0	9.0	3.8	2.1	0.6	0.9	92.6	0.0	46.7	5.3	44.3	3.7	
Total %	0.7	0.8	4.5	2.7	2.6	4.2	0.0	0.7	12.3	0.0	1.3	0.4	0.2	0.1	0.1	10.5	0.0	27.4	3.1	26.0	2.2	

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File Na e : PENNAV
Site Code : 0000000
Start Date : 02/10/20(
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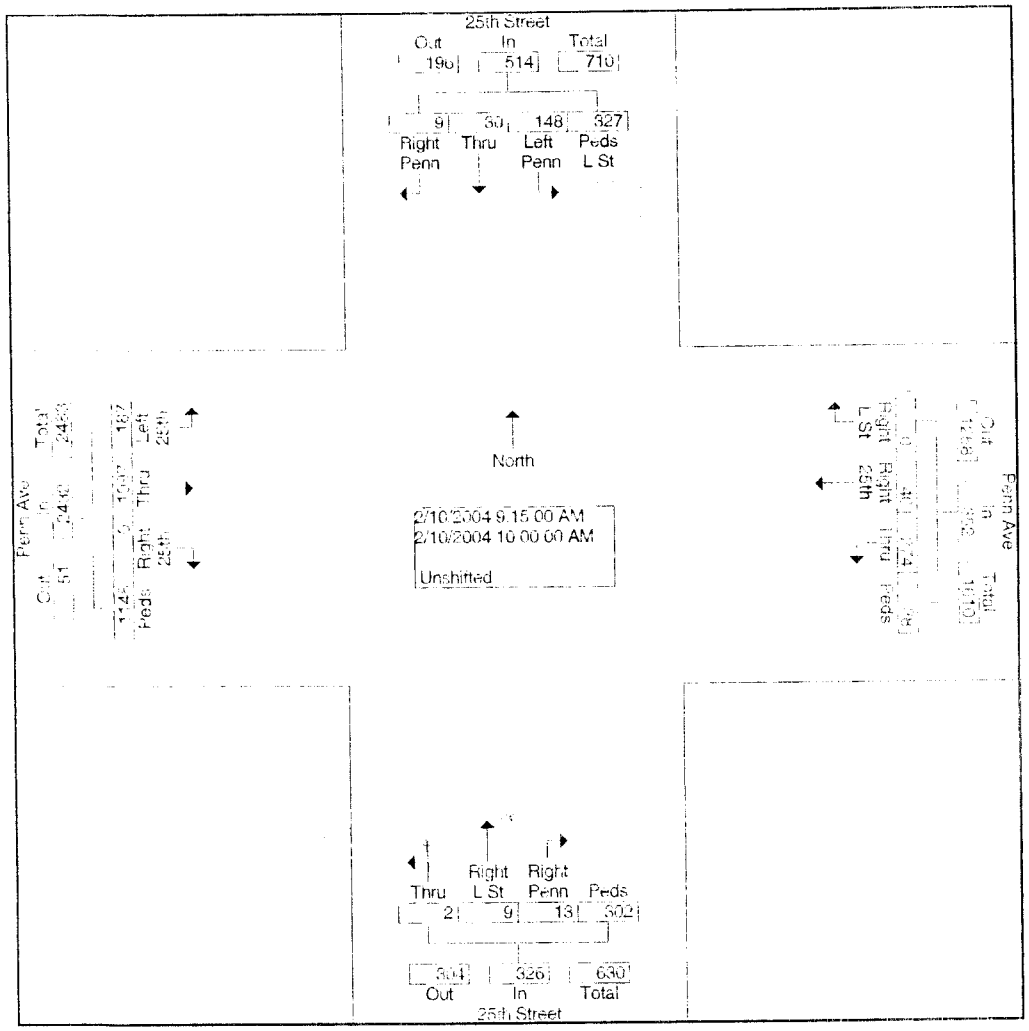
	25th Street From North							Penn Ave From East						25th Street From South						Penn Ave From West						
art Time	Right Penn	Thru	Left Penn	Left L St	Ped 25th	Peds L St	App. Total	Right L St	Right 25th	Thru	Left 25th	Peds	App. Total	Right Penn	Right L St	Thru	Left Penn	Peds	App. Total	Right 25th	Thru	Left 25th	Left L St	Peds	App. Total	n Tota
Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																										
rsection	09:15 AM																									
Volume	9	30	148	72	148	107	514	0	40	274	0	38	352	13	9	2	3	293	326	0	1097	187	1058	90	2432	36.2
Percent	1.8	5.8	28.8	14.0	28.8	20.8		0.0	11.4	77.8	0.0	10.8		4.0	2.8	0.6	0.9	91.7		0.0	45.1	7.7	43.5	3.7		
09:45 Volume	1	11	42	28	42	40	164	0	11	77	0	11	99	1	4	1	1	67	74	0	283	43	257	26	609	94
k Factor																										0.953
High Int.	09:45 AM							09:45 AM						09:15 AM						09:15 AM						
Volume	1	11	42	28	42	40	164	0	11	77	0	11	99	3	1	1	1	93	99	0	278	52	282	29	621	
k Factor							0.784						0.889						0.823						0.979	

Change These in The Preferences Window
Select File/Preferel in the Main Scree
Then Click the Titles Tab

File Na : PENNAV
Site Code : 0000000
Start Date : 02/10/20
Page No : 4



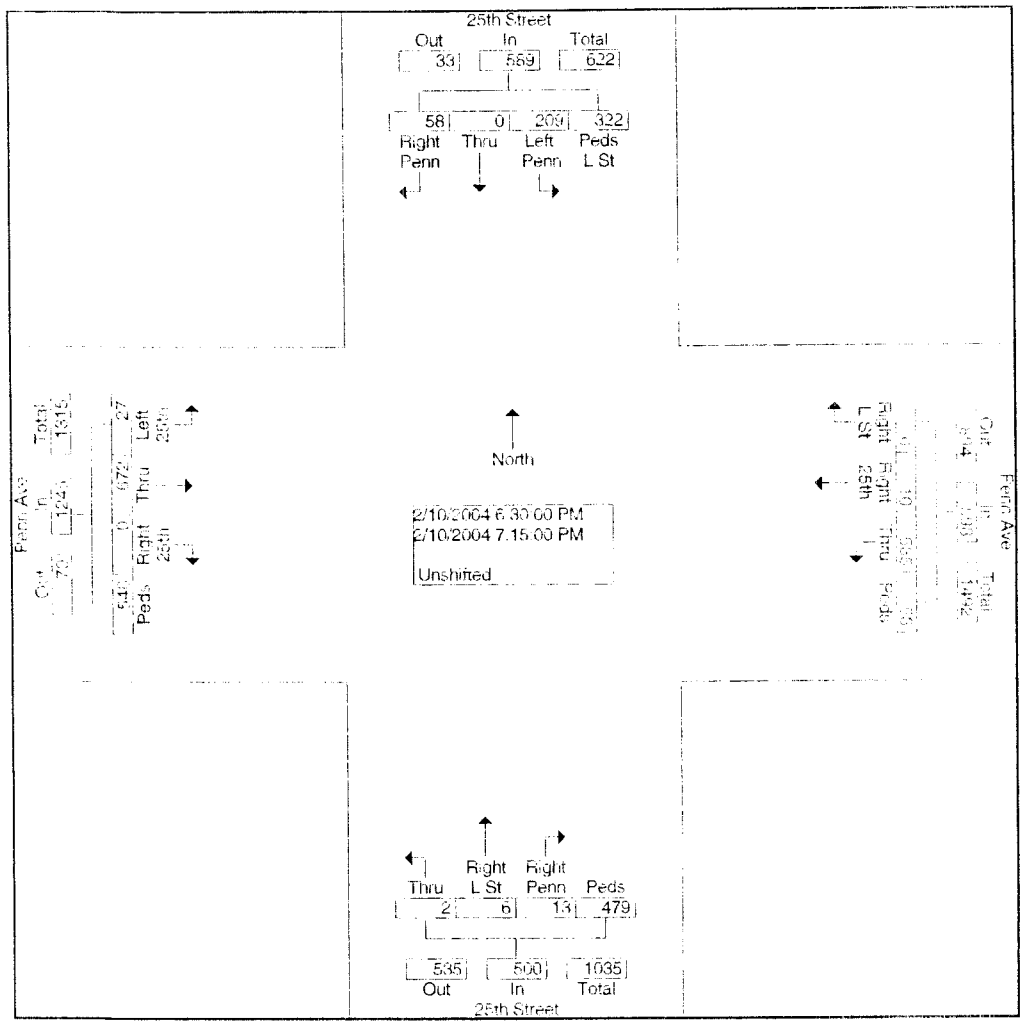
Change These in Th[illegible] Preferences Window
Select File/Preferen[illegible] in the Main Scree
Then Click the Titles Tab

File Na[illegible]e : PENNAV
Site Code : 0000000
Start Date : 02/10/20
Page No : 5

	25th Street From North							Penn Ave From East						25th Street From South						Penn Ave From West						
tart Time	Right Penn	Thru	Left Penn	Left L St	Ped 25th	Peds L St	App. Total	Right L St	Right 25th	Thru	Left 25th	Peds	App. Total	Right Penn	Right L St	Thru	Left Penn	Peds	App. Total	Right 25th	Thru	Left 25th	Left L St	Peds	App. Total	In Tot
Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																										
ersection	06:30 PM																									
Volume	58	0	203	83	48	191	589	0	10	535	0	53	598	13	6	2	2	477	500	0	672	27	466	80	1245	293
Percent	9.8	0.0	35.5	14.1	8.1	32.4		0.0	1.7	89.5	0.0	8.9		2.6	1.2	0.4	0.4	95.4		0.0	54.0	2.2	37.4	6.4		
06:45 Volume	13	0	61	25	17	47	163	0	2	123	0	21	146	3	3	1	1	114	122	0	189	10	129	15	343	77
ak Factor																										0.947
High Int.	06:30 PM							07:15 PM						07:15 PM						06:45 PM						
Volume	12	0	59	20	12	65	168	0	2	145	0	14	161	4	1	1	1	125	132	0	189	10	129	15	343	
ak Factor							0.876						0.929						0.947						0.907	

Change These in Thr Preferences Window
Select File/Preferen , in the Main Scree
Then Click the Titles Tab

File Na e : PENNAV
Site Code : 0000000
Start Date : 02/10/20
Page No : 6



Penn Ave @ 26th Street

Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 26TH@P
Site Code : 00000031
Start Date : 02/05/20(
Page No : 1

Groups Printed- Unshifted

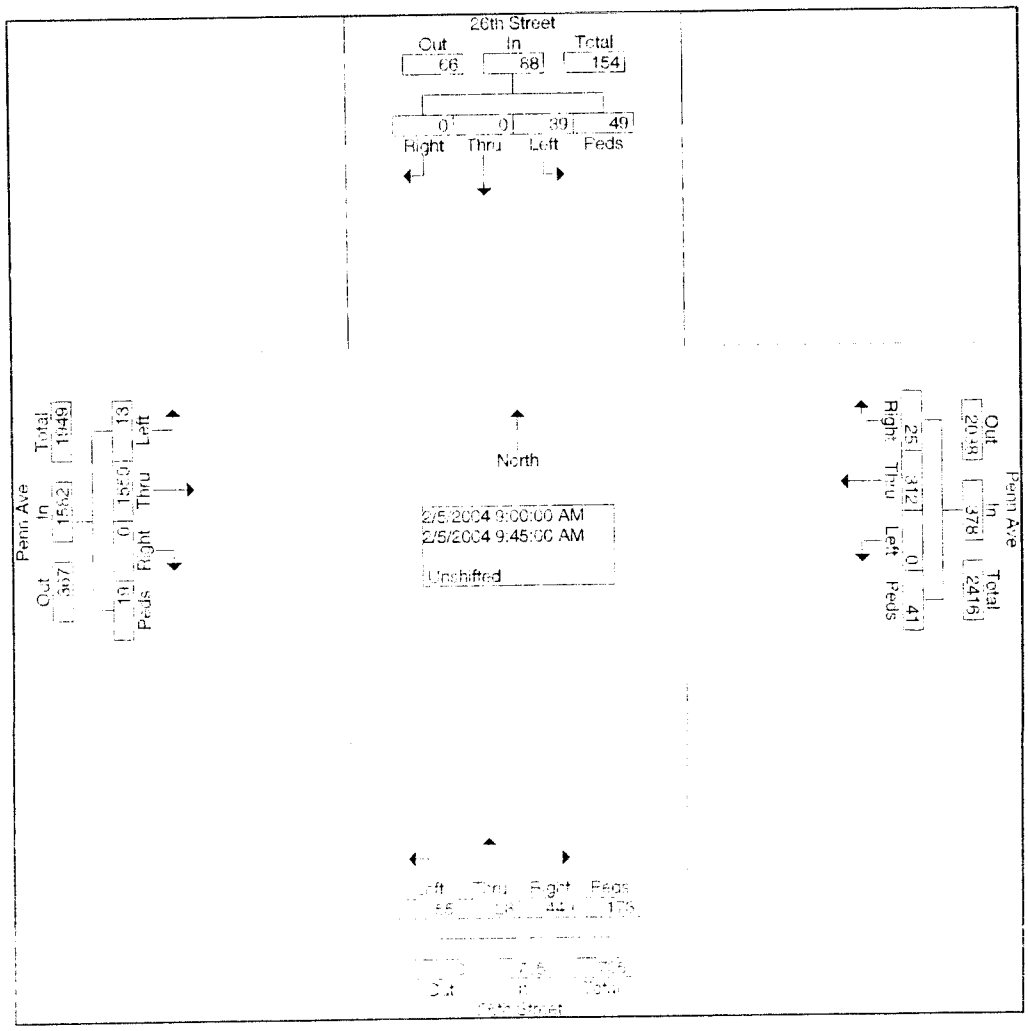
	26th Street From North				Penn Ave From East				26th Street From South				Penn Ave From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tot
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	0	0	3	4	0	18	0	3	58	5	23	14	0	85	6	0	21
07:45 AM	0	0	7	1	4	18	0	2	56	5	22	11	0	93	1	1	22
Total	0	0	10	5	4	36	0	5	114	10	45	25	0	178	7	1	44
08:00 AM	0	0	10	4	4	40	0	1	88	9	29	11	0	110	2	0	30
08:15 AM	0	0	7	2	3	24	0	4	110	14	23	21	0	147	2	0	36
08:30 AM	0	0	6	10	4	49	0	6	109	6	26	30	0	210	2	3	46
08:45 AM	0	0	7	8	1	73	0	6	113	8	22	42	0	288	0	3	57
Total	0	0	30	24	12	186	0	17	420	37	100	104	0	755	6	6	169
09:00 AM	0	0	4	6	8	76	0	7	133	9	20	51	0	381	4	4	70
09:15 AM	0	0	12	14	5	92	0	17	117	9	12	38	0	426	3	3	74
09:30 AM	0	0	10	13	7	77	0	7	103	6	13	41	0	374	2	5	69
09:45 AM	0	0	13	16	4	67	0	10	96	4	10	43	0	369	4	7	64
Total	0	0	39	49	25	312	0	41	449	28	55	173	0	1550	13	19	275
10:00 AM	0	0	8	21	4	60	0	9	87	6	2	22	0	444	3	0	66
10:15 AM	0	0	20	14	5	69	0	5	86	2	13	8	0	378	2	1	60
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	28	35	9	129	0	14	173	8	15	30	0	822	5	1	126
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	10	9	8	79	0	6	37	5	23	54	0	208	5	3	44
04:45 PM	2	0	6	17	4	81	0	0	26	2	32	29	0	191	8	1	47
Total	2	0	16	26	12	160	0	6	65	7	55	83	0	399	13	4	91
05:00 PM	0	0	3	14	0	97	0	0	26	6	20	64	0	202	3	3	46
05:15 PM	2	0	3	6	4	87	0	0	35	3	24	56	0	188	4	5	41
05:30 PM	2	0	17	16	4	93	0	0	46	7	23	61	0	201	3	1	47
05:45 PM	0	0	21	22	3	97	0	0	40	6	21	71	0	214	2	0	49
Total	4	0	44	58	11	374	0	0	147	22	88	252	0	805	12	9	183
06:00 PM	2	0	14	14	0	108	0	0	43	6	27	53	1	206	3	2	47
06:15 PM	0	0	13	9	1	105	0	0	32	4	25	72	0	211	3	2	47
06:30 PM	0	0	31	21	4	110	0	0	33	2	22	71	0	226	1	4	52
06:45 PM	2	0	15	23	4	104	0	0	39	6	49	65	0	218	4	1	53

07:00 PM	1	0	4	27	7	155	0	4	25	10	35	98	0	222	3	3	59
07:15 PM	0	0	7	28	1	143	0	3	33	3	40	88	0	221	5	5	59
Grand Total	11	0	253	319	90	1922	0	96	1573	148	561	1114	1	5816	72	57	1203
Apprch %	1.9	0.0	43.4	54.7	4.3	91.2	0.0	4.6	46.3	4.4	16.5	32.8	0.0	97.8	1.2	1.0	
Total %	0.1	0.0	2.1	2.7	0.7	16.0	0.0	0.8	13.1	1.2	4.7	9.3	0.0	48.3	0.6	0.5	

Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 26TH@P
Site Code : 0000003
Start Date : 02/05/200
Page No : 3

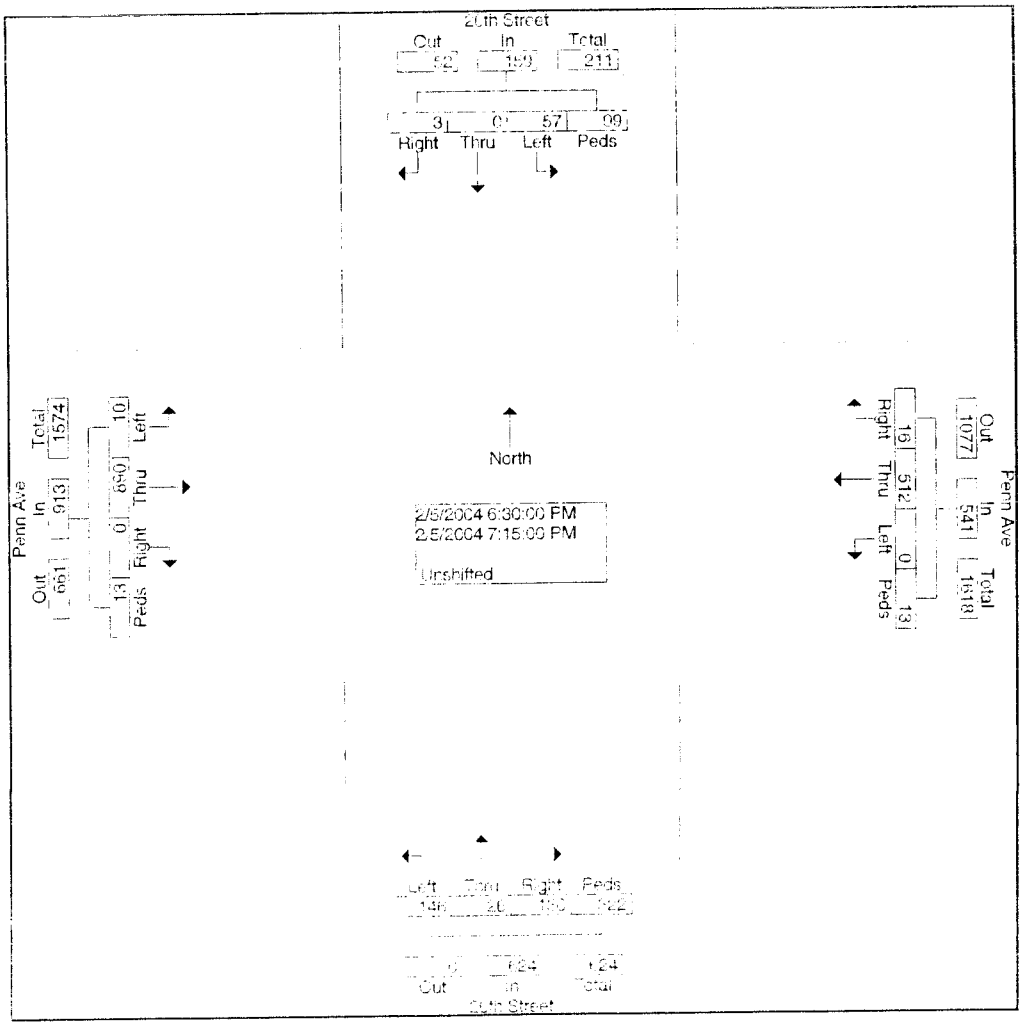
	26th Street From North					Penn Ave From East					26th Street From South					Penn Ave From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																					
rsection 09:00 AM																					
Volume	0	0	39	49	88	25	312	0	41	378	449	28	55	173	705	0	1550	13	19	1582	2753
Percent	0.0	0.0	44.3	55.7		6.6	82.5	0.0	10.8		63.7	4.0	7.8	24.5		0.0	98.0	0.8	1.2		
09:15 Volume	0	0	12	14	26	6	92	0	17	115	117	9	12	38	176	0	426	3	3	432	749
Peak Factor																					0.919
High Int.	09:45 AM					09:15 AM					09:00 AM					09:15 AM					
Volume	0	0	13	16	29	6	92	0	17	115	133	9	20	51	213	0	426	3	3	432	
Peak Factor					0.759					0.622					0.827					0.916	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 26TH@P
Site Code : 00000031
Start Date : 02/05/200
Page No : 4

	26th Street From North					Penn Ave From East					26th Street From South					Penn Ave From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																					
rsection	06:30 PM																				
Volume	3	0	57	99	159	16	512	0	13	541	130	26	146	322	624	0	890	10	13	913	2237
Percent	1.9	0.0	35.8	62.3		3.0	94.6	0.0	2.4		20.8	4.2	23.4	51.6		0.0	97.5	1.1	1.4		
07:15 Volume	0	0	7	28	35	1	143	0	9	153	33	8	40	88	169	0	224	5	5	234	591
Peak Factor																					0.946
High Int.	06:30 PM					07:00 PM					07:15 PM					07:15 PM					
Volume	0	0	31	21	52	7	155	0	4	166	33	8	40	88	169	0	224	5	5	234	
Peak Factor					0.764					0.815					0.923					0.975	



PENN AIR (C) 23RD STREET
(At Seasons Exit)

Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 28TH@P
Site Code : 00000022
Start Date : 02/04/200
Page No : 1

Groups Printed- Unshifted

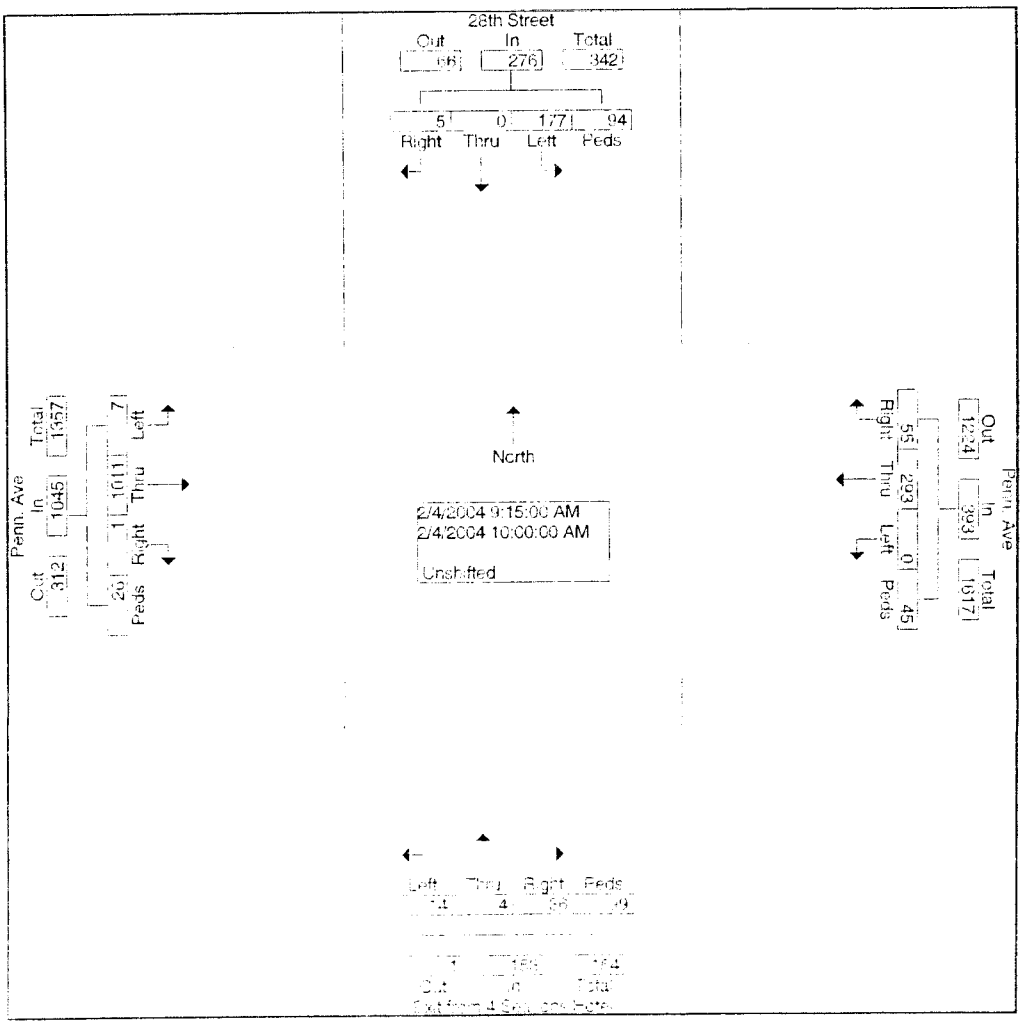
	28th Street From North				Penn. Ave From East				Exit from 4 Seasons Hotel From South				Penn. Ave From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tot
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	2	5	1	5	10	39	0	1	0	0	1	5	0	56	0	0	12
07:45 AM	0	6	2	7	3	44	0	1	4	0	1	8	0	83	0	0	18
Total	2	11	3	12	13	83	0	2	4	0	2	13	0	139	0	0	28
08:00 AM	1	0	10	9	8	45	0	9	0	1	1	9	0	99	0	5	19
08:15 AM	0	0	19	8	20	58	0	8	2	1	1	8	0	113	2	3	24
08:30 AM	0	0	20	21	14	74	0	7	4	0	1	19	0	150	3	2	31
08:45 AM	0	0	29	19	7	64	0	7	5	1	1	11	0	186	2	1	33
Total	1	0	78	57	49	241	0	31	11	3	4	47	0	548	7	11	106
09:00 AM	1	0	35	21	7	74	0	12	9	0	9	19	0	233	3	4	42
09:15 AM	2	0	36	27	12	76	0	12	10	1	5	14	0	251	2	5	45
09:30 AM	0	0	50	28	13	72	0	10	11	1	4	29	0	252	1	10	48
09:45 AM	2	0	51	18	18	71	0	15	7	0	3	35	0	235	3	9	46
Total	5	0	172	94	50	293	0	49	37	2	21	97	0	971	9	28	182
10:00 AM	1	0	40	21	12	74	0	8	8	2	2	21	1	273	1	2	46
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	40	21	12	74	0	8	8	2	2	21	1	273	1	2	46
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	31	31	17	69	0	6	5	1	7	24	0	130	2	4	82
04:45 PM	0	0	30	34	17	87	0	5	10	4	3	27	0	158	4	3	89
Total	0	0	61	65	34	156	0	11	15	5	10	51	0	288	6	12	171
05:00 PM	0	0	19	61	14	80	0	6	5	0	1	21	0	166	2	7	93
15 PM	0	0	17	29	17	80	0	2	7	1	3	15	1	173	1	13	96
00 PM	1	0	19	33	23	76	0	7	7	0	1	32	0	183	2	3	89
05:45 PM	1	0	24	26	19	76	0	12	4	4	4	27	0	189	3	3	89
Total	2	0	79	149	73	312	0	29	23	5	9	95	1	721	8	26	368
06:00 PM	1	0	25	35	24	70	0	11	5	2	2	29	1	148	0	7	86
06:15 PM	3	0	17	48	20	93	0	8	17	5	4	28	7	170	2	9	43
06:30 PM	0	0	29	62	31	97	1	10	14	0	3	26	0	158	3	9	44
06:45 PM	2	1	26	39	34	116	0	4	8	2	3	46	0	164	1	7	45

07:00 PM	0	0	29	55	36	120	0	11	8	4	15	68	0	140	1	10	51
07:15 PM	2	0	33	46	40	127	2	13	13	8	12	50	0	158	0	11	51
Grand Total	19	12	592	683	416	1782	3	187	168	36	87	571	10	3884	38	135	802
Apprch %	1.5	0.9	45.3	52.3	17.4	74.6	0.1	7.8	19.5	4.2	10.1	66.2	0.2	95.5	0.9	3.3	
Total %	0.2	0.1	6.9	7.9	4.8	20.7	0.0	2.2	1.9	0.4	1.0	6.6	0.1	45.0	0.4	1.6	

Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 28TH@P
Site Code : 00000022
Start Date : 02/04/200
Page No : 3

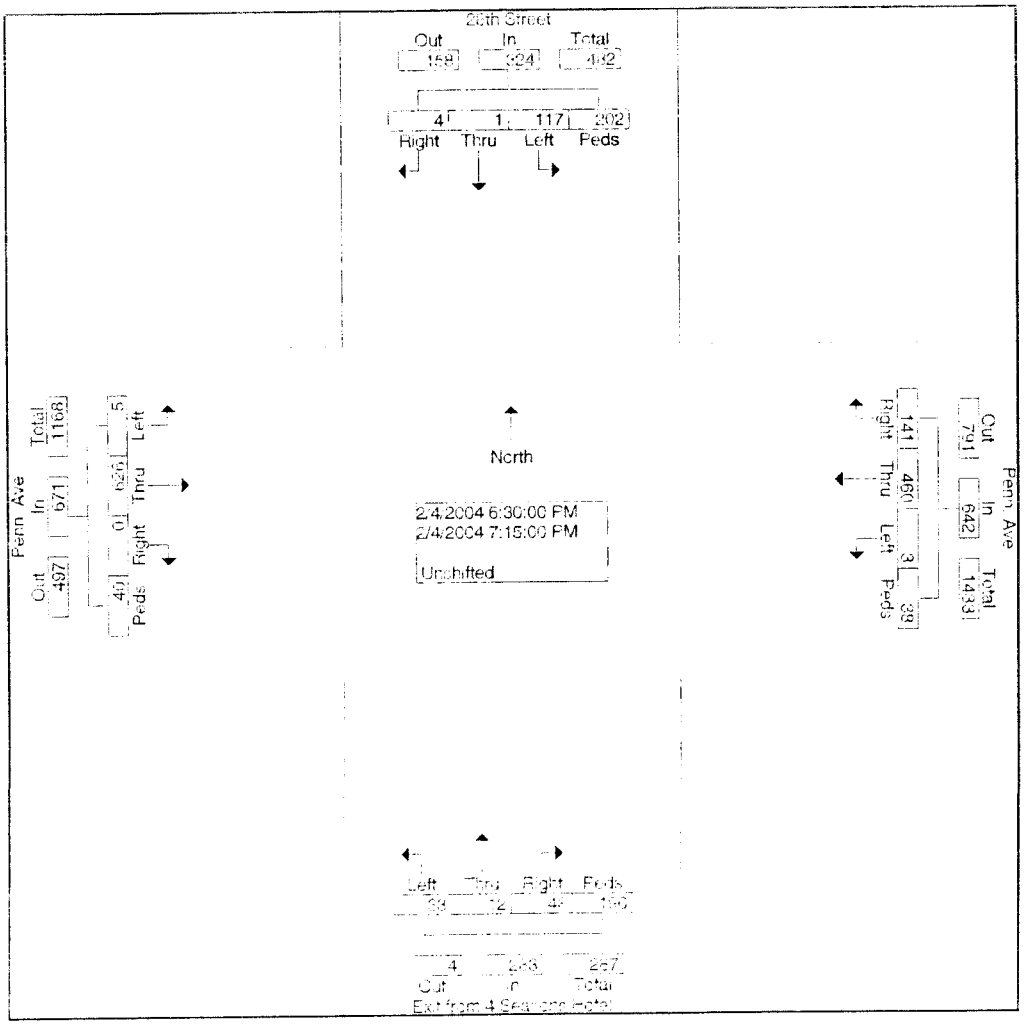
	28th Street From North					Penn. Ave From East					Exit from 4 Seasons Hotel From South					Penn. Ave From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
. Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																					
rsection	09:15 AM																				
Volume	5	0	177	94	276	55	293	0	45	393	36	4	14	99	153	1	1011	7	26	1045	1867
Percent	1.8	0.0	64.1	34.1		14.0	74.6	0.0	11.5		23.5	2.6	9.2	64.7		0.1	96.7	0.7	2.5		
09:30 Volume	0	0	50	28	78	13	72	0	10	95	11	1	4	29	45	0	252	1	10	263	481
Peak Factor																					0.970
High Int.	09:30 AM					09:45 AM					09:30 AM					10:00 AM					
Volume	0	0	50	28	78	13	71	0	15	104	11	1	4	29	45	1	273	1	2	277	
Peak Factor					0.885					0.945					0.850					0.943	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 28TH@P
Site Code : 00000022
Start Date : 02/04/200
Page No : 4

	28th Street From North					Penn. Ave From East					Exit from 4 Seasons Hotel From South					Penn. Ave From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																					
rsection	06:30 PM																				
Volume	4	1	117	202	324	141	460	3	38	642	48	12	33	190	283	0	626	5	40	671	1920
Percent	1.2	0.3	36.1	62.3		22.0	71.7	0.5	5.9		17.0	4.2	11.7	67.1		0.0	93.3	0.7	6.0		
07:15 Volume	2	0	33	46	81	40	127	2	13	182	18	6	12	50	86	0	158	0	11	169	518
Peak Factor																					0.927
High Int.	06:30 PM					07:15 PM					07:00 PM					06:45 PM					
Volume	0	0	29	62	91	40	127	2	13	182	8	4	15	68	95	0	164	1	7	172	
Peak Factor					0.890					0.882					0.745					0.975	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : F4SEAS
Site Code : 0000002
Start Date : 02/04/20
Page No : 1

Groups Printed- Unshifted

	Exit from M Street From North				Penn. Ave From East				Entrance to 4 Seasons Hotel From South				Penn Ave. From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tot
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	0	0	1	0	1	44	3	3	0	0	1	9	1	74	0	0	13
07:45 AM	0	1	0	0	0	42	3	0	0	0	0	11	3	89	0	1	15
Total	0	1	1	0	1	86	6	3	0	0	1	20	4	163	0	1	28
08:00 AM	0	1	0	2	0	43	4	6	0	0	0	21	2	117	0	0	19
08:15 AM	0	1	0	0	0	59	2	2	0	0	0	13	2	118	1	6	20
08:30 AM	0	1	0	0	0	77	3	0	0	0	0	25	5	174	0	0	28
08:45 AM	0	3	0	0	0	62	7	0	0	0	0	21	5	196	0	2	29
Total	0	6	0	2	0	241	16	8	0	0	0	80	14	605	1	8	96
09:00 AM	0	4	0	0	0	73	13	0	0	1	0	39	8	252	0	2	39
09:15 AM	0	0	0	2	0	89	9	0	0	0	0	38	13	276	0	0	42
09:30 AM	0	5	0	0	0	71	10	0	0	0	0	49	7	261	0	3	40
09:45 AM	0	5	0	0	0	71	3	0	0	0	0	53	7	249	0	1	38
Total	0	14	0	2	0	304	35	0	0	1	0	179	35	1038	0	6	161
10:00 AM	0	5	0	2	0	75	4	0	0	0	0	34	7	307	0	0	43
10:15 AM	0	1	0	0	0	58	11	0	0	0	0	34	2	269	0	2	37
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	6	0	2	0	133	15	0	0	0	0	68	9	576	0	2	81
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	1	0	3	0	80	4	1	0	1	0	65	4	146	1	5	81
04:45 PM	0	2	0	1	0	90	5	0	0	0	0	57	1	178	1	1	88
Total	0	3	0	4	0	170	9	1	0	1	0	122	5	324	2	6	84
05:00 PM	0	3	0	0	0	79	3	0	0	0	0	60	6	184	0	3	93
05:15 PM	0	2	0	2	0	87	8	1	0	0	0	62	9	203	0	0	97
05:30 PM	0	5	0	0	0	75	6	0	0	0	0	65	5	203	0	2	96
05:45 PM	0	3	0	2	0	72	6	0	0	0	0	67	5	192	0	2	94
Total	0	13	0	4	0	313	23	1	0	0	0	254	25	787	0	7	142
06:00 PM	0	0	0	1	0	69	10	0	0	0	0	70	4	163	0	0	91
06:15 PM	0	5	0	0	0	102	16	0	0	0	0	87	7	186	1	10	41
06:30 PM	0	8	0	1	0	99	12	0	0	0	0	95	8	168	0	0	99
06:45 PM	0	3	0	0	0	114	10	0	0	0	0	87	8	172	1	4	99

07:00 PM	0	2	0	0	0	117	21	0	0	0	0	116	3	168	0	1	[illegible]
07:15 PM	0	15	0	0	0	121	32	0	0	0	0	121	8	165	1	4	46
Grand Total	0	76	1	16	1	1869	205	13	0	2	1	1299	130	4515	6	49	818
Apprch %	0.0	81.7	1.1	17.2	0.0	89.5	9.8	0.6	0.0	0.2	0.1	99.8	2.8	96.1	0.1	1.0	
Total %	0.0	0.9	0.0	0.2	0.0	22.8	2.5	0.2	0.0	0.0	0.0	15.9	1.6	55.2	0.1	0.6	

Change These in The Preferences Window
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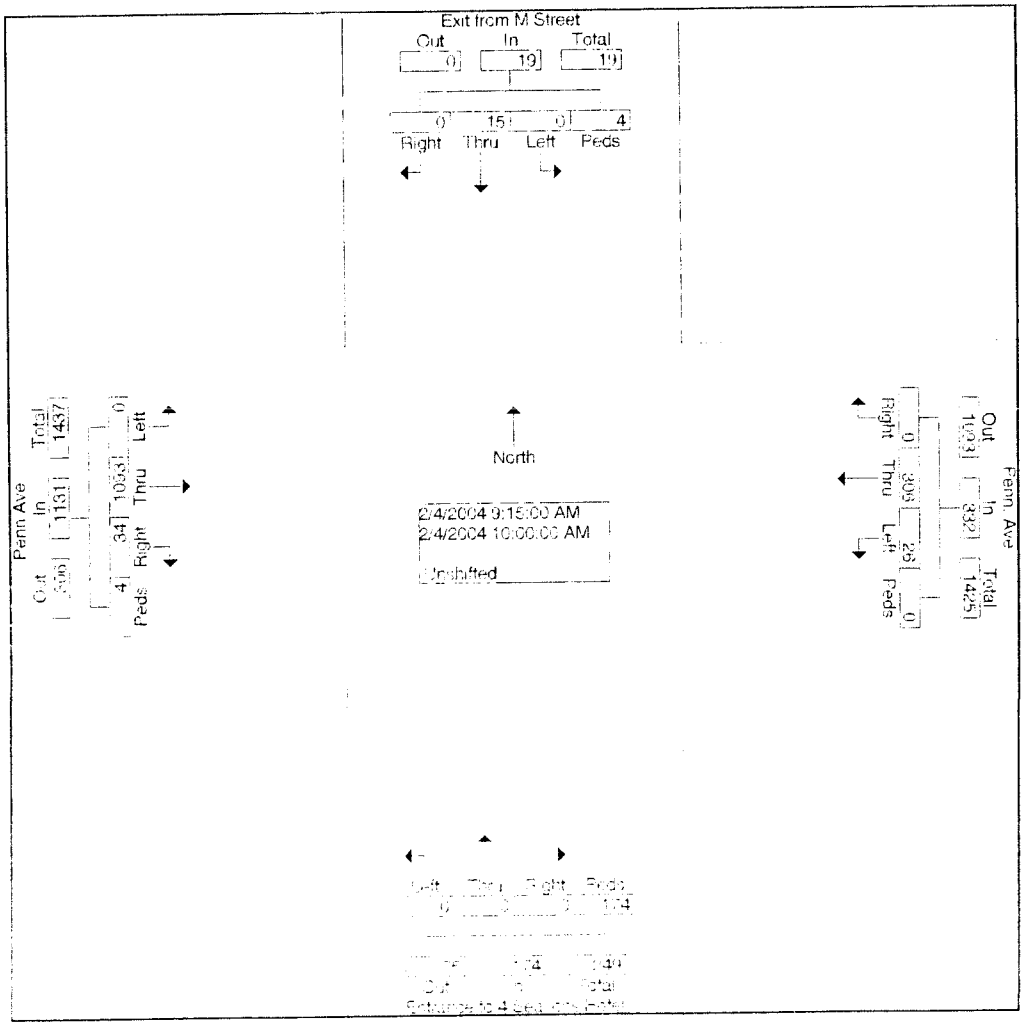
File Name : F4SEAS
Site Code : 0000002
Start Date : 02/04/20
Page No : 3

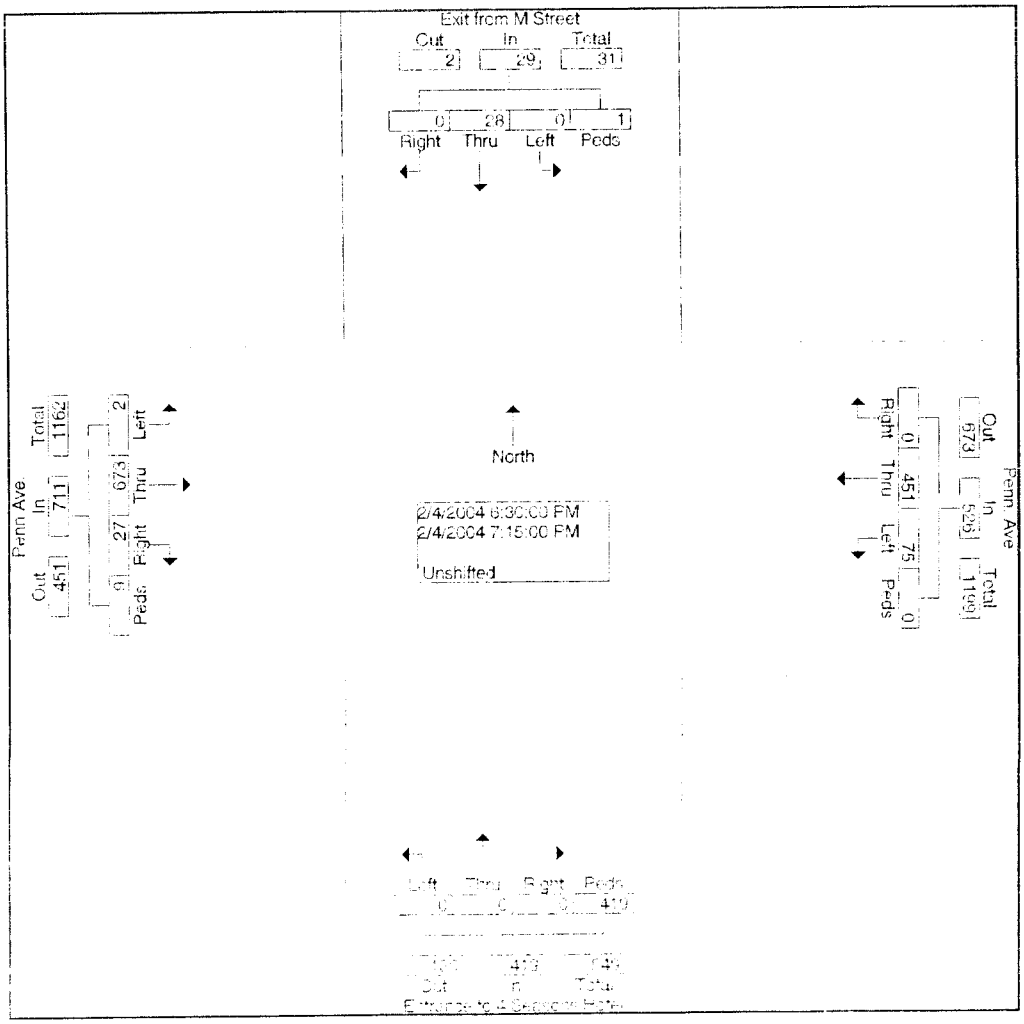
	Exit from M Street From North					Penn. Ave From East					Entrance to 4 Seasons Hotel From South					Penn Ave. From West					
rt Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Tota
Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																					
rsection	09:15 AM																				
Volume	0	15	0	4	19	0	306	26	0	332	0	0	0	174	174	34	1093	0	4	1131	1656
Percent	0.0	78.9	0.0	21.1		0.0	92.2	7.8	0.0		0.0	0.0	0.0	100.0		3.0	96.6	0.0	0.4		
10:00 Volume	0	5	0	2	7	0	75	4	0	79	0	0	0	34	34	7	307	0	0	314	434
Peak Factor																					0.954
High Int.	10:00 AM					09:15 AM					09:45 AM					10:00 AM					
Volume	0	5	0	2	7	0	89	9	0	98	0	0	0	53	53	7	307	0	0	314	
Peak Factor					0.679					0.847					0.821					0.900	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : F4SEAS
Site Code : 0000002
Start Date : 02/04/20
Page No : 4

	Exit from M Street From North					Penn. Ave From East					Entrance to 4 Seasons Hotel From South					Penn Ave. From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																					
rsection	06:30 PM																				
Volume	0	28	0	1	29	0	451	75	0	526	0	0	0	419	419	27	673	2	9	711	1685
Percent	0.0	96.6	0.0	3.4		0.0	85.7	14.3	0.0		0.0	0.0	0.0	100.0		3.8	94.7	0.3	1.3		
07:15 Volume	0	15	0	0	15	0	121	32	0	153	0	0	0	121	121	8	165	1	4	178	467
Peak Factor																					0.902
High Int.	07:15 PM					07:15 PM					07:15 PM					06:45 PM					
Volume	0	15	0	0	15	0	121	32	0	153	0	0	0	121	121	8	172	1	4	185	
Peak Factor					0.483					0.859					0.866					0.961	



N STREET & 23RD STREET

Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 29TH@M
Site Code : 00011000
Start Date : 02/12/200
Page No : 1

Groups Printed- Unshifted

	29th Street From North			M Street From East				29th Street From South				M Street From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tot.
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	5	1	0	7	5	66	8	0	6	12	5	57	3	151	4	4	33
07:45 AM	2	0	1	10	7	98	8	7	5	7	9	72	10	153	5	22	41
Total	7	1	1	17	12	164	16	7	11	19	14	129	13	304	9	26	75
08:00 AM	2	2	5	10	5	87	1	4	12	19	8	76	4	160	4	10	40
08:15 AM	4	2	8	15	8	93	11	6	6	14	4	71	10	133	7	19	41
08:30 AM	0	1	6	18	7	133	4	2	17	24	6	85	7	155	5	14	48
08:45 AM	5	6	17	21	8	119	8	4	13	13	11	89	5	142	6	14	48
Total	11	11	36	64	28	432	24	16	48	70	29	321	26	590	22	57	178
09:00 AM	2	8	21	28	8	150	14	10	19	21	9	79	7	182	11	9	57
09:15 AM	3	6	28	36	10	157	7	13	24	24	7	75	3	146	2	19	56
09:30 AM	1	9	18	33	6	147	13	13	15	27	9	91	5	145	12	13	55
09:45 AM	1	11	16	40	10	173	13	27	17	31	11	94	3	152	11	11	62
Total	7	34	83	137	34	627	47	63	75	103	36	339	18	625	36	52	231
10:00 AM	4	15	15	79	10	165	3	19	20	35	7	94	10	137	10	28	65
10:15 AM	6	4	14	65	15	179	4	10	15	30	9	68	6	160	13	33	63
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	10	19	29	144	25	344	7	29	35	65	16	162	16	297	23	61	128
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
[illegible]:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	5	6	6	66	17	172	16	26	6	3	3	10	4	50	2	1	41
04:45 PM	8	8	10	82	17	199	9	15	6	5	6	21	2	45	2	3	40
Total	13	14	16	148	34	371	25	38	12	8	9	31	6	95	4	4	81
05:00 PM	8	9	9	73	13	217	11	22	4	10	5	16	5	73	4	0	46
05 PM	6	6	4	76	25	194	11	25	5	5	3	12	5	96	2	1	47
0 PM	9	4	9	77	14	192	9	27	6	20	4	17	6	146	5	3	54
05:45 PM	6	4	8	49	11	213	18	15	4	19	3	26	7	142	4	4	68
Total	29	23	30	275	63	816	49	89	19	54	15	71	23	462	15	8	204
06:00 PM	8	3	10	96	25	236	15	25	11	20	5	14	2	166	5	2	64
06:15 PM	8	6	6	90	21	207	10	18	5	18	8	21	4	229	6	2	65
06:30 PM	4	3	13	81	22	255	21	27	7	9	6	31	7	247	9	9	75
06:45 PM	9	6	14	95	30	243	16	19	6	38	10	44	7	271	13	19	84

07:00 PM	7	7	10	118	37	253	16	32	4	33	8	30	7	231	12	16	75
07:15 PM	7	8	13	122	36	231	14	24	6	13	4	15	5	238	7	16	1349
Grand Total	120	135	260	1377	367	4179	260	387	236	450	160	1214	134	3775	161	275	
Apprch %	6.3	7.1	13.7	72.8	7.1	80.5	5.0	7.5	11.5	21.8	7.8	58.9	3.1	86.9	3.7	6.3	
Total %	0.9	1.0	1.9	10.2	2.7	31.0	1.9	2.9	1.7	3.3	1.2	9.0	1.0	28.0	1.2	2.0	

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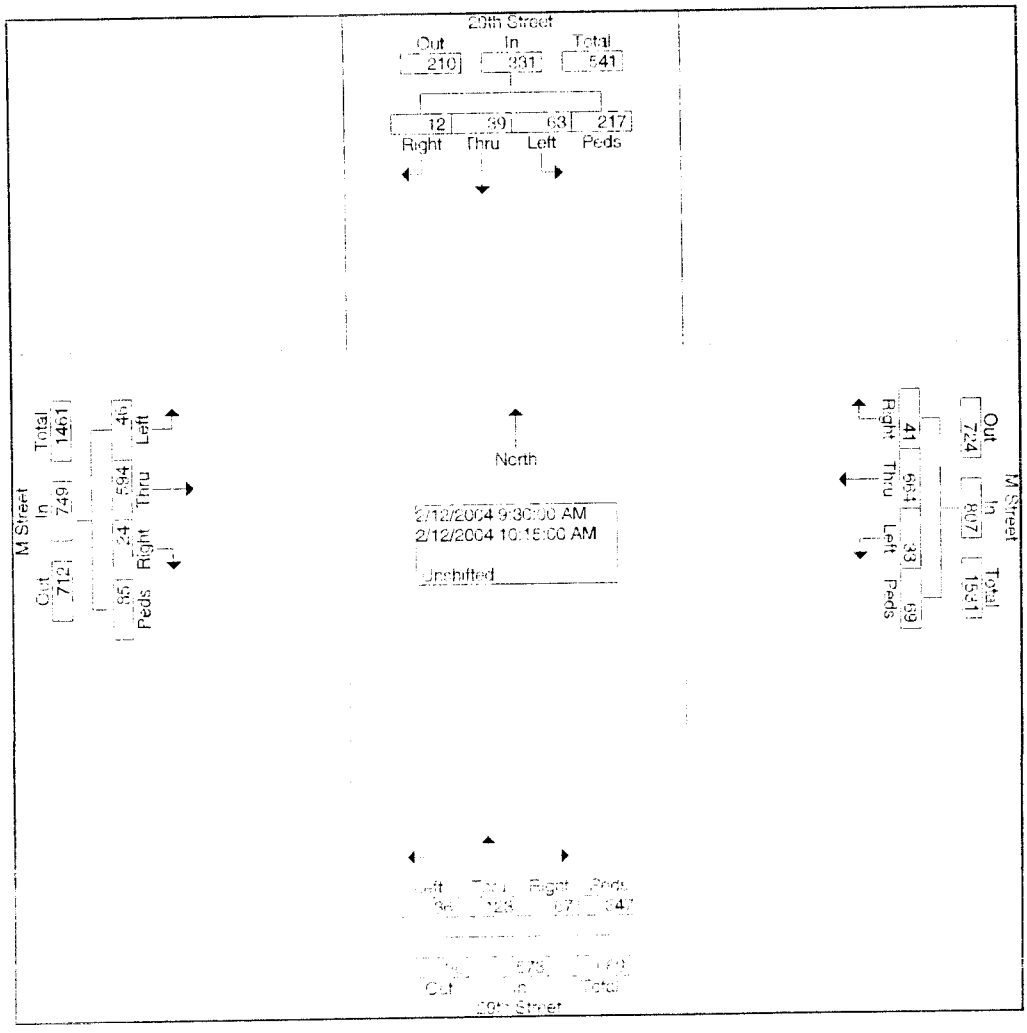
File Name : 29TH@M
Site Code : 00011000
Start Date : 02/12/200
Page No : 3

	29th Street From North					M Street From East					29th Street From South					M Street From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																					
rsection 09:30 AM																					
Volume	12	39	63	217	331	41	664	33	69	807	67	123	36	347	573	24	594	46	85	749	2460
Percent	3.6	11.8	19.0	65.6		5.1	82.3	4.1	8.6		11.7	21.5	6.3	60.6		3.2	79.3	6.1	11.3		
10:00 Volume	4	15	15	79	113	10	165	3	19	197	20	35	7	94	156	10	137	10	28	185	651
Peak Factor																					0.945
High Int.	10:00 AM					09:45 AM					10:00 AM					10:15 AM					
Volume	4	15	15	79	113	10	173	13	27	223	20	35	7	94	156	6	160	13	33	212	
Peak Factor					0.732					0.905					0.918					0.883	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 29TH@M
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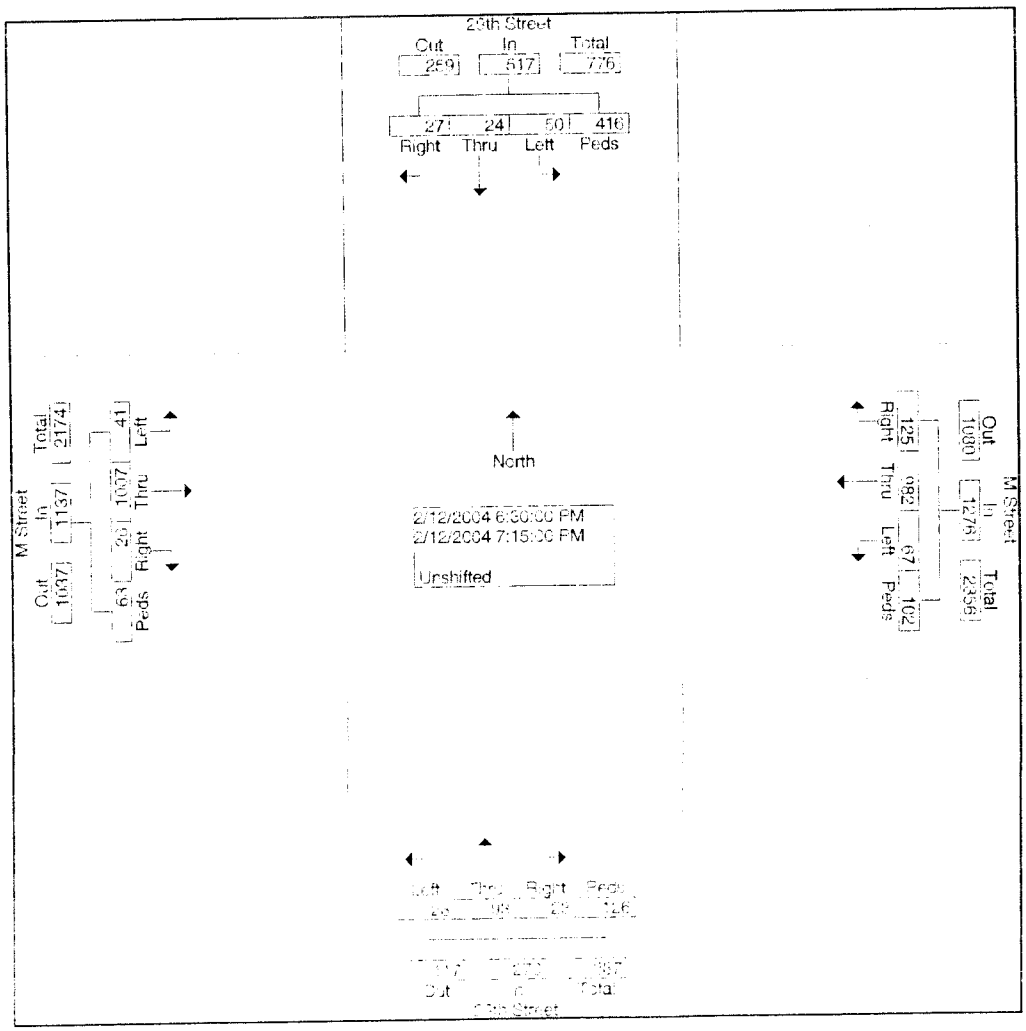
	29th Street From North					M Street From East					29th Street From South					M Street From West					
rt Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																					
rsection	06:30 PM																				
Volume	27	24	50	416	517	125	982	67	102	1276	23	93	28	126	270	26	1007	41	63	1137	3200
Percent	5.2	4.6	9.7	80.5		9.8	77.0	5.3	8.0		8.5	34.4	10.4	46.7		2.3	88.6	3.6	5.5		
07:00 Volume	7	7	10	113	142	37	253	16	32	338	4	33	8	36	81	7	251	12	19	289	850
Peak Factor																					0.941
High Int.	07:15 PM					07:00 PM					06:45 PM					06:45 PM					
Volume	7	8	13	122	150	37	253	16	32	338	6	38	10	44	98	7	271	13	19	310	
Peak Factor					0.862					0.944					0.689					0.917	



M Fraser @ 28th Street.

Change These in The Preferences Window
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Then Click the Titles Tab

File Name : 28TH@M
Site Code : 0000000
Start Date : 02/04/200
Page No : 1

Groups Printed- Unshifted

	28th Street From North				M Street From East					28th Street From South				M Street From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	2nd Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	In Tota
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	1	5	0	3	0	44	1	0	2	0	5	0	1	0	0	0	1	6
07:45 AM	2	7	0	4	0	44	1	1	2	0	5	0	4	0	0	0	1	7
Total	3	12	0	7	0	88	2	1	4	0	10	0	5	0	0	0	2	13
08:00 AM	1	6	0	6	14	51	2	1	4	0	4	0	5	0	0	0	2	9
08:15 AM	1	18	0	7	14	45	3	1	5	0	18	0	1	0	0	0	4	11
08:30 AM	4	12	0	18	15	62	1	1	7	0	20	0	1	0	0	0	4	14
08:45 AM	3	25	0	18	21	72	1	3	15	0	13	2	0	0	0	0	0	17
Total	9	61	0	49	64	230	7	6	31	0	55	2	7	0	0	0	10	53
09:00 AM	2	36	0	25	24	82	2	0	13	0	14	0	1	0	0	0	3	20
09:15 AM	3	34	1	26	28	78	1	3	17	0	14	0	0	0	0	0	2	20
09:30 AM	6	49	0	48	21	96	2	3	17	0	12	0	1	0	0	0	3	25
09:45 AM	4	50	0	62	48	86	2	2	19	0	21	0	3	0	0	0	12	30
Total	15	169	1	161	121	342	7	8	66	0	61	0	5	0	0	0	20	97
10:00 AM	4	42	0	52	33	83	2	4	14	0	16	0	1	0	0	0	2	25
10:15 AM	8	34	0	51	23	93	5	0	7	0	18	2	0	0	0	0	3	24
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	12	76	0	103	56	176	7	4	21	0	34	2	1	0	0	0	5	49
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	5	34	0	42	13	127	6	1	9	0	25	2	3	0	0	0	3	29
04:45 PM	2	13	0	55	36	113	8	1	16	0	22	3	0	0	0	0	2	25
Total	7	48	0	97	55	245	14	2	25	0	47	5	3	0	0	0	5	54
05 PM	3	17	0	42	21	129	6	4	19	0	14	0	2	0	0	0	4	26
05 PM	7	12	0	57	27	124	3	2	21	0	16	1	0	0	0	0	3	27
05:30 PM	5	17	0	37	32	140	7	2	10	0	21	1	1	0	0	0	2	27
05:45 PM	6	21	0	30	28	119	5	4	18	0	32	2	3	0	0	0	2	27
Total	27	67	0	166	108	512	21	12	68	0	83	4	6	0	0	0	11	106

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File Name : 28TH@M
Site Code : 00000000
Start Date : 02/04/200
Page No : 2

Groups Printed- Unshifted

	28th Street From North				M Street From East					28th Street From South				M Street From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	2nd Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	In Tota
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:00 PM	5	28	0	37	29	138	4	1	11	0	19	0	1	0	0	0	1	27
06:15 PM	2	21	0	57	48	189	4	6	16	0	29	2	3	0	0	0	5	38
06:30 PM	3	19	0	69	70	188	6	2	22	0	31	1	1	0	0	0	4	41
06:45 PM	4	28	0	48	74	180	6	0	25	0	39	0	1	0	0	0	8	41
Total	14	96	0	211	221	695	20	9	74	0	118	3	6	0	0	0	18	148
07:00 PM	4	18	0	67	75	167	4	3	30	0	46	5	0	0	0	0	6	42
07:15 PM	9	29	0	76	73	173	8	5	35	0	48	0	0	0	0	0	4	46
Grand Total	100	571	1	937	773	2628	90	50	354	0	502	21	33	0	0	0	81	614
Apprch %	6.2	35.5	0.1	58.2	19.8	67.5	2.3	1.3	9.1	0.0	90.3	3.8	5.9	0.0	0.0	0.0	100.0	
Total %	1.6	9.3	0.0	15.3	12.6	42.8	1.5	0.8	5.8	0.0	8.2	0.3	0.5	0.0	0.0	0.0	1.3	

Change These in The Preferences Window
Select File/Preference in the Main Scree
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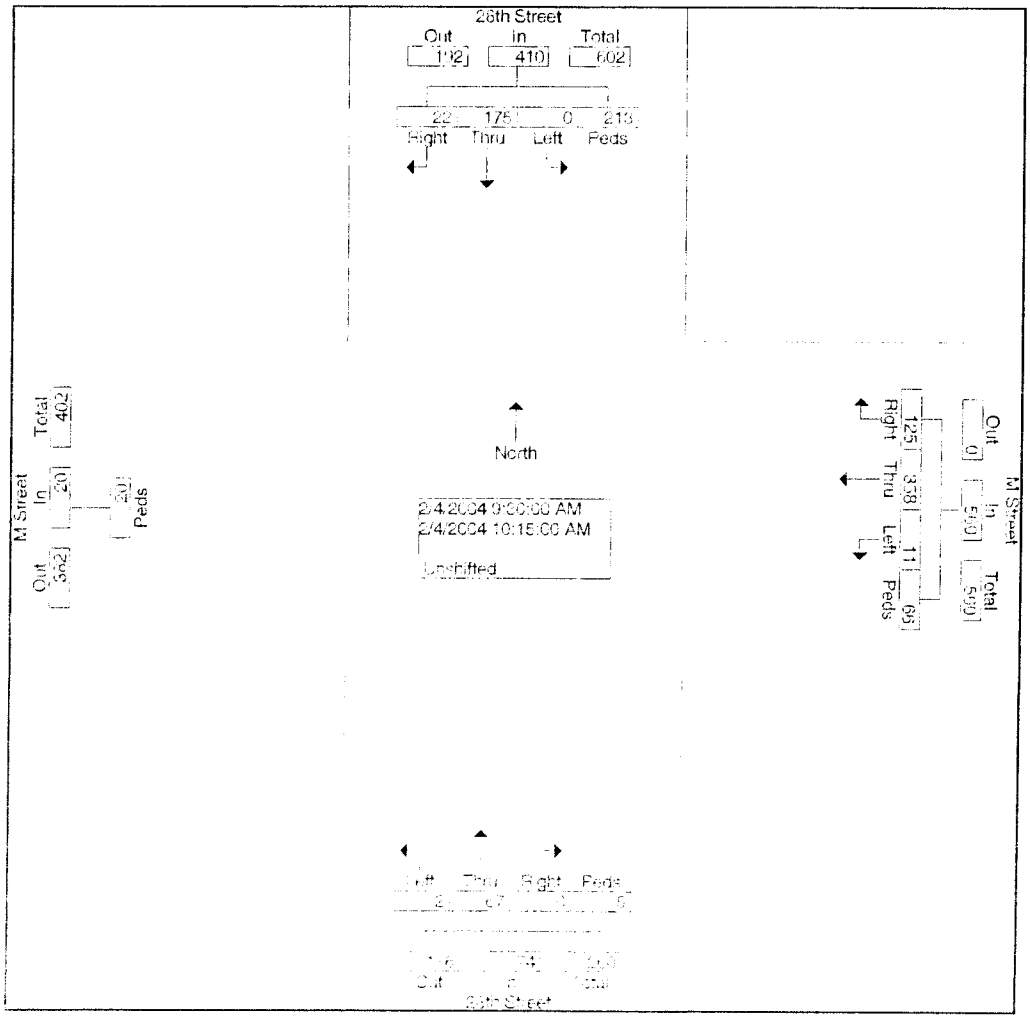
File Name : 28TH@M
Site Code : 0000000C
Start Date : 02/04/20C
Page No : 3

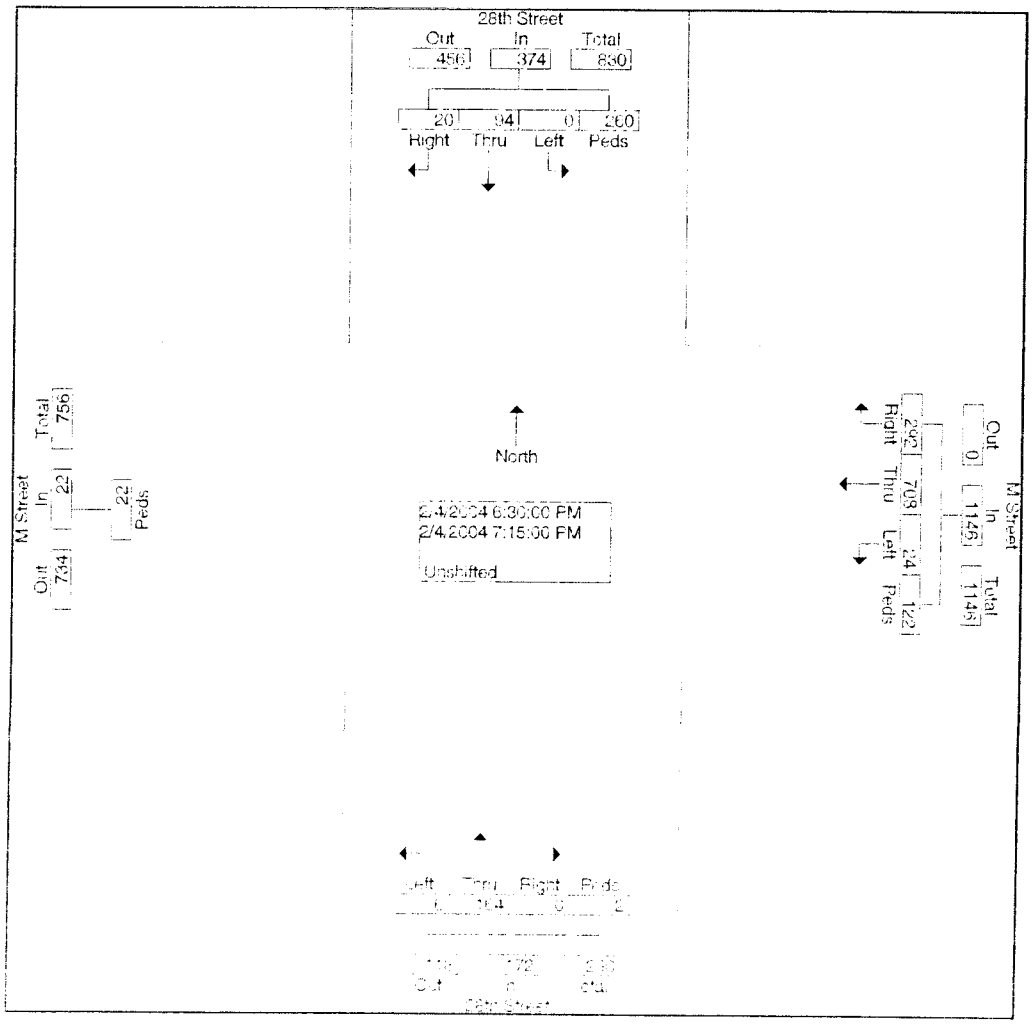
	28th Street From North					M Street From East						28th Street From South					M Street From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	2nd Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	In Tota
k Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																						
ersectio n	09:30 AM																					
Volume	22	175	0	213	410	125	358	11	9	57	560	0	67	2	5	74	0	0	0	20	20	106
Percent	5.4	42.7	0.0	52.0		22.3	63.9	2.0	1.6	10.2		0.0	90.5	2.7	6.8		0.0	0.0	0.0	100.0		
09:45 Volume	4	50	0	62	116	48	86	2	2	19	157	0	21	0	3	24	0	0	0	12	12	30
Peak Factor																						0.861
High Int.	09:45 AM					09:45 AM						09:45 AM					09:45 AM					
Volume	4	50	0	62	116	48	86	2	2	19	157	0	21	0	3	24	0	0	0	12	12	
Peak Factor					0.884						0.892					0.771					0.417	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 28TH@M
Site Code : 00000000
Start Date : 02/04/200
Page No : 4

	28th Street From North					M Street From East						28th Street From South					M Street From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	2nd Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	In Tota
ak Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																						
tersectio n	06:30 PM																					
Volume	20	94	0	260	374	292	708	24	10	112	1146	0	164	6	2	172	0	0	0	22	22	171
Percent	5.3	25.1	0.0	69.5		25.5	61.8	2.1	0.9	9.8		0.0	95.3	3.5	1.2		0.0	0.0	0.0	100.0		
07:15 Volume	9	29	0	76	114	73	173	8	5	35	294	0	48	0	0	48	0	0	0	4	4	46
Peak Factor																						0.932
High Int.	07:15 PM					07:15 PM						07:00 PM					06:45 PM					
Volume	9	20	0	76	114	73	173	8	5	35	294	0	46	5	0	51	0	0	0	8	8	
Peak Factor					0.820						0.974					0.843					0.688	



M STREET @ 26TH STREET

Change These in The Preferences Window
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File Name : 26TH@M
Site Code : 00000061
Start Date : 02/04/200
Page No : 1

Groups Printed- Unshifted

	26th Street From North				M Street From East				20th Street From South				M Street From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tot
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	1	2	0	5	1	46	0	0	0	3	10	2	0	0	0	0	7
07:45 AM	0	0	0	15	3	47	1	0	0	1	9	5	0	0	0	4	8
Total	1	2	0	20	4	93	1	0	0	4	19	7	0	0	0	4	15
08:00 AM	0	0	0	1	2	51	8	0	0	0	9	6	0	0	0	0	7
08:15 AM	0	0	0	9	0	51	1	1	0	0	11	6	0	0	0	4	8
08:30 AM	0	0	0	11	0	67	4	3	0	0	10	7	0	0	0	3	10
08:45 AM	0	0	0	25	0	88	5	3	0	0	16	2	0	0	0	1	14
Total	0	0	0	46	2	257	18	7	0	0	46	21	0	0	0	8	40
09:00 AM	0	0	0	20	3	95	3	1	0	0	9	10	0	0	0	7	14
09:15 AM	0	0	0	17	0	91	8	3	0	0	17	13	0	0	0	10	15
09:30 AM	0	3	0	43	2	109	9	5	0	2	15	11	0	0	0	13	21
09:45 AM	1	1	0	44	1	122	11	1	0	1	21	23	0	0	0	10	23
Total	1	4	0	124	6	417	31	10	0	3	62	57	0	0	0	40	75
10:00 AM	0	1	0	40	1	100	8	5	0	1	18	10	0	0	0	5	18
10:15 AM	0	0	0	32	0	109	7	6	0	0	13	7	0	0	0	4	17
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	1	0	72	1	209	15	11	0	1	31	17	0	0	0	9	36
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	32	0	143	5	4	0	0	4	2	0	0	0	2	19
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	32	0	143	5	4	0	0	4	2	0	0	0	2	19
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM	4	1	0	33	0	151	14	0	0	1	13	7	0	0	0	3	26
05:45 PM	0	1	0	27	0	153	13	1	0	1	7	7	0	0	0	3	21
Total	4	2	0	60	0	304	27	1	0	2	20	14	0	0	0	9	44
06:00 PM	0	3	0	40	1	166	17	1	0	3	2	6	0	0	0	2	24
06:15 PM	3	2	0	50	0	213	15	1	0	2	10	6	0	0	0	0	30
06:30 PM	0	1	0	76	0	253	12	7	0	1	14	7	0	0	0	5	37
06:45 PM	0	0	0	44	1	222	12	8	1	0	16	11	0	0	0	4	31

07:00 PM	0	3	0	66	2	237	21	2	1	1	12	10	0	0	0	4	36
07:15 PM	1	3	0	82	2	246	17	4	0	2	12	10	0	0	0	2	38
07:30 PM	2	0	0	65	0	336	10	1	0	1	25	11	0	0	0	8	45
Grand Total	12	21	0	779	19	3096	201	57	2	20	273	179	0	0	0	97	475
Apprch %	1.5	2.6	0.0	95.9	0.6	91.8	6.0	1.7	0.4	4.2	57.6	37.8	0.0	0.0	0.0	100.0	
Total %	0.3	0.4	0.0	16.4	0.4	65.1	4.2	1.2	0.0	0.4	5.7	3.8	0.0	0.0	0.0	2.0	

Change These in The Preferences Window
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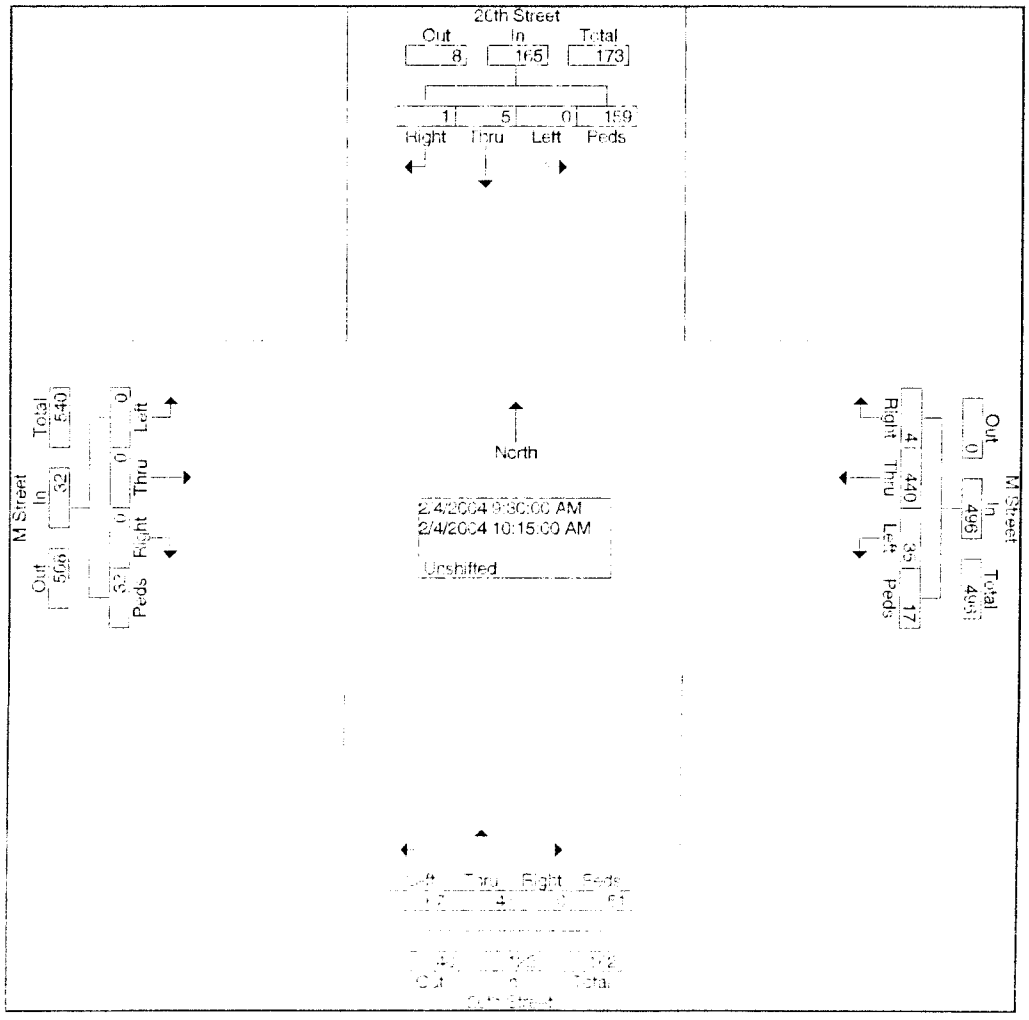
File Name : 26TH@M
Site Code : 00000061
Start Date : 02/04/200
Page No : 3

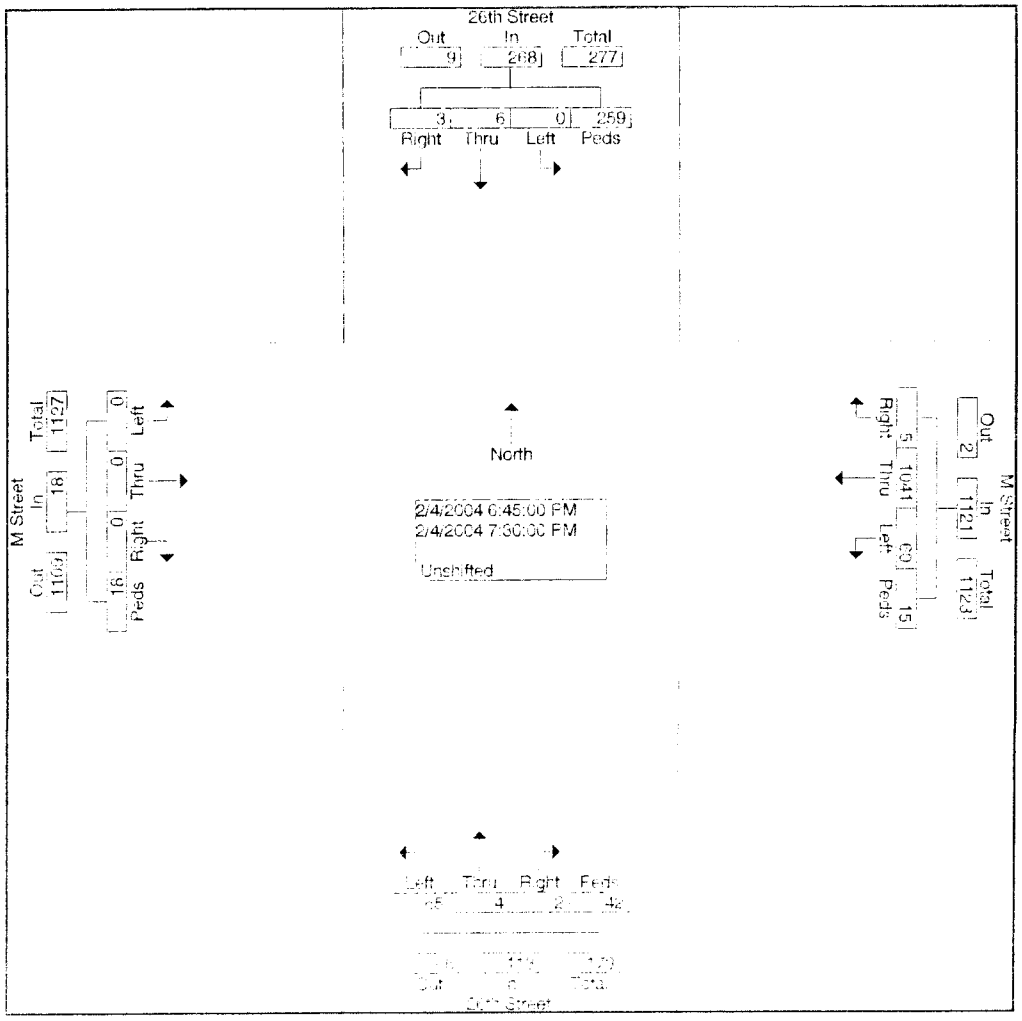
	20th Street From North					M Street From East					20th Street From South					M Street From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Tota
k Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																					
rsection	08:30 AM																				
Volume	1	5	0	159	165	4	440	35	17	496	0	4	67	51	122	0	0	0	32	32	815
Percent	0.6	3.0	0.0	96.4		0.8	88.7	7.1	3.4		0.0	3.3	54.9	41.8		0.0	0.0	0.0	100.0		
09:45 Volume	1	1	0	44	46	1	122	11	1	135	0	1	21	23	45	0	0	0	10	10	236
Peak Factor																					0.863
High Int.	08:30 AM					09:45 AM					09:45 AM					08:30 AM					
Volume	0	3	0	43	46	1	122	11	1	135	0	1	21	23	45	0	0	0	13	13	
Peak Factor					0.897					0.919					0.678					0.615	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 26TH@M
Site Code : 00000061
Start Date : 02/04/200
Page No : 4

	26th Street From North					M Street From East					26th Street From South					M Street From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
k Hour From 12:00 PM to 07:30 PM - Peak 1 of 1																					
ersection	06:45 PM																				
Volume	3	6	0	259	268	5	1041	60	15	1121	2	4	65	42	113	0	0	0	18	18	1520
Percent	1.1	2.2	0.0	96.6		0.4	92.9	5.4	1.3		1.8	3.5	57.5	37.2		0.0	0.0	0.0	100.0		
07:30 Volume	2	0	0	65	67	0	336	10	1	347	0	1	25	11	37	0	0	0	8	8	459
Peak Factor																					0.828
High Int.	07:15 PM					07:30 PM					07:30 PM					07:30 PM					
Volume	1	3	0	82	86	0	336	10	1	347	0	1	25	11	37	0	0	0	8	8	
Peak Factor					0.779					0.808					0.764					0.563	



M STREET @ 25TH STREET

Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 25TH@M
Site Code : 00000051
Start Date : 02/04/200
Page No : 1

Groups Printed- Unshifted

Start Time	25th Street From North				M Street From East				25th Street From South				M Street From West				Int. Tot
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	0	3	0	2	9	50	4	4	0	13	2	1	0	0	0	4	9
07:45 AM	3	2	0	0	23	53	3	6	0	14	1	1	0	0	0	10	11
Total	3	5	0	2	32	103	7	10	0	27	3	2	0	0	0	14	20
08:00 AM	4	5	0	4	14	60	4	5	0	17	5	5	0	0	0	5	12
08:15 AM	0	3	0	7	10	59	9	10	0	28	6	7	0	0	0	4	14
08:30 AM	5	2	0	6	16	72	12	15	0	18	9	7	0	0	0	13	17
08:45 AM	4	3	0	3	20	93	11	30	0	30	9	11	0	0	0	7	22
Total	13	13	0	20	60	284	36	60	0	93	29	30	0	0	0	29	66
09:00 AM	1	4	0	14	20	104	14	26	0	24	14	14	0	0	0	15	25
09:15 AM	5	8	0	14	27	103	17	26	0	25	15	21	0	0	0	11	27
09:30 AM	8	8	0	23	23	115	13	43	0	32	19	8	0	0	0	14	30
09:45 AM	15	6	0	25	26	115	12	58	0	36	13	18	0	0	0	23	34
Total	29	26	0	76	96	437	56	153	0	117	61	61	0	0	0	63	117
10:00 AM	8	5	0	17	28	107	19	46	0	40	16	23	0	0	0	17	32
10:15 AM	10	6	0	14	21	108	14	40	0	47	22	7	0	0	0	11	30
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	18	11	0	31	49	215	33	86	0	87	38	30	0	0	0	28	62
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
..00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	9	17	0	4	14	132	31	28	0	11	2	8	0	0	0	11	26
04:45 PM	11	11	0	6	13	122	16	33	0	7	6	9	0	0	0	8	24
Total	20	28	0	10	27	254	47	66	0	18	8	17	0	0	0	19	51
05:00 PM	9	19	0	10	15	140	25	35	0	12	5	6	0	0	0	13	26
15 PM	10	18	0	2	17	139	29	46	0	15	1	11	0	0	0	12	30
..30 PM	15	19	0	9	18	160	25	36	0	7	1	15	0	0	0	11	31
05:45 PM	22	26	0	11	17	149	29	35	0	6	5	5	0	0	0	18	32
Tota.	36	82	0	32	67	588	108	152	0	40	12	37	0	0	0	54	122
06:00 PM	22	28	0	17	15	145	25	54	0	16	4	21	0	0	0	22	33
06:15 PM	24	35	0	20	16	209	38	70	0	8	1	9	0	0	0	15	44
06:30 PM	34	31	0	12	13	194	40	69	0	7	1	19	0	0	0	17	43
06:45 PM	39	40	0	14	10	210	26	61	0	8	3	15	0	0	0	27	45

07:00 PM	37	40	0	23	10	196	27	76	0	2	6	22	0	0	0	15	15
07:15 PM	35	39	0	21	11	216	29	65	0	10	3	5	0	0	0	15	46
Grand Total	330	378	0	278	406	3051	472	942	0	433	169	268	0	0	0	316	704
Apprch %	33.5	38.3	0.0	28.2	8.3	62.6	9.7	19.3	0.0	49.8	19.4	30.8	0.0	0.0	0.0	100.0	
Total %	4.7	5.4	0.0	3.9	5.8	43.3	6.7	13.4	0.0	6.1	2.4	3.8	0.0	0.0	0.0	4.5	

Change These in The Preferences Window
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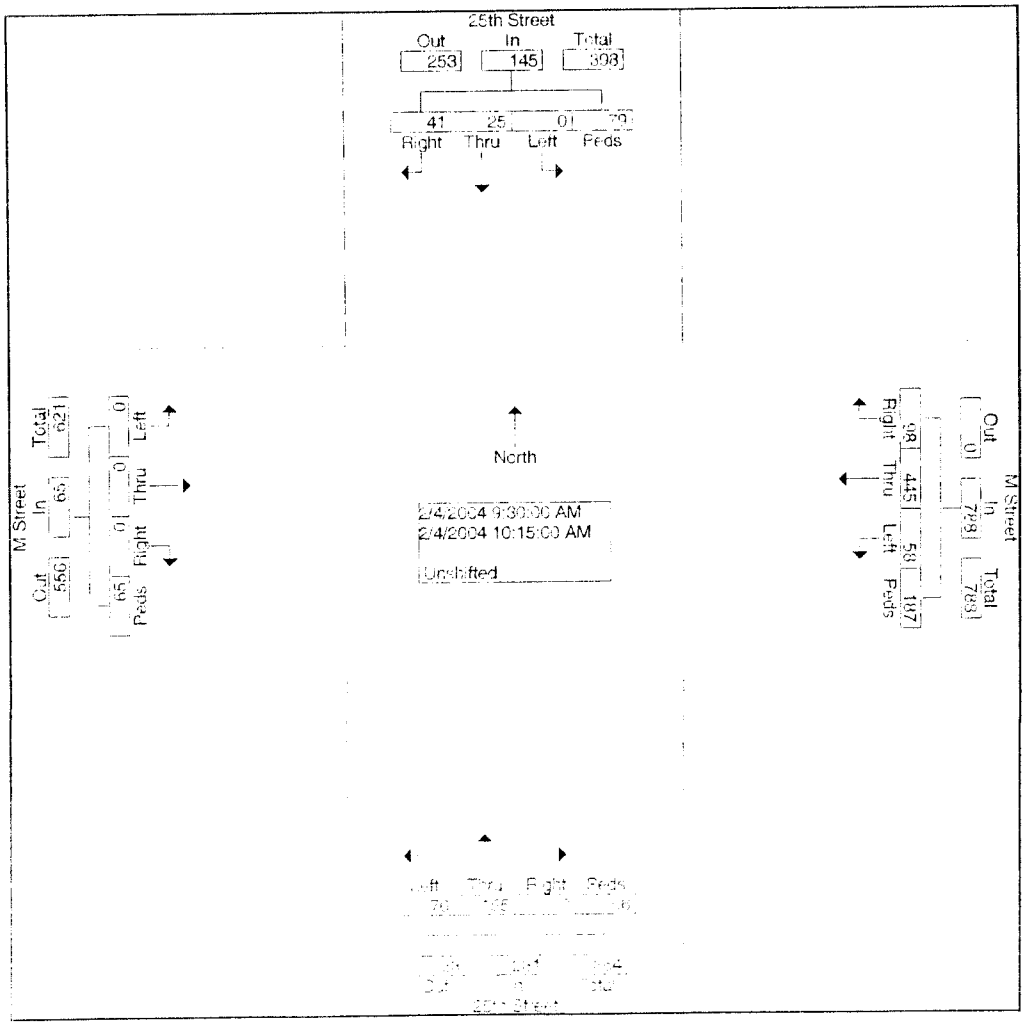
Then Click the Titles Tab

File Name : 25TH@M
Site Code : 00000051
Start Date : 02/04/200
Page No : 3

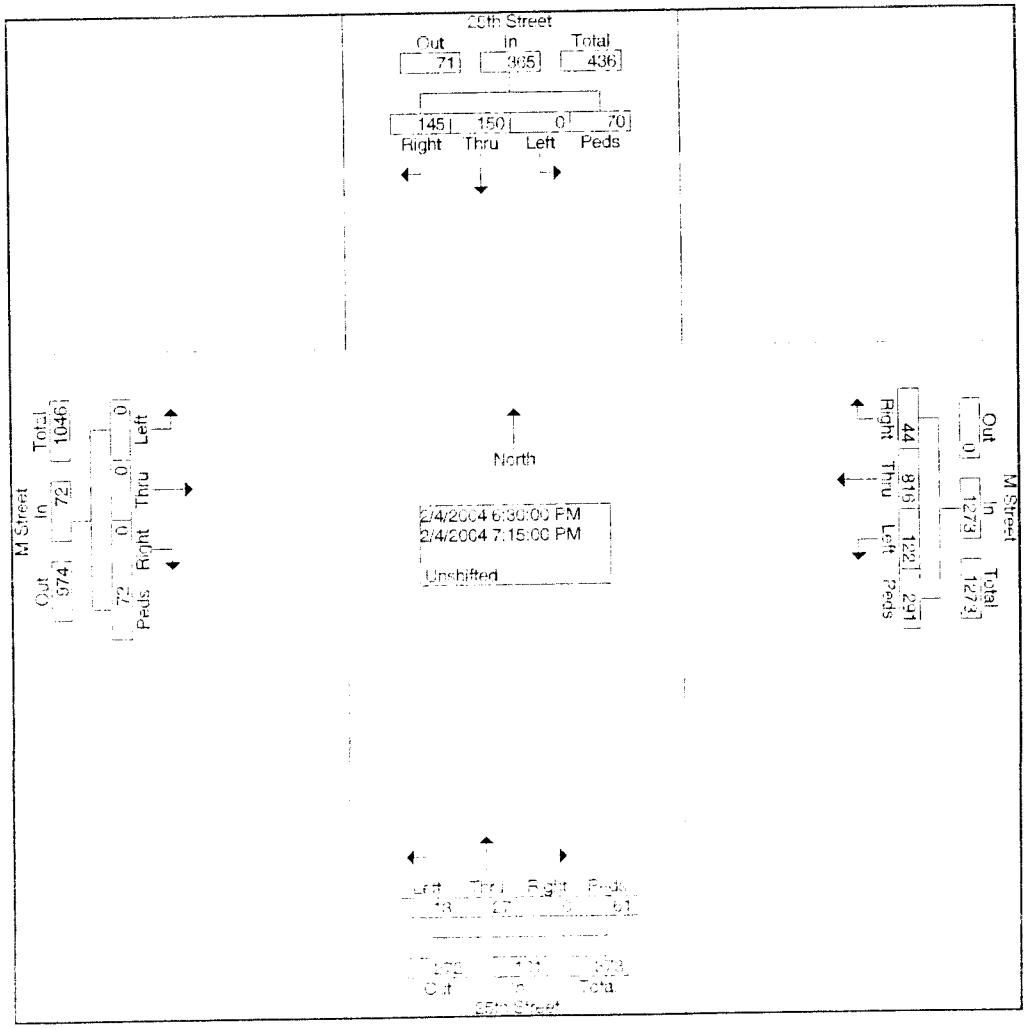
	25th Street From North					M Street From East					25th Street From South					M Street From West					
art Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
r Hour From 07:30 AM to 11:45 AM - Peak 1 of 1																					
rsection	09:30 AM																				
Volume	41	25	0	79	145	38	445	58	187	788	0	155	70	56	281	0	0	0	65	65	1279
Percent	28.3	17.2	0.0	54.5		12.4	56.5	7.4	23.7		0.0	55.2	24.9	19.9		0.0	0.0	0.0	100.0		
09:45 Volume	15	6	0	25	46	26	115	12	58	211	0	36	13	18	67	0	0	0	23	23	347
Peak Factor																					0.921
High Int.	09:45 AM					09:45 AM					10:00 AM					09:45 AM					
Volume	15	6	0	25	46	26	115	12	58	211	0	40	16	23	79	0	0	0	23	23	
Peak Factor					0.788					0.934					0.839					0.707	



Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Titles Tab

File Name : 25TH@M
Site Code : 00000051
Start Date : 02/04/200
Page No : 4

	25th Street From North					M Street From East					25th Street From South					M Street From West					
rt Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int Total
Hour From 12:00 PM to 07:15 PM - Peak 1 of 1																					
rsection	06:30 PM																				
Volume	145	150	0	70	365	44	816	122	291	1273	0	27	13	61	101	0	0	0	72	72	1811
Percent	39.7	41.1	0.0	19.2		3.5	64.1	9.6	22.9		0.0	26.7	12.9	60.4		0.0	0.0	0.0	100.0		
07:15 Volume	35	39	0	21	95	11	216	29	85	341	0	10	3	5	18	0	0	0	15	15	469
Peak Factor																					0.966
High Int.	07:00 PM					07:15 PM					07:00 PM					06:45 PM					
Volume	37	40	0	23	100	11	216	29	85	341	0	2	6	22	30	0	0	0	27	27	
Peak Factor					0.913					0.933					0.842					0.667	



KCI Technologies
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Hunt Valley, MD 21030
410-316-7801

Counter: Katie Chou/Jason Yaw
Counted By:
Weather: Overcast
Other:

File Name : K at 27th and White Hurst
Site Code : 00008765
Start Date : 11/15/2005
Page No : 1

Groups Printed- 1 - Unshifted

	27 Southbound					K Westbound					27 Northbound					White Hurst Northeastbound			K Eastbound			
Start Time	H Right to WH	Right	Left	Peds	App. Total	Right	Bear Right to WH	Thru K to K	Left	App. Total	Right	Bear Left	Left to WB K	Peds	App. Total	To SB 27	To K	App. Total	K Right	K Thru	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0		
06:45 AM	1	0	0	3	4	0	51	37	34	122	8	0	67	2	77	7	177	184	24	51	75	462
Total	1	0	0	3	4	0	51	37	34	122	8	0	67	2	77	7	177	184	24	51	75	462
07:00 AM	0	0	0	3	3	0	72	38	32	142	17	0	60	5	82	12	246	258	18	9	27	512
07:15 AM	0	0	0	9	9	0	75	42	56	173	22	0	79	9	110	22	335	357	16	19	35	684
07:30 AM	0	0	0	11	11	0	76	33	39	148	26	0	83	12	121	18	365	383	13	20	33	696
07:45 AM	0	1	0	20	21	0	92	40	55	187	37	0	111	24	172	22	332	354	13	26	39	773
Total	0	1	0	43	44	0	315	153	182	650	102	0	333	50	485	74	1278	1352	60	74	134	2665
08:00 AM	0	0	0	19	19	0	91	43	45	179	37	0	105	26	168	31	357	388	19	27	46	800
08:15 AM	0	0	0	18	18	0	102	52	47	201	43	0	114	31	188	24	340	364	19	40	59	830
08:30 AM	1	0	0	23	24	0	75	61	46	182	33	0	119	43	195	26	334	360	22	15	37	798
08:45 AM	0	0	0	28	28	0	62	47	51	160	33	0	150	42	225	36	353	389	21	32	53	855
Total	1	0	0	88	89	0	330	203	189	722	146	0	488	142	776	117	1384	1501	81	114	195	3283
09:00 AM	0	0	0	15	15	0	72	55	39	166	29	0	115	26	170	43	367	410	31	31	62	823
09:15 AM	2	6	0	16	24	1	81	51	50	183	48	0	131	27	206	53	341	394	19	26	45	852
09:30 AM	11	27	0	22	60	4	64	54	48	170	13	0	101	27	141	47	368	415	18	20	38	824
Total	13	33	0	53	99	5	217	160	137	519	90	0	347	80	517	143	1076	1219	68	77	145	2499
03:30 PM	41	16	0	10	67	14	187	30	136	367	10	0	36	12	58	35	100	135	57	34	91	718
03:45 PM	37	28	0	6	71	8	208	36	127	379	8	0	41	19	68	26	99	125	62	51	113	756
Total	78	44	0	16	138	22	395	66	263	746	18	0	77	31	126	61	199	260	119	85	204	1474
04:00 PM	23	11	0	11	45	6	215	44	183	448	8	0	33	18	59	31	107	138	102	55	157	847
04:15 PM	25	7	0	16	48	6	230	33	171	440	10	0	21	18	49	31	65	96	81	57	138	771
04:30 PM	19	5	0	17	41	7	215	48	166	436	5	0	36	24	65	52	91	143	113	74	187	872
04:45 PM	17	8	0	19	44	11	241	28	155	435	13	0	38	23	74	41	100	141	98	83	181	875
Total	84	31	0	63	178	30	901	153	675	1759	36	0	128	83	247	155	363	518	394	269	663	3365
05:00 PM	18	8	0	20	46	13	252	26	201	492	6	0	29	26	61	55	88	143	97	70	167	909
05:15 PM	44	9	0	14	67	23	256	5	175	459	12	0	27	23	62	62	98	160	85	60	145	893
05:30 PM	29	8	0	26	63	27	277	25	179	508	5	0	29	38	72	75	104	179	105	67	172	994
05:45 PM	46	13	0	13	72	25	308	18	136	487	4	0	22	21	47	60	99	159	99	82	181	946
Total	137	38	0	73	248	88	1093	74	691	1946	27	0	107	108	242	252	389	641	386	279	665	3742
06:00 PM	28	12	0	17	57	33	260	29	183	505	2	0	19	26	47	60	106	166	105	69	174	949
06:15 PM	35	11	0	27	73	35	261	29	172	497	5	0	23	36	64	52	127	179	83	56	139	952
Grand Total	377	170	0	383	930	213	3823	904	2526	7466	434	0	1589	558	2581	921	5099	6020	1320	1074	2394	19391
Apprch %	40.5	18.3	0.0	41.2		2.9	51.2	12.1	33.8		16.8	0.0	61.6	21.6		15.3	84.7		55.1	44.9		
Total %	1.9	0.9	0.0	2.0	4.8	1.1	19.7	4.7	13.0	38.5	2.2	0.0	8.2	2.9	13.3	4.7	26.3	31.0	6.8	5.5	12.3	

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File Name : K at 27th and White Hurst
Site Code : 00008765
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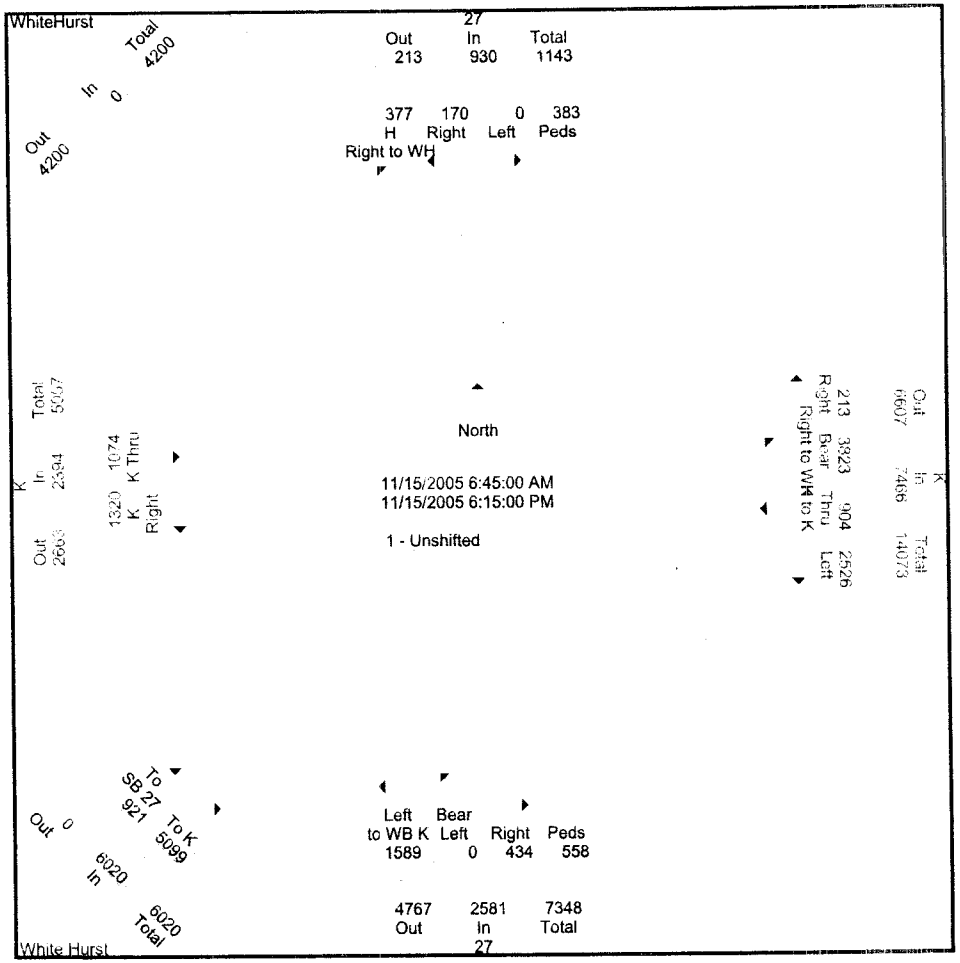

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Hunt Valley, MD 21030
410-316-7801

File Name : K at 27th and White Hurst
Site Code : 00008765
Start Date : 11/15/2005

	27 Southbound					K Westbound					27 Northbound					White Hurst Northeastbound				K Eastbound			
Start Time	H Right to WH	Right	Left	Peds	App. Total	Right	Bear Right to WH	Thru K to K	Left	App. Total	Right	Bear Left	Left to WB K	Peds	App. Total	To SB 27	To K	App. Total	K Right	K Thru	App. Total	Int. Total
Peak Hour From 06:45 AM to 11:45 AM - Peak 1 of 1																						
Intersection	08:45 AM																					
Volume	13	33	0	81	127	5	279	207	188	679	123	0	497	122	742	179	1429	1608	89	109	198	3354
Percent	10.2	26.0	0.0	63.8		0.7	41.1	30.5	27.7		16.6	0.0	67.0	16.4		11.1	88.9		44.9	55.1		
08:45 Volume	0	0	0	28	28	0	62	47	51	160	33	0	150	42	225	36	353	389	21	32	53	855
Peak Factor																						0.981
High Int.	09:30 AM					09:15 AM					08:45 AM					09:30 AM			09:00 AM			
Volume	11	27	0	22	60	1	81	51	50	183	33	0	150	42	225	47	368	415	31	31	62	
Peak Factor					0.529					0.928					0.824			0.969			0.798	

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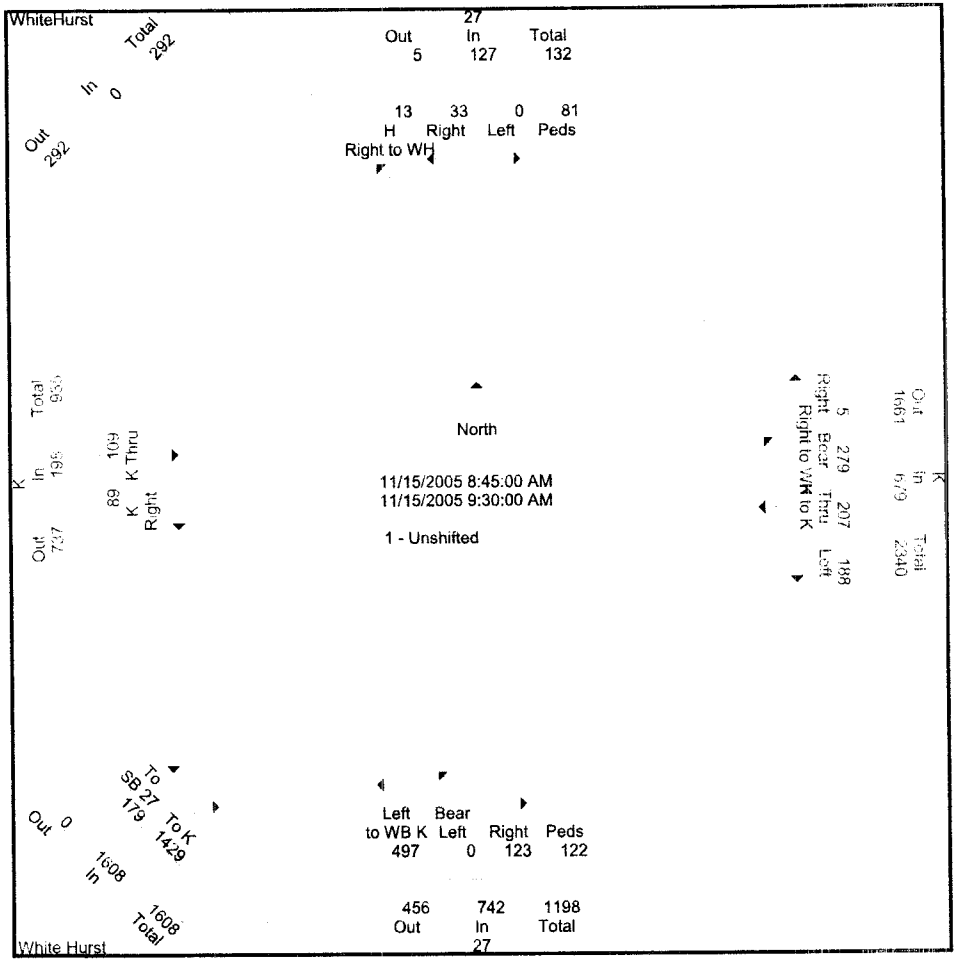
File Name : K at 27th and White Hurst
Site Code : 00008765
Start Date : 11/15/2005



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410-316-7801

File Name : K at 27th and White Hurst
Site Code : 00008765
Start Date : 11/15/2005
Page No : 5

	27 Southbound					K Westbound					27 Northbound					White Hurst Northeastbound				K Eastbound			
Start Time	H Right to WH	Right	Left	Peds	App. Total	Right	Bear Right to WH	Thru K to K	Left	App. Total	Right	Bear Left	Left to WB K	Peds	App. Total	To SB 27	To K	App. Total	K Right	K Thru	App. Total	Int. Total
Peak Hour From 12:00 PM to 06:15 PM - Peak 1 of 1																						
Intersection	05:30 PM																					
Volume	138	44	0	83	265	120	1106	101	670	1997	16	0	93	121	230	247	436	683	392	274	666	3841
Percent	52.1	16.6	0.0	31.3		6.0	55.4	5.1	33.6		7.0	0.0	40.4	52.6		36.2	63.8		58.9	41.1		
05:30 Volume	29	8	0	26	63	27	277	25	179	508	5	0	29	38	72	75	104	179	105	67	172	994
Peak Factor																						0.966
High Int.	06:15 PM					05:30 PM					05:30 PM					05:30 PM			05:45 PM			
Volume	35	11	0	27	73	27	277	25	179	508	5	0	29	38	72	75	104	179	99	82	181	
Peak Factor					0.908					0.983					0.799			0.954			0.920	

APPENDIX D – Exiting Conditions Capacity Analysis - 2004 (HCM)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.86						0.95	
Frt					1.00						0.97	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					5896						3215	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					5896						3215	
Volume (vph)	0	0	0	254	628	0	0	0	0	0	750	163
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	276	683	0	0	0	0	0	815	177
RTOR Reduction (vph)	0	0	0	0	56	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	0	0	0	903	0	0	0	0	0	974	0
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					45.0						44.0	
Effective Green, g (s)					46.0						46.0	
Actuated g/C Ratio					0.46						0.46	
Clearance Time (s)					5.0						6.0	
Lane Grp Cap (vph)					2712						1479	
v/s Ratio Prot											c0.30	
v/s Ratio Perm					0.15							
v/c Ratio					0.33						0.66	
Uniform Delay, d1					17.2						20.9	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.3						2.3	
Delay (s)					17.5						23.2	
Level of Service					B						C	
Approach Delay (s)		0.0			17.5			0.0			23.2	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	10	10	10	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor		0.86			0.95	1.00	1.00	0.95	0.95		1.00	
Frpb, ped/bikes		1.00			1.00	0.83	1.00	0.92	0.91		1.00	
Flpb, ped/bikes		1.00			1.00	1.00	0.97	1.00	1.00		0.96	
Frt		1.00			1.00	0.85	1.00	0.87	0.85		1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00	1.00		0.95	
Satd. Flow (prot)		6400			3539	1226	1710	1320	1281		1587	
Flt Permitted		0.93			1.00	1.00	0.73	1.00	1.00		0.46	
Satd. Flow (perm)		5940			3539	1226	1314	1320	1281		763	
Volume (vph)	13	1550	0	0	312	25	55	28	449	39	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	1685	0	0	339	27	60	30	488	42	0	0
RTOR Reduction (vph)	0	0	0	0	0	12	0	4	4	0	0	0
Lane Group Flow (vph)	0	1699	0	0	339	15	60	270	240	0	42	0
Confl. Peds. (#/hr)	49		173	173		49	19		41	41		19
Turn Type	Perm					Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4					8	2		2	6		
Actuated Green, G (s)		48.0			48.0	48.0	35.0	35.0	35.0		36.0	
Effective Green, g (s)		55.0			55.0	55.0	37.0	37.0	37.0		37.0	
Actuated g/C Ratio		0.55			0.55	0.55	0.37	0.37	0.37		0.37	
Clearance Time (s)		11.0			11.0	11.0	6.0	6.0	6.0		5.0	
Lane Grp Cap (vph)		3267			1946	674	486	488	474		282	
v/s Ratio Prot					0.10			c0.20				
v/s Ratio Perm		c0.29				0.01	0.05		0.19		0.06	
v/c Ratio		0.52			0.17	0.02	0.12	0.55	0.51		0.15	
Uniform Delay, d1		14.2			11.2	10.2	20.8	25.0	24.4		21.0	
Progression Factor		0.68			0.44	0.38	1.00	1.00	1.00		1.83	
Incremental Delay, d2		0.6			0.2	0.1	0.5	4.5	3.8		1.1	
Delay (s)		10.2			5.1	4.0	21.3	29.4	28.3		39.5	
Level of Service		B			A	A	C	C	C		D	
Approach Delay (s)		10.2			5.1			28.1			39.5	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.96			1.00			0.92	
Flpb, ped/bikes					0.98			0.97			1.00	
Frt					0.98			1.00			0.92	
Flt Protected					1.00			0.98			1.00	
Satd. Flow (prot)					5463			1653			1461	
Flt Permitted					1.00			0.89			1.00	
Satd. Flow (perm)					5463			1495			1461	
Volume (vph)	0	0	0	58	445	98	70	155	0	0	25	41
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	63	484	107	76	168	0	0	27	45
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	0	0	23	0
Lane Group Flow (vph)	0	0	0	0	619	0	0	244	0	0	49	0
Confl. Peds. (#/hr)	79		56	56		79	65		187	187		65
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					43.0			47.0			47.0	
Effective Green, g (s)					44.0			48.0			48.0	
Actuated g/C Ratio					0.44			0.48			0.48	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2404			718			701	
v/s Ratio Prot											0.03	
v/s Ratio Perm					0.11			c0.16				
v/c Ratio					0.26			0.34			0.07	
Uniform Delay, d1					17.7			16.2			14.0	
Progression Factor					1.66			1.24			1.00	
Incremental Delay, d2					0.3			0.1			0.2	
Delay (s)					29.6			20.1			14.2	
Level of Service					C			C			B	
Approach Delay (s)		0.0			29.6			20.1			14.2	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.95			1.00			0.95	
Flpb, ped/bikes					0.97			0.96			1.00	
Frt					0.98			1.00			0.97	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					5348			1644			1604	
Flt Permitted					0.99			0.87			1.00	
Satd. Flow (perm)					5348			1451			1604	
Volume (vph)	0	0	0	110	473	69	77	201	0	0	118	36
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	120	514	75	84	218	0	0	128	39
RTOR Reduction (vph)	0	0	0	0	21	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	688	0	0	302	0	0	156	0
Confl. Peds. (#/hr)				59		163	104					104
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					43.0			47.0			47.0	
Effective Green, g (s)					44.0			48.0			48.0	
Actuated g/C Ratio					0.44			0.48			0.48	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2353			696			770	
v/s Ratio Prot											0.10	
v/s Ratio Perm					0.13			c0.21				
v/c Ratio					0.29			0.43			0.20	
Uniform Delay, d1					18.0			17.1			15.0	
Progression Factor					1.51			0.73			1.00	
Incremental Delay, d2					0.3			1.7			0.6	
Delay (s)					27.5			14.1			15.6	
Level of Service					C			B			B	
Approach Delay (s)		0.0			27.5			14.1			15.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0		4.0	
Lane Util. Factor		0.76	1.00	1.00	1.00			1.00		0.94	
Frt		0.85	0.85	1.00	1.00			0.99		0.97	
Flt Protected		1.00	1.00	0.95	1.00			0.99		0.96	
Satd. Flow (prot)		3369	1478	1652	1737			1701		4588	
Flt Permitted		1.00	1.00	0.70	1.00			0.94		0.96	
Satd. Flow (perm)		3369	1478	1222	1737			1608		4588	
Volume (vph)	0	1101	83	158	287	2	17	80	11	465	95
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1197	90	172	312	2	18	87	12	505	103
RTOR Reduction (vph)	0	0	58	0	0	0	0	4	0	33	0
Lane Group Flow (vph)	0	1197	32	172	314	0	0	113	0	575	0
Turn Type			Perm	Perm			Perm				
Protected Phases		4			2			6		8	
Permitted Phases			4	2			6				
Actuated Green, G (s)		35.0	35.0	55.0	55.0			55.0		35.0	
Effective Green, g (s)		36.0	36.0	56.0	56.0			56.0		36.0	
Actuated g/C Ratio		0.36	0.36	0.56	0.56			0.56		0.36	
Clearance Time (s)		5.0	5.0	5.0	5.0			5.0		5.0	
Lane Grp Cap (vph)		1213	532	684	973			900		1652	
v/s Ratio Prot		c0.36			c0.18					0.13	
v/s Ratio Perm			0.02	0.14				0.07			
v/c Ratio		0.99	0.06	0.25	0.32			0.13		0.35	
Uniform Delay, d1		31.8	20.9	11.3	11.8			10.4		23.4	
Progression Factor		1.53	3.25	0.84	0.87			1.85		1.00	
Incremental Delay, d2		19.5	0.2	0.8	0.8			0.3		0.6	
Delay (s)		68.0	68.2	10.3	11.0			19.5		24.0	
Level of Service		E	E	B	B			B		C	
Approach Delay (s)	68.0				10.8			19.5		24.0	
Approach LOS	E				B			B		C	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SEL2	SEL	SET	NWT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0					4.0			4.0	4.0	4.0
Lane Util. Factor		1.00					1.00			0.81	0.81	0.91
Frpb, ped/bikes		0.77					0.99			1.00	1.00	0.94
Flpb, ped/bikes		0.99					0.75			1.00	0.97	1.00
Frt		0.89					1.00			1.00	1.00	0.98
Flt Protected		0.99					0.95			0.95	0.98	1.00
Satd. Flow (prot)		1174					1227			1338	5360	4379
Flt Permitted		0.97					0.71			0.95	0.76	1.00
Satd. Flow (perm)		1145					916			1338	4120	4379
Volume (vph)	3	2	9	13	72	178	0	9	187	1058	1097	274
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	2	10	14	78	193	0	10	203	1150	1192	298
RTOR Reduction (vph)	0	10	0	0	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	19	0	0	0	0	280	0	0	677	1868	341
Confl. Peds. (#/hr)	90		107	38	107	38		90	148	107		
Turn Type	Perm				Perm	Perm			Prot	Prot		
Protected Phases		2					6		7	7	4	8
Permitted Phases	2				6	6						
Actuated Green, G (s)		26.0					26.0			43.0	64.0	17.0
Effective Green, g (s)		28.0					28.0			43.0	64.0	17.0
Actuated g/C Ratio		0.28					0.28			0.43	0.64	0.17
Clearance Time (s)		6.0					6.0			4.0	4.0	4.0
Lane Grp Cap (vph)		321					256			575	3170	744
v/s Ratio Prot										c0.51	0.25	0.08
v/s Ratio Perm		0.02					c0.31				c0.12	
v/c Ratio		0.06					1.09			1.18	1.00dl	0.46
Uniform Delay, d1		26.4					36.0			28.5	10.4	37.4
Progression Factor		1.00					0.87			1.36	1.60	0.72
Incremental Delay, d2		0.4					83.0			95.6	0.7	2.0
Delay (s)		26.7					114.4			134.2	17.3	28.8
Level of Service		C					F			F	B	C
Approach Delay (s)		26.7					114.4				48.4	28.8
Approach LOS		C					F				D	C

Intersection Summary			
HCM Average Control Delay	51.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	NWR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	10
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	40
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	148
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	10	12	10
Total Lost time (s)						4.0		4.0
Lane Util. Factor						0.76		0.88
Frt						0.85		0.85
Flt Protected						1.00		1.00
Satd. Flow (prot)						3369		2601
Flt Permitted						1.00		1.00
Satd. Flow (perm)						3369		2601
Volume (vph)	0	0	0	0	0	1135	0	206
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	1234	0	224
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	1234	0	224
Turn Type								
Protected Phases								
Permitted Phases						6		4
Actuated Green, G (s)						42.5		48.5
Effective Green, g (s)						43.0		49.0
Actuated g/C Ratio						0.43		0.49
Clearance Time (s)						4.5		4.5
Lane Grp Cap (vph)						1449		1274
v/s Ratio Prot								
v/s Ratio Perm						c0.37		c0.09
v/c Ratio						0.85		0.18
Uniform Delay, d1						25.6		14.2
Progression Factor						0.86		1.00
Incremental Delay, d2						2.1		0.3
Delay (s)						24.1		14.5
Level of Service						C		B
Approach Delay (s)	0.0		0.0		24.1		14.5	
Approach LOS	A		A		C		B	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			1.00			1.00	
Frpb, ped/bikes		1.00			0.95			0.94			1.00	
Flpb, ped/bikes		1.00			1.00			0.99			0.92	
Frt		1.00			0.98			0.91			1.00	
Flt Protected		1.00			1.00			0.99			0.95	
Satd. Flow (prot)		5078			3286			1553			1633	
Flt Permitted		0.94			1.00			0.92			0.69	
Satd. Flow (perm)		4761			3286			1455			1180	
Volume (vph)	7	1101	0	0	293	55	14	4	36	177	0	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	1197	0	0	318	60	15	4	39	192	0	5
RTOR Reduction (vph)	0	0	0	0	16	0	0	12	0	0	1	0
Lane Group Flow (vph)	0	1205	0	0	362	0	0	46	0	0	196	0
Confl. Peds. (#/hr)	94		99	99		94	26		45	45		26
Turn Type	Perm						Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		47.0			47.0			43.0			43.0	
Effective Green, g (s)		48.0			48.0			44.0			44.0	
Actuated g/C Ratio		0.48			0.48			0.44			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2285			1577			640			519	
v/s Ratio Prot					0.11							
v/s Ratio Perm		c0.25						0.03			c0.17	
v/c Ratio		0.53			0.23			0.07			0.38	
Uniform Delay, d1		18.1			15.2			16.2			18.8	
Progression Factor		0.22			0.69			1.00			1.45	
Incremental Delay, d2		0.7			0.3			0.2			2.0	
Delay (s)		4.6			10.8			16.4			29.2	
Level of Service		A			B			B			C	
Approach Delay (s)		4.6			10.8			16.4			29.2	
Approach LOS		A			B			B			C	

Intersection Summary			
HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBR	EBR2	WBL	WBT	WBR	NWL
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0
Lane Util. Factor	0.76			0.91		0.97
Frt	0.85			1.00		1.00
Flt Protected	1.00			1.00		0.95
Satd. Flow (prot)	3610			5053		3433
Flt Permitted	1.00			1.00		0.95
Satd. Flow (perm)	3610			5053		3433
Volume (vph)	1136	34	15	432	15	306
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1235	37	16	470	16	333
RTOR Reduction (vph)	2	0	0	3	0	0
Lane Group Flow (vph)	1270	0	0	499	0	333
Turn Type	custom		Perm			Prot
Protected Phases				8		2
Permitted Phases	4		8			
Actuated Green, G (s)	58.5			58.5		32.5
Effective Green, g (s)	59.0			59.0		33.0
Actuated g/C Ratio	0.59			0.59		0.33
Clearance Time (s)	4.5			4.5		4.5
Lane Grp Cap (vph)	2130			2981		1133
v/s Ratio Prot						c0.10
v/s Ratio Perm	c0.35			0.10		
v/c Ratio	0.60			0.17		0.29
Uniform Delay, d1	13.0			9.3		24.9
Progression Factor	0.79			1.57		1.46
Incremental Delay, d2	1.2			0.1		0.6
Delay (s)	11.3			14.7		36.9
Level of Service	B			B		D
Approach Delay (s)				14.7		
Approach LOS				B		

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR
Lane Configurations			↑↑				↰↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	12
Total Lost time (s)			4.0				4.0	
Lane Util. Factor			0.95				0.97	
Frt			1.00				0.98	
Flt Protected			1.00				0.96	
Satd. Flow (prot)			3539				3174	
Flt Permitted			1.00				0.96	
Satd. Flow (perm)			3539				3174	
Volume (vph)	0	0	679	0	0	0	140	18
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	738	0	0	0	152	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	738	0	0	0	172	0
Turn Type								
Protected Phases			8				6	
Permitted Phases								
Actuated Green, G (s)			60.5				30.5	
Effective Green, g (s)			61.0				31.0	
Actuated g/C Ratio			0.61				0.31	
Clearance Time (s)			4.5				4.5	
Lane Grp Cap (vph)			2159				984	
v/s Ratio Prot			c0.21				c0.05	
v/s Ratio Perm								
v/c Ratio			0.34				0.17	
Uniform Delay, d1			9.6				25.2	
Progression Factor			1.00				1.13	
Incremental Delay, d2			0.4				0.4	
Delay (s)			10.0				28.9	
Level of Service			B				C	
Approach Delay (s)		0.0	10.0		0.0		28.9	
Approach LOS		A	B		A		C	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	10	12	12	10	10
Total Lost time (s)					4.0			4.0			4.0	4.0
Lane Util. Factor					0.95			0.95			1.00	1.00
Frt					0.89			1.00			1.00	0.85
Flt Protected					1.00			1.00			1.00	1.00
Satd. Flow (prot)					2948			3302			1739	1478
Flt Permitted					1.00			0.95			1.00	1.00
Satd. Flow (perm)					2948			3152			1739	1478
Volume (vph)	0	0	0	0	192	489	3	433	0	0	130	34
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	209	532	3	471	0	0	141	37
RTOR Reduction (vph)	0	0	0	0	113	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	628	0	0	474	0	0	141	15
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					51.5			39.5			39.5	39.5
Effective Green, g (s)					52.0			40.0			40.0	40.0
Actuated g/C Ratio					0.52			0.40			0.40	0.40
Clearance Time (s)					4.5			4.5			4.5	4.5
Lane Grp Cap (vph)					1533			1261			696	591
v/s Ratio Prot					c0.21						0.08	
v/s Ratio Perm								c0.15				0.01
v/c Ratio					0.41			0.38			0.20	0.03
Uniform Delay, d1					14.6			21.2			19.6	18.2
Progression Factor					0.57			0.84			0.97	1.20
Incremental Delay, d2					0.8			0.8			0.7	0.1
Delay (s)					9.2			18.6			19.7	21.9
Level of Service					A			B			B	C
Approach Delay (s)		0.0			9.2			18.6			20.2	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	11	12	12	11	12
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3358						1744			1774	
Flt Permitted		0.99						1.00			0.83	
Satd. Flow (perm)		3358						1744			1503	
Volume (vph)	171	528	34	0	0	0	0	265	80	39	91	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	574	37	0	0	0	0	288	87	42	99	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	793	0	0	0	0	0	364	0	0	141	0
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		46.3						44.7			44.7	
Effective Green, g (s)		46.8						45.2			45.2	
Actuated g/C Ratio		0.47						0.45			0.45	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1572						788			679	
v/s Ratio Prot								c0.21				
v/s Ratio Perm		0.24									0.09	
v/c Ratio		0.50						0.46			0.21	
Uniform Delay, d1		18.5						19.0			16.6	
Progression Factor		1.00						1.00			0.02	
Incremental Delay, d2		1.2						1.9			0.7	
Delay (s)		19.7						20.9			1.0	
Level of Service		B						C			A	
Approach Delay (s)		19.7			0.0			20.9			1.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0								4.0	4.0	
Lane Util. Factor		0.91								1.00	0.95	
Frt		0.99								1.00	1.00	
Flt Protected		1.00								0.95	1.00	
Satd. Flow (prot)		4722								1652	3303	
Flt Permitted		1.00								0.95	1.00	
Satd. Flow (perm)		4722								1652	3303	
Volume (vph)	0	1044	37	0	0	0	0	0	0	379	548	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1135	40	0	0	0	0	0	0	412	596	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	17	0	0
Lane Group Flow (vph)	0	1171	0	0	0	0	0	0	0	395	596	0
Turn Type										Perm		
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		43.0								47.0	47.0	
Effective Green, g (s)		44.0								48.0	48.0	
Actuated g/C Ratio		0.44								0.48	0.48	
Clearance Time (s)		5.0								5.0	5.0	
Lane Grp Cap (vph)		2078								793	1585	
v/s Ratio Prot		c0.25									0.18	
v/s Ratio Perm										c0.24		
v/c Ratio		0.56								0.50	0.38	
Uniform Delay, d1		20.9								17.8	16.5	
Progression Factor		0.49								1.22	1.23	
Incremental Delay, d2		1.0								1.8	0.6	
Delay (s)		11.2								23.6	20.9	
Level of Service		B								C	C	
Approach Delay (s)		11.2			0.0			0.0			22.0	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL2	WBT	WBR	NBL2	NBT	NBR	SBR2	NER	NER2
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	11	11	11	11	12	11	12
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	0.95		1.00	1.00	0.88	0.95	0.95			0.88	
Frt	0.93		1.00	1.00	0.85	1.00	0.94			0.85	
Flt Protected	1.00		0.95	1.00	1.00	0.95	0.97			1.00	
Satd. Flow (prot)	3277		1711	1801	2694	1625	1559			2694	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	0.97			1.00	
Satd. Flow (perm)	3277		1711	1801	2694	1625	1559			2694	
Volume (vph)	145	142	240	327	309	445	0	114	0	1398	121
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	158	154	261	355	336	484	0	124	0	1520	132
RTOR Reduction (vph)	0	0	0	0	0	0	21	0	0	5	0
Lane Group Flow (vph)	312	0	261	355	336	308	279	0	0	1647	0
Turn Type			custom		Perm	Perm				custom	
Protected Phases	6		5	2			8				
Permitted Phases			5		2	8				1	
Actuated Green, G (s)	11.5		14.5	91.5	91.5	19.5	19.5			56.5	
Effective Green, g (s)	12.0		15.0	92.0	92.0	20.0	20.0			57.0	
Actuated g/C Ratio	0.10		0.12	0.77	0.77	0.17	0.17			0.48	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	4.5			4.5	
Lane Grp Cap (vph)	328		214	1381	2065	271	260			1280	
v/s Ratio Prot	c0.10		c0.15	0.20							
v/s Ratio Perm					0.12	c0.19	0.18			c0.61	
v/c Ratio	0.95		1.22	0.26	0.16	1.14	1.07			1.29	
Uniform Delay, d1	53.7		52.5	4.1	3.7	50.0	50.0			31.5	
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	38.7		133.4	0.5	0.2	96.6	76.8			135.1	
Delay (s)	92.4		185.9	4.5	3.9	146.6	126.8			166.6	
Level of Service	F		F	A	A	F	F			F	
Approach Delay (s)	92.4			54.0			136.8				
Approach LOS	F			D			F				

Intersection Summary			
HCM Average Control Delay	124.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						1.00			1.00	
Frpb, ped/bikes		1.00						0.93			1.00	
Flpb, ped/bikes		0.99						1.00			0.97	
Frt		1.00						0.95			1.00	
Flt Protected		0.99						1.00			0.98	
Satd. Flow (prot)		4660						1528			1654	
Flt Permitted		0.99						1.00			0.60	
Satd. Flow (perm)		4660						1528			1020	
Volume (vph)	131	864	1	0	0	0	0	237	151	97	121	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	142	939	1	0	0	0	0	258	164	105	132	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	1082	0	0	0	0	0	399	0	0	237	0
Confl. Peds. (#/hr)	28		40	40		28			95	95		
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		44.0						48.0			48.0	
Effective Green, g (s)		44.0						48.0			48.0	
Actuated g/C Ratio		0.44						0.48			0.48	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2050						733			490	
v/s Ratio Prot								c0.26				
v/s Ratio Perm		0.23									0.23	
v/c Ratio		0.53						0.54			0.48	
Uniform Delay, d1		20.4						18.3			17.6	
Progression Factor		0.92						1.09			1.16	
Incremental Delay, d2		0.5						2.8			3.3	
Delay (s)		19.3						22.7			23.7	
Level of Service		B						C			C	
Approach Delay (s)		19.3			0.0			22.7			23.7	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.99	
Flpb, ped/bikes					0.99			0.94			1.00	
Frt					1.00			1.00			0.98	
Flt Protected					1.00			0.95			1.00	
Satd. Flow (prot)					5860			1566			1679	
Flt Permitted					1.00			0.78			1.00	
Satd. Flow (perm)					5860			1276			1679	
Volume (vph)	0	0	0	35	440	4	67	4	0	0	5	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	38	478	4	73	4	0	0	5	1
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	0	519	0	0	77	0	0	5	0
Confl. Peds. (#/hr)	159		51	51		159	32		17	17		32
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					46.0			44.0			44.0	
Effective Green, g (s)					47.0			45.0			45.0	
Actuated g/C Ratio					0.47			0.45			0.45	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2754			574			756	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.09			c0.06				
v/c Ratio					0.19			0.13			0.01	
Uniform Delay, d1					15.4			16.1			15.2	
Progression Factor					0.51			0.56			1.00	
Incremental Delay, d2					0.1			0.5			0.0	
Delay (s)					8.0			9.5			15.2	
Level of Service					A			A			B	
Approach Delay (s)		0.0			8.0			9.5			15.2	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					0.91	1.00		1.00			1.00	
Frpb, ped/bikes					1.00	0.46		1.00			0.99	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.98	
Flt Protected					1.00	1.00		1.00			1.00	
Satd. Flow (prot)					4746	676		1735			1703	
Flt Permitted					1.00	1.00		1.00			1.00	
Satd. Flow (perm)					4746	676		1729			1703	
Volume (vph)	0	0	0	0	358	125	2	67	0	0	177	22
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	389	136	2	73	0	0	192	24
RTOR Reduction (vph)	0	0	0	0	0	67	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	0	389	69	0	75	0	0	211	0
Confl. Peds. (#/hr)						213	20		69	69		20
Turn Type				Perm		Perm	Perm					
Protected Phases					8			2			6	
Permitted Phases				8		8	2					
Actuated Green, G (s)					50.0	50.0		40.0			40.0	
Effective Green, g (s)					51.0	51.0		41.0			41.0	
Actuated g/C Ratio					0.51	0.51		0.41			0.41	
Clearance Time (s)					5.0	5.0		5.0			5.0	
Lane Grp Cap (vph)					2420	345		709			698	
v/s Ratio Prot					0.08						c0.12	
v/s Ratio Perm						c0.10		0.04				
v/c Ratio					0.16	0.20		0.11			0.30	
Uniform Delay, d1					13.1	13.4		18.2			19.9	
Progression Factor					1.21	5.58		0.63			1.00	
Incremental Delay, d2					0.1	1.3		0.3			1.1	
Delay (s)					15.9	75.9		11.7			21.0	
Level of Service					B	E		B			C	
Approach Delay (s)		0.0			31.5			11.7			21.0	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91			0.91			1.00	1.00		1.00	
Frpb, ped/bikes		0.99			0.97			1.00	0.86		0.98	
Flpb, ped/bikes		0.99			1.00			0.98	1.00		0.95	
Frt		1.00			0.99			1.00	0.85		0.99	
Flt Protected		1.00			1.00			0.99	1.00		0.97	
Satd. Flow (prot)		4622			4532			1676	1273		1558	
Flt Permitted		0.86			0.84			0.92	1.00		0.67	
Satd. Flow (perm)		3994			3828			1560	1273		1080	
Volume (vph)	46	1006	24	33	664	41	36	123	67	63	39	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	1093	26	36	722	45	39	134	73	68	42	13
RTOR Reduction (vph)	0	2	0	0	7	0	0	0	27	0	4	0
Lane Group Flow (vph)	0	1167	0	0	796	0	0	173	46	0	119	0
Confl. Peds. (#/hr)	217		347	347		217	85		69	69		85
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		69.0			69.0			21.0	21.0		21.0	
Effective Green, g (s)		70.0			70.0			22.0	22.0		22.0	
Actuated g/C Ratio		0.70			0.70			0.22	0.22		0.22	
Clearance Time (s)		5.0			5.0			5.0	5.0		5.0	
Lane Grp Cap (vph)		2796			2680			343	280		238	
v/s Ratio Prot												
v/s Ratio Perm		c0.29			0.21			c0.11	0.04		0.11	
v/c Ratio		0.42			0.30			0.50	0.17		0.50	
Uniform Delay, d1		6.4			5.7			34.2	31.6		34.2	
Progression Factor		1.00			1.62			1.00	1.00		1.00	
Incremental Delay, d2		0.5			0.3			5.2	1.3		7.3	
Delay (s)		6.8			9.5			39.4	32.8		41.5	
Level of Service		A			A			D	C		D	
Approach Delay (s)		6.8			9.5			37.5			41.5	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.86						0.95	
Frt					1.00						0.98	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					5859						3241	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					5859						3241	
Volume (vph)	0	0	0	617	870	0	0	0	0	0	746	107
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	671	946	0	0	0	0	0	811	116
RTOR Reduction (vph)	0	0	0	0	32	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	1585	0	0	0	0	0	916	0
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					52.0						37.0	
Effective Green, g (s)					53.0						39.0	
Actuated g/C Ratio					0.53						0.39	
Clearance Time (s)					5.0						6.0	
Lane Grp Cap (vph)					3105						1264	
v/s Ratio Prot											c0.28	
v/s Ratio Perm					0.27							
v/c Ratio					0.51						0.72	
Uniform Delay, d1					15.1						25.9	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.6						3.6	
Delay (s)					15.7						29.6	
Level of Service					B						C	
Approach Delay (s)		0.0			15.7			0.0			29.6	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	10	10	10	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor		0.86			0.95	1.00	1.00	0.95	0.95		1.00	
Frpb, ped/bikes		1.00			1.00	0.68	1.00	0.97	0.96		1.00	
Flpb, ped/bikes		1.00			1.00	1.00	0.98	1.00	1.00		0.98	
Frt		1.00			1.00	0.85	1.00	0.90	0.85		1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00	1.00		0.95	
Satd. Flow (prot)		6395			3539	1000	1731	1441	1354		1616	
Flt Permitted		0.92			1.00	1.00	0.73	1.00	1.00		0.69	
Satd. Flow (perm)		5912			3539	1000	1325	1441	1354		1179	
Volume (vph)	10	890	0	0	512	61	146	26	130	57	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	967	0	0	557	66	159	28	141	62	0	0
RTOR Reduction (vph)	0	0	0	0	0	25	0	19	19	0	0	0
Lane Group Flow (vph)	0	978	0	0	557	41	159	74	57	0	62	0
Confl. Peds. (#/hr)	99		322	322		99	13		13	13		13
Turn Type	Perm					Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4					8	2		2	6		
Actuated Green, G (s)		55.0			55.0	55.0	28.0	28.0	28.0		28.0	
Effective Green, g (s)		62.0			62.0	62.0	30.0	30.0	30.0		30.0	
Actuated g/C Ratio		0.62			0.62	0.62	0.30	0.30	0.30		0.30	
Clearance Time (s)		11.0			11.0	11.0	6.0	6.0	6.0		6.0	
Lane Grp Cap (vph)		3665			2194	620	398	432	406		354	
v/s Ratio Prot					0.16			0.05				
v/s Ratio Perm		c0.17				0.04	c0.12		0.04		0.05	
v/c Ratio		0.27			0.25	0.07	0.40	0.17	0.14		0.18	
Uniform Delay, d1		8.7			8.6	7.5	27.8	25.8	25.6		25.9	
Progression Factor		1.52			0.12	0.00	1.00	1.00	1.00		0.48	
Incremental Delay, d2		0.2			0.3	0.2	3.0	0.9	0.7		1.0	
Delay (s)		13.3			1.3	0.2	30.8	26.7	26.3		13.5	
Level of Service		B			A	A	C	C	C		B	
Approach Delay (s)		13.3			1.1			28.6			13.5	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.93	
Flpb, ped/bikes					0.98			0.98			1.00	
Frt					0.99			1.00			0.93	
Flt Protected					0.99			0.98			1.00	
Satd. Flow (prot)					5703			1677			1508	
Flt Permitted					0.99			0.88			1.00	
Satd. Flow (perm)					5703			1505			1508	
Volume (vph)	0	0	0	122	816	44	13	27	0	0	150	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	133	887	48	14	29	0	0	163	158
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	0	0	35	0
Lane Group Flow (vph)	0	0	0	0	1061	0	0	43	0	0	286	0
Confl. Peds. (#/hr)	70		61	61		70	72		291	291		72
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					55.0			35.0			35.0	
Effective Green, g (s)					56.0			36.0			36.0	
Actuated g/C Ratio					0.56			0.36			0.36	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					3194			542			543	
v/s Ratio Prot											c0.19	
v/s Ratio Perm					0.19			0.03				
v/c Ratio					0.33			0.08			0.53	
Uniform Delay, d1					11.9			21.1			25.3	
Progression Factor					1.81			1.30			1.00	
Incremental Delay, d2					0.3			0.2			3.6	
Delay (s)					21.7			27.6			28.9	
Level of Service					C			C			C	
Approach Delay (s)		0.0			21.7			27.6			28.9	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.96			1.00			0.92	
Flpb, ped/bikes					0.98			0.96			1.00	
Frt					0.99			1.00			0.94	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					5474			1653			1502	
Flt Permitted					0.99			0.85			1.00	
Satd. Flow (perm)					5474			1427			1502	
Volume (vph)	0	0	0	150	938	104	65	159	0	0	120	86
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	163	1020	113	71	173	0	0	130	93
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	21	0
Lane Group Flow (vph)	0	0	0	0	1280	0	0	244	0	0	202	0
Confl. Peds. (#/hr)				59		163	104					104
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					52.0			38.0			38.0	
Effective Green, g (s)					53.0			39.0			39.0	
Actuated g/C Ratio					0.53			0.39			0.39	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2901			557			586	
v/s Ratio Prot											0.13	
v/s Ratio Perm					0.23			c0.17				
v/c Ratio					0.44			0.44			0.34	
Uniform Delay, d1					14.4			22.4			21.5	
Progression Factor					1.77			0.80			1.00	
Incremental Delay, d2					0.4			2.4			1.6	
Delay (s)					25.9			20.4			23.1	
Level of Service					C			C			C	
Approach Delay (s)		0.0			25.9			20.4			23.1	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	1.00			1.00	
Frt		0.97			0.98		1.00	0.99			0.99	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4617			4633		1652	1724			1721	
Flt Permitted		1.00			1.00		0.42	1.00			0.99	
Satd. Flow (perm)		4617			4633		734	1724			1714	
Volume (vph)	0	877	195	0	307	58	107	142	8	9	416	31
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	953	212	0	334	63	116	154	9	10	452	34
RTOR Reduction (vph)	0	35	0	0	28	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	1130	0	0	369	0	116	161	0	0	493	0
Turn Type							Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		35.0			35.0		55.0	55.0			55.0	
Effective Green, g (s)		36.0			36.0		56.0	56.0			56.0	
Actuated g/C Ratio		0.36			0.36		0.56	0.56			0.56	
Clearance Time (s)		5.0			5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)		1662			1668		411	965			960	
v/s Ratio Prot		c0.24			0.08			0.09				
v/s Ratio Perm							0.16				c0.29	
v/c Ratio		0.68			0.22		0.28	0.17			0.51	
Uniform Delay, d1		27.1			22.3		11.5	10.7			13.6	
Progression Factor		1.11			1.00		0.28	0.26			0.87	
Incremental Delay, d2		1.7			0.3		1.7	0.4			1.9	
Delay (s)		31.9			22.6		4.9	3.1			13.8	
Level of Service		C			C		A	A			B	
Approach Delay (s)		31.9			22.6			3.8			13.8	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SEL2	SEL	SET	NWT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0					4.0			4.0	4.0	4.0
Lane Util. Factor		1.00					1.00			0.86	0.86	0.91
Frpb, ped/bikes		0.72					0.97			1.00	1.00	0.99
Flpb, ped/bikes		1.00					0.73			1.00	0.98	1.00
Frt		0.89					0.98			1.00	1.00	0.99
Flt Protected		1.00					0.96			0.95	0.99	1.00
Satd. Flow (prot)		1101					1164			1420	4329	4663
Flt Permitted		0.98					0.74			0.95	0.69	1.00
Satd. Flow (perm)		1086					902			1420	3042	4663
Volume (vph)	2	2	6	13	83	209	0	58	27	466	672	535
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2	7	14	90	227	0	63	29	507	730	582
RTOR Reduction (vph)	0	11	0	0	0	0	7	0	0	0	0	2
Lane Group Flow (vph)	0	14	0	0	0	0	373	0	0	268	998	602
Confl. Peds. (#/hr)	80		191	53	191	53		80	48	191		
Turn Type	Perm				Perm	Perm			Prot	Prot		
Protected Phases		2					6		7	7	4	8
Permitted Phases	2				6	6						
Actuated Green, G (s)		21.0					21.0			18.0	69.0	47.0
Effective Green, g (s)		23.0					23.0			18.0	69.0	47.0
Actuated g/C Ratio		0.23					0.23			0.18	0.69	0.47
Clearance Time (s)		6.0					6.0			4.0	4.0	4.0
Lane Grp Cap (vph)		250					207			256	2331	2192
v/s Ratio Prot										c0.19	0.08	0.13
v/s Ratio Perm		0.01					c0.41				c0.22	
v/c Ratio		0.06					1.80			1.05	0.95dl	0.27
Uniform Delay, d1		30.0					38.5			41.0	6.8	16.1
Progression Factor		1.00					1.06			1.05	0.92	1.49
Incremental Delay, d2		0.4					378.7			68.6	0.6	0.3
Delay (s)		30.5					419.7			111.6	6.9	24.3
Level of Service		C					F			F	A	C
Approach Delay (s)		30.5					419.7				29.0	24.3
Approach LOS		C					F				C	C

Intersection Summary			
HCM Average Control Delay	93.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	NWR	NWR2
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Volume (vph)	10	10
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	11	11
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)	48	191
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		
Intersection Summary		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↑			↑↑↱			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			1.00			1.00	
Frpb, ped/bikes		1.00			0.87			0.96			1.00	
Flpb, ped/bikes		1.00			1.00			0.98			0.95	
Frt		1.00			0.96			0.93			1.00	
Flt Protected		1.00			1.00			0.98			0.95	
Satd. Flow (prot)		5076			2986			1601			1674	
Flt Permitted		0.94			1.00			0.87			0.68	
Satd. Flow (perm)		4756			2986			1419			1191	
Volume (vph)	5	626	0	0	460	141	33	12	48	117	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	680	0	0	500	153	36	13	52	127	0	0
RTOR Reduction (vph)	0	0	0	0	29	0	0	38	0	0	0	0
Lane Group Flow (vph)	0	685	0	0	624	0	0	63	0	0	127	0
Confl. Peds. (#/hr)	202		190	190		202	40		38	38		40
Turn Type	Perm						Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		67.0			67.0			23.0			23.0	
Effective Green, g (s)		68.0			68.0			24.0			24.0	
Actuated g/C Ratio		0.68			0.68			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		3234			2030			341			286	
v/s Ratio Prot					c0.21							
v/s Ratio Perm		0.14						0.04			c0.11	
v/c Ratio		0.21			0.31			0.18			0.44	
Uniform Delay, d1		6.0			6.5			30.2			32.3	
Progression Factor		3.25			0.37			1.00			0.29	
Incremental Delay, d2		0.1			0.4			1.2			4.8	
Delay (s)		19.6			2.8			31.4			14.2	
Level of Service		B			A			C			B	
Approach Delay (s)		19.6			2.8			31.4			14.2	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	EBR2	WBL	WBT	NBL	NBR	NWL	NWR
Lane Configurations									
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	
Lane Util. Factor		0.76			0.91			0.97	
Frt		0.85			1.00			1.00	
Flt Protected		1.00			1.00			0.95	
Satd. Flow (prot)		3610			5077			3433	
Flt Permitted		1.00			1.00			0.95	
Satd. Flow (perm)		3610			5077			3433	
Volume (vph)	0	667	27	24	752	0	0	451	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	725	29	26	817	0	0	490	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	750	0	0	843	0	0	490	0
Turn Type		custom		Perm					
Protected Phases					8			2	
Permitted Phases		4		8					
Actuated Green, G (s)		49.0			49.0			42.0	
Effective Green, g (s)		49.5			49.5			42.5	
Actuated g/C Ratio		0.50			0.50			0.42	
Clearance Time (s)		4.5			4.5			4.5	
Lane Grp Cap (vph)		1787			2513			1459	
v/s Ratio Prot								c0.14	
v/s Ratio Perm		c0.21			0.17				
v/c Ratio		0.42			0.34			0.34	
Uniform Delay, d1		16.1			15.3			19.3	
Progression Factor		0.48			1.72			1.76	
Incremental Delay, d2		0.7			0.4			0.6	
Delay (s)		8.5			26.6			34.5	
Level of Service		A			C			C	
Approach Delay (s)	8.5				26.6	0.0		34.5	
Approach LOS	A				C	A		C	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	12
Total Lost time (s)			4.0				4.0	
Lane Util. Factor			0.95				0.97	
Frt			1.00				1.00	
Flt Protected			1.00				0.95	
Satd. Flow (prot)			3539				3205	
Flt Permitted			1.00				0.95	
Satd. Flow (perm)			3539				3205	
Volume (vph)	0	0	1634	0	0	0	773	18
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	1776	0	0	0	840	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1776	0	0	0	860	0
Turn Type								
Protected Phases			8				6	
Permitted Phases								
Actuated Green, G (s)			58.5				32.5	
Effective Green, g (s)			59.0				33.0	
Actuated g/C Ratio			0.59				0.33	
Clearance Time (s)			4.5				4.5	
Lane Grp Cap (vph)			2088				1058	
v/s Ratio Prot			c0.50				c0.27	
v/s Ratio Perm								
v/c Ratio			0.85				0.81	
Uniform Delay, d1			16.9				30.7	
Progression Factor			1.00				0.92	
Incremental Delay, d2			4.6				6.5	
Delay (s)			21.5				34.7	
Level of Service			C				C	
Approach Delay (s)		0.0	21.5		0.0		34.7	
Approach LOS		A	C		A		C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	10	12	12	10	10
Total Lost time (s)					4.0			4.0			4.0	4.0
Lane Util. Factor					0.95			0.95			1.00	1.00
Frt					1.00			1.00			1.00	0.85
Flt Protected					1.00			0.99			1.00	1.00
Satd. Flow (prot)					3288			3269			1739	1478
Flt Permitted					1.00			0.82			1.00	1.00
Satd. Flow (perm)					3288			2719			1739	1478
Volume (vph)	0	0	0	0	489	16	57	213	0	0	301	310
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	532	17	62	232	0	0	327	337
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	107
Lane Group Flow (vph)	0	0	0	0	547	0	0	294	0	0	327	230
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					42.0			49.0			49.0	49.0
Effective Green, g (s)					42.5			49.5			49.5	49.5
Actuated g/C Ratio					0.42			0.50			0.50	0.50
Clearance Time (s)					4.5			4.5			4.5	4.5
Lane Grp Cap (vph)					1397			1346			861	732
v/s Ratio Prot					c0.17						c0.19	
v/s Ratio Perm								0.11				0.16
v/c Ratio					0.39			0.22			0.38	0.31
Uniform Delay, d1					19.8			14.3			15.7	15.1
Progression Factor					0.56			0.45			0.74	0.44
Incremental Delay, d2					0.8			0.4			1.0	0.8
Delay (s)					11.8			6.8			12.5	7.5
Level of Service					B			A			B	A
Approach Delay (s)		0.0			11.8			6.8			10.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	10	12	10
Total Lost time (s)						4.0		4.0
Lane Util. Factor						0.76		0.88
Frt						0.85		0.85
Flt Protected						1.00		1.00
Satd. Flow (prot)						3369		2601
Flt Permitted						1.00		1.00
Satd. Flow (perm)						3369		2601
Volume (vph)	0	0	0	0	0	894	0	505
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	972	0	549
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	972	0	549
Turn Type								
Protected Phases								
Permitted Phases						6		8
Actuated Green, G (s)						28.5		62.5
Effective Green, g (s)						29.0		63.0
Actuated g/C Ratio						0.29		0.63
Clearance Time (s)						4.5		4.5
Lane Grp Cap (vph)						977		1639
v/s Ratio Prot								
v/s Ratio Perm						c0.29		c0.21
v/c Ratio						0.99		0.33
Uniform Delay, d1						35.4		8.7
Progression Factor						0.96		1.00
Incremental Delay, d2						16.5		0.6
Delay (s)						50.5		9.2
Level of Service						D		A
Approach Delay (s)	0.0		0.0		50.5		9.2	
Approach LOS	A		A		D		A	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	11	12	12	11	12
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		1.00						0.98			1.00	
Flt Protected		1.00						1.00			1.00	
Satd. Flow (prot)		3410						1768			1801	
Flt Permitted		1.00						1.00			1.00	
Satd. Flow (perm)		3410						1768			1801	
Volume (vph)	0	160	4	0	0	0	0	175	28	0	301	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	174	4	0	0	0	0	190	30	0	327	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	176	0	0	0	0	0	214	0	0	327	0
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		40.0						51.0			51.0	
Effective Green, g (s)		40.5						51.5			51.5	
Actuated g/C Ratio		0.40						0.52			0.52	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1381						911			928	
v/s Ratio Prot		c0.05						0.12			c0.18	
v/s Ratio Perm												
v/c Ratio		0.13						0.24			0.35	
Uniform Delay, d1		18.7						13.4			14.4	
Progression Factor		1.00						1.00			0.00	
Incremental Delay, d2		0.2						0.6			1.0	
Delay (s)		18.9						14.0			1.0	
Level of Service		B						B			A	
Approach Delay (s)		18.9			0.0			14.0			1.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0								4.0	4.0	
Lane Util. Factor		0.95								1.00	0.95	
Frt		0.99								1.00	1.00	
Flt Protected		1.00								0.95	1.00	
Satd. Flow (prot)		3280								1652	3303	
Flt Permitted		1.00								0.95	1.00	
Satd. Flow (perm)		3280								1652	3303	
Volume (vph)	0	626	31	0	0	0	0	0	0	230	1099	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	680	34	0	0	0	0	0	0	250	1195	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	32	0	0
Lane Group Flow (vph)	0	711	0	0	0	0	0	0	0	218	1195	0
Turn Type										Perm		
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		33.0								57.0	57.0	
Effective Green, g (s)		34.0								58.0	58.0	
Actuated g/C Ratio		0.34								0.58	0.58	
Clearance Time (s)		5.0								5.0	5.0	
Lane Grp Cap (vph)		1115								958	1916	
v/s Ratio Prot		c0.22									c0.36	
v/s Ratio Perm										0.13		
v/c Ratio		0.64								0.23	0.62	
Uniform Delay, d1		27.8								10.2	13.8	
Progression Factor		0.44								0.94	0.87	
Incremental Delay, d2		2.6								0.4	1.2	
Delay (s)		14.9								10.0	13.2	
Level of Service		B								B	B	
Approach Delay (s)		14.9			0.0			0.0			12.7	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL2	WBT	WBR	NBL2	NBT	NBR	SBR2	NER	NER2
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	11	11	11	11	12	11	12
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95		1.00	1.00	0.88	0.95	0.95		1.00	0.88	
Frt	0.96		1.00	1.00	0.85	1.00	0.88		0.86	0.85	
Flt Protected	1.00		0.95	1.00	1.00	0.95	0.99		1.00	1.00	
Satd. Flow (prot)	3412		1711	1801	2694	1625	1490		1611	2694	
Flt Permitted	1.00		0.23	1.00	1.00	0.95	0.99		1.00	1.00	
Satd. Flow (perm)	3412		422	1801	2694	1625	1490		1611	2694	
Volume (vph)	840	265	775	149	1427	132	0	114	100	282	321
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	913	288	842	162	1551	143	0	124	109	307	349
RTOR Reduction (vph)	0	0	0	0	0	0	107	0	0	172	0
Lane Group Flow (vph)	1201	0	842	162	1551	112	48	0	109	484	0
Turn Type			custom		Perm	Perm			custom	custom	
Protected Phases	6			2			8				
Permitted Phases			5		2	8			4	1	
Actuated Green, G (s)	20.0		46.5	95.0	95.0	16.0	16.0		16.0	19.5	
Effective Green, g (s)	20.5		47.0	95.5	95.5	16.5	16.5		16.5	20.0	
Actuated g/C Ratio	0.17		0.39	0.80	0.80	0.14	0.14		0.14	0.17	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	583		165	1433	2144	223	205		222	449	
v/s Ratio Prot	c0.35			0.09							
v/s Ratio Perm			c1.99		0.58	c0.07	0.03		0.07	c0.18	
v/c Ratio	2.06		5.10	0.11	0.72	0.50	0.23		0.49	1.08	
Uniform Delay, d1	49.8		36.5	2.7	5.9	47.9	46.1		47.9	50.0	
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	482.9		1859.8	0.2	2.2	7.9	2.7		7.6	65.2	
Delay (s)	532.7		1896.3	2.9	8.1	55.8	48.8		55.4	115.2	
Level of Service	F		F	A	A	E	D		E	F	
Approach Delay (s)	532.7			630.0			51.7				
Approach LOS	F			F			D				

Intersection Summary			
HCM Average Control Delay	489.7	HCM Level of Service	F
HCM Volume to Capacity ratio	3.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						1.00			1.00	
Frpb, ped/bikes		0.98						0.94			1.00	
Flpb, ped/bikes		0.99						1.00			0.97	
Frt		0.98						0.96			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3136						1558			1669	
Flt Permitted		0.99						1.00			0.90	
Satd. Flow (perm)		3136						1558			1514	
Volume (vph)	64	482	80	0	0	0	0	119	59	54	186	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	524	87	0	0	0	0	129	64	59	202	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	669	0	0	0	0	0	175	0	0	261	0
Confl. Peds. (#/hr)	28		40	40		28			95	95		
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		41.0						51.0			51.0	
Effective Green, g (s)		41.0						51.0			51.0	
Actuated g/C Ratio		0.41						0.51			0.51	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		1286						795			772	
v/s Ratio Prot								0.11				
v/s Ratio Perm		0.21									c0.17	
v/c Ratio		0.52						0.22			0.34	
Uniform Delay, d1		22.1						13.5			14.5	
Progression Factor		1.29						0.64			0.73	
Incremental Delay, d2		0.9						0.6			1.1	
Delay (s)		29.3						9.3			11.7	
Level of Service		C						A			B	
Approach Delay (s)		29.3			0.0			9.3			11.7	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.99	
Flpb, ped/bikes					0.99			0.97			1.00	
Frt					1.00			1.00			0.96	
Flt Protected					1.00			0.95			1.00	
Satd. Flow (prot)					5904			1608			1646	
Flt Permitted					1.00			0.77			1.00	
Satd. Flow (perm)					5904			1297			1646	
Volume (vph)	0	0	0	60	1041	5	65	4	0	0	6	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	65	1132	5	71	4	0	0	7	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	1202	0	0	75	0	0	8	0
Confl. Peds. (#/hr)	259		42	42		259	18		15	15		18
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					55.0			35.0			35.0	
Effective Green, g (s)					56.0			36.0			36.0	
Actuated g/C Ratio					0.56			0.36			0.36	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					3306			467			593	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.20			c0.06				
v/c Ratio					0.36			0.16			0.01	
Uniform Delay, d1					12.2			21.7			20.6	
Progression Factor					0.60			0.63			1.00	
Incremental Delay, d2					0.3			0.7			0.0	
Delay (s)					7.6			14.4			20.6	
Level of Service					A			B			C	
Approach Delay (s)		0.0			7.6			14.4			20.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					0.91	1.00		1.00			1.00	
Frpb, ped/bikes					1.00	0.46		1.00			0.99	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.98	
Flt Protected					1.00	1.00		1.00			1.00	
Satd. Flow (prot)					4746	676		1733			1681	
Flt Permitted					1.00	1.00		0.99			1.00	
Satd. Flow (perm)					4746	676		1719			1681	
Volume (vph)	0	0	0	0	732	292	6	164	0	0	94	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	796	317	7	178	0	0	102	22
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	796	293	0	185	0	0	116	0
Confl. Peds. (#/hr)	260		2			213	22		122	122		22
Turn Type				Perm		Perm	Perm					
Protected Phases					8			2			6	
Permitted Phases				8		8	2					
Actuated Green, G (s)					69.0	69.0		21.0			21.0	
Effective Green, g (s)					70.0	70.0		22.0			22.0	
Actuated g/C Ratio					0.70	0.70		0.22			0.22	
Clearance Time (s)					5.0	5.0		5.0			5.0	
Lane Grp Cap (vph)					3322	473		378			370	
v/s Ratio Prot					0.17						0.07	
v/s Ratio Perm						c0.43		c0.11				
v/c Ratio					0.24	0.62		0.49			0.31	
Uniform Delay, d1					5.4	8.0		34.1			32.7	
Progression Factor					0.05	1.19		0.98			1.00	
Incremental Delay, d2					0.2	5.7		4.4			2.2	
Delay (s)					0.4	15.2		37.7			34.9	
Level of Service					A	B		D			C	
Approach Delay (s)		0.0			4.6			37.7			34.9	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91			0.91			1.00	1.00		1.00	
Frpb, ped/bikes		0.97			0.93			1.00	0.80		0.97	
Flpb, ped/bikes		1.00			0.99			0.98	1.00		0.92	
Frt		0.99			0.98			1.00	0.85		0.96	
Flt Protected		1.00			1.00			0.99	1.00		0.98	
Satd. Flow (prot)		4564			4274			1683	1183		1459	
Flt Permitted		0.80			0.84			0.93	1.00		0.82	
Satd. Flow (perm)		3655			3587			1578	1183		1231	
Volume (vph)	41	594	26	67	982	125	28	93	23	50	24	27
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	646	28	73	1067	136	30	101	25	54	26	29
RTOR Reduction (vph)	0	4	0	0	15	0	0	0	16	0	6	0
Lane Group Flow (vph)	0	715	0	0	1261	0	0	131	9	0	103	0
Confl. Peds. (#/hr)	416		387	387		416	63		102	102		63
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		55.0			55.0			35.0	35.0		35.0	
Effective Green, g (s)		56.0			56.0			36.0	36.0		36.0	
Actuated g/C Ratio		0.56			0.56			0.36	0.36		0.36	
Clearance Time (s)		5.0			5.0			5.0	5.0		5.0	
Lane Grp Cap (vph)		2047			2009			568	426		443	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.35			0.08	0.01		c0.08	
v/c Ratio		0.35			0.63			0.23	0.02		0.23	
Uniform Delay, d1		12.0			14.9			22.3	20.6		22.3	
Progression Factor		1.00			1.41			1.00	1.00		1.00	
Incremental Delay, d2		0.5			1.4			0.9	0.1		1.2	
Delay (s)		12.5			22.5			23.3	20.7		23.6	
Level of Service		B			C			C	C		C	
Approach Delay (s)		12.5			22.5			22.9			23.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX E – Trip Generation Data – 2014

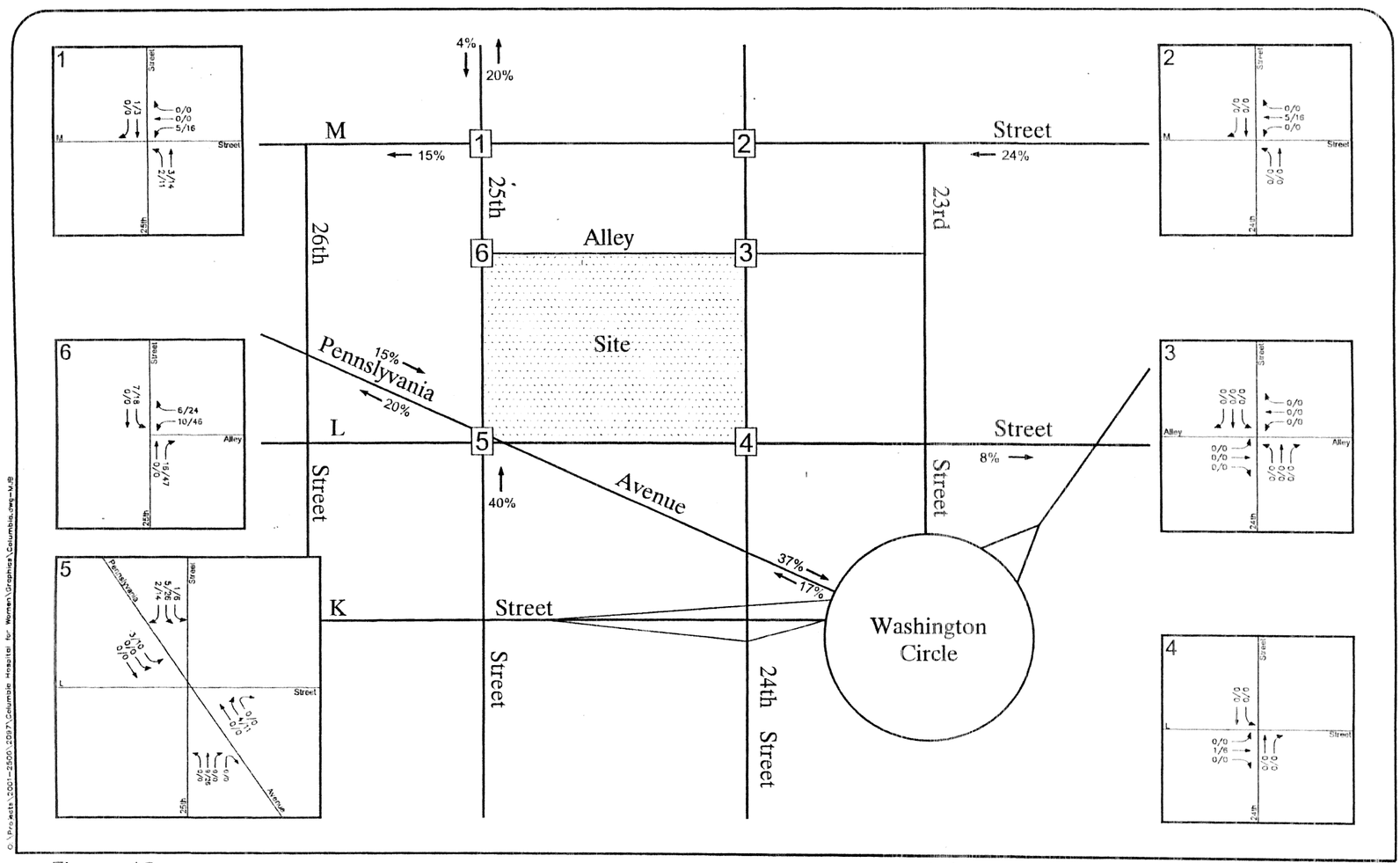


Figure 10
Site–Generated Traffic Volumes and
Directional Distribution (Retail)

2425 L Street, N.W.
Washington, D.C.

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS

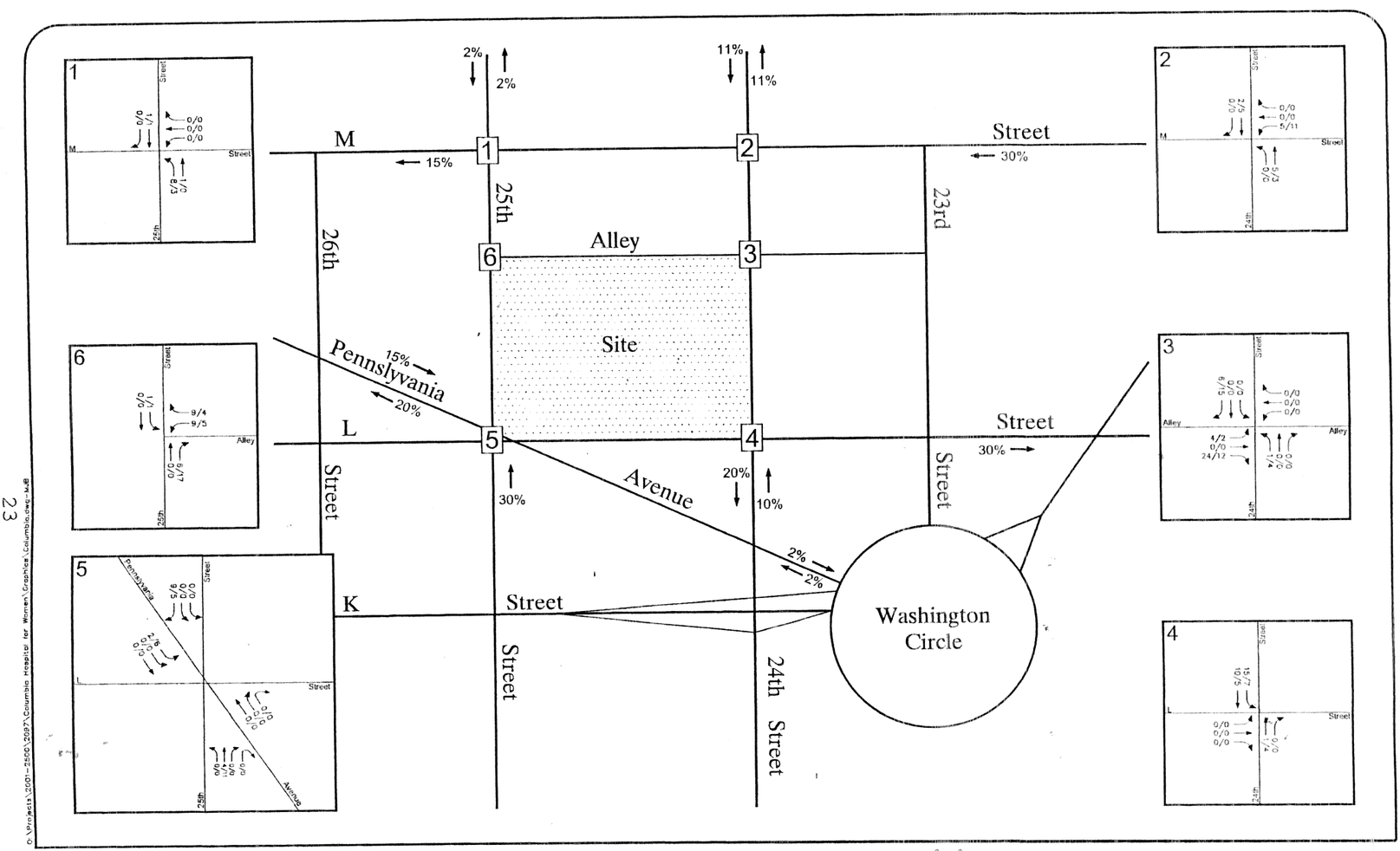
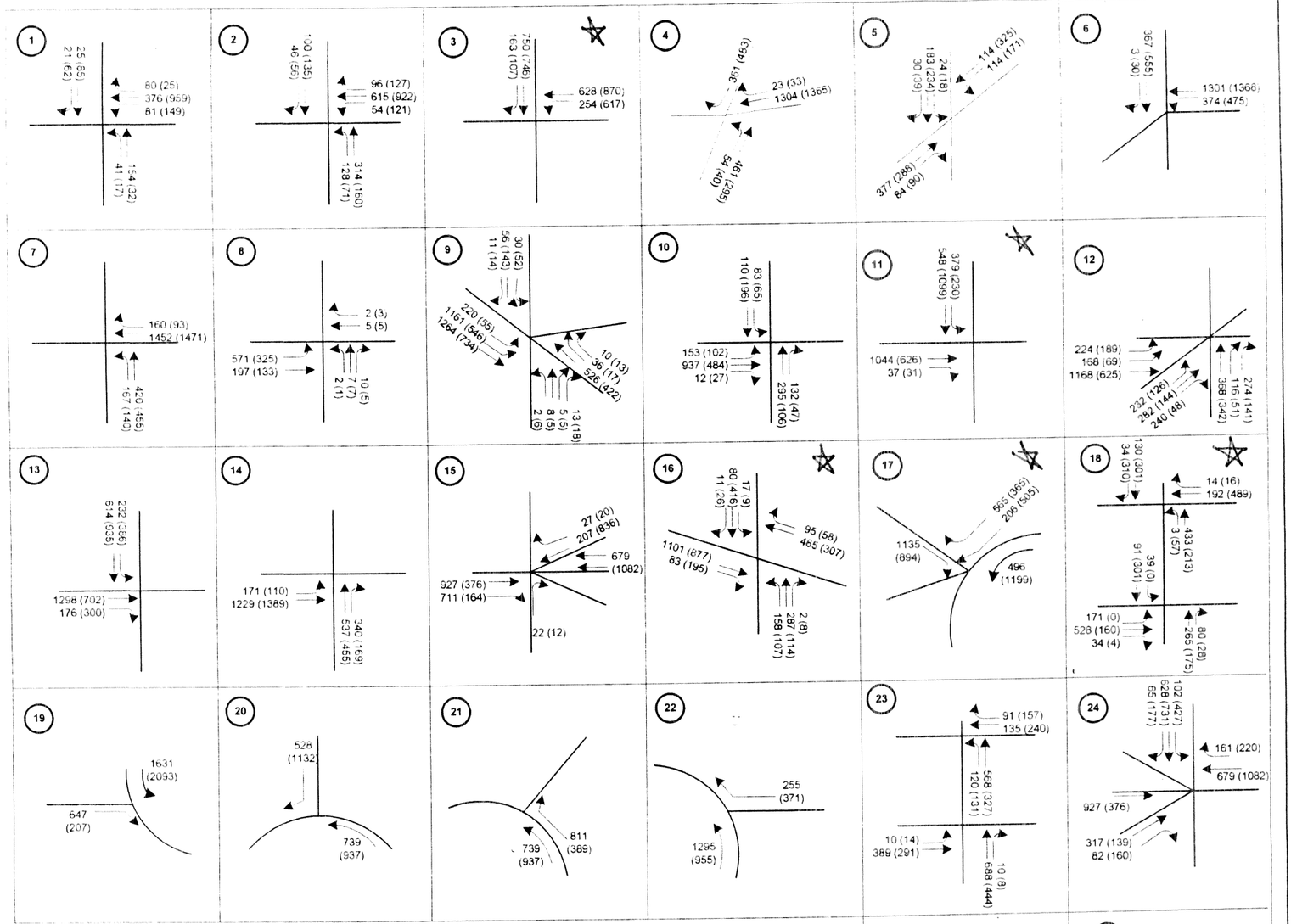


Figure 9
Site–Generated Traffic Volumes and
Directional Distribution (Residential)

2425 L Street, N.W.
Washington, D.C.

WELLS & ASSOCIATES, LLC.
TRAFFIC, TRANSPORTATION, and PARKING CONSULTANTS



Not to Scale	N	Square 37 Rezoning	**Existing (2002) AM and PM Peak Hour Volumes**
September 2002			**FIGURE 6**

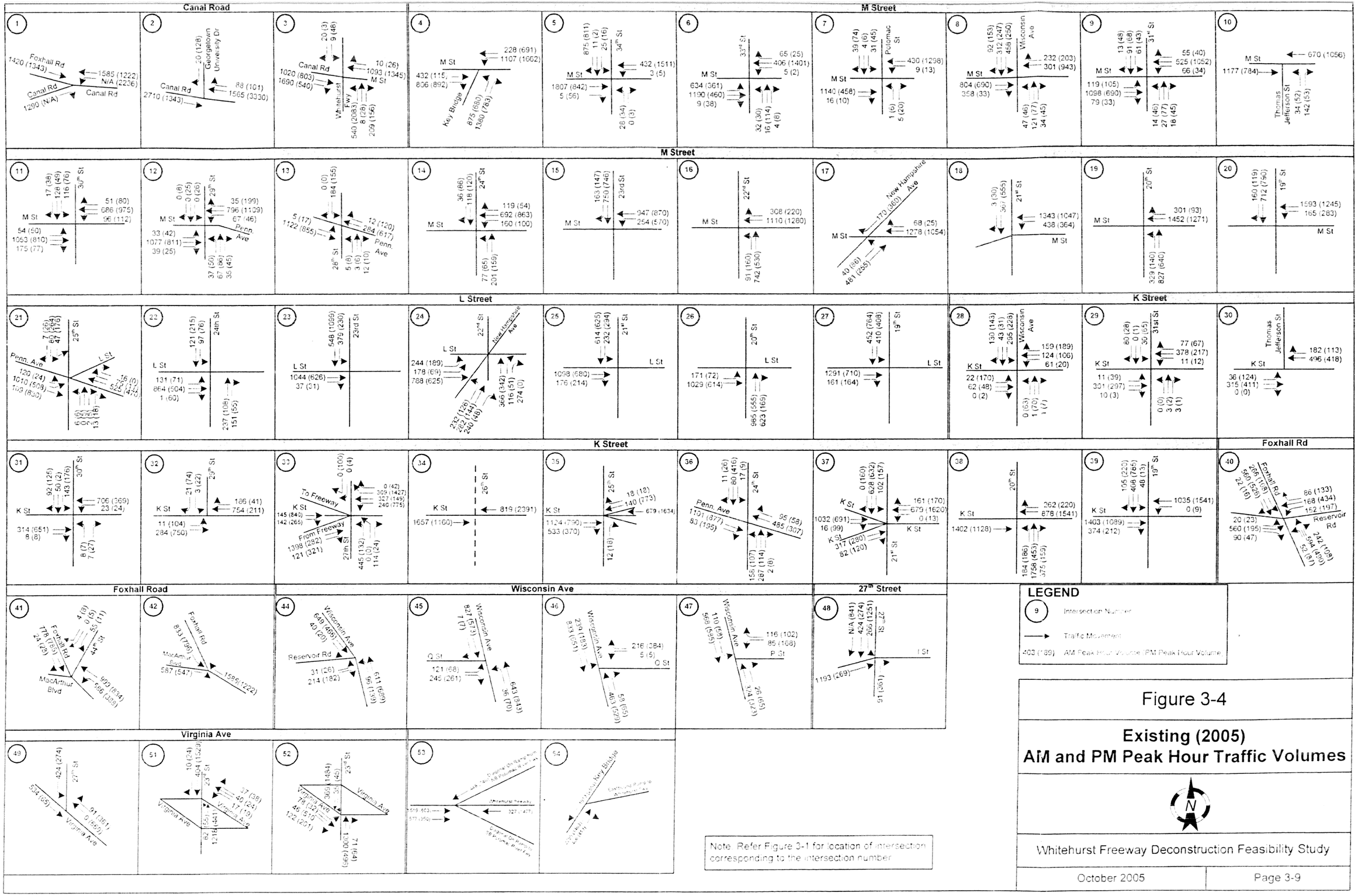


Figure 3-4

Existing (2005) AM and PM Peak Hour Traffic Volumes

Whitehurst Freeway Deconstruction Feasibility Study

APPENDIX F – Future Conditions Capacity Analysis – 2014 (HCM)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.86						0.95	
Frt					1.00						0.97	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					5896						3215	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					5896						3215	
Volume (vph)	0	0	0	252	628	0	0	0	0	0	750	162
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	301	751	0	0	0	0	0	897	194
RTOR Reduction (vph)	0	0	0	0	44	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	0	0	0	1008	0	0	0	0	0	1073	0
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					45.0						44.0	
Effective Green, g (s)					46.0						46.0	
Actuated g/C Ratio					0.46						0.46	
Clearance Time (s)					5.0						6.0	
Lane Grp Cap (vph)					2712						1479	
v/s Ratio Prot											c0.33	
v/s Ratio Perm					0.17							
v/c Ratio					0.37						0.73	
Uniform Delay, d1					17.6						21.9	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.4						3.1	
Delay (s)					18.0						25.0	
Level of Service					B						C	
Approach Delay (s)		0.0			18.0			0.0			25.0	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	10	10	10	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor		0.86			0.95	1.00	1.00	0.95	0.95		1.00	
Frpb, ped/bikes		1.00			1.00	0.68	1.00	0.97	0.96		1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00		0.99	
Frt		1.00			1.00	0.85	1.00	0.87	0.85		1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00	1.00		0.95	
Satd. Flow (prot)		6405			3539	1000	1770	1385	1354		1633	
Flt Permitted		0.93			1.00	1.00	0.73	1.00	1.00		0.42	
Satd. Flow (perm)		5938			3539	1000	1353	1385	1354		727	
Volume (vph)	13	1550	0	0	326	25	55	28	449	39	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	16	1853	0	0	390	30	66	33	537	47	0	0
RTOR Reduction (vph)	0	0	0	0	0	14	0	7	7	0	0	0
Lane Group Flow (vph)	0	1869	0	0	390	17	66	294	262	0	47	0
Confl. Peds. (#/hr)				322		99			13	13		
Turn Type	Perm					Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4					8	2		2	6		
Actuated Green, G (s)		48.0			48.0	48.0	35.0	35.0	35.0		36.0	
Effective Green, g (s)		55.0			55.0	55.0	37.0	37.0	37.0		37.0	
Actuated g/C Ratio		0.55			0.55	0.55	0.37	0.37	0.37		0.37	
Clearance Time (s)		11.0			11.0	11.0	6.0	6.0	6.0		5.0	
Lane Grp Cap (vph)		3266			1946	550	501	512	501		269	
v/s Ratio Prot					0.11			c0.21				
v/s Ratio Perm		c0.31				0.02	0.05		0.19		0.06	
v/c Ratio		0.57			0.20	0.03	0.13	0.57	0.52		0.17	
Uniform Delay, d1		14.8			11.4	10.3	20.9	25.2	24.6		21.2	
Progression Factor		0.67			0.54	0.80	1.00	1.00	1.00		1.80	
Incremental Delay, d2		0.7			0.2	0.1	0.5	4.6	3.9		1.4	
Delay (s)		10.6			6.4	8.3	21.4	29.8	28.5		39.6	
Level of Service		B			A	A	C	C	C		D	
Approach Delay (s)		10.6			6.5			28.4			39.6	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.96			1.00			0.92	
Flpb, ped/bikes					0.98			0.96			1.00	
Frt					0.98			1.00			0.92	
Flt Protected					0.99			0.98			1.00	
Satd. Flow (prot)					5457			1650			1473	
Flt Permitted					0.99			0.88			1.00	
Satd. Flow (perm)					5457			1469			1473	
Volume (vph)	0	0	0	64	445	98	79	162	0	0	28	41
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	77	532	117	94	194	0	0	33	49
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	0	0	25	0
Lane Group Flow (vph)	0	0	0	0	691	0	0	288	0	0	57	0
Confl. Peds. (#/hr)	79		56	56		79	65		187	187		65
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					43.0			47.0			47.0	
Effective Green, g (s)					44.0			48.0			48.0	
Actuated g/C Ratio					0.44			0.48			0.48	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2401			705			707	
v/s Ratio Prot											0.04	
v/s Ratio Perm					0.13			c0.20				
v/c Ratio					0.29			0.41			0.08	
Uniform Delay, d1					18.0			16.8			14.1	
Progression Factor					1.68			1.19			1.00	
Incremental Delay, d2					0.3			0.2			0.2	
Delay (s)					30.4			20.2			14.3	
Level of Service					C			C			B	
Approach Delay (s)		0.0			30.4			20.2			14.3	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.95			1.00			0.95	
Flpb, ped/bikes					0.97			0.96			1.00	
Frt					0.98			1.00			0.97	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					5348			1651			1607	
Flt Permitted					0.99			0.87			1.00	
Satd. Flow (perm)					5348			1447			1607	
Volume (vph)	0	0	0	118	479	69	77	209	0	0	121	36
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	141	573	82	92	250	0	0	145	43
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	776	0	0	342	0	0	177	0
Confl. Peds. (#/hr)				59		163	104					104
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					43.0			47.0			47.0	
Effective Green, g (s)					44.0			48.0			48.0	
Actuated g/C Ratio					0.44			0.48			0.48	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2353			695			771	
v/s Ratio Prot											0.11	
v/s Ratio Perm					0.15			c0.24				
v/c Ratio					0.33			0.49			0.23	
Uniform Delay, d1					18.3			17.7			15.2	
Progression Factor					1.59			0.74			1.00	
Incremental Delay, d2					0.3			2.0			0.7	
Delay (s)					29.4			15.0			15.9	
Level of Service					C			B			B	
Approach Delay (s)		0.0			29.4			15.0			15.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0		4.0	
Lane Util. Factor		0.76	1.00	1.00	1.00			1.00		0.94	
Frt		0.85	0.85	1.00	1.00			0.98		0.97	
Flt Protected		1.00	1.00	0.95	1.00			0.99		0.96	
Satd. Flow (prot)		3369	1478	1652	1737			1691		4587	
Flt Permitted		1.00	1.00	0.66	1.00			0.94		0.96	
Satd. Flow (perm)		3369	1478	1155	1737			1604		4587	
Volume (vph)	0	1101	83	158	288	2	17	95	21	466	95
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1316	99	189	344	2	20	114	25	557	114
RTOR Reduction (vph)	0	0	63	0	0	0	0	7	0	33	0
Lane Group Flow (vph)	0	1316	36	189	346	0	0	152	0	638	0
Turn Type			Perm	Perm			Perm				
Protected Phases		4			2			6		8	
Permitted Phases			4	2			6				
Actuated Green, G (s)		35.0	35.0	55.0	55.0			55.0		35.0	
Effective Green, g (s)		36.0	36.0	56.0	56.0			56.0		36.0	
Actuated g/C Ratio		0.36	0.36	0.56	0.56			0.56		0.36	
Clearance Time (s)		5.0	5.0	5.0	5.0			5.0		5.0	
Lane Grp Cap (vph)		1213	532	647	973			898		1651	
v/s Ratio Prot		c0.39			c0.20					0.14	
v/s Ratio Perm			0.02	0.16				0.10			
v/c Ratio		1.08	0.07	0.29	0.36			0.17		0.39	
Uniform Delay, d1		32.0	21.0	11.6	12.1			10.7		23.8	
Progression Factor		1.48	3.08	0.98	1.06			2.20		1.00	
Incremental Delay, d2		48.3	0.2	1.1	0.9			0.0		0.7	
Delay (s)		95.7	64.8	12.5	13.8			23.5		24.5	
Level of Service		F	E	B	B			C		C	
Approach Delay (s)	93.5				13.3			23.5		24.5	
Approach LOS	F				B			C		C	

Intersection Summary			
HCM Average Control Delay	57.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SEL2	SEL	SET	NWT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0					4.0			4.0	4.0	4.0
Lane Util. Factor		1.00					1.00			0.81	0.81	0.91
Frpb, ped/bikes		0.84					0.99			1.00	1.00	0.94
Flpb, ped/bikes		1.00					0.77			1.00	0.97	1.00
Frt		0.92					0.99			1.00	1.00	0.97
Flt Protected		1.00					0.96			0.95	0.98	1.00
Satd. Flow (prot)		1343					1245			1338	5378	4357
Flt Permitted		0.97					0.75			0.95	0.76	1.00
Satd. Flow (perm)		1310					976			1338	4155	4357
Volume (vph)	3	14	9	13	75	183	0	19	192	1058	1097	278
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	4	17	11	16	90	219	0	23	230	1265	1312	332
RTOR Reduction (vph)	0	12	0	0	0	0	3	0	0	0	0	3
Lane Group Flow (vph)	0	36	0	0	0	0	329	0	0	748	2059	397
Confl. Peds. (#/hr)	90		107	38	107	38		90	148	107		
Turn Type	Perm				Perm	Perm			Prot	Prot		
Protected Phases		2					6		7	7	4	8
Permitted Phases	2				6	6						
Actuated Green, G (s)		26.0					26.0			43.0	64.0	17.0
Effective Green, g (s)		28.0					28.0			43.0	64.0	17.0
Actuated g/C Ratio		0.28					0.28			0.43	0.64	0.17
Clearance Time (s)		6.0					6.0			4.0	4.0	4.0
Lane Grp Cap (vph)		367					273			575	3185	741
v/s Ratio Prot										c0.56	0.28	0.09
v/s Ratio Perm		0.03					c0.34				c0.14	
v/c Ratio		0.10					1.21			1.30	1.11dl	0.54
Uniform Delay, d1		26.7					36.0			28.5	11.1	37.9
Progression Factor		1.00					0.86			1.33	1.54	0.77
Incremental Delay, d2		0.5					121.8			146.5	0.9	2.6
Delay (s)		27.2					152.9			184.5	17.9	31.9
Level of Service		C					F			F	B	C
Approach Delay (s)		27.2					152.9				62.3	31.9
Approach LOS		C					F				E	C

Intersection Summary			
HCM Average Control Delay	66.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	NWR	NWR2
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Volume (vph)	47	10
Peak-hour factor, PHF	0.92	0.92
Growth Factor (vph)	110%	110%
Adj. Flow (vph)	56	12
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)	148	107
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			1.00			1.00	
Frt		1.00			0.98			0.91			1.00	
Flt Protected		1.00			1.00			0.99			0.95	
Satd. Flow (prot)		5084			3458			1674			1770	
Flt Permitted		0.94			1.00			0.92			0.71	
Satd. Flow (perm)		4766			3458			1555			1325	
Volume (vph)	7	1101	0	0	307	55	14	4	36	177	0	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	8	1316	0	0	367	66	17	5	43	212	0	6
RTOR Reduction (vph)	0	0	0	0	15	0	0	15	0	0	1	0
Lane Group Flow (vph)	0	1324	0	0	418	0	0	50	0	0	217	0
Turn Type	Perm						Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		47.0			47.0			43.0			43.0	
Effective Green, g (s)		48.0			48.0			44.0			44.0	
Actuated g/C Ratio		0.48			0.48			0.44			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2288			1660			684			583	
v/s Ratio Prot					0.12							
v/s Ratio Perm		c0.28						0.03			c0.16	
v/c Ratio		0.58			0.25			0.07			0.37	
Uniform Delay, d1		18.7			15.4			16.2			18.7	
Progression Factor		0.21			0.68			1.00			1.43	
Incremental Delay, d2		0.8			0.4			0.2			1.8	
Delay (s)		4.7			10.8			16.4			28.5	
Level of Service		A			B			B			C	
Approach Delay (s)		4.7			10.8			16.4			28.5	
Approach LOS		A			B			B			C	

Intersection Summary			
HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR	NWL	NWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0			4.0	
Lane Util. Factor		0.76		0.91			0.97	
Frt		0.85		1.00			1.00	
Flt Protected		1.00		1.00			0.95	
Satd. Flow (prot)		3610		5076			3433	
Flt Permitted		1.00		1.00			0.95	
Satd. Flow (perm)		3610		5076			3433	
Volume (vph)	0	1137	15	391	0	0	320	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1359	18	468	0	0	383	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1359	0	486	0	0	383	0
Turn Type		custom	Perm					
Protected Phases				8			2	
Permitted Phases		4	8					
Actuated Green, G (s)		58.5		58.5			32.5	
Effective Green, g (s)		59.0		59.0			33.0	
Actuated g/C Ratio		0.59		0.59			0.33	
Clearance Time (s)		4.5		4.5			4.5	
Lane Grp Cap (vph)		2130		2995			1133	
v/s Ratio Prot							c0.11	
v/s Ratio Perm		c0.38		0.10				
v/c Ratio		0.64		0.16			0.34	
Uniform Delay, d1		13.5		9.3			25.3	
Progression Factor		0.76		1.61			1.41	
Incremental Delay, d2		1.3		0.1			0.8	
Delay (s)		11.5		15.1			36.4	
Level of Service		B		B			D	
Approach Delay (s)	11.5			15.1	0.0		36.4	
Approach LOS	B			B	A		D	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	12
Total Lost time (s)			4.0				4.0	
Lane Util. Factor			0.95				0.97	
Frt			1.00				0.98	
Flt Protected			1.00				0.96	
Satd. Flow (prot)			3539				3177	
Flt Permitted			1.00				0.96	
Satd. Flow (perm)			3539				3177	
Volume (vph)	0	0	699	0	0	0	152	18
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	836	0	0	0	182	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	836	0	0	0	204	0
Turn Type								
Protected Phases			8				6	
Permitted Phases								
Actuated Green, G (s)			60.5				30.5	
Effective Green, g (s)			61.0				31.0	
Actuated g/C Ratio			0.61				0.31	
Clearance Time (s)			4.5				4.5	
Lane Grp Cap (vph)			2159				985	
v/s Ratio Prot			c0.24				c0.06	
v/s Ratio Perm								
v/c Ratio			0.39				0.21	
Uniform Delay, d1			10.0				25.4	
Progression Factor			1.00				1.18	
Incremental Delay, d2			0.5				0.5	
Delay (s)			10.5				30.4	
Level of Service			B				C	
Approach Delay (s)		0.0	10.5		0.0		30.4	
Approach LOS		A	B		A		C	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	10	12	12	10	10
Total Lost time (s)					4.0			4.0			4.0	4.0
Lane Util. Factor					0.95			0.95			1.00	1.00
Frt					0.99			1.00			1.00	0.85
Flt Protected					1.00			1.00			1.00	1.00
Satd. Flow (prot)					3271			3302			1739	1478
Flt Permitted					1.00			0.95			1.00	1.00
Satd. Flow (perm)					3271			3150			1739	1478
Volume (vph)	0	0	0	0	204	14	3	434	0	0	130	34
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	244	17	4	519	0	0	155	41
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	0	0	256	0	0	523	0	0	155	16
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					51.5			39.5			39.5	39.5
Effective Green, g (s)					52.0			40.0			40.0	40.0
Actuated g/C Ratio					0.52			0.40			0.40	0.40
Clearance Time (s)					4.5			4.5			4.5	4.5
Lane Grp Cap (vph)					1701			1260			696	591
v/s Ratio Prot					c0.08						0.09	
v/s Ratio Perm								c0.17				0.01
v/c Ratio					0.15			0.42			0.22	0.03
Uniform Delay, d1					12.5			21.6			19.8	18.2
Progression Factor					0.11			0.82			0.76	0.81
Incremental Delay, d2					0.2			0.9			0.7	0.1
Delay (s)					1.5			18.6			15.8	14.8
Level of Service					A			B			B	B
Approach Delay (s)		0.0			1.5			18.6			15.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	10	12	10
Total Lost time (s)						4.0		4.0
Lane Util. Factor						0.76		0.88
Frt						0.85		0.85
Flt Protected						1.00		1.00
Satd. Flow (prot)						3369		2601
Flt Permitted						1.00		1.00
Satd. Flow (perm)						3369		2601
Volume (vph)	0	0	0	0	0	1135	0	208
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	1357	0	249
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	1357	0	249
Turn Type								
Protected Phases								
Permitted Phases						6		4
Actuated Green, G (s)						42.5		48.5
Effective Green, g (s)						43.0		49.0
Actuated g/C Ratio						0.43		0.49
Clearance Time (s)						4.5		4.5
Lane Grp Cap (vph)						1449		1274
v/s Ratio Prot								
v/s Ratio Perm						c0.40		c0.10
v/c Ratio						0.94		0.20
Uniform Delay, d1						27.2		14.4
Progression Factor						0.84		1.00
Incremental Delay, d2						1.6		0.3
Delay (s)						24.5		14.7
Level of Service						C		B
Approach Delay (s)	0.0		0.0		24.5		14.7	
Approach LOS	A		A		C		B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	11	12	12	11	12
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3358						1744			1774	
Flt Permitted		0.99						1.00			0.81	
Satd. Flow (perm)		3358						1744			1465	
Volume (vph)	171	529	34	0	0	0	0	266	80	39	91	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	204	632	41	0	0	0	0	318	96	47	109	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	873	0	0	0	0	0	403	0	0	156	0
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		46.3						44.7			44.7	
Effective Green, g (s)		46.8						45.2			45.2	
Actuated g/C Ratio		0.47						0.45			0.45	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1572						788			662	
v/s Ratio Prot								c0.23				
v/s Ratio Perm		0.26									0.11	
v/c Ratio		0.56						0.51			0.24	
Uniform Delay, d1		19.1						19.5			16.8	
Progression Factor		1.00						1.00			0.02	
Incremental Delay, d2		1.4						2.4			0.8	
Delay (s)		20.5						21.9			1.2	
Level of Service		C						C			A	
Approach Delay (s)		20.5			0.0			21.9			1.2	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0								4.0	4.0	
Lane Util. Factor		0.91								1.00	0.95	
Frt		0.99								1.00	1.00	
Flt Protected		1.00								0.95	1.00	
Satd. Flow (prot)		4718								1652	3303	
Flt Permitted		1.00								0.95	1.00	
Satd. Flow (perm)		4718								1652	3303	
Volume (vph)	0	1097	46	0	0	0	0	0	0	382	551	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1312	55	0	0	0	0	0	0	457	659	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	10	0	0
Lane Group Flow (vph)	0	1363	0	0	0	0	0	0	0	447	659	0
Turn Type										Perm		
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		43.0								47.0	47.0	
Effective Green, g (s)		44.0								48.0	48.0	
Actuated g/C Ratio		0.44								0.48	0.48	
Clearance Time (s)		5.0								5.0	5.0	
Lane Grp Cap (vph)		2076								793	1585	
v/s Ratio Prot		c0.29									0.20	
v/s Ratio Perm										c0.27		
v/c Ratio		0.66								0.56	0.42	
Uniform Delay, d1		22.0								18.5	16.9	
Progression Factor		0.54								1.28	1.31	
Incremental Delay, d2		1.2								2.2	0.6	
Delay (s)		13.1								26.0	22.7	
Level of Service		B								C	C	
Approach Delay (s)		13.1			0.0			0.0			24.1	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL2	WBT	WBR	NBL2	NBT	NBR	SBR2	NER	NER2
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	11	11	11	11	12	11	12
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	0.95		1.00	1.00	0.88	0.95	0.95			0.88	
Frt	0.93		1.00	1.00	0.85	1.00	0.94			0.85	
Flt Protected	1.00		0.95	1.00	1.00	0.95	0.97			1.00	
Satd. Flow (prot)	3278		1711	1801	2694	1625	1559			2694	
Flt Permitted	1.00		0.54	1.00	1.00	0.95	0.97			1.00	
Satd. Flow (perm)	3278		981	1801	2694	1625	1559			2694	
Volume (vph)	146	142	243	332	314	445	0	114	0	1398	121
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	175	170	291	397	375	532	0	136	0	1672	145
RTOR Reduction (vph)	0	0	0	0	0	0	21	0	0	5	0
Lane Group Flow (vph)	345	0	291	397	375	337	310	0	0	1812	0
Turn Type			custom		Perm	Perm			custom	custom	
Protected Phases	6			2			8				
Permitted Phases			5		2	8			4	1	
Actuated Green, G (s)	12.5		22.5	93.5	93.5	17.5	17.5			49.5	
Effective Green, g (s)	13.0		23.0	94.0	94.0	18.0	18.0			50.0	
Actuated g/C Ratio	0.11		0.19	0.78	0.78	0.15	0.15			0.42	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	4.5			4.5	
Lane Grp Cap (vph)	355		188	1411	2110	244	234			1123	
v/s Ratio Prot	c0.11			0.22							
v/s Ratio Perm			c0.30		0.14	c0.21	0.20			c0.67	
v/c Ratio	0.97		1.55	0.28	0.18	1.38	1.32			1.61	
Uniform Delay, d1	53.3		48.5	3.6	3.3	51.0	51.0			35.0	
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	41.2		271.1	0.5	0.2	195.0	172.3			280.4	
Delay (s)	94.5		319.6	4.1	3.5	246.0	223.3			315.4	
Level of Service	F		F	A	A	F	F			F	
Approach Delay (s)	94.5			90.3			234.8				
Approach LOS	F			F			F				

Intersection Summary			
HCM Average Control Delay	220.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						1.00			1.00	
Frpb, ped/bikes		1.00						0.93			1.00	
Flpb, ped/bikes		0.99						1.00			0.97	
Frt		1.00						0.95			1.00	
Flt Protected		0.99						1.00			0.97	
Satd. Flow (prot)		4660						1527			1649	
Flt Permitted		0.99						1.00			0.44	
Satd. Flow (perm)		4660						1527			738	
Volume (vph)	131	866	1	0	0	0	0	238	152	156	146	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	157	1035	1	0	0	0	0	285	182	187	175	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	1193	0	0	0	0	0	448	0	0	362	0
Confl. Peds. (#/hr)	28		40	40		28			95	95		
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		44.0						48.0			48.0	
Effective Green, g (s)		44.0						48.0			48.0	
Actuated g/C Ratio		0.44						0.48			0.48	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		2050						733			354	
v/s Ratio Prot								0.29				
v/s Ratio Perm		0.26									c0.49	
v/c Ratio		0.58						0.61			1.02	
Uniform Delay, d1		21.1						19.1			26.0	
Progression Factor		0.96						1.33			1.15	
Incremental Delay, d2		0.4						3.6			53.4	
Delay (s)		20.6						29.1			83.3	
Level of Service		C						C			F	
Approach Delay (s)		20.6			0.0			29.1			83.3	
Approach LOS		C			A			C			F	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.99	
Flpb, ped/bikes					0.99			0.94			1.00	
Frt					1.00			1.00			0.98	
Flt Protected					1.00			0.96			1.00	
Satd. Flow (prot)					5858			1568			1688	
Flt Permitted					1.00			0.77			1.00	
Satd. Flow (perm)					5858			1269			1688	
Volume (vph)	0	0	0	35	449	4	67	4	0	0	5	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	42	537	5	80	5	0	0	6	1
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	0	583	0	0	85	0	0	6	0
Confl. Peds. (#/hr)	159		51	51		159	32		17	17		32
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					46.0			44.0			44.0	
Effective Green, g (s)					47.0			45.0			45.0	
Actuated g/C Ratio					0.47			0.45			0.45	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2753			571			760	
v/s Ratio Prot											0.00	
v/s Ratio Perm					0.10			c0.07				
v/c Ratio					0.21			0.15			0.01	
Uniform Delay, d1					15.6			16.2			15.2	
Progression Factor					0.54			0.59			1.00	
Incremental Delay, d2					0.2			0.5			0.0	
Delay (s)					8.6			10.2			15.2	
Level of Service					A			B			B	
Approach Delay (s)		0.0			8.6			10.2			15.2	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					0.91	1.00		1.00			1.00	
Frpb, ped/bikes					1.00	0.46		1.00			1.00	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					1.00	1.00		1.00			1.00	
Satd. Flow (prot)					4746	676		1736			1713	
Flt Permitted					1.00	1.00		1.00			1.00	
Satd. Flow (perm)					4746	676		1731			1713	
Volume (vph)	0	0	0	0	376	125	2	67	0	0	175	22
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	450	149	2	80	0	0	209	26
RTOR Reduction (vph)	0	0	0	0	0	73	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	0	450	76	0	82	0	0	230	0
Confl. Peds. (#/hr)	213					213				66		
Turn Type				Perm		Perm	Perm					
Protected Phases					8			2			6	
Permitted Phases				8		8	2					
Actuated Green, G (s)					50.0	50.0		40.0			40.0	
Effective Green, g (s)					51.0	51.0		41.0			41.0	
Actuated g/C Ratio					0.51	0.51		0.41			0.41	
Clearance Time (s)					5.0	5.0		5.0			5.0	
Lane Grp Cap (vph)					2420	345		710			702	
v/s Ratio Prot					0.09						c0.13	
v/s Ratio Perm						c0.11		0.05				
v/c Ratio					0.19	0.22		0.12			0.33	
Uniform Delay, d1					13.3	13.5		18.3			20.1	
Progression Factor					1.21	5.90		0.61			1.00	
Incremental Delay, d2					0.2	1.5		0.3			1.2	
Delay (s)					16.3	81.2		11.4			21.4	
Level of Service					B	F		B			C	
Approach Delay (s)		0.0			32.4			11.4			21.4	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91			0.91			1.00	1.00		1.00	
Frpb, ped/bikes		0.99			0.97			1.00	0.86		0.98	
Flpb, ped/bikes		0.99			1.00			0.98	1.00		0.95	
Frt		1.00			0.99			1.00	0.85		0.99	
Flt Protected		1.00			1.00			0.99	1.00		0.97	
Satd. Flow (prot)		4626			4544			1678	1273		1564	
Flt Permitted		0.85			0.83			0.91	1.00		0.62	
Satd. Flow (perm)		3929			3784			1551	1273		992	
Volume (vph)	46	1007	24	33	687	41	36	123	67	63	39	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	55	1204	29	39	821	49	43	147	80	75	47	14
RTOR Reduction (vph)	0	2	0	0	6	0	0	0	21	0	4	0
Lane Group Flow (vph)	0	1286	0	0	903	0	0	190	59	0	132	0
Confl. Peds. (#/hr)	217		347	347		217	85		69	69		85
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		69.0			69.0			21.0	21.0		21.0	
Effective Green, g (s)		70.0			70.0			22.0	22.0		22.0	
Actuated g/C Ratio		0.70			0.70			0.22	0.22		0.22	
Clearance Time (s)		5.0			5.0			5.0	5.0		5.0	
Lane Grp Cap (vph)		2750			2649			341	280		218	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.24			0.12	0.05		c0.13	
v/c Ratio		0.47			0.34			0.56	0.21		0.61	
Uniform Delay, d1		6.7			5.9			34.7	31.9		35.1	
Progression Factor		1.00			1.55			1.00	1.00		1.00	
Incremental Delay, d2		0.6			0.3			6.4	1.7		11.9	
Delay (s)		7.3			9.5			41.1	33.6		47.0	
Level of Service		A			A			D	C		D	
Approach Delay (s)		7.3			9.5			38.9			47.0	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.86						0.95	
Frt					1.00						0.98	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					5857						3242	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					5857						3242	
Volume (vph)	0	0	0	638	870	0	0	0	0	0	758	107
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	763	1040	0	0	0	0	0	906	128
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	1780	0	0	0	0	0	1023	0
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					52.0						37.0	
Effective Green, g (s)					53.0						39.0	
Actuated g/C Ratio					0.53						0.39	
Clearance Time (s)					5.0						6.0	
Lane Grp Cap (vph)					3104						1264	
v/s Ratio Prot											c0.32	
v/s Ratio Perm					0.30							
v/c Ratio					0.57						0.81	
Uniform Delay, d1					15.9						27.2	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.8						5.7	
Delay (s)					16.6						32.9	
Level of Service					B						C	
Approach Delay (s)		0.0			16.6			0.0			32.9	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	10	10	10	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor		0.86			0.95	1.00	1.00	0.95	0.95		1.00	
Frpb, ped/bikes		1.00			1.00	0.68	1.00	0.98	0.96		1.00	
Flpb, ped/bikes		1.00			1.00	1.00	0.98	1.00	1.00		0.98	
Frt		1.00			1.00	0.85	1.00	0.90	0.85		0.99	
Flt Protected		1.00			1.00	1.00	0.95	1.00	1.00		0.95	
Satd. Flow (prot)		6397			3539	1000	1733	1442	1354		1612	
Flt Permitted		0.92			1.00	1.00	0.73	1.00	1.00		0.70	
Satd. Flow (perm)		5903			3539	1000	1329	1442	1354		1188	
Volume (vph)	10	890	0	0	536	61	146	26	130	57	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	12	1064	0	0	641	73	175	31	155	68	0	4
RTOR Reduction (vph)	0	0	0	0	0	28	0	15	15	0	2	0
Lane Group Flow (vph)	0	1076	0	0	641	45	175	87	69	0	70	0
Confl. Peds. (#/hr)	99		322	322		99	13		13	13		13
Turn Type	Perm					Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4					8	2		2	6		
Actuated Green, G (s)		55.0			55.0	55.0	28.0	28.0	28.0		28.0	
Effective Green, g (s)		62.0			62.0	62.0	30.0	30.0	30.0		30.0	
Actuated g/C Ratio		0.62			0.62	0.62	0.30	0.30	0.30		0.30	
Clearance Time (s)		11.0			11.0	11.0	6.0	6.0	6.0		6.0	
Lane Grp Cap (vph)		3660			2194	620	399	433	406		356	
v/s Ratio Prot					0.18			0.06				
v/s Ratio Perm		c0.18				0.05	c0.13		0.05		0.06	
v/c Ratio		0.29			0.29	0.07	0.44	0.20	0.17		0.20	
Uniform Delay, d1		8.8			8.8	7.6	28.2	26.1	25.8		26.0	
Progression Factor		1.53			0.12	0.00	1.00	1.00	1.00		0.42	
Incremental Delay, d2		0.2			0.3	0.2	3.5	1.0	0.9		1.2	
Delay (s)		13.8			1.3	0.2	31.7	27.1	26.7		12.1	
Level of Service		B			A	A	C	C	C		B	
Approach Delay (s)		13.8			1.2			29.2			12.1	
Approach LOS		B			A			C			B	

Intersection Summary

HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.93	
Flpb, ped/bikes					0.97			0.98			1.00	
Frt					0.99			1.00			0.94	
Flt Protected					0.99			0.98			1.00	
Satd. Flow (prot)					5688			1674			1515	
Flt Permitted					0.99			0.81			1.00	
Satd. Flow (perm)					5688			1384			1515	
Volume (vph)	0	0	0	134	816	45	26	43	0	0	160	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	160	976	54	31	51	0	0	191	173
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	0	0	0	1183	0	0	82	0	0	331	0
Confl. Peds. (#/hr)	70		61	61		70	72		291	291		72
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					55.0			35.0			35.0	
Effective Green, g (s)					56.0			36.0			36.0	
Actuated g/C Ratio					0.56			0.36			0.36	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					3185			498			545	
v/s Ratio Prot											c0.22	
v/s Ratio Perm					0.21			0.06				
v/c Ratio					0.37			0.16			0.61	
Uniform Delay, d1					12.2			21.8			26.2	
Progression Factor					1.89			1.10			1.00	
Incremental Delay, d2					0.3			0.5			5.0	
Delay (s)					23.4			24.5			31.2	
Level of Service					C			C			C	
Approach Delay (s)		0.0			23.4			24.5			31.2	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					0.96			1.00			0.92	
Flpb, ped/bikes					0.98			0.97			1.00	
Frt					0.99			1.00			0.95	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					5472			1660			1513	
Flt Permitted					0.99			0.82			1.00	
Satd. Flow (perm)					5472			1375			1513	
Volume (vph)	0	0	0	162	952	104	66	165	0	0	131	86
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	194	1138	124	79	197	0	0	157	103
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	15	0
Lane Group Flow (vph)	0	0	0	0	1441	0	0	276	0	0	245	0
Confl. Peds. (#/hr)				59		163	104					104
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					52.0			38.0			38.0	
Effective Green, g (s)					53.0			39.0			39.0	
Actuated g/C Ratio					0.53			0.39			0.39	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					2900			536			590	
v/s Ratio Prot											0.16	
v/s Ratio Perm					0.26			c0.20				
v/c Ratio					0.50			0.51			0.41	
Uniform Delay, d1					15.0			23.3			22.2	
Progression Factor					1.78			0.82			1.00	
Incremental Delay, d2					0.5			3.4			2.1	
Delay (s)					27.2			22.6			24.3	
Level of Service					C			C			C	
Approach Delay (s)		0.0			27.2			22.6			24.3	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑		↰	↑			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor		0.91			0.91		1.00	1.00			1.00	
Frt		0.97			0.98		1.00	0.99			0.99	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		4617			4631		1652	1724			1721	
Flt Permitted		1.00			1.00		0.39	1.00			0.99	
Satd. Flow (perm)		4617			4631		680	1724			1714	
Volume (vph)	0	877	195	0	313	60	107	142	8	9	424	31
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1049	233	0	374	72	128	170	10	11	507	37
RTOR Reduction (vph)	0	35	0	0	29	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	1247	0	0	417	0	128	178	0	0	552	0
Turn Type							Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		35.0			35.0		55.0	55.0			55.0	
Effective Green, g (s)		36.0			36.0		56.0	56.0			56.0	
Actuated g/C Ratio		0.36			0.36		0.56	0.56			0.56	
Clearance Time (s)		5.0			5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)		1662			1667		381	965			960	
v/s Ratio Prot		c0.27			0.09			0.10				
v/s Ratio Perm							0.19				c0.32	
v/c Ratio		0.75			0.25		0.34	0.18			0.58	
Uniform Delay, d1		28.1			22.5		11.9	10.8			14.3	
Progression Factor		1.12			1.00		0.32	0.31			0.91	
Incremental Delay, d2		1.9			0.4		2.4	0.4			2.4	
Delay (s)		33.2			22.9		6.2	3.7			15.4	
Level of Service		C			C		A	A			B	
Approach Delay (s)		33.2			22.9			4.7			15.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SEL2	SEL	SET	NWT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0					4.0			4.0	4.0	4.0
Lane Util. Factor		1.00					1.00			0.86	0.86	0.91
Frpb, ped/bikes		0.88					0.97			1.00	1.00	0.98
Flpb, ped/bikes		1.00					0.77			1.00	0.98	1.00
Frt		0.95					0.97			1.00	1.00	0.99
Flt Protected		1.00					0.96			0.95	0.99	1.00
Satd. Flow (prot)		1464					1216			1420	4341	4610
Flt Permitted		1.00					0.74			0.95	0.68	1.00
Satd. Flow (perm)		1462					942			1420	2980	4610
Volume (vph)	2	35	6	13	95	233	0	75	41	475	672	541
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	2	42	7	16	114	279	0	90	49	568	803	647
RTOR Reduction (vph)	0	12	0	0	0	0	8	0	0	0	0	2
Lane Group Flow (vph)	0	55	0	0	0	0	475	0	0	309	1111	686
Confl. Peds. (#/hr)	80		191	53	191	53		80	48	191		
Turn Type	Perm				Perm	Perm			Prot	Prot		
Protected Phases		2					6		7	7	4	8
Permitted Phases	2				6	6						
Actuated Green, G (s)		21.0					21.0			18.0	69.0	47.0
Effective Green, g (s)		23.0					23.0			18.0	69.0	47.0
Actuated g/C Ratio		0.23					0.23			0.18	0.69	0.47
Clearance Time (s)		6.0					6.0			4.0	4.0	4.0
Lane Grp Cap (vph)		336					217			256	2301	2167
v/s Ratio Prot										c0.22	0.09	0.15
v/s Ratio Perm		0.04					c0.50				c0.25	
v/c Ratio		0.17					2.19			1.21	1.09dl	0.32
Uniform Delay, d1		30.8					38.5			41.0	7.2	16.5
Progression Factor		1.00					1.03			1.04	0.96	1.46
Incremental Delay, d2		1.1					548.1			123.5	0.7	0.4
Delay (s)		31.9					587.9			166.3	7.6	24.4
Level of Service		C					F			F	A	C
Approach Delay (s)		31.9					587.9				42.1	24.4
Approach LOS		C					F				D	C

Intersection Summary			
HCM Average Control Delay	136.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	NWR	NWR2
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Total Lost time (s)		
Lane Util. Factor		
Frpb, ped/bikes		
Flpb, ped/bikes		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Volume (vph)	24	10
Peak-hour factor, PHF	0.92	0.92
Growth Factor (vph)	110%	110%
Adj. Flow (vph)	29	12
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Confl. Peds. (#/hr)	48	191
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			1.00			1.00	
Frpb, ped/bikes		1.00			0.88			0.96			1.00	
Flpb, ped/bikes		1.00			1.00			0.98			0.95	
Frt		1.00			0.97			0.93			1.00	
Flt Protected		1.00			1.00			0.98			0.95	
Satd. Flow (prot)		5077			3005			1602			1677	
Flt Permitted		0.94			1.00			0.87			0.66	
Satd. Flow (perm)		4749			3005			1422			1166	
Volume (vph)	5	626	0	0	484	141	33	12	48	117	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	6	748	0	0	579	169	39	14	57	140	0	0
RTOR Reduction (vph)	0	0	0	0	27	0	0	39	0	0	0	0
Lane Group Flow (vph)	0	754	0	0	721	0	0	71	0	0	140	0
Confl. Peds. (#/hr)	202		190	190		202	40		38	38		40
Turn Type	Perm						Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		67.0			67.0			23.0			23.0	
Effective Green, g (s)		68.0			68.0			24.0			24.0	
Actuated g/C Ratio		0.68			0.68			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		3229			2043			341			280	
v/s Ratio Prot					c0.24							
v/s Ratio Perm		0.16						0.05			c0.12	
v/c Ratio		0.23			0.35			0.21			0.50	
Uniform Delay, d1		6.1			6.7			30.4			32.8	
Progression Factor		3.31			0.49			1.00			0.43	
Incremental Delay, d2		0.2			0.5			1.4			6.0	
Delay (s)		20.3			3.8			31.8			20.2	
Level of Service		C			A			C			C	
Approach Delay (s)		20.3			3.8			31.8			20.2	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL2	WBL	WBT	NBL	NBR	NWL	NWR
Lane Configurations									
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0	
Lane Util. Factor		0.76			0.91			0.97	
Frt		0.85			1.00			1.00	
Flt Protected		1.00			1.00			0.95	
Satd. Flow (prot)		3610			5077			3433	
Flt Permitted		1.00			1.00			0.95	
Satd. Flow (perm)		3610			5077			3433	
Volume (vph)	0	667	25	0	747	0	0	475	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	798	30	0	893	0	0	568	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	798	0	0	923	0	0	568	0
Turn Type		custom	Perm						
Protected Phases					8			2	
Permitted Phases		4	8						
Actuated Green, G (s)		49.0			49.0			42.0	
Effective Green, g (s)		49.5			49.5			42.5	
Actuated g/C Ratio		0.50			0.50			0.42	
Clearance Time (s)		4.5			4.5			4.5	
Lane Grp Cap (vph)		1787			2513			1459	
v/s Ratio Prot								c0.17	
v/s Ratio Perm		c0.22			0.18				
v/c Ratio		0.45			0.37			0.39	
Uniform Delay, d1		16.4			15.6			19.8	
Progression Factor		0.45			1.83			1.65	
Incremental Delay, d2		0.8			0.4			0.7	
Delay (s)		8.2			29.0			33.4	
Level of Service		A			C			C	
Approach Delay (s)	8.2				29.0	0.0		33.4	
Approach LOS	A				C	A		C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR
Lane Configurations			↑↑				↰↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	12
Total Lost time (s)			4.0				4.0	
Lane Util. Factor			0.95				0.97	
Frt			1.00				1.00	
Flt Protected			1.00				0.95	
Satd. Flow (prot)			3539				3205	
Flt Permitted			1.00				0.95	
Satd. Flow (perm)			3539				3205	
Volume (vph)	0	0	1634	0	0	0	790	18
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	1954	0	0	0	945	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1954	0	0	0	967	0
Turn Type								
Protected Phases			8				6	
Permitted Phases								
Actuated Green, G (s)			58.5				32.5	
Effective Green, g (s)			59.0				33.0	
Actuated g/C Ratio			0.59				0.33	
Clearance Time (s)			4.5				4.5	
Lane Grp Cap (vph)			2088				1058	
v/s Ratio Prot			c0.55				c0.30	
v/s Ratio Perm								
v/c Ratio			0.94				0.91	
Uniform Delay, d1			18.8				32.1	
Progression Factor			1.00				0.93	
Incremental Delay, d2			9.5				12.4	
Delay (s)			28.2				42.4	
Level of Service			C				D	
Approach Delay (s)		0.0	28.2		0.0		42.4	
Approach LOS		A	C		A		D	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	10	12	12	10	10
Total Lost time (s)					4.0			4.0			4.0	4.0
Lane Util. Factor					0.95			0.95			1.00	1.00
Frt					1.00			1.00			1.00	0.85
Flt Protected					1.00			1.00			1.00	1.00
Satd. Flow (prot)					3288			3301			1739	1478
Flt Permitted					1.00			0.95			1.00	1.00
Satd. Flow (perm)					3288			3141			1739	1478
Volume (vph)	0	0	0	0	506	16	3	200	0	0	301	312
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	605	19	4	239	0	0	360	373
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	85
Lane Group Flow (vph)	0	0	0	0	622	0	0	243	0	0	360	288
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					42.0			49.0			49.0	49.0
Effective Green, g (s)					42.5			49.5			49.5	49.5
Actuated g/C Ratio					0.42			0.50			0.50	0.50
Clearance Time (s)					4.5			4.5			4.5	4.5
Lane Grp Cap (vph)					1397			1555			861	732
v/s Ratio Prot					c0.19						c0.21	
v/s Ratio Perm								0.08				0.19
v/c Ratio					0.45			0.16			0.42	0.39
Uniform Delay, d1					20.4			13.8			16.1	15.8
Progression Factor					0.56			0.18			0.76	0.60
Incremental Delay, d2					1.0			0.2			1.2	1.2
Delay (s)					12.3			2.7			13.4	10.8
Level of Service					B			A			B	B
Approach Delay (s)		0.0			12.3			2.7			12.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	10	12	10
Total Lost time (s)						4.0		4.0
Lane Util. Factor						0.76		0.88
Frt						0.85		0.85
Flt Protected						1.00		1.00
Satd. Flow (prot)						3369		2601
Flt Permitted						1.00		1.00
Satd. Flow (perm)						3369		2601
Volume (vph)	0	0	0	0	0	894	0	518
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	1069	0	619
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	1069	0	619
Turn Type								
Protected Phases								
Permitted Phases						6		8
Actuated Green, G (s)						28.5		62.5
Effective Green, g (s)						29.0		63.0
Actuated g/C Ratio						0.29		0.63
Clearance Time (s)						4.5		4.5
Lane Grp Cap (vph)						977		1639
v/s Ratio Prot								
v/s Ratio Perm						c0.32		c0.24
v/c Ratio						1.09		0.38
Uniform Delay, d1						35.5		9.0
Progression Factor						1.04		1.00
Incremental Delay, d2						53.3		0.7
Delay (s)						90.4		9.6
Level of Service						F		A
Approach Delay (s)	0.0		0.0		90.4		9.6	
Approach LOS	A		A		F		A	

Intersection Summary			
HCM Average Control Delay	60.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	11	12	12	11	12
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						1.00			1.00	
Frt		1.00						0.98			1.00	
Flt Protected		1.00						1.00			1.00	
Satd. Flow (prot)		3410						1772			1801	
Flt Permitted		1.00						1.00			1.00	
Satd. Flow (perm)		3410						1772			1801	
Volume (vph)	0	184	4	0	0	0	0	203	28	0	331	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	220	5	0	0	0	0	243	33	0	396	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	223	0	0	0	0	0	271	0	0	396	0
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		40.0						51.0			51.0	
Effective Green, g (s)		40.5						51.5			51.5	
Actuated g/C Ratio		0.40						0.52			0.52	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1381						913			928	
v/s Ratio Prot		c0.07						0.15			c0.22	
v/s Ratio Perm												
v/c Ratio		0.16						0.30			0.43	
Uniform Delay, d1		18.9						13.9			15.1	
Progression Factor		1.00						1.00			0.08	
Incremental Delay, d2		0.3						0.8			1.4	
Delay (s)		19.2						14.7			2.6	
Level of Service		B						B			A	
Approach Delay (s)		19.2			0.0			14.7			2.6	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0								4.0	4.0	
Lane Util. Factor		0.95								1.00	0.95	
Frt		0.99								1.00	1.00	
Flt Protected		1.00								0.95	1.00	
Satd. Flow (prot)		3279								1652	3303	
Flt Permitted		1.00								0.95	1.00	
Satd. Flow (perm)		3279								1652	3303	
Volume (vph)	0	703	36	0	0	0	0	0	0	233	1122	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	841	43	0	0	0	0	0	0	279	1342	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	16	0	0
Lane Group Flow (vph)	0	880	0	0	0	0	0	0	0	263	1342	0
Turn Type										Perm		
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		33.0								57.0	57.0	
Effective Green, g (s)		34.0								58.0	58.0	
Actuated g/C Ratio		0.34								0.58	0.58	
Clearance Time (s)		5.0								5.0	5.0	
Lane Grp Cap (vph)		1115								958	1916	
v/s Ratio Prot		c0.27									c0.41	
v/s Ratio Perm										0.16		
v/c Ratio		0.79								0.27	0.70	
Uniform Delay, d1		29.8								10.5	14.9	
Progression Factor		0.55								1.03	0.92	
Incremental Delay, d2		5.0								0.5	1.5	
Delay (s)		21.3								11.3	15.3	
Level of Service		C								B	B	
Approach Delay (s)		21.3			0.0			0.0			14.6	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL2	WBT	WBR	WBR2	NBL2	NBT	NBR	SBR2	NER	NER2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	11	11	11	11	11	12	11	12
Total Lost time (s)	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95		1.00	1.00	0.88		0.95	0.95		1.00	0.88	
Frt	0.96		1.00	1.00	0.85		1.00	0.95		0.86	0.85	
Flt Protected	1.00		0.95	1.00	1.00		0.95	0.97		1.00	1.00	
Satd. Flow (prot)	3414		1711	1801	2694		1625	1574		1611	2694	
Flt Permitted	1.00		0.20	1.00	1.00		0.95	0.97		1.00	1.00	
Satd. Flow (perm)	3414		366	1801	2694		1625	1574		1611	2694	
Volume (vph)	857	265	780	151	1437	42	132	0	25	100	287	321
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	1025	317	933	181	1718	50	158	0	30	120	343	384
RTOR Reduction (vph)	0	0	0	0	2	0	0	15	0	0	169	0
Lane Group Flow (vph)	1342	0	933	181	1766	0	96	77	0	120	558	0
Turn Type			custom		Perm		Perm			custom	custom	
Protected Phases	6			2				8				
Permitted Phases			5		2		8			4	1	
Actuated Green, G (s)	26.5		40.5	95.5	95.5		15.5	15.5		15.5	19.5	
Effective Green, g (s)	27.0		41.0	96.0	96.0		16.0	16.0		16.0	20.0	
Actuated g/C Ratio	0.22		0.34	0.80	0.80		0.13	0.13		0.13	0.17	
Clearance Time (s)	4.5		4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	768		125	1441	2155		217	210		215	449	
v/s Ratio Prot	c0.39			0.10								
v/s Ratio Perm			c2.55		0.66		0.06	0.05		c0.07	c0.21	
v/c Ratio	1.75		7.46	0.13	0.82		0.44	0.37		0.56	1.24	
Uniform Delay, d1	46.5		39.5	2.7	7.0		47.9	47.4		48.7	50.0	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	341.7		2925.3	0.2	3.6		6.4	4.9		10.1	126.8	
Delay (s)	388.2		2964.8	2.8	10.6		54.3	52.3		58.8	176.8	
Level of Service	F		F	A	B		D	D		E	F	
Approach Delay (s)	388.2			966.5				53.3				
Approach LOS	F			F				D				

Intersection Summary			
HCM Average Control Delay	656.4	HCM Level of Service	F
HCM Volume to Capacity ratio	3.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.95						1.00			1.00	
Frpb, ped/bikes		0.98						0.92			1.00	
Flpb, ped/bikes		0.99						1.00			0.97	
Frt		0.98						0.94			1.00	
Flt Protected		1.00						1.00			0.98	
Satd. Flow (prot)		3138						1514			1655	
Flt Permitted		1.00						1.00			0.83	
Satd. Flow (perm)		3138						1514			1389	
Volume (vph)	65	503	83	0	0	0	0	123	87	87	197	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	78	601	99	0	0	0	0	147	104	104	236	0
RTOR Reduction (vph)	0	11	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	767	0	0	0	0	0	226	0	0	340	0
Confl. Peds. (#/hr)	28		40	40		28			95	95		
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		41.0						51.0			51.0	
Effective Green, g (s)		41.0						51.0			51.0	
Actuated g/C Ratio		0.41						0.51			0.51	
Clearance Time (s)		4.0						4.0			4.0	
Lane Grp Cap (vph)		1287						772			708	
v/s Ratio Prot								0.15				
v/s Ratio Perm		0.24									c0.24	
v/c Ratio		0.60						0.29			0.48	
Uniform Delay, d1		23.0						14.1			15.9	
Progression Factor		1.25						0.65			0.82	
Incremental Delay, d2		0.7						0.9			2.1	
Delay (s)		29.6						10.1			15.2	
Level of Service		C						B			B	
Approach Delay (s)		29.6			0.0			10.1			15.2	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.98	
Flpb, ped/bikes					0.99			0.97			1.00	
Frt					1.00			1.00			0.95	
Flt Protected					1.00			0.96			1.00	
Satd. Flow (prot)					5903			1609			1626	
Flt Permitted					1.00			0.77			1.00	
Satd. Flow (perm)					5903			1290			1626	
Volume (vph)	0	0	0	60	1054	5	65	4	0	0	6	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	72	1260	6	78	5	0	0	7	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	1338	0	0	83	0	0	8	0
Confl. Peds. (#/hr)	259		42	42		259	18		15	15		18
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					55.0			35.0			35.0	
Effective Green, g (s)					56.0			36.0			36.0	
Actuated g/C Ratio					0.56			0.36			0.36	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					3306			464			585	
v/s Ratio Prot											0.01	
v/s Ratio Perm					0.23			c0.06				
v/c Ratio					0.40			0.18			0.01	
Uniform Delay, d1					12.5			21.9			20.6	
Progression Factor					0.64			0.65			1.00	
Incremental Delay, d2					0.4			0.8			0.0	
Delay (s)					8.4			15.0			20.6	
Level of Service					A			B			C	
Approach Delay (s)		0.0			8.4			15.0			20.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					0.91	1.00		1.00			1.00	
Frpb, ped/bikes					1.00	0.43		1.00			0.99	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.98	
Flt Protected					1.00	1.00		1.00			1.00	
Satd. Flow (prot)					4738	634		1734			1681	
Flt Permitted					1.00	1.00		0.99			1.00	
Satd. Flow (perm)					4738	634		1720			1681	
Volume (vph)	0	0	0	25	745	292	6	164	0	0	94	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	30	891	349	7	196	0	0	112	24
RTOR Reduction (vph)	0	0	0	0	0	103	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	921	246	0	203	0	0	128	0
Confl. Peds. (#/hr)	260		20	2		260	22			122		22
Turn Type				Perm		Perm	Perm					
Protected Phases					8			2			6	
Permitted Phases				8		8	2					
Actuated Green, G (s)					69.0	69.0		21.0			21.0	
Effective Green, g (s)					70.0	70.0		22.0			22.0	
Actuated g/C Ratio					0.70	0.70		0.22			0.22	
Clearance Time (s)					5.0	5.0		5.0			5.0	
Lane Grp Cap (vph)					3317	444		378			370	
v/s Ratio Prot											0.08	
v/s Ratio Perm					0.19	c0.39		c0.12				
v/c Ratio					0.28	0.55		0.54			0.35	
Uniform Delay, d1					5.6	7.3		34.5			32.9	
Progression Factor					0.06	10.86		1.02			1.00	
Incremental Delay, d2					0.2	4.6		5.2			2.6	
Delay (s)					0.5	84.4		40.3			35.5	
Level of Service					A	F		D			D	
Approach Delay (s)		0.0			23.6			40.3			35.5	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		4.0			4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91			0.91			1.00	1.00		1.00	
Frpb, ped/bikes		0.97			0.93			1.00	0.80		0.97	
Flpb, ped/bikes		1.00			0.99			0.98	1.00		0.93	
Frt		0.99			0.98			1.00	0.85		0.96	
Flt Protected		1.00			1.00			0.99	1.00		0.98	
Satd. Flow (prot)		4570			4296			1684	1183		1464	
Flt Permitted		0.78			0.83			0.92	1.00		0.81	
Satd. Flow (perm)		3566			3554			1571	1183		1219	
Volume (vph)	41	594	26	67	1019	125	28	93	23	50	24	27
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	49	710	31	80	1218	149	33	111	28	60	29	32
RTOR Reduction (vph)	0	4	0	0	14	0	0	0	18	0	12	0
Lane Group Flow (vph)	0	786	0	0	1433	0	0	144	10	0	109	0
Confl. Peds. (#/hr)	416		387	387		416	63		102	102		63
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		55.0			55.0			35.0	35.0		35.0	
Effective Green, g (s)		56.0			56.0			36.0	36.0		36.0	
Actuated g/C Ratio		0.56			0.56			0.36	0.36		0.36	
Clearance Time (s)		5.0			5.0			5.0	5.0		5.0	
Lane Grp Cap (vph)		1997			1990			566	426		439	
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.40			c0.09	0.01		0.09	
v/c Ratio		0.39			0.72			0.25	0.02		0.25	
Uniform Delay, d1		12.4			16.2			22.5	20.7		22.5	
Progression Factor		1.00			1.40			1.00	1.00		1.00	
Incremental Delay, d2		0.6			2.2			1.1	0.1		1.4	
Delay (s)		13.0			24.9			23.6	20.8		23.9	
Level of Service		B			C			C	C		C	
Approach Delay (s)		13.0			24.9			23.2			23.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX G – Accident Data

DDOT: Accident Summary Report (R-4)

Date:
Prepared By:

Location:

Quadrant:

23RD ST And L ST NW

Summary for the time period of: 1/1/2000 To: 12/31/2003

Total Number of Accident 12

Total Number of Injuries 3

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
8	66.67%	0	0.00%	0	0.00%	3	25.00%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	0	7	5	0	0

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	1	8.33%
13:30-16:00	3	25.00%
16:00-18:30	2	16.67%
18:30-07:30	6	50.00%
Weekday:	10	83.33%
Weekend:	2	16.67%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location: Quadrant:

L ST And **24TH ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **8**

Total Number of Injuries **1**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
3	37.50%	0	0.00%	1	12.50%	4	50.00%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	0	2	3	0	1

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
1	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	3	37.50%
11:30-13:30	3	37.50%
13:30-16:00	2	25.00%
16:00-18:30	0	0.00%
18:30-07:30	0	0.00%
Weekday:	8	100.00%
Weekend:	0	0.00%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location:

Quadrant:

M ST And **23RD ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **11**

Total Number of Injuries **1**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
4	36.36%	0	0.00%	0	0.00%	3	27.27%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	0	1	6	0	1

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	2	18.18%
09:30-11:30	2	18.18%
11:30-13:30	0	0.00%
13:30-16:00	0	0.00%
16:00-18:30	2	18.18%
18:30-07:30	5	45.45%
Weekday:	8	72.73%
Weekend:	3	27.27%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location: M ST And 24TH ST

Quadrant: NW

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **32**

Total Number of Injuries **5**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
14	43.75%	0	0.00%	3	9.38%	12	37.50%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
2	1	2	3	10	0	12

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	5	15.63%
09:30-11:30	5	15.63%
11:30-13:30	5	15.63%
13:30-16:00	4	12.50%
16:00-18:30	8	25.00%
18:30-07:30	5	15.63%
Weekday:	29	90.63%
Weekend:	2	6.25%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location:

Quadrant:

25TH ST And **M ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **12**

Total Number of Injuries **1**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
4	33.33%	0	0.00%	0	0.00%	7	58.33%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
1	0	0	0	5	1	3

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	1	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	2	16.67%
09:30-11:30	2	16.67%
11:30-13:30	3	25.00%
13:30-16:00	0	0.00%
16:00-18:30	2	16.67%
18:30-07:30	3	25.00%
Weekday:	12	100.00%
Weekend:	0	0.00%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By:

Location: Quadrant:

26TH ST And **M ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **2**

Total Number of Injuries **0**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
2	100.00%	0	0.00%	0	0.00%	0	0.00%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	0	1	0	0	0

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	0	0.00%
13:30-16:00	0	0.00%
16:00-18:30	0	0.00%
18:30-07:30	2	100.00%
Weekday:	1	50.00%
Weekend:	1	50.00%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location: Quadrant:

WASHINGTON CIR And **PENNSYLVANIA AVE** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **18**

Total Number of Injuries **5**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
8	44.44%	0	0.00%	0	0.00%	8	44.44%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
2	0	0	5	9	0	0

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
1	0	0	0	1	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	2	11.11%
13:30-16:00	3	16.67%
16:00-18:30	4	22.22%
18:30-07:30	9	50.00%
Weekday:	13	72.22%
Weekend:	5	27.78%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By:
Y.Aden

Location: Quadrant:

WASHINGTON CIR And **23RD ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **28**

Total Number of Injuries **3**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
11	39.29%	0	0.00%	0	0.00%	12	42.86%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
4	0	0	5	16	1	0

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
1	0	1	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	4	14.29%
09:30-11:30	2	7.14%
11:30-13:30	2	7.14%
13:30-16:00	3	10.71%
16:00-18:30	8	28.57%
18:30-07:30	9	32.14%
Weekday:	24	85.71%
Weekend:	4	14.29%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location: PENNSYLVANIA AVE And 23RD ST

Quadrant: NW

Summary for the time period of: 1/1/2000 To: 12/31/2003

Total Number of Accident 3

Total Number of Injuries 1

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
1	33.33%	0	0.00%	0	0.00%	2	66.67%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	1	0	2	0	0

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	0	0.00%
13:30-16:00	1	33.33%
16:00-18:30	2	66.67%
18:30-07:30	0	0.00%
Weekday:	3	100.00%
Weekend:	0	0.00%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location:

Quadrant:

PENNSYLVANIA AVE And **24TH ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **15**

Total Number of Injuries **4**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
2	13.33%	0	0.00%	1	6.67%	8	53.33%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
2	0	0	4	4	0	3

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	1	0

Accident Times:

Time	Number	Percent
07:30-09:30	1	6.67%
09:30-11:30	2	13.33%
11:30-13:30	1	6.67%
13:30-16:00	1	6.67%
16:00-18:30	3	20.00%
18:30-07:30	7	46.67%
Weekday:	12	80.00%
Weekend:	3	20.00%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By: Y.Aden

Location:

Quadrant:

25TH ST	And	**PENNSYLVANIA AVE**	**NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **14**

Total Number of Injuries **7**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
4	28.57%	0	0.00%	0	0.00%	9	64.29%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
1	0	0	2	5	0	4

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
1	0	1	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	0	0.00%
13:30-16:00	5	35.71%
16:00-18:30	2	14.29%
18:30-07:30	7	50.00%
Weekday:	11	78.57%
Weekend:	3	21.43%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By:
Y.Aden

Location:

Quadrant:

PENNSYLVANIA AVE And **L ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **5**

Total Number of Injuries **1**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
3	60.00%	0	0.00%	0	0.00%	2	40.00%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	0	0	1	1	2

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	1	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	1	20.00%
11:30-13:30	0	0.00%
13:30-16:00	2	40.00%
16:00-18:30	1	20.00%
18:30-07:30	1	20.00%
Weekday:	2	40.00%
Weekend:	3	60.00%

DDOT: Accident Summary Report (R-4)

Prepared Date: 9/24/2003

Y. Aden

Location Quadrant

26TH ST And **PENNSYLVANIA AVE** **NW**

Summary for the time period **1/1/2000** To: **12/31/2002**

Total Number of Accident **22**

Total Number of Injuries **18**

Contributing

Driver		Vehicle		Roadway		Unknown:	
7	31.82%	0	0.00%	5	22.73%	8	36.36%

Collision Types:

Right	Left	Right	Rear	Side Swiped:	Head On:	Parked
10	0	0	6	4	0	1

Fixed	Ran Off Road:	Pedestrian	Backing	Non Collision:	Other:
1	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	2	9.09%
09:30-11:30	2	9.09%
11:30-13:30	0	0.00%
13:30-16:00	4	18.18%
16:00-18:30	4	18.18%
18:30-07:30	10	45.45%
Weekday	19	86.36%
Weekend	3	13.64%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By:

Location: Quadrant:

28TH ST And **PENNSYLVANIA AVE** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **40**

Total Number of Injuries **22**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
16	40.00%	0	0.00%	2	5.00%	15	37.50%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
5	5	0	12	13	1	1

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	1	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	6	15.00%
09:30-11:30	1	2.50%
11:30-13:30	4	10.00%
13:30-16:00	5	12.50%
16:00-18:30	13	32.50%
18:30-07:30	11	27.50%
Weekday:	30	75.00%
Weekend:	10	25.00%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By:

Location: Quadrant:

28TH ST And **M ST** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **14**

Total Number of Injuries **2**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
6	42.86%	0	0.00%	0	0.00%	6	42.86%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
1	0	0	1	5	0	5

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	2	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	5	35.71%
11:30-13:30	2	14.29%
13:30-16:00	2	14.29%
16:00-18:30	3	21.43%
18:30-07:30	2	14.29%
Weekday:	12	85.71%
Weekend:	2	14.29%

DDOT: Accident Summary Report (R-4)

Date: 9/23/2003
Prepared By:

Location: Quadrant:

M ST And **PENNSYLVANIA AVE** **NW**

Summary for the time period of: **1/1/2000** To: **12/31/2003**

Total Number of Accident **1**

Total Number of Injuries **1**

Contributing Factors:

Driver:		Vehicle:		Roadway:		Unknown:	
0	0.00%	1	100.00%	0	0.00%	0	0.00%

Collision Types:

Right Angle:	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
0	0	0	1	0	0	0

Fixed Object	Ran Off Road:	Pedestrian:	Backing	Non Collision:	Other:
0	0	0	0	0	0

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	0	0.00%
13:30-16:00	0	0.00%
16:00-18:30	1	100.00%
18:30-07:30	0	0.00%
Weekday:	1	100.00%
Weekend:	0	0.00%

APPENDIX H – COST ESTIMATES

	Neck Downs on 26th at Pennsylvania Avenue				
Item	Description	Unit	Quantity	Unit Cost	Total
202004	Hard Surface Pavement Excavation	CY	30	$ 45.00	$ 1,350.00
212002	Test Pit	CY	1	$ 150.00	$ 150.00
300000	New drainage pipe connection	LF	75	$ 200.00	$ 15,000.00
311000	New Double Basin	EA	1	$ 3,900.00	$ 3,900.00
608026	Brick Sidwalk on Sand/Cement Bed	SY	85	$ 200.00	$ 17,000.00
609068	Furnish and Set 8"x12" Granite Straight Curb	LF	40	$ 45.00	$ 1,800.00
609072	Furnish and Set 8"x12" Granite Circular Curb, Radius 10-100 FT	LF	65	$ 55.00	$ 3,575.00
609202	PCC Wheelchair/Bicyle Ramp - New Constructin	EA	3	$ 640.00	$ 1,920.00
609500	Brick Gutter	LF	100	$ 25.00	$ 2,500.00
616001	Maintenance of Highway Traffic (10%)	JOB	1	$ 4,719.50	$ 4,719.50
				Total	$ 47,195.00

	Neck Down on M Street				
Item	Description	Unit	Quantity	Unit Cost	Total
202004	Hard Surface Pavement Excavation	CY	20	$ 45.00	$ 900.00
212002	Test Pit	CY	1	$ 150.00	$ 150.00
300000	New drainage pipe connection	LF	50	$ 200.00	$ 10,000.00
311000	New Double Basin	EA	1	$ 3,900.00	$ 3,900.00
608026	Brick Sidwalk on Sand/Cement Bed	SY	55	$ 200.00	$ 11,000.00
609068	Furnish and Set 8"x12" Granite Straight Curb	LF	20	$ 45.00	$ 900.00
609072	Furnish and Set 8"x12" Granite Circular Curb, Radius 10-100 FT	LF	50	$ 55.00	$ 2,750.00
609202	PCC Wheelchair/Bicyle Ramp - New Constructin	EA	2	$ 640.00	$ 1,280.00
609500	Brick Gutter	LF	60	$ 25.00	$ 1,500.00
616001	Maintenance of Highway Traffic (10%)	JOB	1	$ 3,238.00	$ 3,238.00
				Total	$ 35,618.00

	Resurfacing M Street, 25th Street, L Street and 24th Street				
Item	Description	Unit	Quantity	Unit Cost	Total
400000	Grinding HMA Pavement 0"-2"	SY	1700	$ 5.50	$ 9,350.00
409009	Superpave, 2" Surface Course	TON	200	$ 75.00	$ 15,000.00
616001	Maintenance of Highway Traffic (20%)	JOB	1	$ 8,149.00	$ 8,149.00
616040	Thermoplastic Pavement Marking, 4 Inch	LF	2900	$ 0.55	$ 1,595.00
616044	Thermoplastic Pavement Marking, 6 Inch	LF	2300	$ 4.00	$ 9,200.00
616050	Thermoplastic Pavement Marking, 12 Inch	LF	700	$ 8.00	$ 5,600.00
				Total	$ 48,894.00

	Signing				
Item	Description	Unit	Quantity	Unit Cost	Total
620000	Tubular Steel Post and Anchor Base	EA	1	$ 200.00	$ 200.00
620014	Traffic Sign Panels	SF	15	$ 35.00	$ 525.00
				Total	$ 725.00

	Decorative Fencing at Pennsylvania Avenue and K Street				
Item	Description	Unit	Quantity	Unit Cost	Total
600000	Decorative Fencing (Southside of Pennsylvania Avenue)	LF	60	$ 60.00	$ 3,600.00
600000	Decorative Fencing (Median of Pennsylvania Avenue)	LF	155	$ 60.00	$ 9,300.00
600000	Decorative Fencing (North Side of Pennsylvania Avenue)	LF	330	$ 60.00	$ 19,800.00