Owner 1600 WASHINGTON AVENUE, INC. Permit No. 38728 Cost $ 48,000..

Pt. of Lot 1 Block 53 Subdivision PINE RIDGE Address 1600 Washington Avenue

General Contractor Arkin Construction Co. 7293 Bond No. 5362 1600-A, 1602, 1602-A, 1604, 1604A and 421 -423 Sixteenth et

Architect Maurice S. Weintraub Engineer Morton Fellman 425 16th

Zoning Regulations: Use BAA Area 19 Lot Size 100 X 161 3234-06-001

Building Size: Front 100' Depth 111' Height 22' Stories ~~2~~ 1

Certificate of Occupancy No. 2016, Jan. 28, 1953. Use STORE BUILDING - 8 store rooms

Type of Construction #1 CBB (footing designed for 2nd floor) Foundation Spread Footing (Roof not designed for 2nd floor) Roof Flat Date June 19,1952

PLUMBING Contractor #33957 Service Plumbing Co: 1------ Sewer Connection 4" Date Sept.23, 1952

Temporary Water Closet 1,

Water Closets	8,	Swimming Pool Traps	Down Spouts
Lavatories	8,	Steam or Hot Water Boilers	Wells
Bath Tubs			
Showers		ROUGH APPROVAL E. Cox, 10-23-52	
Urinals		FINAL APPROVAL DK, L. Rothman, 1-27-53	
Sinks			
Dish Washing Machine			
Laundry Trays			
Laundry Washing Machines			
Drinking Fountains			
Floor Drains			
Grease Traps			
Safe Wastes			

GAS Contractor Date

Gas Ranges, Gas Water Heaters, Gas Space Heaters, Gas Refrigerators, Gas Steam Tables, Gas Broilers, Gas Frylators, Gas Pressing Machine, Gas Vents for Stove

GAS Rough APPROVAL

GAS FINAL APPROVAL

AIR CONDITIONING Contractor #40438 Airko Air Cond 17-ton : $5,100: Dec 19, 1952 OK, Al Plaag, 2/2/53

SEPTIC TANK Contractor

OIL BURNER Contractor

SPRINKLER Contractor

ELECTRICAL Contractor #37869 B.Haskell Company Date Oct. 27, 1952

	Switches 8	Ranges	Temporary Service #37559--
OUTLETS	Lights 46	Irons	*1 Neon Transformers #38565 York
	Receptacles 80	Refrigerators	Sign Outlets
		Fans	Meter Change
		Motors	Centers of Distributions 8
HEATERS	Water	Appliances	Service -Equipment 1
	Space		Violations
FIXTURES		Electrical Contractor	Date

P.M. 9-19-52

B. Haskell, 9-17-1952

Sign: 1/19/53 (423-16 St)*

FINAL APPROVAL By H.ROSSER Date 1/26/53

Alterations or Repairs Over

ALTERATIONS & ADDITIONS

Building Permits: #40624 Flat metal wall sign w. neon, 2 faces: York Sign Co: $100: Jan 19, 1953
23 - 16 St #40626 Installing one new toilet room: owner: $200: Jan 19, 1953
502 Washington Av. #40707 Install 5-HP Air Cond. & Tower: Airko Air Cond: OK, Plg. 1-30-53 $ 1,500: Jan 29, 1953
600 Washington Av. #40714 Install 3-ton Air Cond & Tower: Miami Beach A.Cond: $ 900: Jan 29, 1953-
~~02A-Wash.Av.~~ OK, Al Plaag, 3-3-53
04 Wash. Ave. #41126 Painting: Morris Mudrick: $ 100: Apr 7, 1953
102 Wash.Av.(Schneider) #41214 Partition, 2x4's, w. Sheetrock: Simon Burr: $ 600: Apr 20, 1953
02 Wash Ave " # 41275 Flat wall Sign (no lights) Van Dyke Sign Co: $ 75....Apr.23,1953
04 Wash Ave # 41976 Flat Wall Sign, 18 sq ft: York Sig n Co: $ 150: July 1, 1953
02 Wash Ave # 42224 Interior alteration - erection of shelves: owner: $ 200: July 22, 1953

Plumbing Permits: #34485 Service Plumbing Co: 1 Water Closet, 1 Lavatory, 1 Floor Drain, 1 Electrict Hot Water Heater: Jan 23, 1953 L. Rothman, 1-27-53, OK. 1-27-53
#34498 Service Plumbing Co: 1 Hot Water Boiler, 4 Down Spouts: Jan 27, 1953 L.Rothman
04 Washington # 34959 N & R Plumbing Co: 7 Lavatories, 1 Electric water heater, June 8, 1953 - OK, L.Rothman, 10-16-53
121 16th st (Barber shop) # 35145 Service Plumbing Co: 3 Lavatories, July 27, 1953 ok Rothman 7-31-53
04 Washington # 35262 N & R Plumbing Co: 1 Drinking fountain, Aug. 28,1953

Electrical Permits: #38629 Pan Electric Co: 2 Motors (1 HP), 1 Motor (2-5 HP): Jan 27, 1953 3-18-53 OK, H.Rosser,
00 Wash (Bratter) #38659 B. Haskell: 164 Fixtures, 8 Sign Outlets, 3 Motors (1 HP), 3 Motors (2-5 HP): OK, H.Rosser, Feb 17, 1953 .....Jan 29, 1953
00 Wash (Club 16) #38660 B. Haskell: 1 Switch Outlet, 2 Motors (1 HP), 1 Motor (2-5 HP): Jan 29, 1953-
02A Wash.(Wm Fox) #38678 Hosack Elec: 22 Fixtures: Feb 2, 1953 OK, H. Rosser, 2-2-53 OK, Rosser, 2-17-53
00 Wash.(S.Siegel) #38985 Kammer & Wood: 20 Receptacles, 1 Meter Change: 3/23/53 OK, Rosser, 2/8/54
06 Wash.(Richter) # 39420 Emanuel Elec Co: 1 Switch Outlet, 24 Fixtures, 1 Iron Outlet, 3 Appliance Outlets: May 15, 1953 OK- 6/12/53 HOR
04 (Vick & Frank) #39773 York Sign: 1 Neon Transformer: June 29, 1953
1 - 16 St. #40061 Astor Elec Serv: 6 Receptacles, 1 Light Outlet, 7 Fixtures: July 30, 1953 -
3 CLUB 16 - # 40441 Astor Electri Service: 1 Switch outlet, 1 Motor, Sept.21, 1953 OK, H. Rosser, 8-19-53 --OK, Rosser, 9-22-53

Lot Block Subdivision

ALTERATIONS & ADDITIONS

#1602 **Building Permits:** #42721 AWNING, approx. 17'x 9': Enduro Products: $ 400: Sept 21, 1953

#43201 Flat Wall Sign: Claude Southern: $ 350: Nov 4, 1953

1604 #46213 Miami Air Conditioning: Install 1 - 5 ton A. C. Unit...no cooling tower or duct work: OK, Plaag 12/10/54 $ 1 000 Oct. 27, 1954

1600 Wash Avenue #46471 Thermo Cool, Inc...Install 1 - 5 ton A. C. Unit OK, Plaag 12/10/54 $ 1 000 Nov. 24, 1954

1600 Wash Avenue #46639 Mutual Neon....two flat wall signs....43 square feet $ 350.00 Dec. 21, 19

1604 Washington #47233 A. B. C. Neon flat wall neon sign $ 75.00 April 8, 1955

1610 Washington #48355 H. Popkin & Son: Removing partitions between 1610 and 1612 Washington Ave

New entrance for 1612 Washington Avenue $ 2 000 Aug. 17, 1955

1600 Wash. #54381 Alum-A-Lock: 8½' wide, approx 50' long aluminum awning over sidewalk-$890-9/5/57

Plumbing Permits: 1604A Wash. #55040 Owner: Interior partitions-7'0" high-$200-11/22/57

1600 Wash #42402 Coldman Plumbing: 2 water closets, 4 lavatories, 1 sink, 2 floor drains, 2 safe waste drains, 1 elec wtr htr

1606 Wash. Ave. #43514 Peoples Gas system: 1 Frylator 10/23/62 May 26, 1960 OK Rothman 4/26/

1600 Wash. #44751 Economy Plumbing: 1 water closet; 1 lavatory; 1 drinking fountain; 1 water heater, elec. - 5/5/65

1606 Washington #45967 Morgen Plumbing: 1 water closet; 1 lavatory - 6/8/67

Electrical Permits:

#1602 Miller Shop # 40777 Claude Neon - 3 Neon transformers: Nov.4,1953

43385 Ace Electric Co.....30 fixtures...November 10, 1954 OK, Rosser 11/23/54

43503 Ace Electric....39 fixtures...November 29, 1954 OK, Rosser 11/29/54

#43557 Emanuel Electric....1 switch outlet, 2 centers of distribution, 1 0-1hp motor, 1 2-5hp motor.....December 3, 1954 OK, Rosser 12/27/54

#43665 Mutual Neon.....two neon transformers.....Dec. 20, 1954

#44257 A. B. C. Neon one neon transformer April 8, 1955

45096 Emanuel Electric: 1light outlet, 1 fixture July 14, 1955 OK, Plaag 7/28/55

46079 Edison Neon Sign Co: one neon transformer November 4, 1955

46187 Astor Electric Ser., Inc: two receptacles November 21, 1955 OK, Fidler 2/3/1956

1604 Wash. 46735 Tropicalites: three neon transformers, 1 flasher Feb. 6, 1956

1600 Wash. #50709 Astor Elec: 1 Motor (1HP), 1 Motor (2-5HP)- August 22, 1957 OK 9-16-57 Fidler

1600 Wash. #50771 Astor Elec: 2 Fixtures - August 30, 1957 OK 9-3-57 Fidler

#55984 Kenny Elec: 3 switch outlets, 4 receptacles, 1 light outlet-11/1/60 OK Meginniss 5/22/61

Lot Block Subdivision

ALTERATIONS & ADDITIONS

Building Permits:

1606 Washington Ave #49110 Edison Neon Sign Co: Flat wall neon sign $ 150 Nov. 4, 1955
1604 Washington Ave 49728 Tropicalites Co: Flat wall sign, 50 sq. feet $ 550 Feb. 2, 1956
1600 Wash. #50471 Cash Neon Sign Co: Changing present sign channel letters to read "Scott's Pharmacy"- Flat wall sign - No electrical change - $350.00 - Feb. 17, 1959
Wash #61917 Owner: Existing store remodeled into doctors offices by adding partitions. Partitions to be lathed & plastered ceiling or wood with clear glass above, additional exit door - $2000 - May 19, 1960 OK Saperstein 4/26/61
Wash #62934 King Construction(Mel Grossman,arch.)Rework store front,relocate glass,interior paneling, $2,000, 9/13/60
2 Wash #63322 Millman Construction: Interior work & partitions - J. Dalton Reis, Interior Dec. - $2,500- 10/24/60OK11/10/60
04A Wash. #63426 Liebe r: Interior and exterior painting - $375.00 - 10/31/60 Saperstein
02 Wash. #63443 Rudy Glass Corp: Remodel entrance - $420 - Nov. 1, 1960 Compl. Saperstein 4/16/62
~~Rudolph Caronia~~ #63670 Hurst Awning: Awnings over sidewalk 46' long, 8' with 7'6" head clearance-$1117-11/18/60
2 Wash. #63860 Dick Nolen Weatherproofing: Clean front of bldg preparing for painting - $125 - Dec. 9, 1960
00 Wash.#64339 C. E. Morgan: 1 - 2 h.p. window unit air conditioner - $400. - Mar. 6, 1961 OK PLAAG 3/7/61
4 Washington Ave. #66103 King Construction Co.: Rework store front - $450. - 10/12/61 Compl. Saperstein 4/16/62
4 Wash.Ave. #67399 Acolite Neon Sign Co.: Flat wall lettered sign, 3.4 x 9, 31 sq. ft. - ATLANTIC COAST LINE RAILROAD - $175. - 6/6/62
.600 Wash. Ave. #74010 King Constr. Co.: Remodel store front and partitions - $6,500 - 5/6/65 OK Beck 7/19/65
.600 Wash. Ave. #74288 ABC Neon Sign Co.: Sign, MUSTANG SHOP - 6/23/65 - $1,000.
506 Wash. Ave. #76670 Owner, Rudolph Caronia: Remodel restaurant - $100 - 7/19/66 OK Brown 7/27/66
506 Wash. Ave. #76684 Flutie Neon: 5 x 10, flat wall sign, "WAFFLE SHOP COFFEE SHOP ICE CREAM" - $800 - 7/20/66
606 Wash. Ave. #78400 Owner, Del-Kay Co., Inc.: Partitions to provide toilet room - $700 - 6/7/67 W. C. 11/13/67
500 Wash. Ave. #78408 Gunn and Thompson Const. Co.: Restore bldg. to condition that existed prior to fire - $7,000 - 6/8/67
600 Wash. Ave. #78857 Air Cond. & Appliance Center, Inc.: Install one 2-ton air cond.unit - $400 - 8/28/67 W. C. 8/9/67

Electrical Permits:

0204 Kenny Elec: 1 motor (1HP)- June 25, 1957
220 Jonesey Elec: 10 switch outlets, 20 receptacles, 15 light outlets, 1 water heater outlet, 1 x-ray outlet, 1 service equipment, 1 sign outlet - June 1, 1960 OK Newbold 4/28/61
424 Bond Elec: 1 center of distribution, 1 motor (2HP)- March 10, 1961
940 Bond Elec: 1 motor, 2-5 hp; 1 violation - 6/30/61
'604 Gates Elec: 3 switch outlets, 15 light outlets, 15 fixtures - 11/16/61
266 Jonesey Elec. Co. (Mustang Shop) 7 switch outlets; 34 light outlets; 8 receptacles; 1 water heater outlet; 34 fixtures; 3 iron outlets; 1 refrig. outlet; 1 fan outlet - 5/11/65 OK Fidler 6/9/65
62439 ABC Neon: 6 fixtures; 2 neon transformers - 6/23/65
53428 M. B. Electrical Exhibition Service: 1 switch outlets; 7 receptacles; 1 serv. equip. - 4/25/66
#63689 Flutie Neon Signs: 3 neon transformers - 7/20/66
4743 Jonesey Electric Co. (1600 Wash. Ave.): 7 switch outlets; 14 light outlets; 5 receptacles; 1 fan outlet; 1 motor, 0-1 hp; 5 appliance outlets - 6/7/67

Lot Block Subdivision

ALTERATIONS & ADDITIONS

Building Permits:

#80504 John N. Snodgrass Interior Alteration no Structurual change $700.00 6/20/68 ond 9/9/68
1604-A Washington Ave. Seaboard Coast Line sign permit approved 9/4/68 (Council Memo #1463

#85208 - Joe Zam - Exterior Painting - $580.00 10/6/70

#2022-Chailes Bros. Air Cond- 1 5Ton Air Cond.(replacement)$1984.60-4-28-72

#01617-Snapp, Inc.-Exterior gunite repairs-$4500-8-17-72

#2454-Southern Atlantic A/C- 1 5ton central a/c-$2600-21-73

22-Buyama Refrigeration- 1 5ton central a/c-$2900-6-20-73

955-A Bu Refrigeration- 1 5ton central a/c-$3000-4-22-74

3462-Henry DeGraff and son-Refinish walls-ceiling floor-interior-$15000-6-25-73

#07629-Florida Glas and Mirror-Replacement of front store glass-$2500-7-21-75

Plumbing Permits: #3588-Boiler inspection-4-27-76

#46637 Reynolds Bros. 3 Lavatories $6.00 6/27/68

#48160 - Peoples Gas - gas heater 1 1/5/71

#06955-Owner-Aluminum awning-$250-3-6-75

#49710-Peoples Gas- 1 meter gas natural-2-14-73

uilding 88777-Sklar Construction-Store front remodeling-$20000-3-31-75

09348- Eddys Painting - Exterior Painting $1500 7-7-76

Electrical Permits:

#65920 North Miami Electric 7 Switch Outlets, 14 Light Outlets, 16 Receptacles $4.55 7/1/68

#70322-Barneys Quality Electric-5 ton a/c windpw-2-8-73

0698-Miami Shores Electric- 5tons a/c; 10 fixtures-7-25-73

72361-Golden Electric- 20 switch outlets; 1 motors, 0-1HP-6-24-75

LOT _____ BLOCK _____ SUBDIVISION _____ DDF _____

ALTERATIONS & ADDITIONS

Building Permits: #MO7422 7/1/85 Ace Air Cond - 1 space heater replacement

#MO8491 10/10/86 Allied Air - 5 ton air cond wind

#30548 6/19/87 owner/agent remove closet and paint interior white and art deco colors $1,000.

#30560 6/23/87 owner exterior painting above awning all yellow, 3 column, green, pink, blue $75.

#30577 - 6-25-87 - Owner - Window sign - $100.00

Plumbing Permits:

Electrical Permits:

LOT _____ BLOCK _____ SUBDIVISION _____ ADDRESS _____

ALTERATIONS & ADDITIONS

Building Permits:

#10065-Rudys Glass Constr-1606 Washingt-Smart and Thrifty-Store front remodeling-$4500-10-20-76

#14399-Rudys Glass-Store front-$3500-12-20-78

602 Washington Ave-#89915-F. Josephson-Interior and store frony for Dr. office-$36,000-8-7-79

#21628 2/9/82 Levy Gray Roofing - repair roof 1 sq $750.

#23065 11/17/82 Levy Grey Roofing - reroof 2,500 sq ft $3,500.

#25792 8/24/84 owner's staff - repair front door, aluminium frame, drywall on brick wall, back door jamb, suspended ceiling $1,000.

M-04469- Air Mechanical Corp. 1 4 ton AC unit. 9-5-79

Plumbing Permits:

#57533-Fast Freddy Plumbing- 6 lavatory, 1 water closet, 2 footh bath, 1 sewer connection-8-13-79

#63581 - Silver Plumbing - Gas piping to boiler - 11-3-87 C.I.

Electrical Permits:

#73598-Formosa Electric-4 light outlets; 2 receptacles; 92 fixtures-11-4-76

5236-Sherba Bros- 15 switch outlets, 20 light outlets, 42 receptacles, 1 fan motor, 0-1HP, 32 fixtures, 1 door lock. 1 call bell-12-28-78

75680-Slay Electric-14 switch outlets, 26 light outlets, 50 receptacles, 1 water heater, 2 motors, 0-1HP, 1 4ton a/c, strip heater-8-14-79

6/9/81 - #77231 - Ocean Electric Co. - 1 window a/c - $10.00

#78336 12/16/82 Crime Control - 1 burglar alarm, 8 devices

#79668 8/24/84 F & K Elec Inc - 10 light outlets, 8 outlets commercial

OVER

BUILDING PERMITS: #B8800030 - 10-18-88 - AAV Construction - Interior remodeling - $18,000.

#M8800148 - F Service A/C - 5ton A/C central, duct work, 1 condensate drai
11-14-88 C.T.

#SB880245 - 12-2-88 - Tropical Sign - Electric sign chanel letters - $650.00

#SB880334 - 12-2-88 - A To Z Awnings - Awning installation 80 sq. ft. - $2,00

#B8800073 - 12-5-88 - Custom Renditions Inc. - Remodel interior into a subway sand.
shop - $25,000.00 C.T.

#B8800030 - Certificate of Completion - #88013 - 1604 Washington Ave. - 12-22-88

#M8900310 - All BRANDS - 1-10 KW CENTRAL HEATING, 5 ton A/C CENTRAL, duct WORK, 1 CONDENSA-
drain - 1-12-89 C.T.

#M8900389 - Miami Air - Central heating, a/c central, violation, double fine,
mandatory 303.3 - 2-3-89 C.T.

#SB891103 - 4-21-89 - A To Z Awnings, Inc. - New 60 sq. ft. awning (1606 Wash. Ave.) -
$2,000.00 C.T.

#SB891169 - Tropical Signs Corp. - Sign channel letters electrical-5-3-89-$500.00

ELECTRICAL PERMITS: #E8800133 - Mayo Electric - 5 Seitch outlets, 60 light outlets, 15
receptacles, 1-125amp service repair/meter change, 1 sign time clock -
11-8-88 C.T.

#E8800313 - TROPICAL SIGN CORP - NEW ELECTRIC SIGN - 12-8-88 C.T.

#E8800385 - D&R Electric - NEW ELECTRICAL REPAIRS - 12-29-88 C.T.

#BE891337 - Tropical Signs Corp. - NEW ELECTRIC SIGN $48.00 7/13/89 JSC

PLUMBING PERMITS: #P8800230 - G P Piping Systems - New fixtures - 12-19-88 C.T.

#P8800256 - Aurora Plumbing - Set new fixtures -12-28-88 C.T.

BUILDING PERMITS: #BM890679 - Custom Renditions - Erect cooler box 5X7-5-17-89 CT

#5537 - Certificate of Occupancy - Subway (5175 Inc.) - 5-26-89 C.T

CERTIFICATE OF OCCUPANCY # 153

LAUREL APARTMENTS ** -(see other side) - Demolition [redacted]

Owner JOS. DEUTCHER Mailing Address Permit No. 11073

Lot 1 Block 53 Subdivision -Pine Ridge No. 425 Street 16th St Date Apr.22-1938

General Contractor Masterbilt Corp. Bond 1793 Address

Architect Henry Hohauser 7294 Address

Front 71' Depth 31' Height 24-6 Stories 2 Use APARTMENT HOUSE 10 units

Type of construction c-b-s- Cost $ 21,550.00 Foundation spread footing Roof built-up tar & gravel -

---

Plumbing Contractor Markowitz & Resnick # 10972 Address Date May 7-1938

No. fixtures 42 Rough approved by Date

~~No. Receptacles~~ Gas 20

Plumbing Contractor Markowitz & Resnick # 10973 Address Date May 7-1938

No. fixtures set 7 - Gas 1 Final approved by Date

Sewer connection Septic tank Make Date

Electrical Contractor Griffin Electric Co. # 10914 Address Date May 28-1938

No. outlets 56 65 Heaters Stoves Motors Fans # 11066- Griffin Temporary service -July 6-1938

58- receptacles- 12 reffigerators- 27 centers of distribution --(2bldgs)

Rough approved by Date

Electrical Contractor Griffin # 11311 Address Date Sept.1-1938

No. fixtures set 82 Final approved by Lincoln Brown,Jr. Date

Date of service Sept. 6th-1938

Alterations or repairs #11420- ADDITION to residence- 1 room Henry Hohauser, architect - Owner, builds. $ 400.00 Date Aug.4-1938

~~BUILDING PERMIT #19223 Painting outside Mr. Larkie, painter, $350 Oct. 30, 1944~~

1600 Washington Avenue

OPERATIONS PLAN

Planning Board

Final Submission – August 3, 2017

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CONCEPT

Ambassador Paul L. Cejas has been a responsible business owner in the City of Miami Beach for countless years. He has been involved in improvements to the Lincoln Road commercial corridor and the surrounding areas.

Through his years of ownership, Ambassador Cejas has seen the development and growth of the area. He has also seen the growing need for reasonably priced housing in a live/work environment in the City of Miami Beach. With this project, the Ambassador proposes to invest in the improvement of the Washington Avenue corridor by developing a mixed-use building which will provide modern living, in a live/work environment at a reasonable rate.

This project works to derive its form and architectural language by taking cues from the historical structures of the Flamingo Park neighborhood. It proposes to incorporate a courtyard that is visible for passersby, creating a visual interest into the building and paying homage to a quintessential part of historic Miami Beach architecture.

The proposed project envisions 134 residential units, which will range between one (1) and two (2) bedrooms, with an average size of approximately 1,100 gross square feet. The property will also provide all the necessary residential amenities, as well as retail on the ground level and potentially a small eating establishment. Parking for the entire project will be contained within the existing 1601 Drexel Avenue garage. That structure will serve as an accessory use garage to this building, as well as continue to provide the required parking for the existing uses on site and the New World Symphony.[1]

[1] Pursuant to Section 142-368 of the Code, all "[r]equired parking provided for performing arts and cultural facilities .... located off-site pursuant to section 130-36, shall not be included in permitted floor area wherever located, including outside of this district."

Hours of Operations & Access

As a residential property, the building will we be operational 24-hours a day.

Retail establishments, and potentially a small eating establishment are proposed for the ground level of the structure. At this stage of the development, the ultimate tenants are unknown. Therefore, the ultimate hours of operation and employee count are unknown. Nevertheless, it can be expected that any proposed retail establishment will have hours of operation consistent with the area. Most of the area retail establishments cease operations between 10:00 PM and Midnight. Any proposed retail along 16th Street would close at 10:00 PM while any proposed retail along Washington Avenue would close at Midnight. Additionally, any restaurant establishment located along 16th Street would close no later than midnight on Thursday through Saturday and no later than 10:00 PM Sunday through Wednesday. While any restaurant establishment along Washington Avenue would close no later than 11:00 PM Sunday through Wednesday and 2:00 AM Thursday through Saturday.

Access

Access to the retail/restaurant bays will be gained through the ground level, both along 16th Street and Washington Avenue.

Access to the residential component will be gained both directly from the garage and from the street level at the southwestern section of the property, as well as the northeast corner of the Washington Avenue façade.

Staffing Levels

As with the proposed hours of operation, the ultimate staffing level for the retail and any potential eating establishment cannot be determined at this time, as they will be guided by the particular tenants. Nevertheless, in light of the anticipated uses and size of the commercial venues we estimate that staffing levels would range between 10 and 13 employees.

The overall a size of the ground level retail component is approximately 12,994. In part, this will guide the ultimate size of any tenant space. Staffing levels will be dependent upon both the occupant load assigned by the City's Fire Department and the ultimate tenant uses.

Security

As a residential property, the Applicant proposes to have secured access measures to protect its tenants from uninvited guests. A security gate will be located at the access point to the courtyard along the east façade, another will be located at the lobby entrance on the southwest corner of the 16th Street façade.

Future commercial establishments may expand on security, including the introduction of cameras or other measures approved throughout the city.

Parking

Parking for all of the uses on-site will be located in the adjacent parking garage structure located at 1601 Drexel Avenue. Sufficient parking exists within the

garage to allow for the existing parking requirements and parking for the proposed uses.

Despite having sufficient parking to house any guest to the property, the Applicant believes that many of the commercial patrons and residents of the project will walk, bike, or use local car services due to the walkability of the Lincoln Road area and the Flamingo Park neighborhood.

A detailed parking analyses is contained within the project plans and a traffic and parking study has been prepared by Traff Tech Engineering and has been provided under separate cover.

No valet services are expected for this facility.

DELIVERIES & COLLECTIONS

The following procedures will be implemented to ensure minimal impact on local residents:

All deliveries will occur during weekday hours between 8:00 AM and 5:00 PM through the designated loading area, which is located along the rear of the property (east of the garage and west of the residential property), totally within a private back alley area.

The Applicant will work with one of the City approved waste collection companies for refuse collections. Collections will occur daily between 8:00 AM and 5:00 PM within the private back alley area, which is located along the east side of the garage.

All vehicles will enter and exit the private alley by way of Drexel Avenue. Detailed vehicle maneuvering

information is contained within the project plans and the traffic study prepared by Traff Tech Engineering.

1600 Washington
Miami Beach, Florida

traffic study

prepared for:
1600 Washington

Traf Tech
ENGINEERING, INC.

June 2017

Traf Tech
ENGINEERING, INC.

June 12, 2017

Mr. Glenn Boyer
420 Lincoln Road
Development, LLC

Re: 1600 Washington – Traffic Study

Dear Glenn:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the traffic study conducted for the 1600 Washington re-development project located in the City of Miami Beach in Miami-Dade County, Florida.

It has been a pleasure working with you on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

June 12, 2017

8400 North University Drive, Suite 309, Tamarac, Florida 33321
Tel: (954) 582-0988 Fax: (954) 582-0989

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INTRODUCTION

1600 Washington is a proposed mixed-use development consisting of retail space on the ground floor and residential units above located at the northwest corner of Washington Avenue and 16th Street in the City of Miami Beach in Miami-Dade County, Florida. The location of the project site is illustrated in Figure 1 on the following page.

Traf Tech Engineering, Inc. was retained to conduct a traffic study[1] in connection with the proposed retail-residential development. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Traffic Impact Analysis
7. Conclusions and Recommendations

[1] The traffic methodology was discussed and agreed with the City of Miami Beach staff and is included in Appendix A.

Traf Tech
ENGINEERING, INC.

PROJECT LOCATION MAP

FIGURE 1
1600 Washington
Miami Beach, Florida

INVENTORY

Existing Land Use

Existing at the site is a one-story retail development (currently occupied) with no on-site parking.

Proposed Land Use and Access

The existing retail development will be replaced with a mixed-use development consisting of the following uses and intensities:

- 12,863 square feet of retail space on the ground floor (only 2,863 square feet will be new retail space)
- 134 residential units

Parking will be provided at the existing parking structure located at the northeast corner of 16th Street and Drexel Avenue. Appendix B contains a copy of the site plan for the project site.

EXISTING CONDITIONS

This section addresses the existing roadway system located in the vicinity of the project site and nearby intersections.

Roadway System

The roadway system located near the project site includes Washington Avenue, Drexel Avenue, Alton Road, 17th Street, 16th Street, and 15th Street. Near the project site, Washington Avenue, Alton Road, and Drexel Avenue are oriented in the north and south direction. 17th Street, 16th Street, and 15th Street are oriented in the east and west direction. Washington Avenue, Alton Road and 17th Street are four-lane facilities while Drexel Avenue, 16th Street and 15th Street are two-lane roadways.

Nearby Intersections

With the assistance of City of Miami Beach staff, six intersections (including the garage entrance driveway) were identified as the locations that will be impacted the most by the proposed project. These intersections include:

- Washington Avenue & 17th Street (Signalized)
- Washington Avenue & 16th Street (Signalized)
- Washington Avenue & 15th Street (Signalized)
- Drexel Avenue & 16th Street (Signalized)
- 16th Street and Garage Entrance (Stop controlled)
- Alton Road & 16th Street (Signalized)

Figure 2 on the following page shows the existing lane geometry of the six (6) intersections selected for analysis purposes. The number of lanes on the street system surrounding the project site is also depicted in the figure.

Traf Tech
ENGINEERING, INC.

EXISTING LANE GEOMETRY

FIGURE 2
1600 Washington
Miami Beach, Florida

TRAFFIC COUNTS

Traf Tech Engineering, Inc., in association with Traffic Survey Specialists, Inc., collected traffic data at the following locations:

- Washington Avenue & 17th Street (Signalized)
- Washington Avenue & 16th Street (Signalized)
- Washington Avenue & 15th Street (Signalized)
- Drexel Avenue & 16th Street (Signalized)
- 16th Street and Garage Entrance (Stop controlled)
- Alton Road & 16th Street (Signalized)

The intersection turning movement counts performed by Traffic Survey Specialists, Inc., were collected on Friday, March 4, 2016 and August 26, 2016 during the PM peak period (4:00 PM to 7:00 PM).

The existing PM peak hour traffic counts are presented in Figure 3 on the following page. Appendix C contains the traffic data as collected in the field. The signal timing plans for the signalized intersections were obtained from the Miami-Dade County Signals and Signs Division and are included in Appendix C.

Traf Tech
ENGINEERING, INC.

EXISTING TRAFFIC COUNTS
(March 4 and August 26, 2016)

FIGURE 3
1600 Washington
Miami Beach, Florida

TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (9th Edition)*. According to the subject ITE manual, the most appropriate "land use" categories for the proposed land uses are: ITE Land Use 233 – Mid Rise Apartment and ITE Land Use 826 – Specialty Retail. Table 1 below summarizes the external trips associated with the proposed 1600 Washington project.

TABLE 1
Trip Generation Summary
1600 Washington (Proposed Land Uses)

Land Use	Size	Daily Trips	Weekday Peak Hour Trips		
			Inbound	Outbound	Total
PROPOSED USES					
Residential	134 units	636	31	22	53
Retail	2,863 sf	128	4	4	8
New Trips	**-**	**764**	**35**	**26**	**61**

Source: ITE Trip Generation Manual (9th Edition)

As indicated in Table 1, the external trips anticipated to be generated by the proposed 1600 Washington project consist of approximately 764 daily trips and approximately 61 trips during the weekday peak hour (35 inbound and 26 outbound). The trip generation rates/equations used to determine the trips associated with the proposed uses are presented below:

ITE Land Use 223 – Mid Rise Apartment
Weekday Daily Trip Generation
T = PM Peak Hour of Adjacent Street divided by 0.0833)[1]
Where T = number of weekday daily trips and X = number of units

Weekday Peak Hour of Adjacent Street
T = 0.48 (X) – 11.07 (58% inbound and 42% outbound)
Where T = number of weekday peak hour trips and X = number of units

[1] Daily trip rate not available on ITE for mid-rise apartments (assumed 8.33% PM peak-hour of adjacent street to daily ratio, which is typical for residential developments). This was based on ITE's LUC 222 – High-Rise Apartments (PM Peak Hour of Adjacent Street Trip Rate =0.35 and Daily Trip Rate = 4.2).

ITE Land Use 826 – Specialty Retail Center

Weekday Daily Trip Generation

T = 44.32 (X)

Where T = number of weekday daily trips and
X = 1,000 square feet of gross leasable area

Weekday Peak Hour of Adjacent Street

T = 2.71 (X) (44% inbound and 56% outbound)

Where T = number of weekday peak hour trips and
X = 1,000 square feet of gross leasable area

TRIP DISTRUBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for the project were based on Miami-Dade County's Cardinal Distribution information for the study area. Table 2 summarizes the County's cardinal distribution data for Traffic Analysis Zone 643, which is applicable to the project site from the latest SERPM data published by Miami-Dade County.

TABLE 2
Project Trip Distribution
1600 Washington

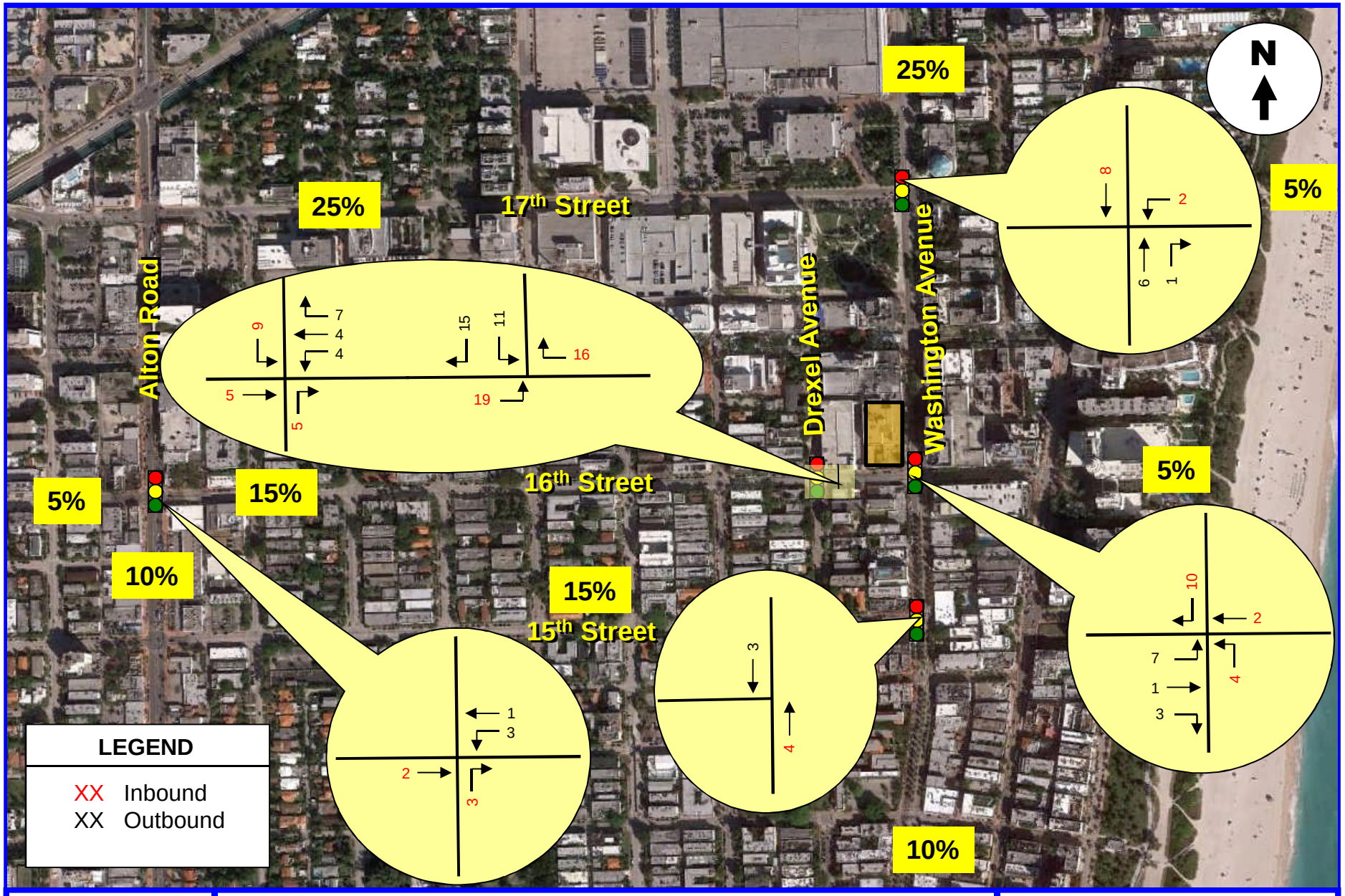
Direction		% of Total Trips
North:	Northwest	15.5
	Northeast	19.9
South:	Southwest	4.3
	Southeast	7.7
East:	Northeast	4.6
	Southeast	0
West:	Northwest	18.9
	Southwest	29.2
	Total	100.00%

Source: Miami-Dade County (2040 SERPM)

Based on the above, the following traffic assignment was assumed for the proposed restaurant development:

- 25% to/from the north via Washington Avenue
- 10% to/from the south via Washington Avenue
- 5% to/from the east via 17th Street
- 5% to/from the east via 16th Street
- 25% to/from the west via 17th Street
- 15% to/from the west via 16th Street
- 15% to/from the west via 15th Street

The new peak hour traffic generated by the project was assigned to the nearby transportation network using the traffic assignment documented above. The new project traffic assignment is summarized in Figure 4.



Traf Tech
ENGINEERING, INC.

PROJECT TRAFFIC ASSIGNMENT

FIGURE 4
1600 Washington
Miami Beach, Florida

TRAFFIC ANALYSIS

This section of the study is divided into three (3) parts. The first part consists of developing the future conditions traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions. The third section addresses the projected operating conditions of the project's parking garage driveway.

Future Conditions Traffic Volumes

Two sets of future traffic volumes were developed. The first set includes project buildout conditions without the proposed project and the second set adds the new trips anticipated to be generated by the project.

In order to develop year 2020 traffic volumes (project anticipated to be built and occupied by the year 2020), without the proposed project, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field during the month of March and August to average peak season conditions. Based on FDOT's Peak Season Factor Category report, a factor of 1.00 and 1.02 are required to convert traffic counts collected during the first week of March and Last week of August to average peak season conditions (refer to Appendix D).

The second analysis includes a growth factor to project 2016 peak season traffic volumes to the year 2020. Based on traffic growth data published by the FDOT for a nearby traffic count stations, minimal traffic growth has occurred during the past five years (refer to Appendix D). However, in order to assess impacts with a conservative approach, and to account for unforeseen approved project (committed trips) that may impact the study intersections, a one and one-half percent (1.5%) growth rate was used for purposes of this study. Moreover, committed development trips associated with several projects were added to the peak season volumes in order to develop 2020 background traffic conditions for the study area.

The new trips generated by the 1600 Washington project (refer to Figure 4) were added to the 2020 background traffic in order to develop total traffic conditions. The future traffic projections for the study intersections (peak season adjustments, growth rates, committed development trips and project traffic) are presented in tabular format in Appendix E. Figures 5 and 6 present the year 2020 future traffic volumes for the study area.

Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the 1600 Washington project.

Level of Service Analyses

Intersection capacity/level of service analyses were conducted for the six (6) study intersections and the access driveway. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCM) using the SYNCHRO software. The results of the capacity analyses are summarized in Tables 3 and 4. As indicated in Tables 3 and 4, all study intersections are currently operating adequately and will continue to operate at a acceptable level of service in the year 2020 with the proposed project in place.

Parking Garage Driveway

The parking garage driveway along 16 Street is projected to operate at level of service "C" (refer to Table 4).

Traf Tech
ENGINEERING, INC.

BACKGROUND TRAFFIC – YEAR 2020

FIGURE 5
1600 Washington
Miami Beach, Florida

Traf Tech
ENGINEERING, INC.

TOTAL TRAFFIC w/PROJECT – YEAR 2020

FIGURE 6
1600 Washington
Miami Beach, Florida

TABLE 3 Intersection Levels of Service – (Signalized Intersections) 1600 Washington			
		Future Traffic Conditions	
Intersection	2016 Existing	2020 w/o Project	2020 With Project
Washington Ave & 17th St	C	C	C
Washington Ave & 16th St	B	D	D
Washington Ave & 15th St	B	B	B
Drexel Ave & 16th St	A	A	A
Alton Road & 16th Street	C	C	C

Source: Highway Capacity Manual

TABLE 4 Intersection Levels of Service (Stop-Controlled Intersections) 1600 Washington			
		Future Traffic Conditions	
Intersection/Movement	2016 Existing	2020 w/o Project	2020 With Project
Garage Ent. & 16th Street			
- SBL	B	B	B
- SBR	B	B	B

Source: Highway Capacity Manual

The computer printouts of the intersection capacity analyses are contained in Appendix F.

OTHER MODES OF TRANSPORTATION

Throughout much of Miami Beach, and specifically within the immediate area of the proposed 1600 Washington project, there are many convenient and cost-effective transportation alternatives for residents, patrons, and visitors alike. Many patrons of the 1600 Washington project are likely to avail themselves of alternative travel modes as opposed to the automobile. Several of the more prominent modes in this area include bus transit services, bicycling (including the Deco Bike), and the sidewalk network throughout the surrounding area. Each of these is explained in further detail below.

Miami-Dade Transit

Transit services on Miami Beach are provided by Miami-Dade Transit. There are numerous transit routes serving the immediate study area including 120, 115, 117, and 123 Routes. The nearest bus stop for these services is located at the intersection of Washington Street and 16th Street. These transit routes provide frequent service and access to all of Miami-Dade County as well as connections to other destinations outside of the County.

DecoBike

DecoBike is a bicycle sharing and rental program on Miami Beach. This program offers a network of 100 solar-powered bicycle rental stations and a fleet of 1,000 bicycles which can be rented 24 hours per day. Within the immediate area of the 1600 Washington project, there is one convenient DecoBike rental station (Station 159: 15th Street & Washington Ave).

Pedestrian Network

Most of Miami Beach is considered a very walkable environment. Specifically, within the project study area, each of the existing roadways has sidewalks on both sides and crosswalks are present at each of the major signalized intersections. There are many attractive destinations within easy access to the 1600 Washington project and the

project has been designed in such a manner as to provide direct access to this sidewalk network.

In summary, this project is located within an area that provides excellent access to alternative modes of transportation. It is expected that many of the customers of the 1600 Washington project will utilize these services as opposed to driving passenger vehicles.

CONCLUSIONS AND RECOMMENDATIONS

1600 Washington is a proposed mixed-use development consisting of retail space on the ground floor and residential units above located at the northwest corner of Washington Avenue and 16th Street in the City of Miami Beach in Miami-Dade County, Florida.

Existing at the site is a one-story retail development (currently occupied) with no on-site parking. The existing retail development will be replaced with a mixed-use development consisting of the following uses and intensities:

- 12,863 square feet of retail space on the ground floor (only 2,863 square feet will be new retail space)
- 134 residential units

Parking will be provided at the existing parking structure located at the northeast corner of 16th Street and Drexel Avenue.

Traf Tech Engineering, Inc. was retained to conduct a traffic study in connection with the proposed mixed-use development. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. The conclusions of the traffic study are presented below:

- The external trips anticipated to be generated by the proposed 1600 Washington project consist of approximately 764 daily trips and approximately 61 trips during the weekday peak hour (35 inbound and 26 outbound).

- All study intersections are currently operating adequately and will continue to operate at an acceptable level of service in the year 2020 with the proposed project in place.

- The parking garage driveway along 16 Street is projected to operate at level of service “C”.

APPENDIX A

Traffic Methodology

TO: 1600 Washington

FROM: Joaquin Vargas

DATE: June 5, 2017

SUBJECT: Traffic Methodology for 1600 Washington

1600 Washington is a proposed retail/residential development planned to occupy an existing retail space located on the northwest corner of Washington Avenue and 16th Street in the City of Miami Beach in Miami-Dade County, Florida.

A traffic study documenting the impacts of the proposed re-development project will be undertaken. The following is our proposed methodology for the traffic study associated with this project:

- The trip generation for the proposed residential will be based on ITE's *Trip Generation Manual* (9th Edition). For the proposed residential land use, ITE LUC 220 – apartments will be used. The number of dwelling units will be used for trip generation purposes. The existing and proposed retail use (net difference) will be assumed to be specialty retail similar to other Miami Beach projects with ground-floor retail uses.

- The traffic study will evaluate intersections located in the immediate vicinity of the project. The analyses will be undertaken for the critical PM peak hour (Friday 4PM to 7PM). These intersections (counts already undertaken as part of the recently approved Time Out Market) are:

    1. Washington Avenue & 17th Street (Signalized)
    2. Washington Avenue & 16th Street (Signalized)
    3. Washington Avenue & 15th Street (Signalized)
    4. Drexel Avenue & 16th Street (Signalized)
    5. 16th Street and Garage Entrance (Stop controlled)
    6. Alton Road & 16th Street (Signalized)

- Traffic circulation will be evaluated in the traffic study, including its impact to the surrounding street system and adjacent driveways, if any.

- For purposes of the traffic study, the build-out year will be 2018. For purposes of traffic growth, FDOT historical traffic data will be used.

- Existing traffic signal timing data and traffic counts will be included in the appendix of the traffic study.

- The committed developments used in the recently approved Time Out Market, including the Time Out Market trips will be used for purposes of this project.

- The traffic study will address any anticipated / proposed impacts onto the existing on-street vehicular parking, if applicable. Any impacts to on-street parking will be discussed with the City's Parking Department.

- Traffic figures will be prepared for the following trip generation scenarios for each of the intersections analyzed:

  1. Existing trips
  2. Proposed site trips distribution
  3. Existing + traffic growth
  4. Future or build-out + traffic growth + site trips

- The presence of transit and nearby routes will be discussed as will the provision and location of bicycle racks.

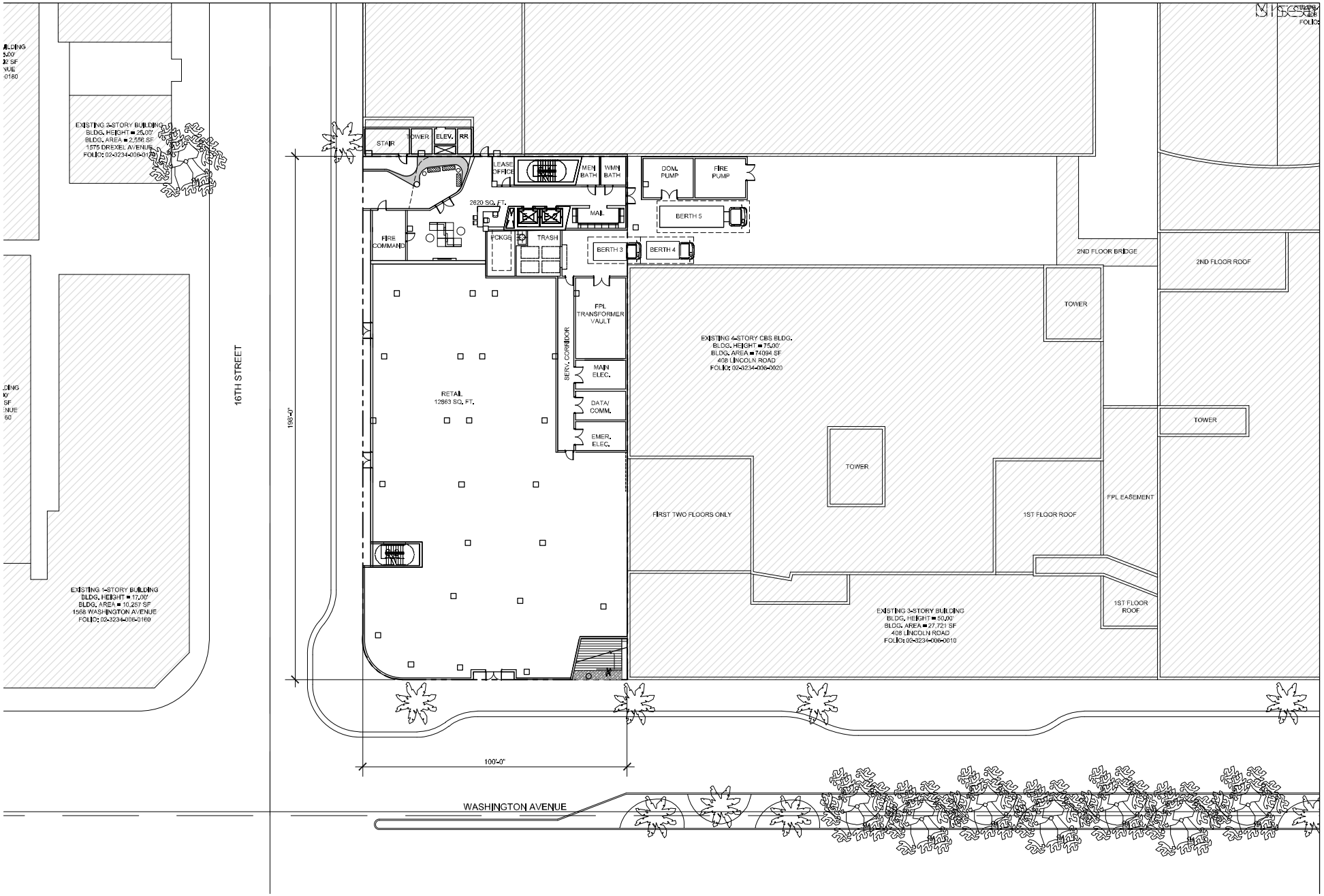
- Provide bicycle racks at the site to encourage other modes of transportation.

- The site plan will also include the location of bicycle parking, garbage pick-up area and place designated for deliveries.

- The submittal of the study will include LOS calculations for review by the peer reviewer.

APPENDIX B

Site Plan
1600 Washington


EXISTING 2-STORY BUILDING
BLDG. HEIGHT = 25.00'
BLDG. AREA = 2,556 SF
1575 DREXEL AVENUE
FOLIO: 02-3234-006-0170
16TH STREET
EXISTING 1-STORY BUILDING
BLDG. HEIGHT = 17.00'
BLDG. AREA = 10,257 SF
1568 WASHINGTON AVENUE
FOLIO: 02-3234-006-0160
STAIR
TOWER
ELEV.
RR
LEASE OFFICE
MEN BATH
WMN BATH
DOM. PUMP
FIRE PUMP
2820 SQ. FT.
MAIL
BERTH 5
FIRE COMMAND
PCKGE
TRASH
BERTH 3
BERTH 4
2ND FLOOR BRIDGE
2ND FLOOR ROOF
FPL TRANSFORMER VAULT
SERV. CORRIDOR
EXISTING 4-STORY CBS BLDG.
BLDG. HEIGHT = 75.00'
BLDG. AREA = 74094 SF
408 LINCOLN ROAD
FOLIO: 02-4234-006-0020
TOWER
MAIN ELEC.
RETAIL
12863 SQ. FT.
DATA/ COMM.
EMER. ELEC.
TOWER
TOWER
FPL EASEMENT
FIRST TWO FLOORS ONLY
1ST FLOOR ROOF
1ST FLOOR ROOF
EXISTING 3-STORY BUILDING
BLDG. HEIGHT = 50.00'
BLDG. AREA = 27,721 SF
408 LINCOLN ROAD
FOLIO: 02-3234-006-0010
198'-0"
100'-0"
WASHINGTON AVENUE

APPENDIX C

Signal Timing Plan and Traffic Counts

TOD Schedule Report

for 2707: Drexel Av&16 St

Print Date: 8/17/2013

Print Time: 1:51 PM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2707	Drexel Av&16 St	DOW-7		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
-	WBT	-	NBT	-	EBT	-	SBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase	Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 WBT	0 - 5 - 5	0 - 21 - 21	16 - 5 - 5	1 - 1 - 1	40 - 40 - 30	0 - 40 - 40	4	1
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 NBT	0 - 5 - 5	0 - 21 - 21	7 - 7 - 7	2.5 - 2.5 - 2.5	22 - 10 - 10	35 - 35 - 40	4	0.1
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 EBT	0 - 5 - 5	0 - 21 - 21	16 - 5 - 5	1 - 1 - 1	40 - 40 - 30	0 - 40 - 40	4	1
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 SBT	0 - 5 - 5	0 - 21 - 21	7 - 7 - 7	2.5 - 2.5 - 2.5	22 - 10 - 10	35 - 35 - 40	4	0.1

Current TOD Schedule	Plan	Cycle	1	2	3	4	5	6	7	8	Ring Offset	Offset
			-	WBT	-	NBT	-	EBT	-	SBT		

Last In Service Date: unknown

Permitted Phases

	12345678
Default	-234-6-8
External Permit 0	--------
External Permit 1	--------
External Permit 2	--------

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M T W Th F S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-7-----1	SuM T W ThF S

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-7-----1	SuM T W ThF S
0130	TOD OUTPUTS	--------	M T W ThF
0230	TOD OUTPUTS	-7-----1	W
0330	TOD OUTPUTS	-7-----1	M T ThF
0800	TOD OUTPUTS	--------	M T W ThF
0900	TOD OUTPUTS	-7-----1	M T W ThF

*** Settings**

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report

for 2805: Washington Av&15 St

Print Date: 3/24/2014

Print Time: 8:06 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2805	Washington Av&15 St	HOLIDAY-2		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
-	SBT	-	-	-	NBT	-	EBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase		Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2	SBT	7 - 7 - 7	16 - 16 - 16	7 - 7 - 7	1 - 1 - 1	35 - 30 - 30	0 - 30 - 30	4	0.2
3	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
5	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6	NBT	7 - 7 - 7	16 - 16 - 16	7 - 7 - 7	1 - 1 - 1	35 - 30 - 30	0 - 30 - 30	4	0.2
7	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8	EBT	5 - 5 - 5	24 - 24 - 24	5 - 5 - 5	1 - 1 - 1	12 - 15 - 12	31 - 30 - 30	4	0.7

Last In Service Date: 05/13/2010 13:24

Permitted Phases

	12345678
Default	-2---6-8
External Permit 0	--------
External Permit 1	--------
External Permit 2	--------

Current TOD Schedule	Plan	Cycle	Green Time 1 -	2 SBT	3 -	4 -	5 -	6 NBT	7 -	8 EBT	Ring Offset	Offset
	1	70	0	31	0	0	0	31	0	30	0	3
	2	100	0	61	0	0	0	61	0	30	0	97
	3	80	0	41	0	0	0	41	0	30	0	22
	4	100	0	61	0	0	0	61	0	30	0	7
	5	100	0	61	0	0	0	61	0	30	0	2
	6	110	0	71	0	0	0	71	0	30	0	61
	7	90	0	51	0	0	0	51	0	30	0	4
	8	100	0	61	0	0	0	61	0	30	0	23
	9	80	0	41	0	0	0	41	0	30	0	42
	10	90	0	51	0	0	0	51	0	30	0	78
	11	100	0	61	0	0	0	61	0	30	0	46
	12	110	0	71	0	0	0	71	0	30	0	43
	13	80	0	41	0	0	0	41	0	30	0	58
	14	90	0	51	0	0	0	51	0	30	0	28
	15	110	0	71	0	0	0	71	0	30	0	46
	16	150	0	111	0	0	0	111	0	30	0	139
	18	90	0	51	0	0	0	51	0	30	0	85
	19	100	0	61	0	0	0	61	0	30	0	18
	20	110	0	71	0	0	0	71	0	30	0	18
	21	100	0	61	0	0	0	61	0	30	0	0
	22	70	0	31	0	0	0	31	0	30	0	13
	23	70	0	31	0	0	0	31	0	30	0	13

Local TOD Schedule

Time	Plan	DOW
0000	22	Su S
0000	10	M T W Th F
0100	23	M T W Th F
0530	1	Su S
0600	1	M T W Th F
0715	2	M T W Th F
0800	11	M T W Th F
0900	4	M T W Th F
1000	4	Su S
1330	12	M T W Th F
1530	6	M T W Th F
1800	8	M T W Th F
2000	10	Su S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8------1	SuM T W ThF S
0100	TOD OUTPUTS	8----3--	SuM T W
0600	TOD OUTPUTS	8-------	M T W ThF
0700	PERMIT	--------	M T W ThF
0800	TOD OUTPUTS	--------	M T W ThF
0900	TOD OUTPUTS	--------	M T W ThF
1330	TOD OUTPUTS	--------	M T W ThF
1530	CONDITIONAL SERVI	--------	M T ThF
2130	TOD OUTPUTS	8------1	SuM T W ThF S
2300	PERMIT	8-------	SuM T W ThF S

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8------1	SuM T W ThF S
0100	TOD OUTPUTS	8----3--	SuM T W
0200	TOD OUTPUTS	8----3--	ThF S
0600	TOD OUTPUTS	8-------	M T W ThF
0700	TOD OUTPUTS	--------	Su S
0700	PERMIT	--------	M T W ThF
0800	TOD OUTPUTS	--------	M T W ThF
0900	TOD OUTPUTS	--------	M T W ThF
1330	TOD OUTPUTS	--------	M T W ThF
1430	TOD OUTPUTS	--------	W
1530	CONDITIONAL SERVICE	--------	M T ThF
2130	TOD OUTPUTS	8------1	SuM T W ThF S
2300	PERMIT	8-------	SuM T W ThF S

*** Settings**

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report

for 2806: Washington Av&16 St

Print Date: 3/24/2014

Print Time: 8:07 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2806	Washington Av&16 St	HOLIDAY-2		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
-	SBT	-	WBT	SBL	NBT	-	EBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase		Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2	SBT	7 - 7 - 7	14 - 14 - 14	7 - 7 - 7	1 - 1 - 1	25 - 31 - 25	0 - 28 - 28	4	0.4
3	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4	WBT	5 - 5 - 5	28 - 28 - 28	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 15 - 12	28 - 28 - 28	4	0.6
5	SBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	5 - 5 - 5	7 - 7 - 7	3	0
6	NBT	7 - 7 - 7	14 - 14 - 14	7 - 7 - 7	1 - 1 - 1	25 - 31 - 25	0 - 28 - 28	4	0.4
7	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8	EBT	5 - 5 - 5	28 - 28 - 28	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 15 - 12	28 - 28 - 28	4	0.6

Last In Service Date: 05/13/2010 12:37

Permitted Phases

	12345678
Default	-2-456-8
External Permit 0	-2-4-6-8
External Permit 1	-2-4-6-8
External Permit 2	-2-4-6-8

Current TOD Schedule	Plan	Cycle	Green Time 1 -	2 SBT	3 -	4 WBT	5 SBL	6 NBT	7 -	8 EBT	Ring Offset	Offset
	1	70	0	27	0	34	0	27	0	34	0	48
	2	100	0	57	0	34	5	49	0	34	0	92
	3	80	0	37	0	34	5	29	0	34	0	76
	4	100	0	57	0	34	5	49	0	34	0	89
	5	100	0	57	0	34	5	49	0	34	0	55
	6	110	0	67	0	34	5	59	0	34	0	54
	7	90	0	47	0	34	5	39	0	34	0	70
	8	100	0	57	0	34	5	49	0	34	0	22
	9	80	0	37	0	34	5	29	0	34	0	65
	10	90	0	47	0	34	5	39	0	34	0	27
	11	100	0	57	0	34	5	49	0	34	0	54
	12	110	0	67	0	34	5	59	0	34	0	41
	13	80	0	37	0	34	5	29	0	34	0	46
	14	90	0	47	0	34	5	39	0	34	0	54
	15	110	0	67	0	34	5	59	0	34	0	86
	16	150	0	107	0	34	5	99	0	34	0	114
	18	90	0	47	0	34	5	39	0	34	0	57
	19	100	0	57	0	34	5	49	0	34	0	0
	20	110	0	67	0	34	5	59	0	34	0	0
	21	110	0	67	0	34	5	59	0	34	0	0
	22	70	0	27	0	34	5	19	0	34	0	22

Local TOD Schedule

Time	Plan	DOW
0000	22	Su S
0000	10	M T W Th F
0100	Free	M T W Th F
0530	1	Su S
0600	1	M T W Th F
0715	2	M T W Th F
0800	11	M T W Th F
0900	4	M T W Th F
1000	4	Su S
1330	12	M T W Th F
1530	6	M T W Th F
1800	8	M T W Th F
2000	10	Su S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8--5----	SuM T W ThF S
0100	TOD OUTPUTS	8--5---1	M T W ThF
0200	TOD OUTPUTS	8--5----	M T W ThF
0600	TOD OUTPUTS	8--5----	M T W ThF
0715	TOD OUTPUTS	--------	SuM T W ThF S
2300	TOD OUTPUTS	8-------	SuM T W ThF S

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8--5----	SuM T W ThF S
0100	TOD OUTPUTS	8--5---1	M T W ThF
0200	TOD OUTPUTS	8--5----	M T W ThF
0600	TOD OUTPUTS	8--5----	M T W ThF
0715	TOD OUTPUTS	--------	SuM T W ThF S
2300	TOD OUTPUTS	8-------	SuM T W ThF S

*** Settings**

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report

for 2808: Washington Av&17 St

Print Date: 3/24/2014

Print Time: 8:07 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2808	Washington Av&17 St	HOLIDAY-2		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
NBL	SBT	EBL	WBT	-	NBT	-	EBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase		Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1	NBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	5 - 5 - 5	9 - 7 - 9	3.7	2.3
2	SBT	5 - 5 - 5	16 - 16 - 16	5 - 5 - 5	1 - 1 - 1	15 - 15 - 15	0 - 15 - 15	4	2.3
3	EBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	5 - 5 - 5	8 - 5 - 8	3.7	3.4
4	WBT	5 - 5 - 5	18 - 18 - 18	7 - 7 - 7	2.5 - 2.5 - 2.5	10 - 18 - 12	24 - 24 - 24	4	3.4
5	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	2.3
6	NBT	5 - 5 - 5	16 - 16 - 16	5 - 5 - 5	1 - 1 - 1	15 - 15 - 15	0 - 15 - 15	4	2.3
7	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8	EBT	5 - 5 - 5	18 - 18 - 18	7 - 7 - 7	2.5 - 2.5 - 2.5	10 - 18 - 12	24 - 24 - 24	4	3.4

Last In Service Date: unknown

Permitted Phases

	12345678
Default	1234-6-8
External Permit 0	-2-4-6-8
External Permit 1	-2-4-6-8
External Permit 2	-2-4-6-8

Current TOD Schedule	Plan	Cycle	Green Time 1 NBL	2 SBT	3 EBL	4 WBT	5 -	6 NBT	7 -	8 EBT	Ring Offset	Offset
	1	70	0	21	6	23	0	21	0	36	0	25
	2	90	6	29	6	23	0	41	0	36	0	53
	4	100	6	39	6	23	0	51	0	36	0	54
	5	90	6	29	6	23	0	41	0	36	0	69
	6	90	6	29	6	23	0	41	0	36	0	73
	7	90	6	29	6	23	0	41	0	36	0	59
	11	100	6	39	6	23	0	51	0	36	0	93
	12	110	6	49	6	23	0	61	0	36	0	36
	14	90	6	29	6	23	0	41	0	36	0	73
	15	110	6	49	6	23	0	61	0	36	0	102
	16	150	6	89	6	23	0	101	0	36	0	82
	18	90	6	29	6	23	0	41	0	36	0	29
	19	100	6	39	6	23	0	51	0	36	0	0
	20	110	6	49	6	23	0	61	0	36	0	0
	21	110	6	49	6	23	0	61	0	36	0	0

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su S
0000	Free	M T W Th F
0100	Free	M T W Th F
0530	1	Su S
0600	1	M T W Th F
0715	2	M T W Th F
0800	11	M T W Th F
0900	4	M T W Th F
1000	4	Su S
1330	12	M T W Th F
1530	6	M T W Th F
1800	Free	M T W Th F
2000	Free	Su S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	M T W ThF
0100	TOD OUTPUTS	-------1	M T W ThF
0550	TOD OUTPUTS	---5----	M T W ThF
0600	TOD OUTPUTS	--------	M T W ThF
0720	TOD OUTPUTS	--------	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-------1	Su S
0000	TOD OUTPUTS	--------	M T W ThF
0100	TOD OUTPUTS	-------1	M T W ThF
0520	TOD OUTPUTS	---5----	Su S
0530	TOD OUTPUTS	--------	Su S
0550	TOD OUTPUTS	---5----	M T W ThF
0600	TOD OUTPUTS	--------	M T W ThF
0605	TOD OUTPUTS	--------	Su S
0720	TOD OUTPUTS	--------	M T W ThF

*** Settings**

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report
for 2645: Alton Rd&16 St

Print Date: 1/24/2014

Print Time: 8:09 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2645	Alton Rd&16 St	DOW-6		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
SBL	NBT	-	EBT	-	SBT	-	WBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase		Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1	SBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	5 - 5 - 5	8 - 7 - 18	3	0
2	NBT	7 - 7 - 7	18 - 18 - 18	7 - 7 - 7	1 - 1 - 1	40 - 40 - 40	0 - 0 - 0	4	0.2
3	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4	EBT	7 - 7 - 7	26 - 26 - 26	7 - 7 - 7	3.5 - 3.5 - 3.5	12 - 12 - 12	47 - 47 - 47	4	0.6
5	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6	SBT	7 - 7 - 7	18 - 18 - 18	7 - 7 - 7	1 - 1 - 1	40 - 40 - 40	0 - 0 - 0	4	0.2
7	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8	WBT	7 - 7 - 7	26 - 26 - 26	7 - 7 - 7	3.5 - 3.5 - 3.5	12 - 12 - 12	47 - 47 - 47	4	0.6

Last In Service Date: unknown

Permitted Phases

	12345678
Default	-2-4-6-8
External Permit 0	--------
External Permit 1	-2-4-6-8
External Permit 2	-2-4-6-8

Current TOD Schedule	Plan	Cycle	Green Time 1 SBL	2 NBT	3 -	4 EBT	5 -	6 SBT	7 -	8 WBT	Ring Offset	Offset
	1	160	0	114	0	37	0	114	0	37	0	21
	2	160	0	114	0	37	0	114	0	37	0	8
	3	120	0	73	0	38	0	73	0	38	0	33
	4	130	0	83	0	38	0	83	0	38	0	50
	5	130	0	84	0	37	0	84	0	37	0	17
	6	130	0	83	0	38	0	83	0	38	0	86
	7	105	0	61	0	35	0	61	0	35	0	20
	8	120	0	73	0	38	0	73	0	38	0	37
	9	120	0	76	0	35	0	76	0	35	0	25
	10	130	0	83	0	38	0	83	0	38	0	0
	11	105	0	61	0	35	0	61	0	35	0	25
	12	105	0	61	0	35	0	61	0	35	0	25
	13	105	0	61	0	35	0	61	0	35	0	20
	14	105	0	61	0	35	0	61	0	35	0	20
	15	130	0	86	0	35	0	86	0	35	0	37
	16	130	0	83	0	38	0	83	0	38	0	101
	17	130	0	83	0	38	0	83	0	38	0	119
	18	90	0	46	0	35	0	46	0	35	0	37
	19	90	0	46	0	35	0	46	0	35	0	15
	20	130	0	83	0	38	0	83	0	38	0	45
	21	90	0	46	0	35	0	46	0	35	0	38
	22	90	0	46	0	35	0	46	0	35	0	25
	23	90	0	46	0	35	0	46	0	35	0	15
	25	140	0	93	0	38	0	93	0	38	0	56
	26	180	0	133	0	38	0	133	0	38	0	152
	27	140	0	93	0	38	0	93	0	38	0	84

Local TOD Schedule

Time	Plan	DOW
0000	8	Su M T W Th S
0000	21	F
0030	11	Su S
0030	21	M T W Th
0600	8	Su M T W Th F S
0800	7	Su S
0800	5	M T W Th F
1000	4	Su
1030	4	S
1515	16	M T W Th F
1615	6	M T W Th F
1830	4	Su M T W Th F S
2000	8	Su M T W Th F S
2330	21	M T W Th

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	SuM T W ThF S
0900	TOD OUTPUTS	----4---	M T W ThF
2000	TOD OUTPUTS	--------	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	SuM T W ThF S
0900	TOD OUTPUTS	----4---	M T W ThF
2000	TOD OUTPUTS	--------	M T W ThF

*** Settings**

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TRAFFIC SURVEY SPECIALISTS, INC.

17TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: ROLANDO MARTINEZ
SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 17STWASH
Page : 1

ALL VEHICLES

	WASHINGTON AVENUE From North				17TH STREET From East				WASHINGTON AVENUE From South				17TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
16:00	0	0	36	21	1	20	58	5	1	64	75	24	1	24	72	64	466
16:15	0	1	24	37	0	11	53	4	1	61	66	20	0	19	70	38	405
16:30	0	1	36	19	0	14	60	8	0	68	82	25	1	17	73	59	463
16:45	0	2	32	21	0	16	54	6	1	58	99	26	0	16	69	58	458
Hr Total	0	4	128	98	1	61	225	23	3	251	322	95	2	76	284	219	1792
17:00	0	1	32	23	1	17	79	5	0	87	83	25	0	29	62	58	502
17:15	0	3	28	22	0	22	61	7	0	82	81	21	0	23	47	44	441
17:30	1	1	30	25	0	20	56	4	0	72	93	26	0	25	59	44	456
17:45	0	1	32	15	0	19	63	2	2	80	91	26	0	28	65	58	482
Hr Total	1	6	122	85	1	78	259	18	2	321	348	98	0	105	233	204	1881
18:00	0	0	34	21	0	22	60	2	0	67	90	25	0	22	55	42	440
18:15	0	0	17	17	0	12	42	3	0	71	72	13	0	26	51	37	361
18:30	0	0	38	17	0	16	44	0	2	57	64	17	0	22	55	39	371
18:45	0	1	26	25	0	18	49	2	0	53	44	20	0	28	54	41	361
Hr Total	0	1	115	80	0	68	195	7	2	248	270	75	0	98	215	159	1533
TOTAL	1	11	365	263	2	207	679	48	7	820	940	268	2	279	732	582	5206

TRAFFIC SURVEY SPECIALISTS, INC.

17TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
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SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
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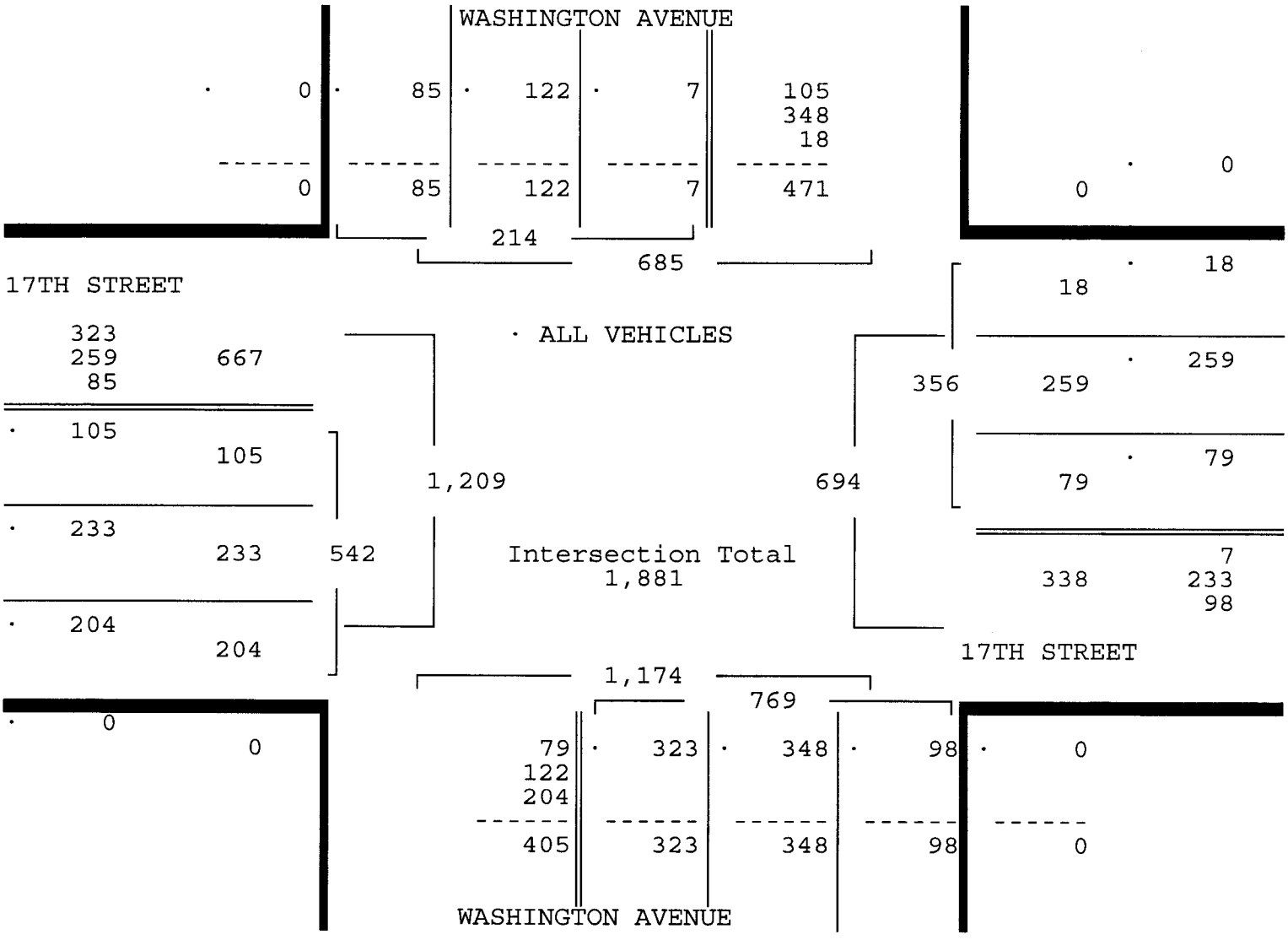
ALL VEHICLES

	WASHINGTON AVENUE From North				17TH STREET From East				WASHINGTON AVENUE From South				17TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 08/26/16																	
Peak start 17:00					17:00				17:00				17:00				
Volume	1	6	122	85	1	78	259	18	2	321	348	98	0	105	233	204	
Percent	0%	3%	57%	40%	0%	22%	73%	5%	0%	42%	45%	13%	0%	19%	43%	38%	
Pk total	214				356				769				542				
Highest	17:30				17:00				17:45				17:45				
Volume	1	1	30	25	1	17	79	5	2	80	91	26	0	28	65	58	
Hi total	57				102				199				151				
PHF	.94				.87				.97				.90				



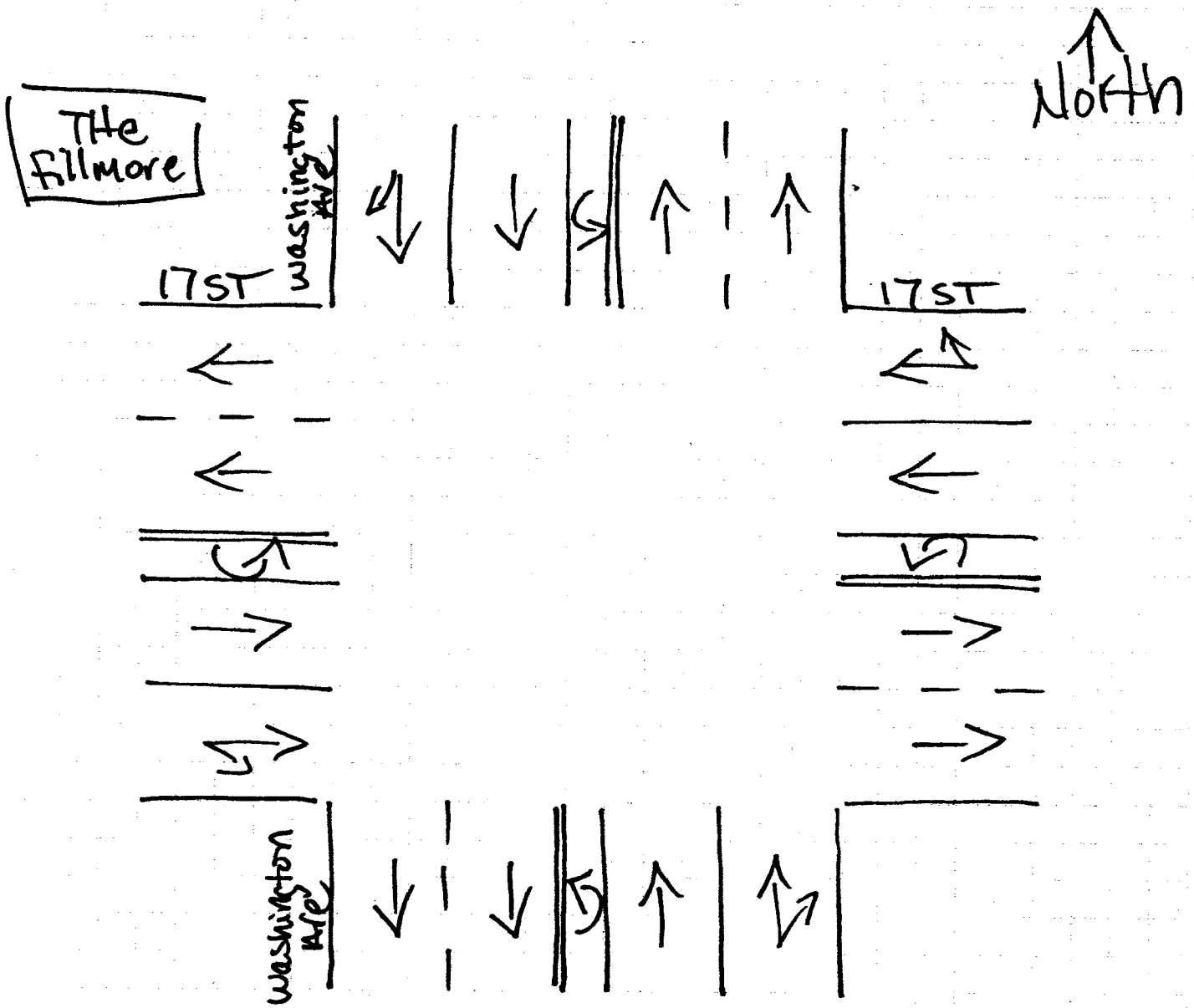
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

17TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: ROLANDO MARTINEZ
SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 17STWASH
Page : 1

PEDESTRIANS & BIKES

	WASHINGTON AVENUE From North				17TH STREET From East				WASHINGTON AVENUE From South				17TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/26/16																	
16:00	0	7	0	5	0	4	0	8	0	2	0	26	0	5	0	4	61
16:15	0	1	0	15	0	2	0	13	0	4	0	21	0	3	0	8	67
16:30	0	5	0	1	0	0	0	16	0	2	0	17	0	2	0	6	49
16:45	0	5	0	7	0	2	0	10	0	1	0	17	0	3	0	5	50
Hr Total	0	18	0	28	0	8	0	47	0	9	0	81	0	13	0	23	227
17:00	0	0	0	0	0	1	0	11	0	7	0	27	0	9	0	15	70
17:15	0	2	0	10	0	0	0	13	0	8	0	32	0	0	0	7	72
17:30	0	2	0	8	0	1	0	16	0	5	0	11	0	6	0	18	67
17:45	0	0	0	5	0	0	0	6	0	1	0	18	0	5	0	16	51
Hr Total	0	4	0	23	0	2	0	46	0	21	0	88	0	20	0	56	260
18:00	0	3	0	5	0	2	0	12	0	4	0	12	0	1	0	2	41
18:15	0	0	0	4	0	0	0	0	0	5	0	16	0	0	0	4	29
18:30	0	3	0	4	0	0	0	0	0	0	0	9	0	1	0	2	19
18:45	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	4	9
Hr Total	0	6	0	16	0	2	0	12	0	9	0	37	0	4	0	12	98
TOTAL	0	28	0	67	0	12	0	105	0	39	0	206	0	37	0	91	585



Miami Beach, Florida
January 20, 2015
drawn by: Luis Palomino
signalized ✓

TRAFFIC SURVEY SPECIALISTS, INC.

16TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STWASH
Page : 1

ALL VEHICLES

	WASHINGTON AVENUE From North				16TH STREET From East				WASHINGTON AVENUE From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
16:00	1	12	111	27	0	20	36	19	4	15	120	16	0	14	39	9	443
16:15	1	16	84	20	0	18	24	21	9	19	107	20	0	14	23	7	383
16:30	1	21	96	28	0	16	32	30	3	12	108	19	0	17	14	12	409
16:45	2	13	117	33	0	18	32	44	4	20	140	20	0	24	28	18	513
Hr Total	5	62	408	108	0	72	124	114	20	66	475	75	0	69	104	46	1748
17:00	1	16	112	24	0	21	30	29	3	9	112	21	0	16	31	9	434
17:15	0	10	100	31	0	17	39	35	4	15	134	19	0	15	24	10	453
17:30	6	20	97	24	0	14	52	25	3	17	139	18	0	16	21	12	464
17:45	3	14	105	29	0	19	37	34	5	12	137	17	0	18	15	5	450
Hr Total	10	60	414	108	0	71	158	123	15	53	522	75	0	65	91	36	1801
18:00	1	14	107	46	0	18	31	30	3	10	130	21	0	13	25	16	465
18:15	3	12	79	27	0	18	42	36	2	15	135	32	0	17	19	10	447
18:30	1	12	90	30	0	23	36	19	6	16	105	23	1	14	25	12	413
18:45	2	10	104	19	0	15	35	17	5	14	102	21	0	8	25	16	393
Hr Total	7	48	380	122	0	74	144	102	16	55	472	97	1	52	94	54	1718
TOTAL	22	170	1202	338	0	217	426	339	51	174	1469	247	1	186	289	136	5267

TRAFFIC SURVEY SPECIALISTS, INC.

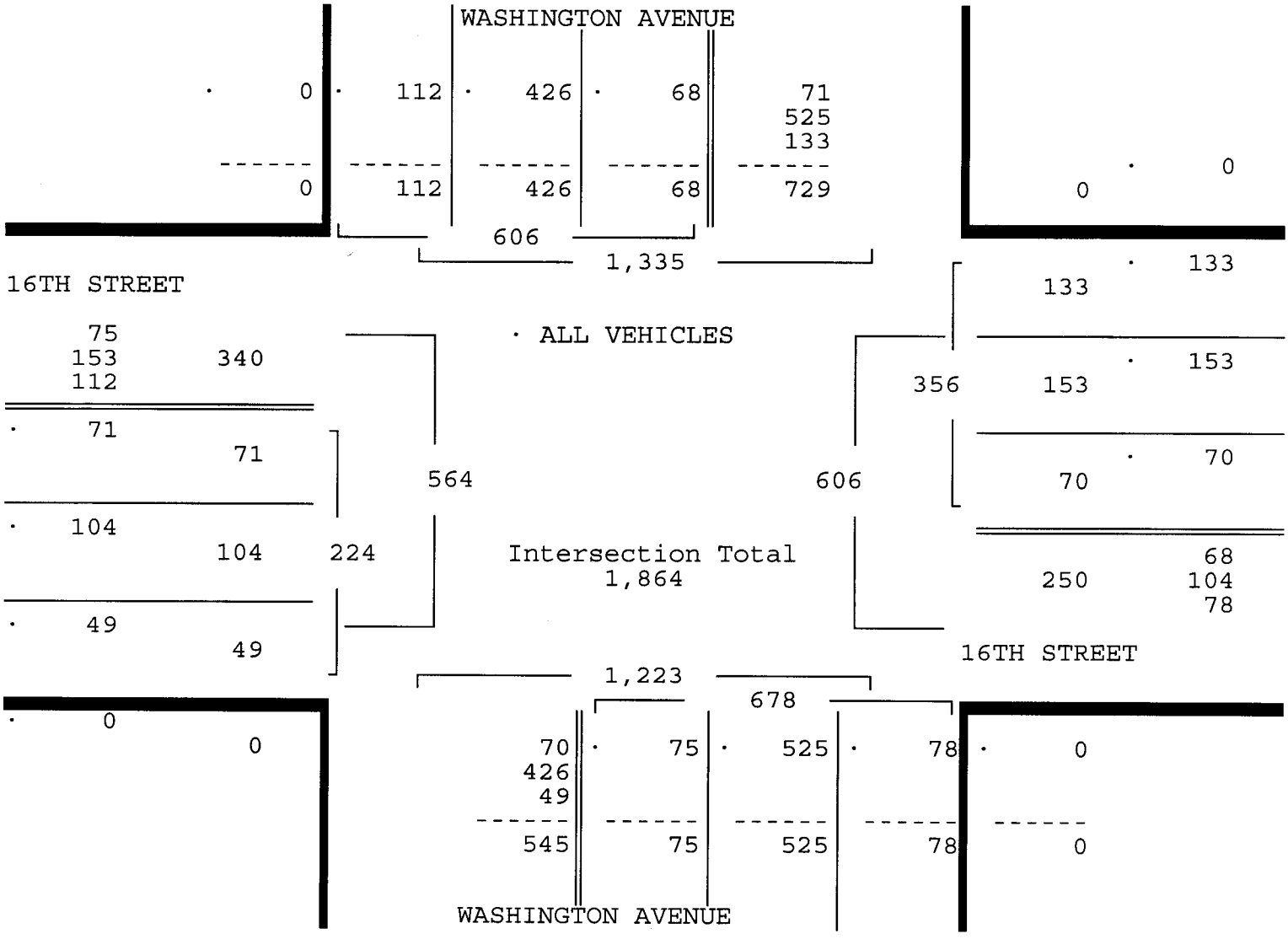
16TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STWASH

ALL VEHICLES

	WASHINGTON AVENUE From North				16TH STREET From East				WASHINGTON AVENUE From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 08/26/16																	
Peak start	16:45				16:45				16:45				16:45				
Volume	9	59	426	112	0	70	153	133	14	61	525	78	0	71	104	49	
Percent	1%	10%	70%	18%	0%	20%	43%	37%	2%	9%	77%	12%	0%	32%	46%	22%	
Pk total	606				356				678				224				
Highest	16:45				16:45				16:45				16:45				
Volume	2	13	117	33	0	18	32	44	4	20	140	20	0	24	28	18	
Hi total	165				94				184				70				
PHF	.92				.95				.92				.80				



TRAFFIC SURVEY SPECIALISTS, INC.

16TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

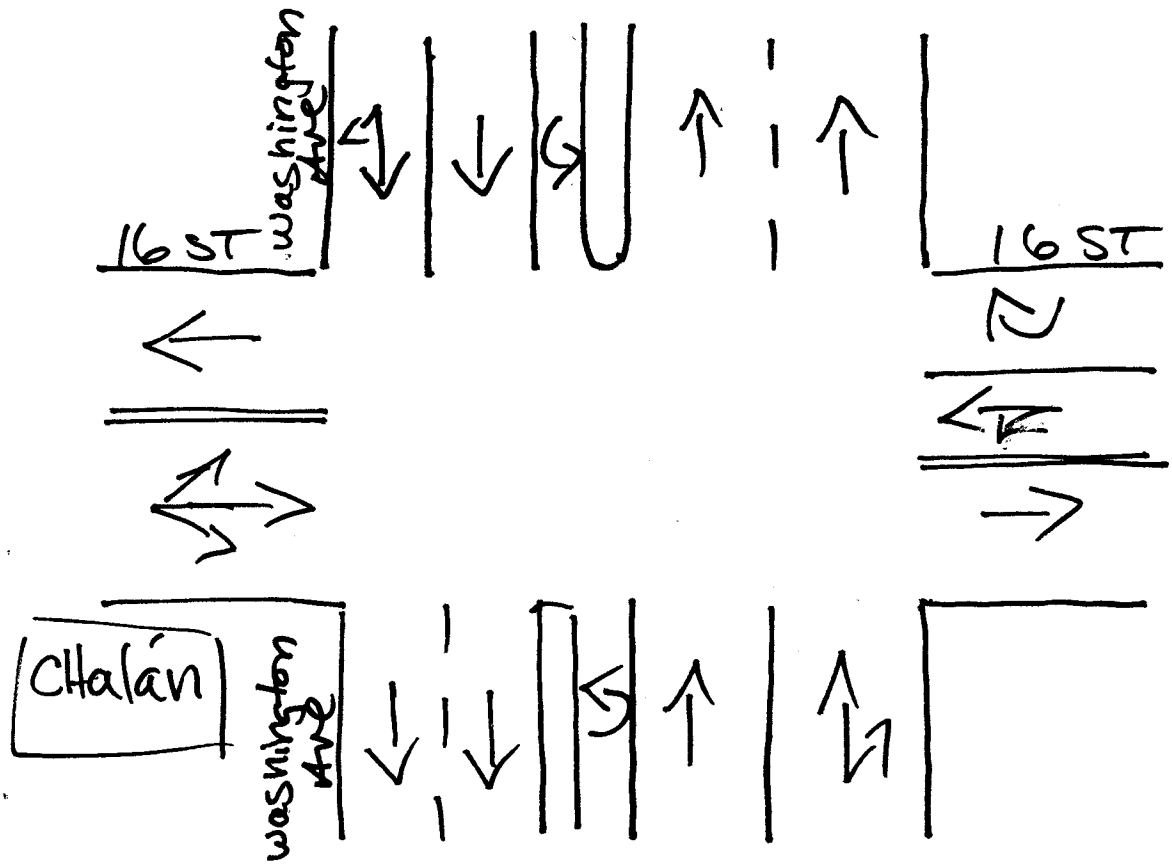
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STWASH

PEDESTRIANS & BIKES

	WASHINGTON AVENUE From North				16TH STREET From East				WASHINGTON AVENUE From South				16TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/26/16																	
16:00	0	3	0	29	0	7	0	34	0	6	0	28	0	1	0	63	171
16:15	0	0	0	14	0	4	0	68	0	3	0	20	0	0	0	28	137
16:30	0	2	0	23	0	3	0	33	0	2	0	14	0	2	0	67	146
16:45	0	1	0	11	0	4	0	36	0	2	0	10	0	0	0	64	128
Hr Total	0	6	0	77	0	18	0	171	0	13	0	72	0	3	0	222	582
17:00	0	2	0	22	0	6	0	54	0	0	0	16	0	3	0	66	169
17:15	0	1	0	23	0	1	0	50	0	1	0	20	0	6	0	52	154
17:30	0	4	0	15	0	0	0	51	0	4	0	28	0	4	0	76	182
17:45	0	7	0	22	0	1	0	28	0	11	0	31	0	1	0	48	149
Hr Total	0	14	0	82	0	8	0	183	0	16	0	95	0	14	0	242	654
18:00	0	3	0	21	0	1	0	71	0	6	0	24	0	6	0	63	195
18:15	0	1	0	37	0	5	0	51	0	0	0	21	0	5	0	45	165
18:30	0	7	0	32	0	2	0	26	0	1	0	6	0	4	0	53	131
18:45	0	4	0	24	0	3	0	29	0	0	0	21	0	2	0	69	152
Hr Total	0	15	0	114	0	11	0	177	0	7	0	72	0	17	0	230	643
TOTAL	0	35	0	273	0	37	0	531	0	36	0	239	0	34	0	694	1879

North



Miami Bch, Florida
August 25, 2016
drawn by: Luis Palomino
signalized

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

15TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: RICHARD MENDEZ
SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 15STWASH
Page : 1

ALL VEHICLES

	WASHINGTON AVENUE From North				----- From East				WASHINGTON AVENUE From South				15TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
16:00	2	0	132	13	0	0	0	0	3	9	145	0	0	19	0	30	353
16:15	1	0	107	8	0	0	0	0	2	23	132	0	0	27	0	33	333
16:30	5	0	106	13	0	0	0	0	0	10	129	0	0	18	0	24	305
16:45	3	0	142	15	0	0	0	0	1	14	151	0	0	29	0	22	377
Hr Total	11	0	487	49	0	0	0	0	6	56	557	0	0	93	0	109	1368
17:00	5	0	123	15	0	0	0	0	2	14	126	0	0	21	0	22	328
17:15	7	0	107	14	0	0	0	0	2	10	149	0	0	10	0	22	321
17:30	6	0	108	12	0	0	0	0	2	9	144	0	0	29	0	26	336
17:45	6	0	119	10	0	0	0	0	3	10	134	0	0	24	0	29	335
Hr Total	24	0	457	51	0	0	0	0	9	43	553	0	0	84	0	99	1320
18:00	4	0	118	13	0	0	0	0	1	18	136	0	0	14	0	26	330
18:15	5	0	100	6	0	0	0	0	3	15	146	0	1	24	0	27	327
18:30	7	0	106	14	0	0	0	0	5	23	132	0	0	18	0	16	321
18:45	8	0	108	20	0	0	0	0	5	12	111	0	0	14	0	18	296
Hr Total	24	0	432	53	0	0	0	0	14	68	525	0	1	70	0	87	1274
TOTAL	59	0	1376	153	0	0	0	0	29	167	1635	0	1	247	0	295	3962

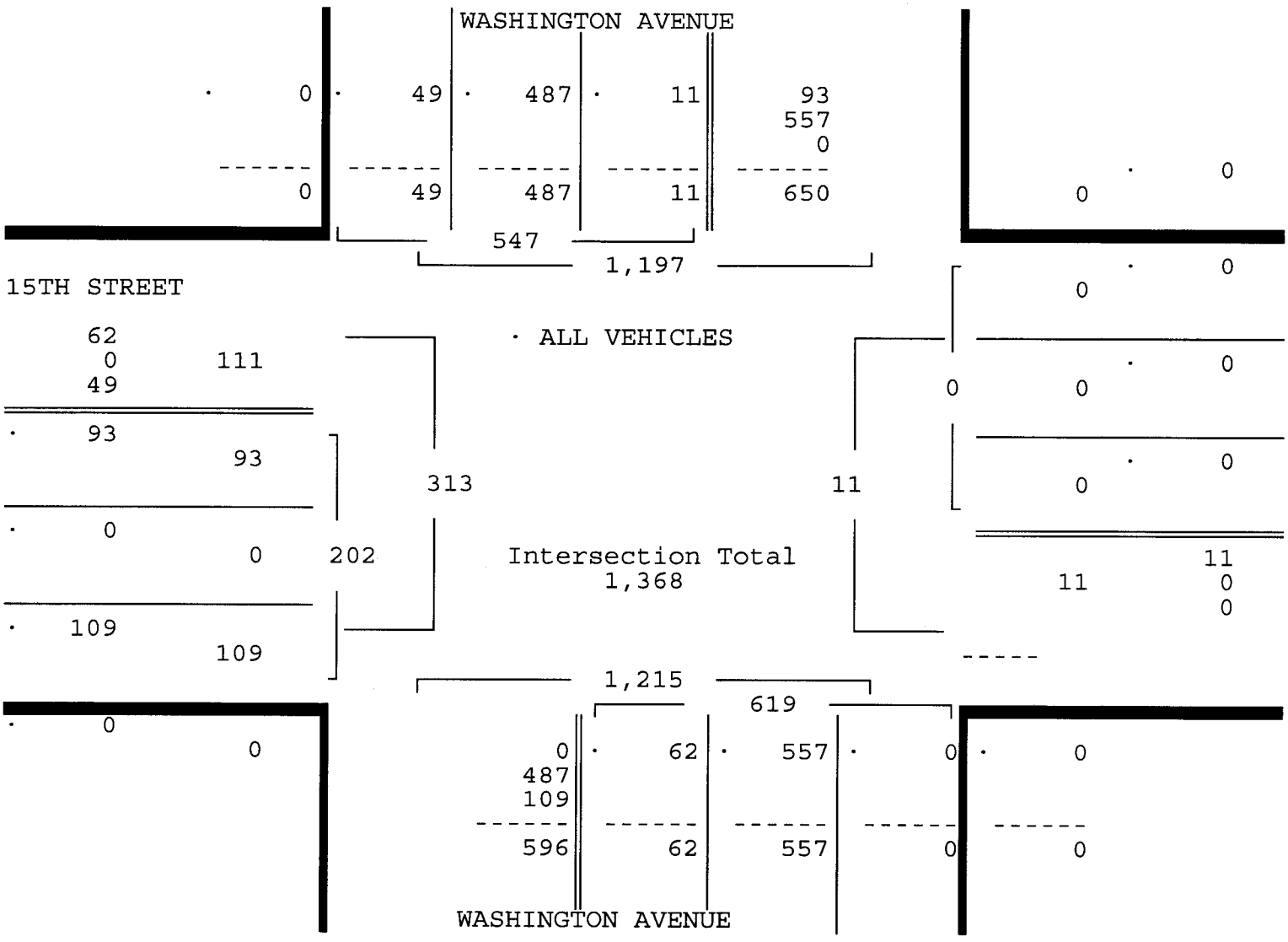
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

15TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: RICHARD MENDEZ
SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 15STWASH

ALL VEHICLES

	WASHINGTON AVENUE From North				----- From East				WASHINGTON AVENUE From South				15TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 08/26/16																	
Peak start 16:00					16:00				16:00				16:00				
Volume	11	0	487	49	0	0	0	0	6	56	557	0	0	93	0	109	
Percent	2%	0%	89%	9%	0%	0%	0%	0%	1%	9%	90%	0%	0%	46%	0%	54%	
Pk total	547				0				619				202				
Highest	16:45				16:00				16:45				16:15				
Volume	3	0	142	15	0	0	0	0	1	14	151	0	0	27	0	33	
Hi total	160				0				166				60				
PHF	.85				.0				.93				.84				



TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

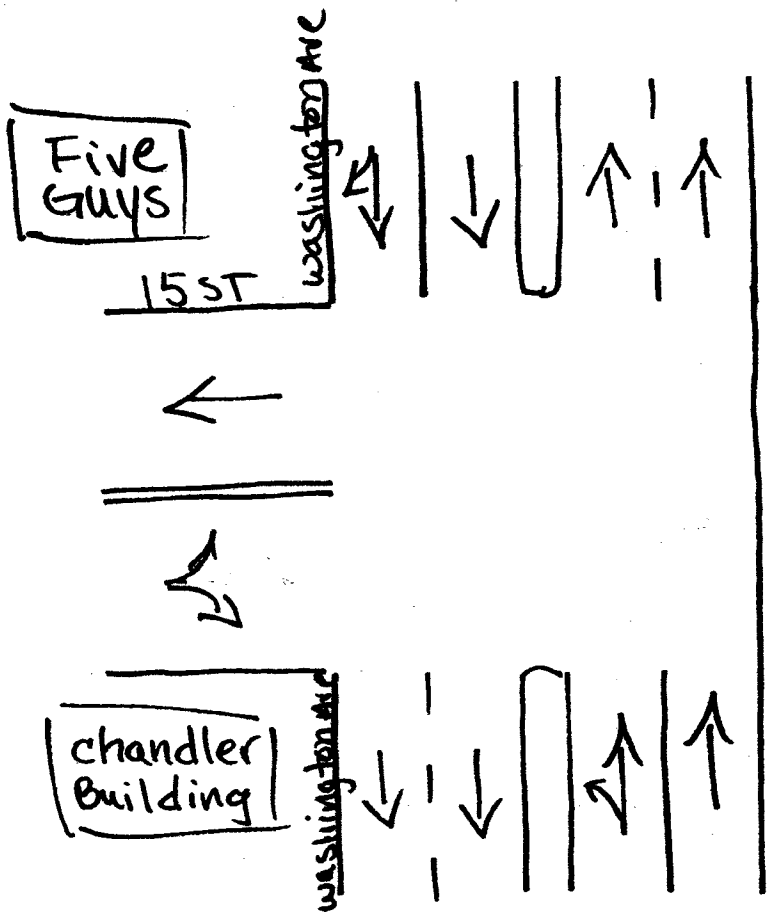
15TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: RICHARD MENDEZ
SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 15STWASH

PEDESTRIANS & BIKES

	WASHINGTON AVENUE From North				----- From East				WASHINGTON AVENUE From South				15TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/26/16																	
16:00	0	1	0	25	0	0	0	0	0	1	0	19	0	2	0	88	136
16:15	0	2	0	9	0	0	0	0	0	1	0	32	0	0	0	81	125
16:30	0	1	0	16	0	0	0	0	0	2	0	25	0	1	0	53	98
16:45	0	2	0	36	0	0	0	0	0	0	0	17	0	2	0	84	141
Hr Total	0	6	0	86	0	0	0	0	0	4	0	93	0	5	0	306	500
17:00	0	0	0	16	0	0	0	0	0	4	0	21	0	4	0	93	138
17:15	0	3	0	10	0	0	0	0	0	1	0	20	0	3	0	89	126
17:30	0	1	0	16	0	0	0	0	0	0	0	22	0	1	0	72	112
17:45	0	3	0	19	0	0	0	0	0	3	0	20	0	1	0	87	133
Hr Total	0	7	0	61	0	0	0	0	0	8	0	83	0	9	0	341	509
18:00	0	2	0	30	0	0	0	0	0	0	0	28	0	3	0	71	134
18:15	0	1	0	34	0	0	0	0	0	0	0	18	0	5	0	105	163
18:30	0	3	0	19	0	0	0	0	0	0	0	43	0	0	0	94	159
18:45	0	0	0	43	0	0	0	0	0	1	0	40	0	3	0	85	172
Hr Total	0	6	0	126	0	0	0	0	0	1	0	129	0	11	0	355	628
TOTAL	0	19	0	273	0	0	0	0	0	13	0	305	0	25	0	1002	1637

North



Miami beach, Florida
January 20, 2015
drawn by: Luis Palomino
Signalized ✓

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

16TH STREET & DREXEL AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STDREX
Page : 1

ALL VEHICLES

	DREXEL AVENUE From North				16TH STREET From East				DREXEL AVENUE From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
16:00	0	2	3	3	0	5	59	6	0	2	2	5	1	7	58	5	158
16:15	0	0	0	6	0	2	54	7	0	2	2	5	0	6	45	8	137
16:30	0	1	1	4	0	5	59	7	0	1	2	4	0	4	38	2	128
16:45	0	2	0	3	0	3	85	7	0	2	1	7	0	6	58	6	180
Hr Total	0	5	4	16	0	15	257	27	0	7	7	21	1	23	199	21	603
17:00	0	1	0	4	0	4	56	8	0	10	2	8	1	5	48	7	154
17:15	0	4	1	5	0	6	63	12	0	5	1	2	1	6	41	9	156
17:30	0	0	0	8	0	5	87	10	0	3	2	4	0	4	45	5	173
17:45	0	1	1	6	0	8	73	8	0	6	1	4	0	8	33	6	155
Hr Total	0	6	2	23	0	23	279	38	0	24	6	18	2	23	167	27	638
18:00	0	0	0	6	0	4	79	12	1	9	1	4	0	9	53	7	185
18:15	1	3	0	5	0	2	77	11	1	4	0	9	0	4	35	1	153
18:30	0	1	0	5	0	3	83	6	0	6	2	5	0	1	44	1	157
18:45	0	1	1	3	0	5	60	7	0	4	1	4	0	3	41	4	134
Hr Total	1	5	1	19	0	14	299	36	2	23	4	22	0	17	173	13	629
TOTAL	1	16	7	58	0	52	835	101	2	54	17	61	3	63	539	61	1870

TRAFFIC SURVEY SPECIALISTS, INC.

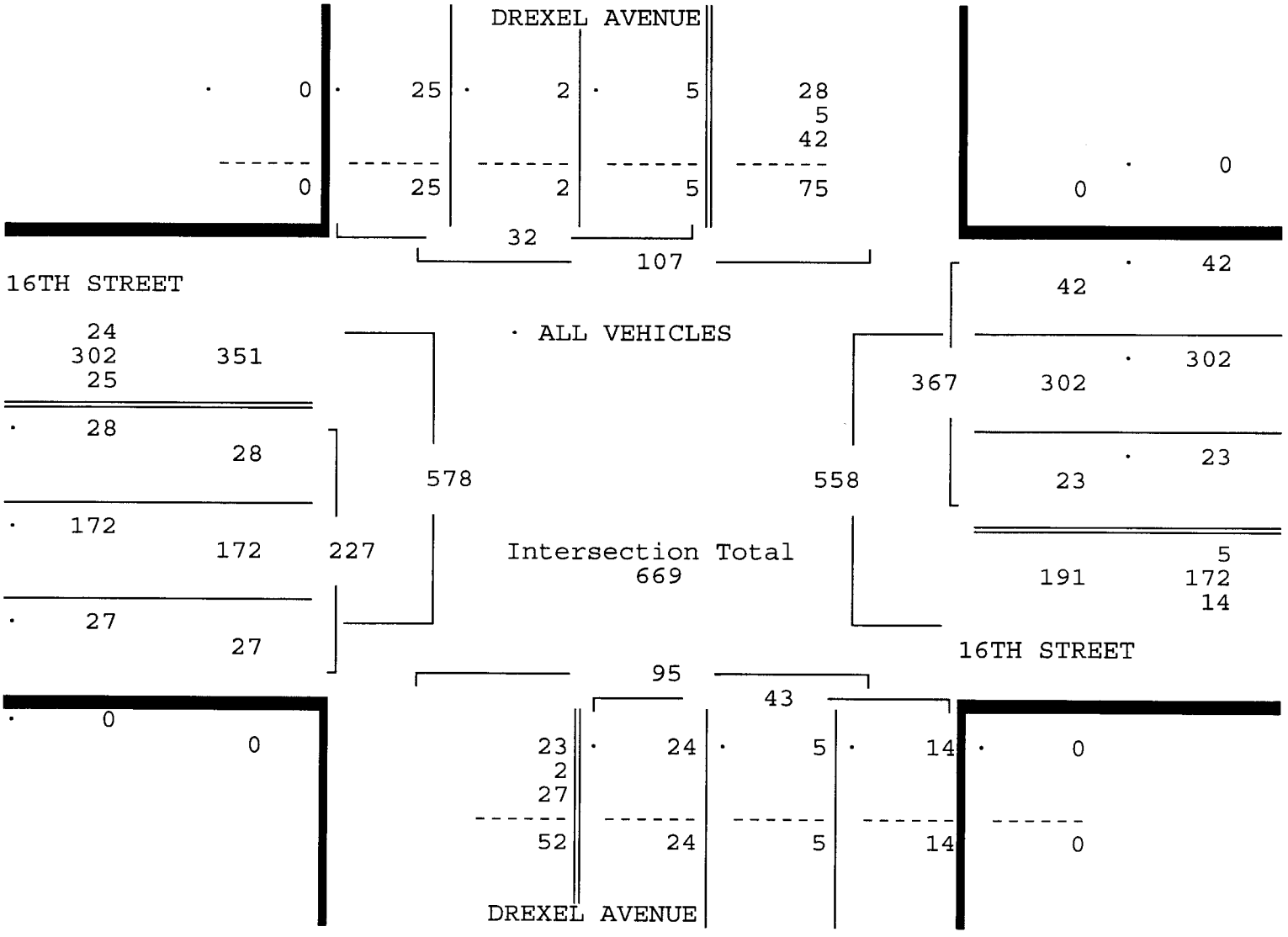
16TH STREET & DREXEL AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STDREX
Page : 2

ALL VEHICLES

	DREXEL AVENUE From North				16TH STREET From East				DREXEL AVENUE From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 08/26/16																	
Peak start 17:15					17:15				17:15				17:15				
Volume	0	5	2	25	0	23	302	42	1	23	5	14	1	27	172	27	
Percent	0%	16%	6%	78%	0%	6%	82%	11%	2%	53%	12%	33%	0%	12%	76%	12%	
Pk total	32				367				43				227				
Highest	17:15				17:30				18:00				18:00				
Volume	0	4	1	5	0	5	87	10	1	9	1	4	0	9	53	7	
Hi total	10				102				15				69				
PHF	.80				.90				.72				.82				



TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

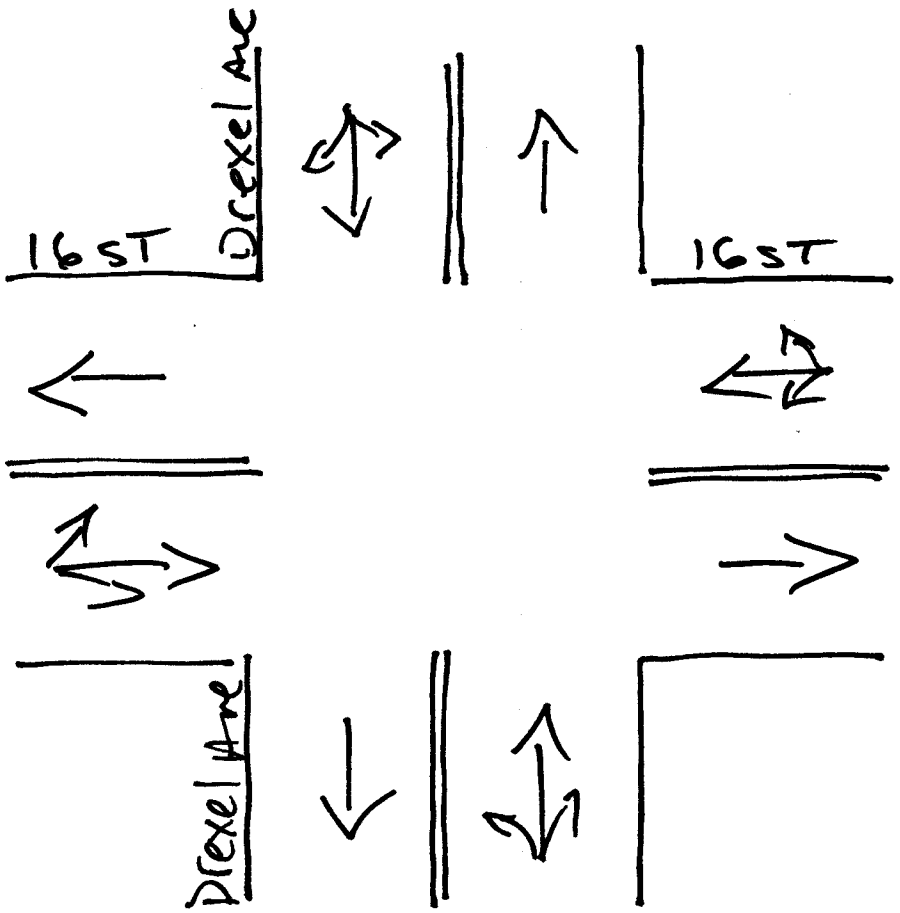
16TH STREET & DREXEL AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STDREX

PEDESTRIANS & BIKES

	DREXEL AVENUE From North				16TH STREET From East				DREXEL AVENUE From South				16TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/26/16																	
16:00	0	10	0	23	0	0	0	3	0	5	0	19	0	0	0	4	64
16:15	0	7	0	14	0	0	0	12	0	7	0	21	0	0	0	14	75
16:30	0	4	0	15	0	0	0	6	0	4	0	13	0	1	0	9	52
16:45	0	5	0	16	0	2	0	18	0	5	0	12	0	0	0	7	65
Hr Total	0	26	0	68	0	2	0	39	0	21	0	65	0	1	0	34	256
17:00	0	4	0	16	0	4	0	3	0	5	0	18	0	2	0	15	67
17:15	0	8	0	17	0	1	0	13	0	5	0	10	0	0	0	10	64
17:30	0	4	0	7	0	0	0	8	0	7	0	19	0	1	0	3	49
17:45	0	10	0	7	0	2	0	7	0	17	0	14	0	2	0	5	64
Hr Total	0	26	0	47	0	7	0	31	0	34	0	61	0	5	0	33	244
18:00	0	6	0	12	0	2	0	10	0	11	0	17	0	1	0	5	64
18:15	0	2	0	29	0	0	0	9	0	3	0	10	0	0	0	12	65
18:30	0	5	0	19	0	0	0	10	0	7	0	17	0	0	0	8	66
18:45	0	5	0	17	0	0	0	12	0	3	0	17	0	0	0	4	58
Hr Total	0	18	0	77	0	2	0	41	0	24	0	61	0	1	0	29	253
TOTAL	0	70	0	192	0	11	0	111	0	79	0	187	0	7	0	96	753

North



Miami Bch, Florida
August 25, 2016
drawn by: Luis Palomino
signalized

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

16TH STREET & PARKING GARAGE
MIAMI BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STGARA
Page : 1

ALL VEHICLES

	PARKING GARAGE From North				16TH STREET From East				----- From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
16:00	0	0	0	1	0	0	68	3	0	0	0	0	1	2	54	0	129
16:15	0	1	0	5	0	0	58	11	0	0	0	0	1	4	43	0	123
16:30	0	4	0	10	1	0	63	2	0	0	0	0	0	3	39	0	122
16:45	0	5	0	12	0	0	81	6	0	0	0	0	0	2	59	0	165
Hr Total	0	10	0	28	1	0	270	22	0	0	0	0	2	11	195	0	539
17:00	0	4	0	5	0	0	64	9	0	0	0	0	0	0	59	0	141
17:15	0	4	0	5	0	0	75	4	0	0	0	0	0	2	41	0	131
17:30	0	5	0	13	0	0	89	2	0	0	0	0	0	4	45	0	158
17:45	0	2	0	12	0	0	75	2	0	0	0	0	0	1	37	0	129
Hr Total	0	15	0	35	0	0	303	17	0	0	0	0	0	7	182	0	559
18:00	0	3	0	16	0	0	77	2	0	0	0	0	0	1	57	0	156
18:15	0	3	0	12	0	0	80	2	0	0	0	0	0	4	44	0	145
18:30	0	3	0	7	0	0	83	3	0	0	0	0	0	2	49	0	147
18:45	0	3	0	13	0	0	57	4	0	0	0	0	0	2	44	0	123
Hr Total	0	12	0	48	0	0	297	11	0	0	0	0	0	9	194	0	571
TOTAL	0	37	0	111	1	0	870	50	0	0	0	0	2	27	571	0	1669

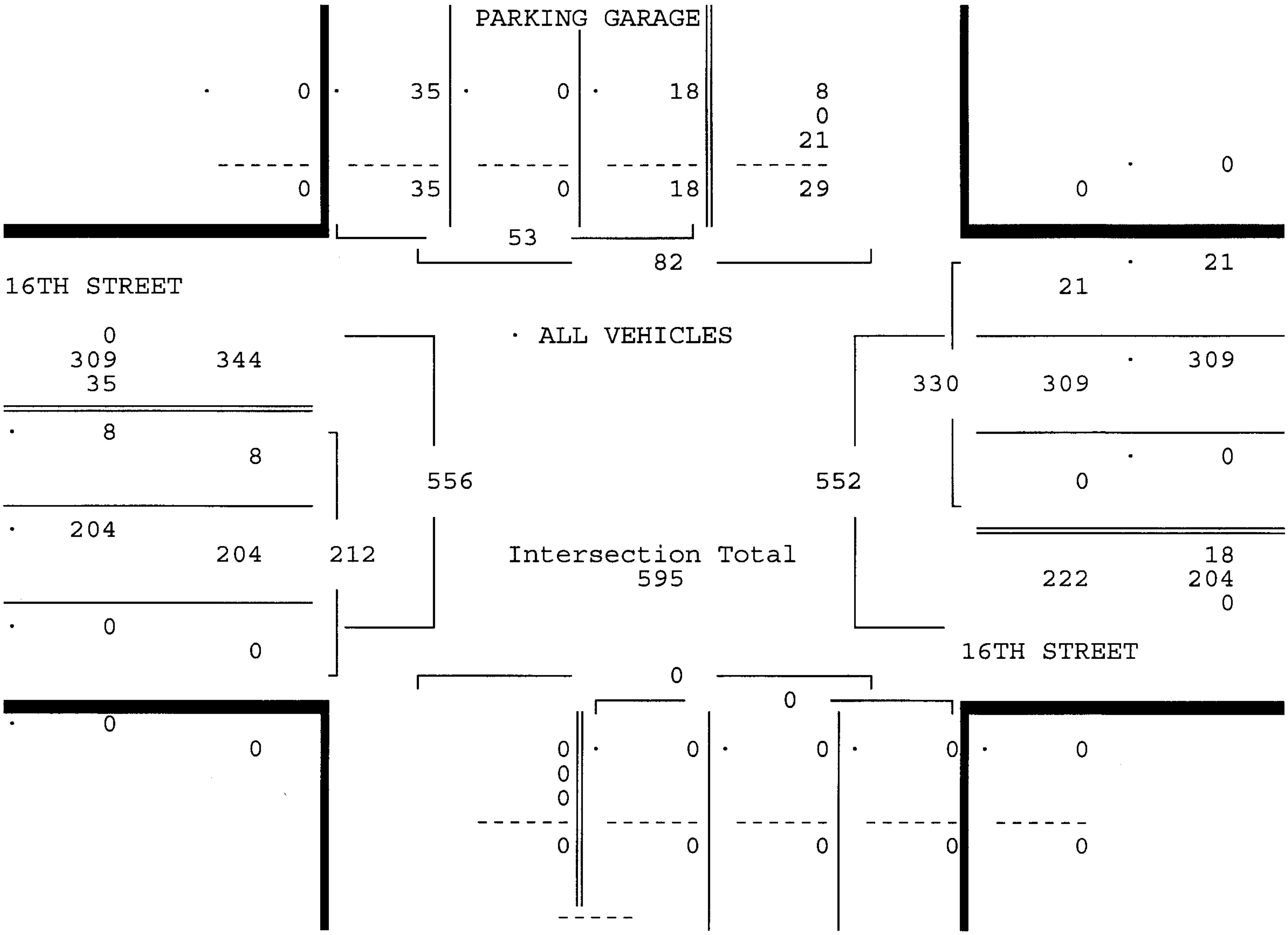
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

16TH STREET & PARKING GARAGE
MIAMI BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STGARA

ALL VEHICLES

	PARKING GARAGE From North				16TH STREET From East				----- From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/26/16																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 08/26/16																	
Peak start	16:45				16:45				16:45				16:45				
Volume	0	18	0	35	0	0	309	21	0	0	0	0	0	8	204	0	
Percent	0%	34%	0%	66%	0%	0%	94%	6%	0%	0%	0%	0%	0%	4%	96%	0%	
Pk total	53				330				0				212				
Highest	17:30				17:30				16:00				16:45				
Volume	0	5	0	13	0	0	89	2	0	0	0	0	0	2	59	0	
Hi total	18				91				0				61				
PHF	.74				.91				.0				.87				



TRAFFIC SURVEY SPECIALISTS, INC.

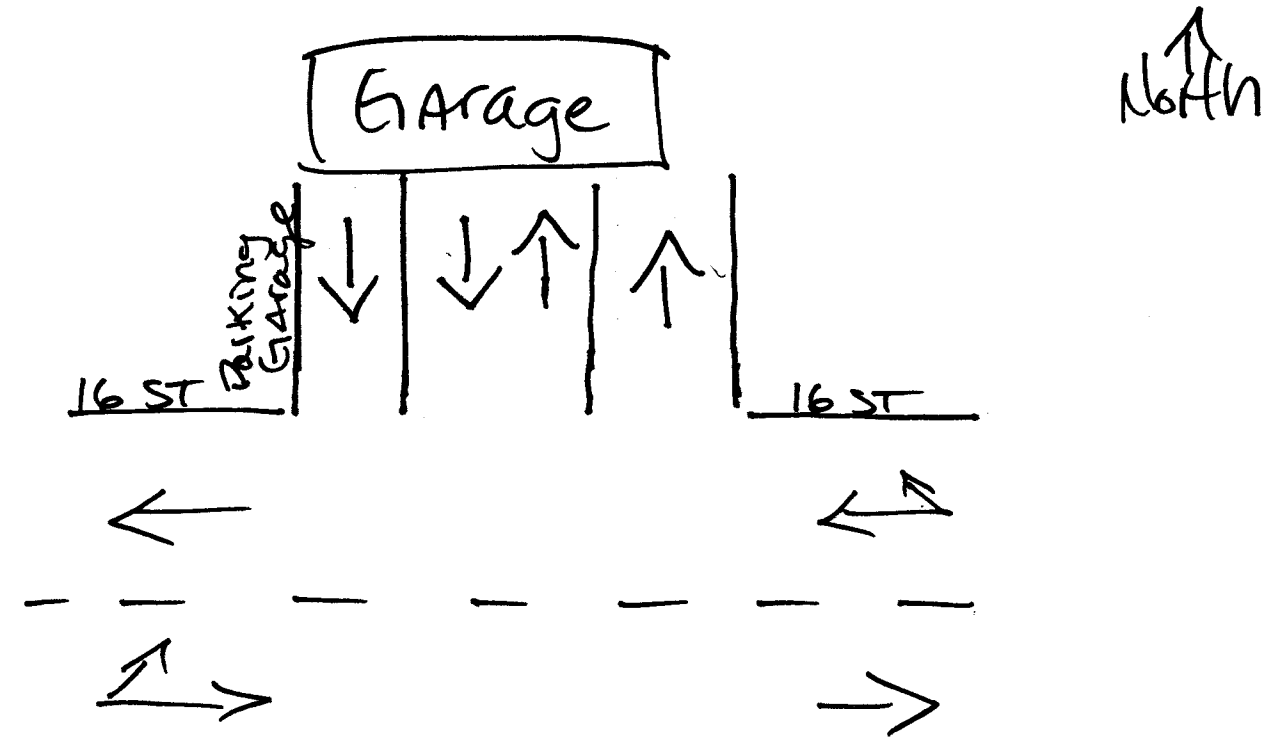
16TH STREET & PARKING GARAGE
MIAMI BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160180
Start Date: 08/26/16
File I.D. : 16STGARA
Page : 1

PEDESTRIANS & BIKES

	PARKING GARAGE From North				16TH STREET From East				----- From South				16TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/26/16																	
16:00	0	2	0	15	0	0	0	2	0	0	0	0	0	0	0	0	19
16:15	0	4	0	29	0	0	0	0	0	0	0	0	0	0	0	0	33
16:30	0	1	0	16	0	0	0	0	0	0	0	0	0	0	0	0	17
16:45	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	19
Hr Total	0	7	0	79	0	0	0	2	0	0	0	0	0	0	0	0	88
17:00	0	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	10
17:15	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	6	20
17:30	0	0	0	10	0	0	0	1	0	0	0	0	0	0	0	0	11
17:45	0	3	0	11	0	0	0	0	0	0	0	0	0	0	0	3	17
Hr Total	0	5	0	43	0	0	0	1	0	0	0	0	0	0	0	9	58
18:00	0	2	0	21	0	0	0	3	0	0	0	0	0	0	0	1	27
18:15	0	2	0	27	0	0	0	4	0	0	0	0	0	0	0	1	34
18:30	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
18:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Hr Total	0	4	0	60	0	0	0	7	0	0	0	0	0	0	0	3	74
TOTAL	0	16	0	182	0	0	0	10	0	0	0	0	0	0	0	12	220



Miami Bch, Florida
August 25, 2016
drawn by: Luis Palomino©
not signalized

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
Phone (561) 272-3255

16TH STREET & ALTON ROAD
MIAMI BEACH, FLORIDA
COUNTED BY: MARCELLO MINO-WILZEK
SIGNALIZED

Site Code : 00160041
Start Date: 03/04/16
File I.D. : 16STALTR
Page : 1

ALL VEHICLES

	ALTON ROAD From North				16TH STREET From East				ALTON ROAD From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/04/16																	
16:30	0	34	192	15	0	28	12	31	0	14	240	43	0	11	20	12	652
16:45	2	23	174	8	0	21	15	33	0	8	223	36	0	17	15	10	585
17:00	0	35	201	16	0	25	15	28	1	16	221	29	0	9	10	16	622
17:15	2	31	208	14	0	27	12	22	1	9	206	31	0	14	17	11	605
Hr Total	4	123	775	53	0	101	54	114	2	47	890	139	0	51	62	49	2464
17:30	0	28	186	14	1	23	11	36	0	12	234	28	0	14	16	9	612
17:45	0	23	211	6	0	25	23	30	0	11	215	28	0	4	15	8	599
18:00	0	28	172	8	0	22	10	30	0	13	211	28	1	7	13	13	556
18:15	0	29	201	7	0	20	16	28	0	14	226	26	0	9	15	16	607
Hr Total	0	108	770	35	1	90	60	124	0	50	886	110	1	34	59	46	2374
18:30	0	30	197	15	0	24	17	31	1	11	211	20	0	5	10	13	585
18:45	0	29	198	11	0	26	10	28	0	18	247	31	0	8	16	12	634
Hr Total	0	59	395	26	0	50	27	59	1	29	458	51	0	13	26	25	1219
TOTAL	4	290	1940	114	1	241	141	297	3	126	2234	300	1	98	147	120	6057

Traffic Survey Specialists, Inc.
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Delray Beach, Florida 33483
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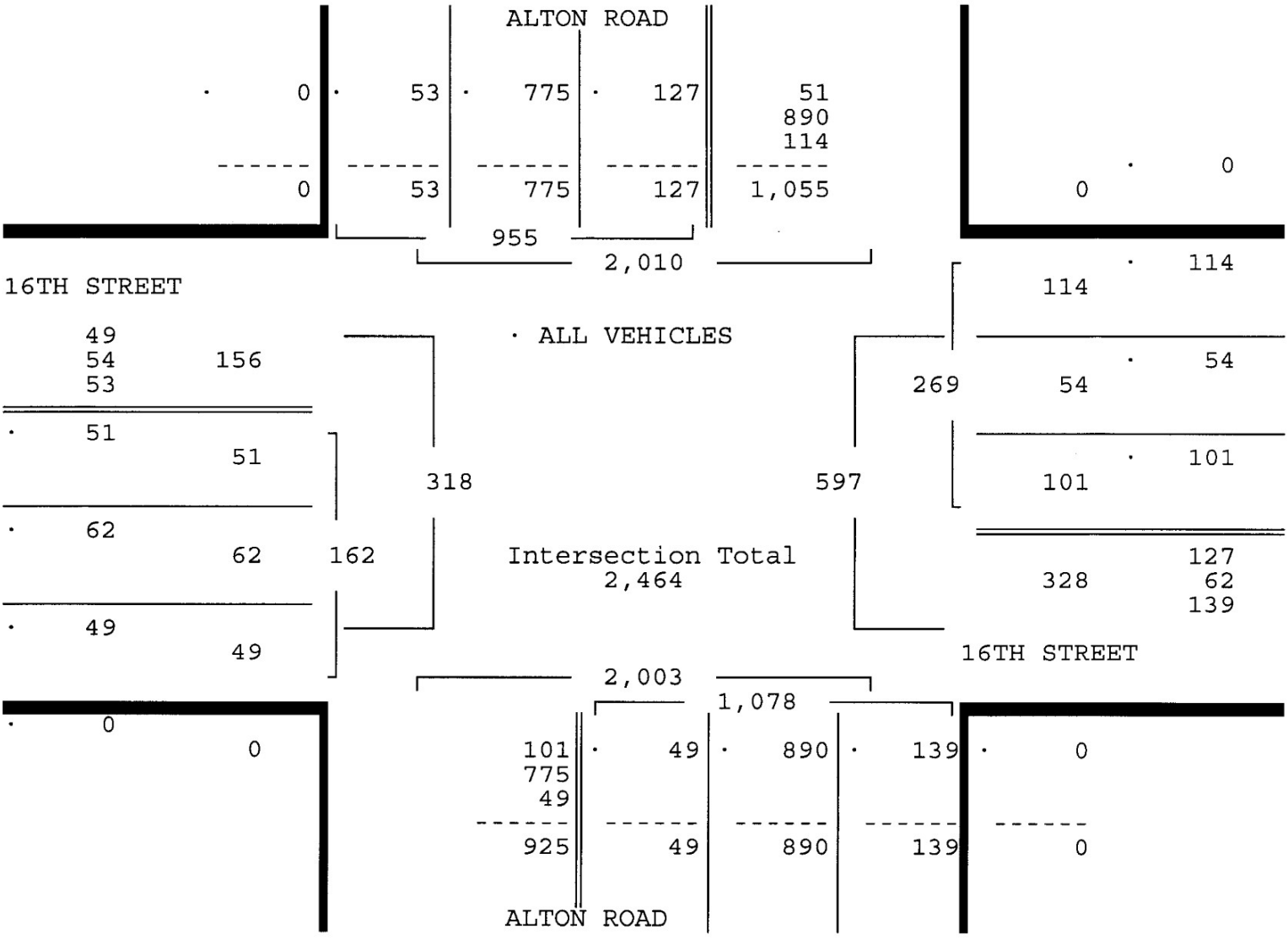
16TH STREET & ALTON ROAD
MIAMI BEACH, FLORIDA
COUNTED BY: MARCELLO MINO-WILZEK
SIGNALIZED

Site Code : 00160041
Start Date: 03/04/16
File I.D. : 16STALTR

ALL VEHICLES

	ALTON ROAD From North				16TH STREET From East				ALTON ROAD From South				16TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/04/16																	
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 03/04/16																	
Peak start 16:30					16:30				16:30				16:30				
Volume	4	123	775	53	0	101	54	114	2	47	890	139	0	51	62	49	
Percent	0%	13%	81%	6%	0%	38%	20%	42%	0%	4%	83%	13%	0%	31%	38%	30%	
Pk total	955				269				1078				162				
Highest	17:15				16:30				16:30				16:30				
Volume	2	31	208	14	0	28	12	31	0	14	240	43	0	11	20	12	
Hi total	255				71				297				43				
PHF	.94				.95				.91				.94				



Traffic Survey Specialists, Inc.
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Delray Beach, Florida 33483
Phone (561) 272-3255

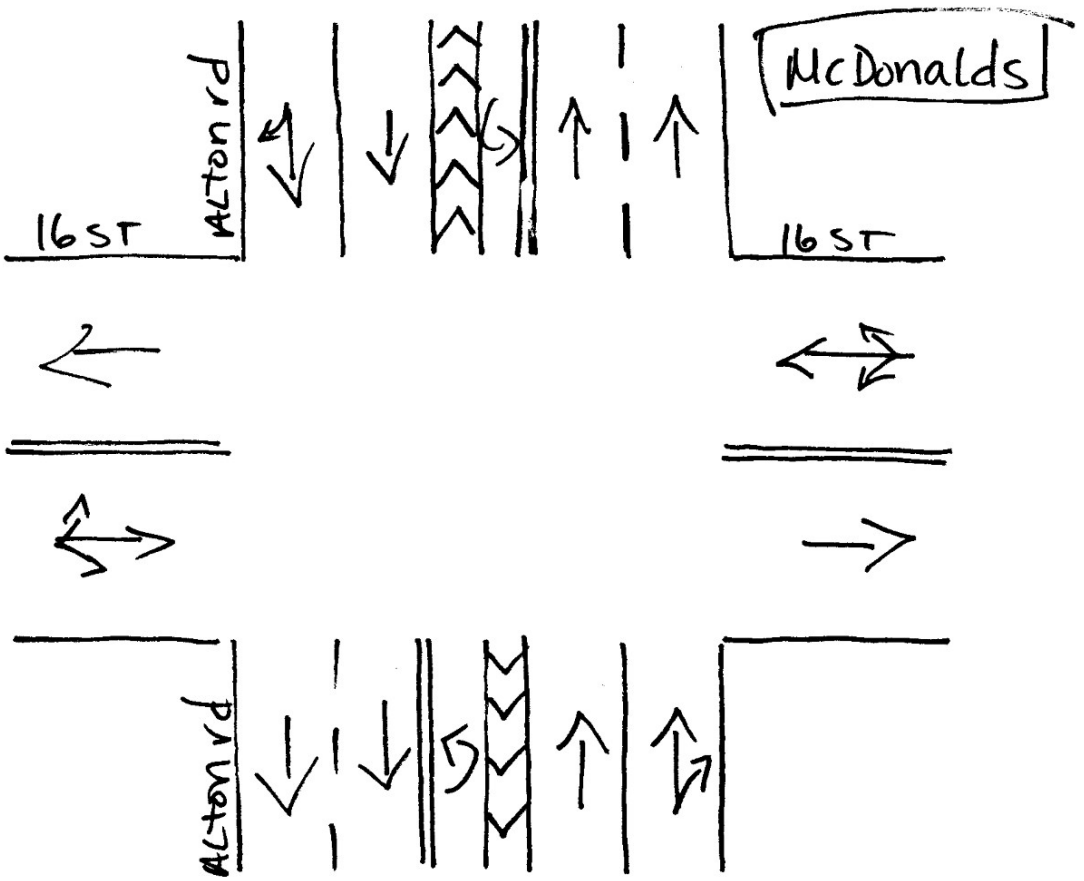
16TH STREET & ALTON ROAD
MIAMI BEACH, FLORIDA
COUNTED BY: MARCELLO MINO-WILZEK
SIGNALIZED

Site Code : 00160041
Start Date: 03/04/16
File I.D. : 16STALTR
Page : 1

PEDESTRIANS & BIKES

	ALTON ROAD From North				16TH STREET From East				ALTON ROAD From South				16TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/04/16																	
16:30	0	2	0	7	0	0	0	20	0	0	0	2	0	0	0	5	36
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	2	0	7	0	0	0	20	0	0	0	2	0	0	0	5	36
17:30	0	0	0	11	0	0	0	0	0	0	0	8	0	3	0	3	25
17:45	0	0	0	23	0	0	0	9	0	2	0	12	0	2	0	19	67
18:00	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	11	30
18:15	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14
Hr Total	0	0	0	48	0	0	0	28	0	2	0	20	0	5	0	33	136
18:30	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	14	40
18:45	0	10	0	28	0	0	0	9	0	1	0	5	0	0	0	13	66
Hr Total	0	10	0	28	0	0	0	35	0	1	0	5	0	0	0	27	106
TOTAL	0	12	0	83	0	0	0	83	0	3	0	27	0	5	0	65	278

North



Miami Beach, Florida
February 24, 2016
drawn by: Luis Palomino
signalized

APPENDIX D

Peak Season Conversion Factors and Growth Rate Calculations

2014 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8701 MIAMI-DADE SOUTH

MOCF: 0.99

WEEK	DATES	SF	PSCF
1	01/01/2014 - 01/04/2014	0.98	0.99
2	01/05/2014 - 01/11/2014	1.01	1.02
3	01/12/2014 - 01/18/2014	1.03	1.04
4	01/19/2014 - 01/25/2014	1.02	1.03
5	01/26/2014 - 02/01/2014	1.01	1.02
6	02/02/2014 - 02/08/2014	1.00	1.01
7	02/09/2014 - 02/15/2014	1.00	1.01
8	02/16/2014 - 02/22/2014	0.99	1.00
* 9	02/23/2014 - 03/01/2014	0.99	1.00
*10	03/02/2014 - 03/08/2014	0.99	1.00
*11	03/09/2014 - 03/15/2014	0.99	1.00
*12	03/16/2014 - 03/22/2014	0.99	1.00
*13	03/23/2014 - 03/29/2014	0.99	1.00
*14	03/30/2014 - 04/05/2014	0.99	1.00
*15	04/06/2014 - 04/12/2014	0.99	1.00
*16	04/13/2014 - 04/19/2014	0.99	1.00
*17	04/20/2014 - 04/26/2014	0.99	1.00
*18	04/27/2014 - 05/03/2014	0.99	1.00
*19	05/04/2014 - 05/10/2014	0.99	1.00
*20	05/11/2014 - 05/17/2014	0.99	1.00
*21	05/18/2014 - 05/24/2014	0.99	1.00
22	05/25/2014 - 05/31/2014	1.00	1.01
23	06/01/2014 - 06/07/2014	1.01	1.02
24	06/08/2014 - 06/14/2014	1.01	1.02
25	06/15/2014 - 06/21/2014	1.02	1.03
26	06/22/2014 - 06/28/2014	1.02	1.03
27	06/29/2014 - 07/05/2014	1.03	1.04
28	07/06/2014 - 07/12/2014	1.03	1.04
29	07/13/2014 - 07/19/2014	1.04	1.05
30	07/20/2014 - 07/26/2014	1.03	1.04
31	07/27/2014 - 08/02/2014	1.02	1.03
32	08/03/2014 - 08/09/2014	1.02	1.03
33	08/10/2014 - 08/16/2014	1.01	1.02
34	08/17/2014 - 08/23/2014	1.00	1.01
35	08/24/2014 - 08/30/2014	1.01	1.02
36	08/31/2014 - 09/06/2014	1.01	1.02
37	09/07/2014 - 09/13/2014	1.01	1.02
38	09/14/2014 - 09/20/2014	1.01	1.02
39	09/21/2014 - 09/27/2014	1.01	1.02
40	09/28/2014 - 10/04/2014	1.00	1.01
41	10/05/2014 - 10/11/2014	1.00	1.01
42	10/12/2014 - 10/18/2014	0.99	1.00
43	10/19/2014 - 10/25/2014	0.99	1.00
44	10/26/2014 - 11/01/2014	1.00	1.01
45	11/02/2014 - 11/08/2014	1.00	1.01
46	11/09/2014 - 11/15/2014	1.00	1.01
47	11/16/2014 - 11/22/2014	1.00	1.01
48	11/23/2014 - 11/29/2014	1.00	1.01
49	11/30/2014 - 12/06/2014	0.99	1.00
50	12/07/2014 - 12/13/2014	0.99	1.00
51	12/14/2014 - 12/20/2014	0.98	0.99
52	12/21/2014 - 12/27/2014	1.01	1.02
53	12/28/2014 - 12/31/2014	1.03	1.04

* PEAK SEASON

Growth Rate Trend Analysis Calcualtions

Description	Station #				
	8566	8567	8531	8514	
Trend Growth Rate(1)	-5.28	-2.87	-0.18	3.54	
Adjusted Growth Rate	0.50	0.50	0.50	3.54	
Average Growth Rate					1.26
Growth Rate Used					**1.50**

Notes:

1: Refer to Trend Analysis Chart

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2015 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8414 - WASHINGTON AVE, 200 FT N OF 12 ST (2011 OFF SYSTEM CYCLE)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2015	20300 C	N 9800	S 10500	9.00	57.40	17.50
2014	21000 C	N 10000	S 11000	9.00	59.30	13.90
2013	18700 F	N 9200	S 9500	9.00	58.90	16.20
2012	18700 C	N 9200	S 9500	9.00	59.70	16.00

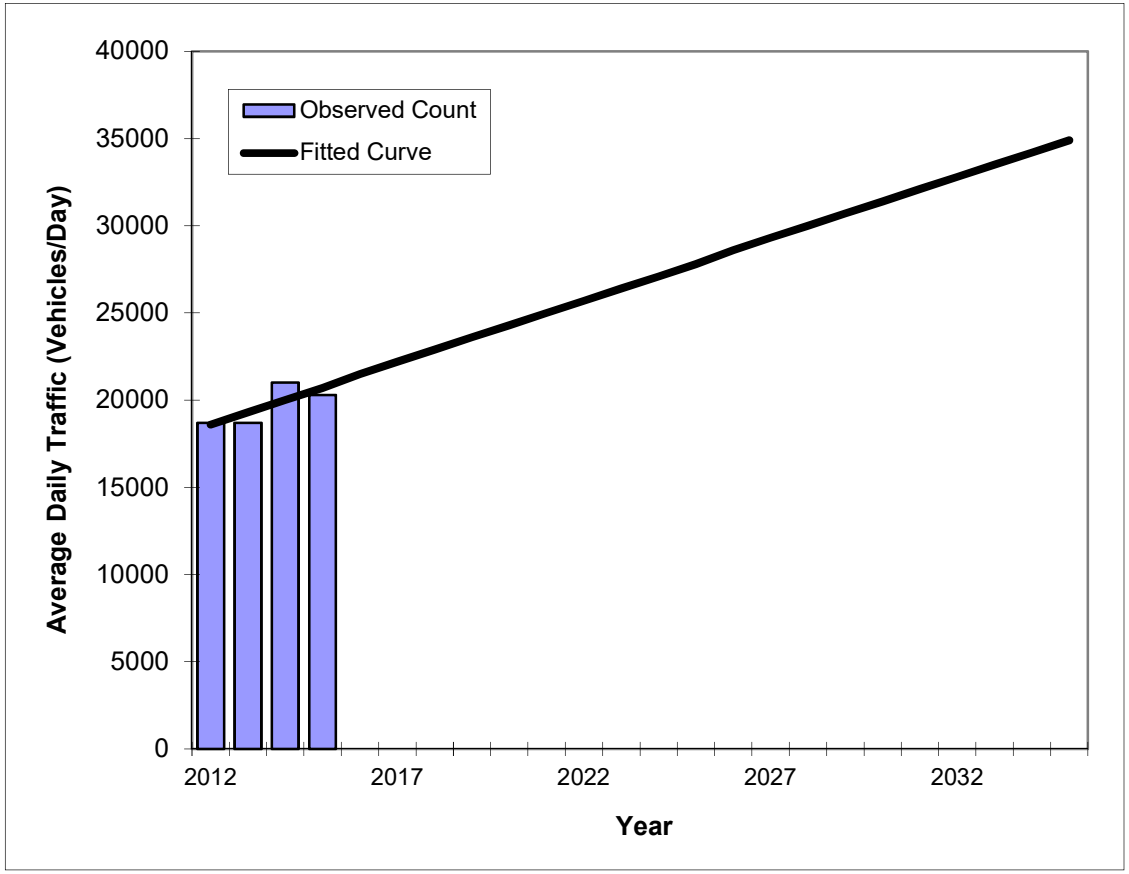
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

WASHINGTON AVE -- 200' N OF 12 ST

PIN#	0
Location	4

County:	Miami-Dade (87)
Station #:	8414
Highway:	WASHINGTON AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2012	18700	18600
2013	18700	19300
2014	21000	20000
2015	20300	20700
2016 Opening Year Trend		
2016	N/A	21500
2017 Mid-Year Trend		
2017	N/A	22200
2018 Design Year Trend		
2018	N/A	22900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	710
Trend R-squared:	62.27%
Trend Annual Historic Growth Rate:	3.76%
Trend Growth Rate (2015 to Design Year):	3.54%
Printed:	27-Oct-16

Straight Line Growth Option

***Axle-Adjusted**

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2015 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8531 - 17TH ST, 200' EAST OFMERIDIAN AVE (2011 OFF SYSTEM CYCLE)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2015	19000 C	E 8500	W 10500	9.00	57.40	7.10
2014	18700 S	E 9600	W 9100	9.00	59.30	10.70
2013	18900 F	E 9700	W 9200	9.00	58.90	16.20
2012	19000 C	E 9800	W 9200	9.00	59.70	16.00

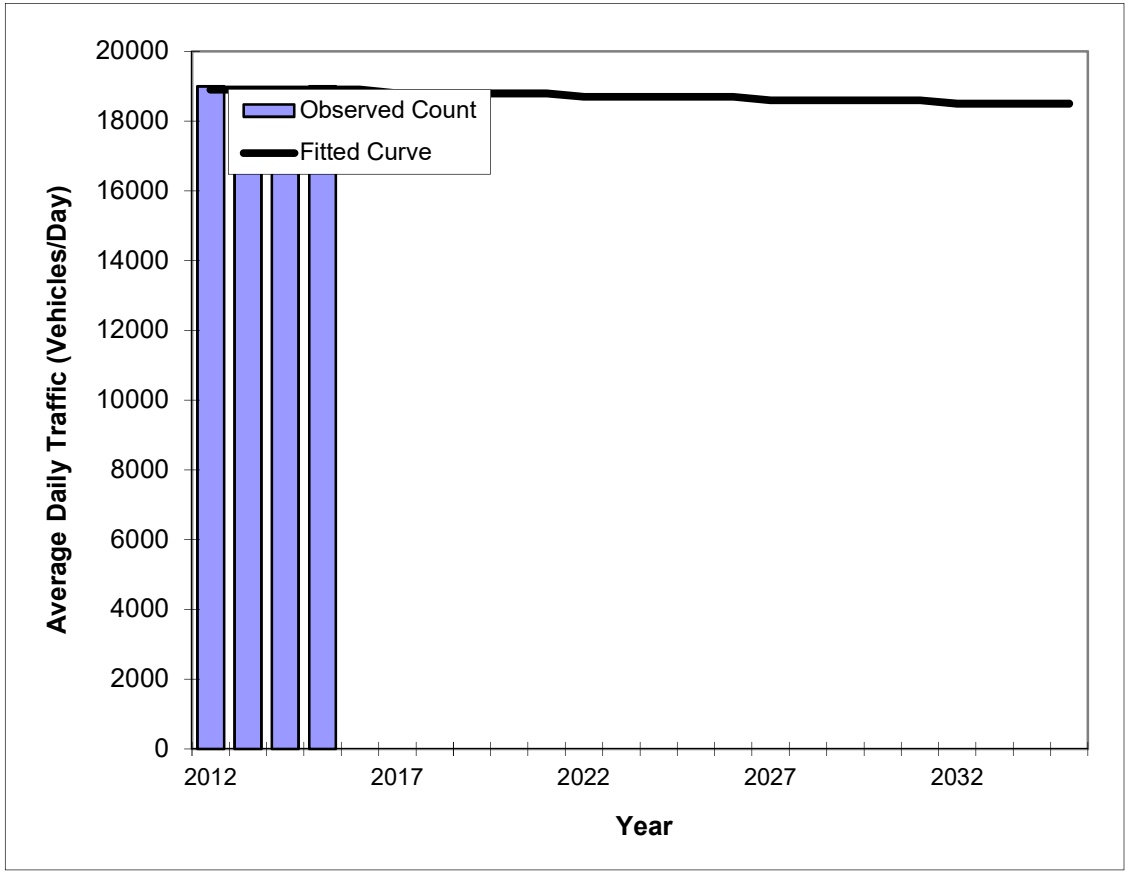
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

17 ST -- 200' E OF MERIDIAN AVE

PIN#	0
Location	3

County:	Miami-Dade (87)
Station #:	8531
Highway:	17 ST



Year	Traffic (ADT/AADT) Count*	Trend**
2012	19000	18900
2013	18900	18900
2014	18700	18900
2015	19000	18900
2016 Opening Year Trend		
2016	N/A	18900
2017 Mid-Year Trend		
2017	N/A	18800
2018 Design Year Trend		
2018	N/A	18800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-20
Trend R-squared:	3.33%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2015 to Design Year):	-0.18%
Printed:	27-Oct-16

Straight Line Growth Option

***Axle-Adjusted**

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2015 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8566 - 15 ST, 200' EAST OFJEFFERSON AVE (2011 OFF SYSTEM CYCLE)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2015	7800 C	E 4700	W 3100	9.00	57.40	7.10
2014	9100 S			9.00	59.30	10.70
2013	9200 F	0	0	9.00	58.90	16.20
2012	9200 C	E 0	W 0	9.00	59.70	16.00

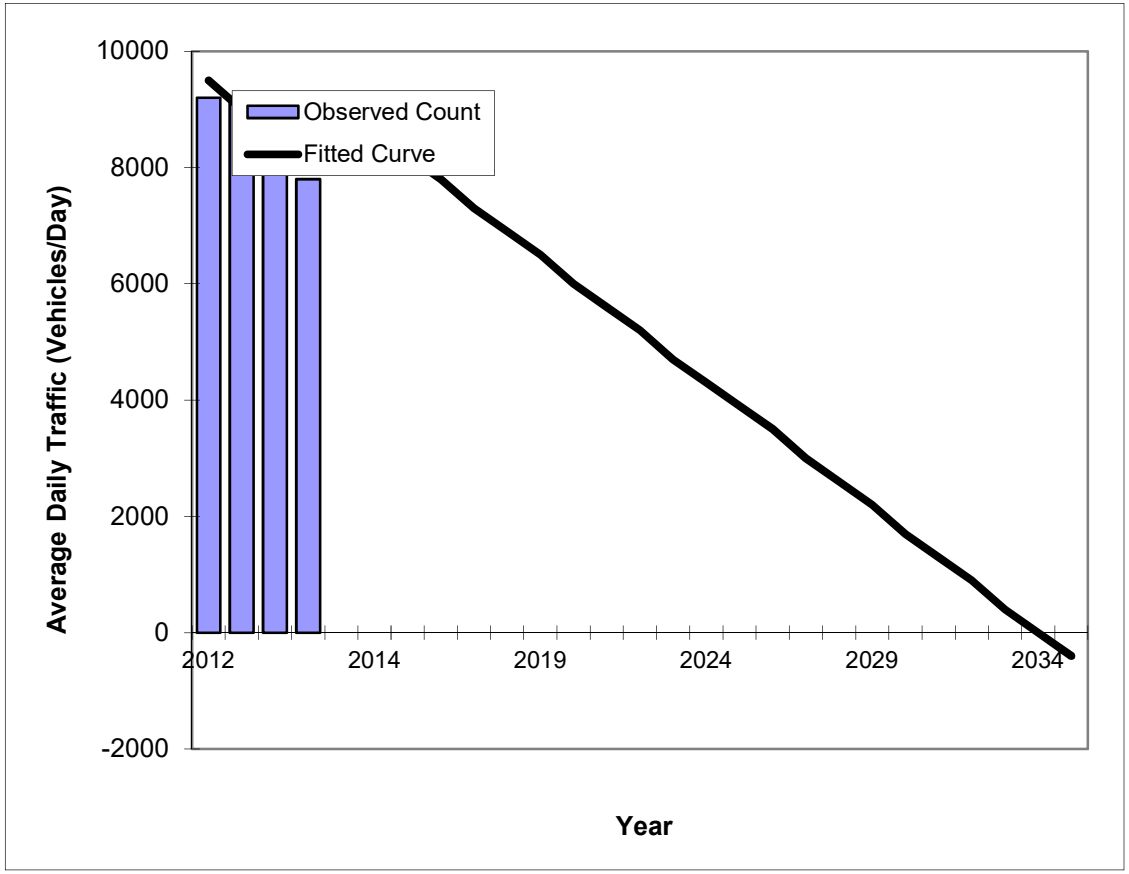
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

15 ST -- 200' E OF JEFFERSON AVE

PIN#	0
Location	1

County:	Miami-Dade (87)
Station #:	8566
Highway:	15 ST



Year	Traffic (ADT/AADT) Count*	Trend**
2012	9200	9500
2013	9200	9000
2014	9100	8600
2015	7800	8200
2016 Opening Year Trend		
2016	N/A	7800
2017 Mid-Year Trend		
2017	N/A	7300
2018 Design Year Trend		
2018	N/A	6900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-430
Trend R-squared:	65.68%
Trend Annual Historic Growth Rate:	-4.56%
Trend Growth Rate (2015 to Design Year):	-5.28%
Printed:	27-Oct-16

Straight Line Growth Option

***Axle-Adjusted**

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2015 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8567 - 16 ST, 200' EAST OFMERIDIAN AVE (2011 OFF SYSTEM CYCLE)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2015	9100 C	E 4400	W 4700	9.00	57.40	7.10
2014	9700 S			9.00	59.30	10.70
2013	9800 F	0	0	9.00	58.90	16.20
2012	9900 C	E 0	W 0	9.00	59.70	16.00

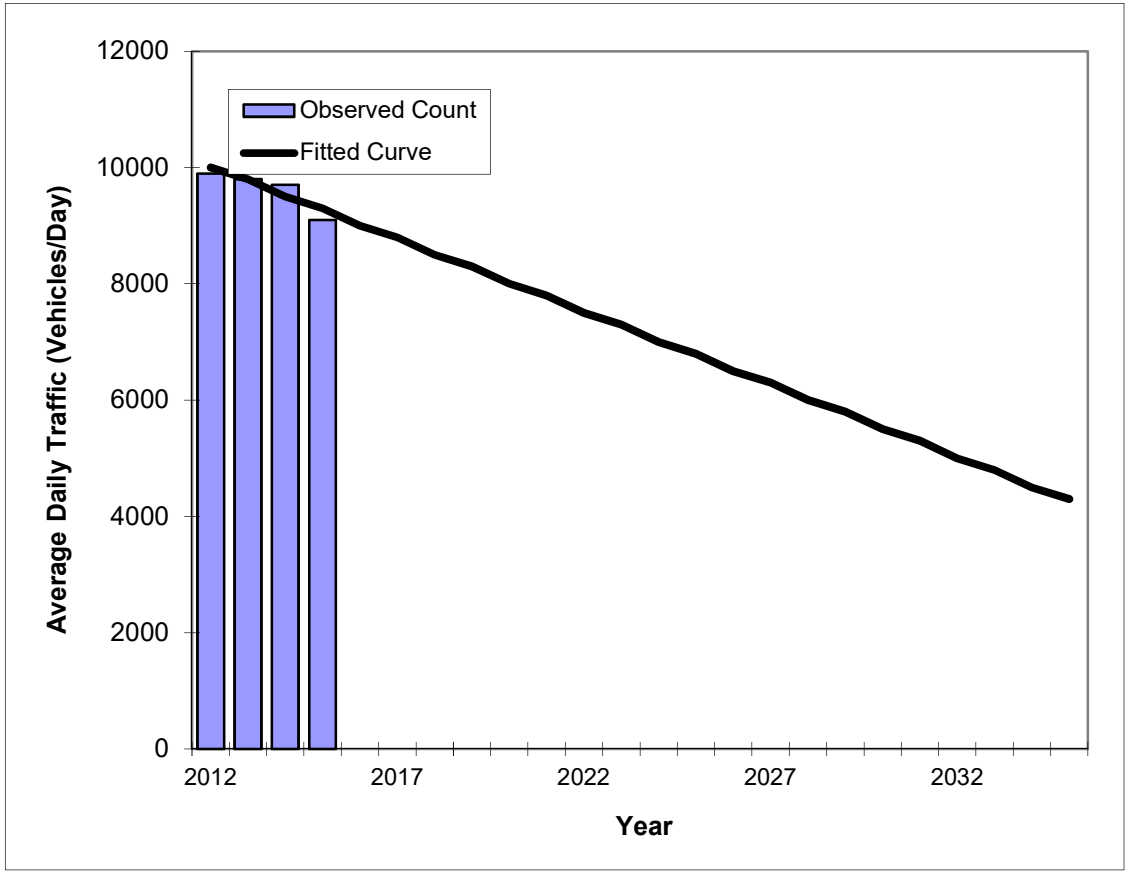
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

16 ST -- 200' E OF MERIDIAN AVE

PIN#	0
Location	2

County:	Miami-Dade (87)
Station #:	8567
Highway:	16 ST



Year	Traffic (ADT/AADT) Count*	Trend**
2012	9900	10000
2013	9800	9800
2014	9700	9500
2015	9100	9300
2016 Opening Year Trend		
2016	N/A	9000
2017 Mid-Year Trend		
2017	N/A	8800
2018 Design Year Trend		
2018	N/A	8500
TRANPLAN Forecasts/Trends		

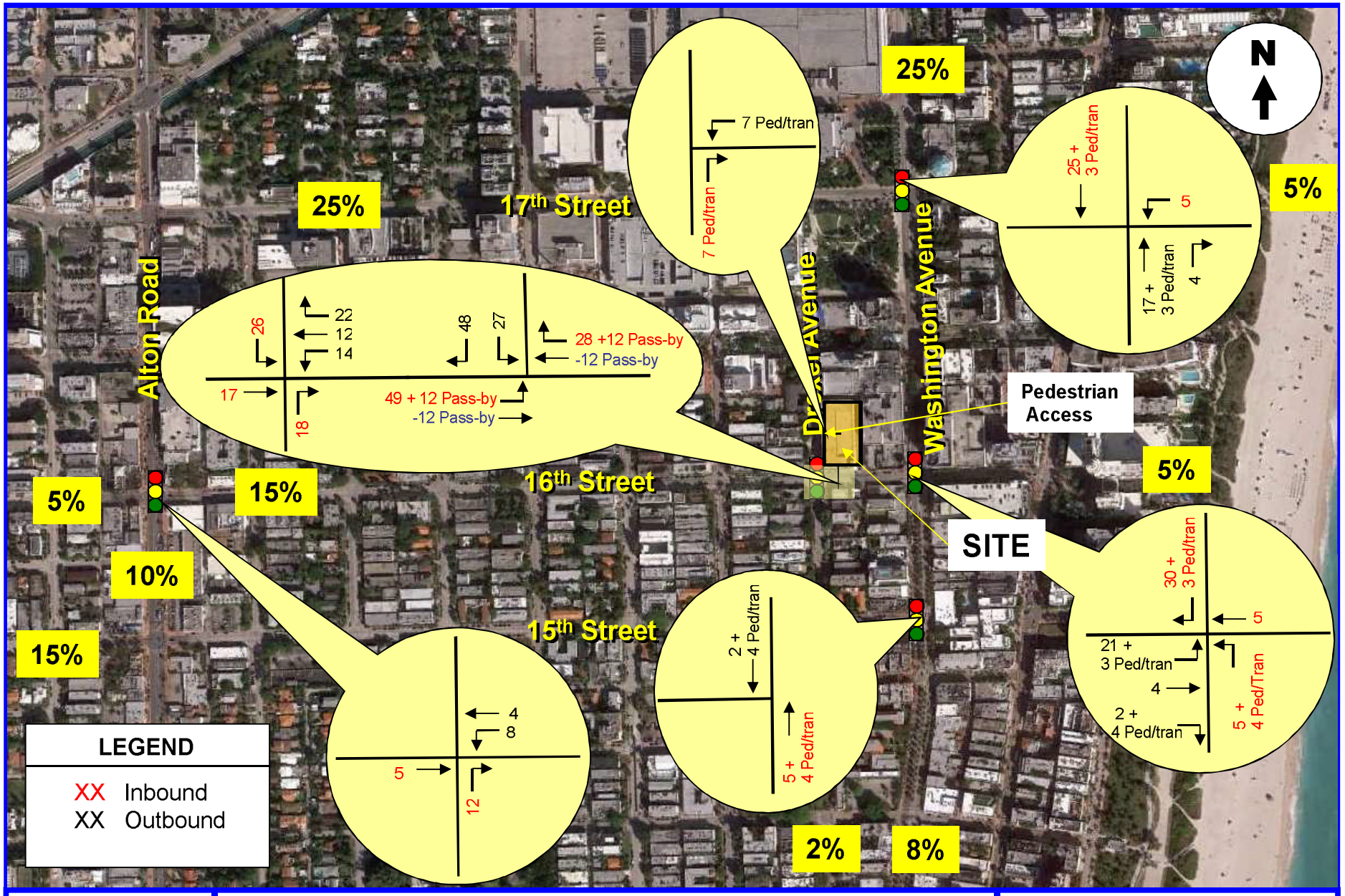
**** Annual Trend Increase:**	-250
Trend R-squared:	80.65%
Trend Annual Historic Growth Rate:	-2.33%
Trend Growth Rate (2015 to Design Year):	-2.87%
Printed:	27-Oct-16

Straight Line Growth Option

***Axle-Adjusted**

APPENDIX E

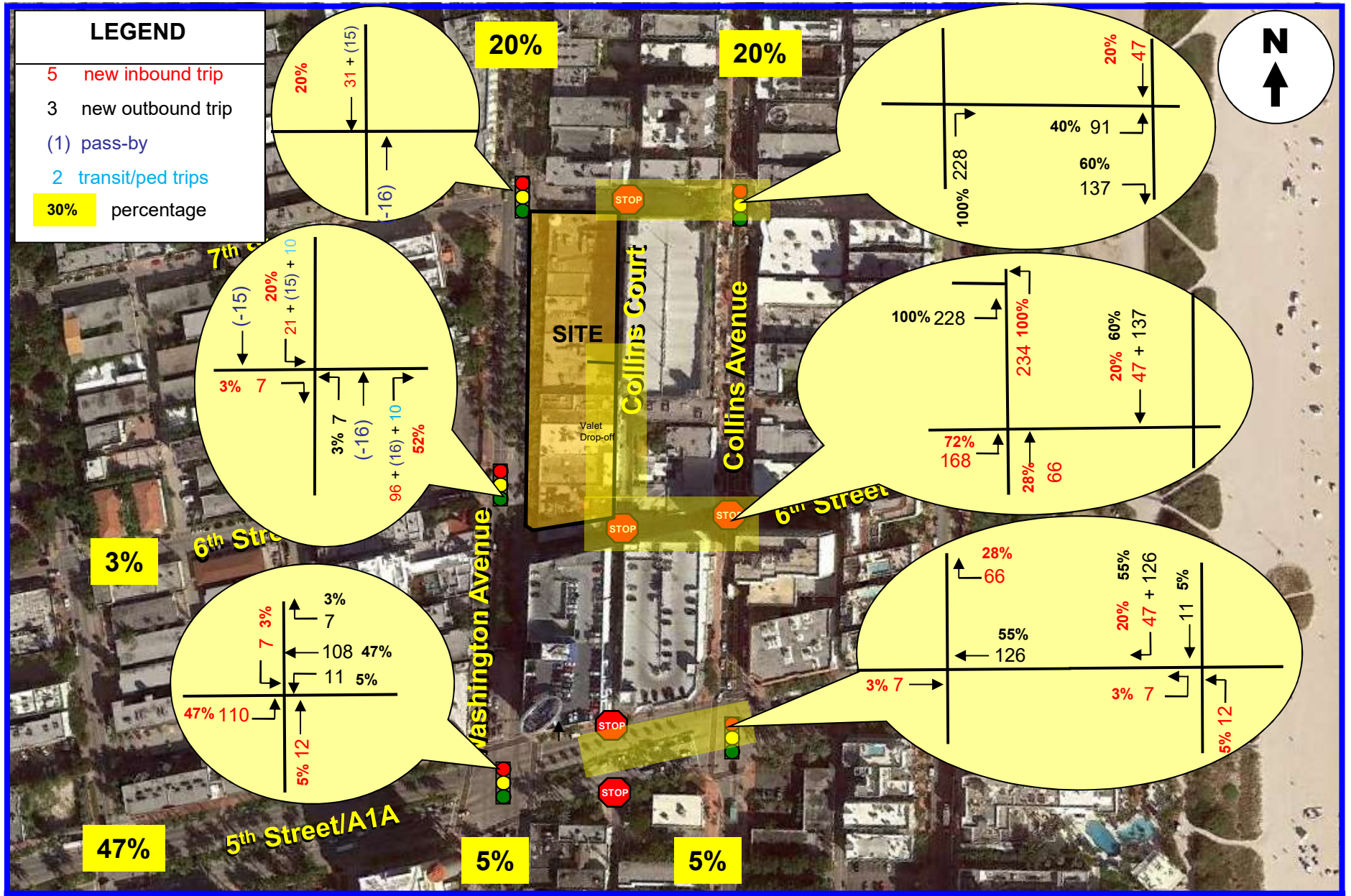
Committed Developments



Traf Tech ENGINEERING, INC.

PROJECT TRAFFIC ASSIGNMENT

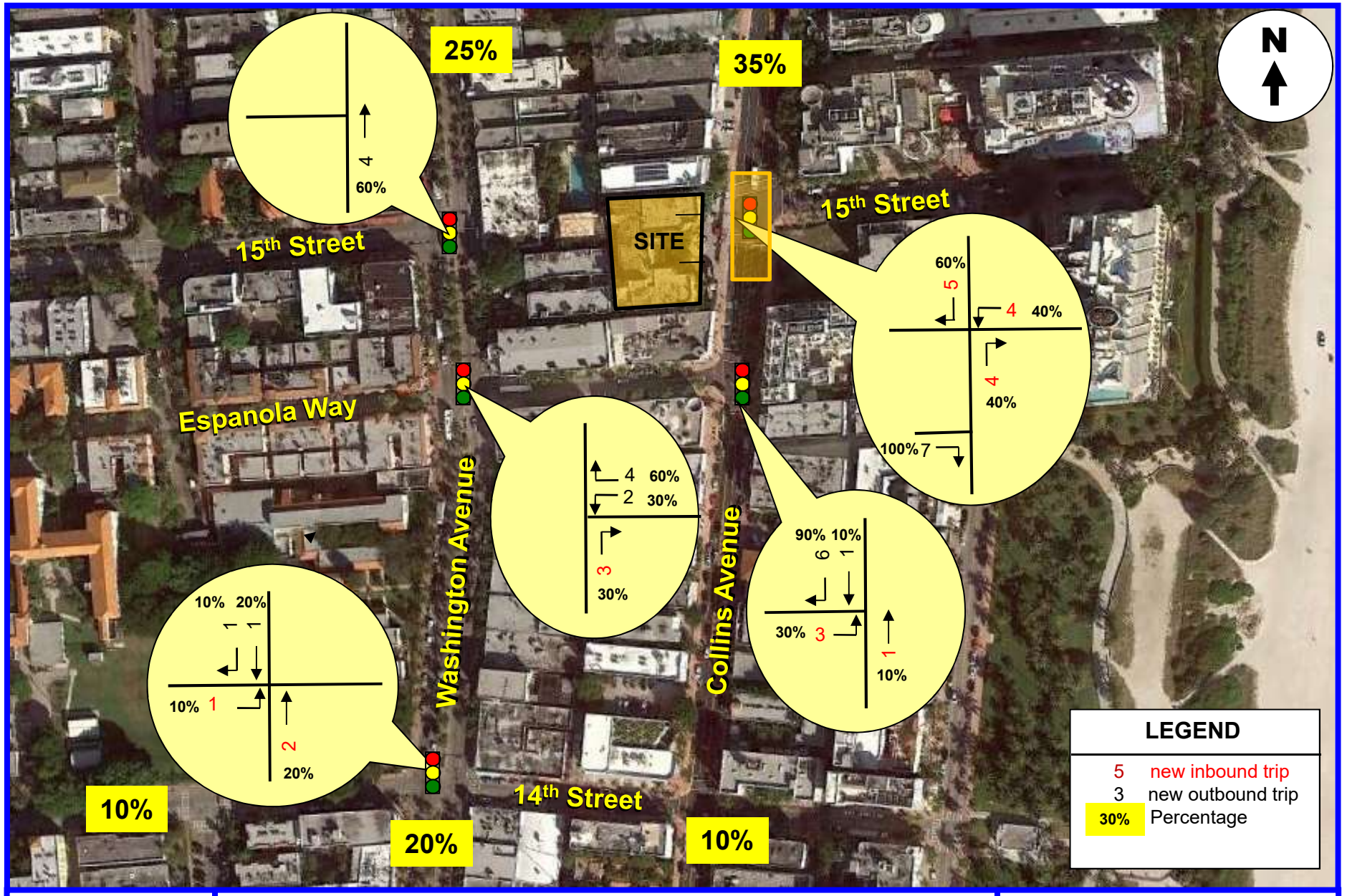
FIGURE 4
Time Out Market
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

NEW PROJECT TRAFFIC ASSIGNMENT
(Weekday New Peak Hour Trips)

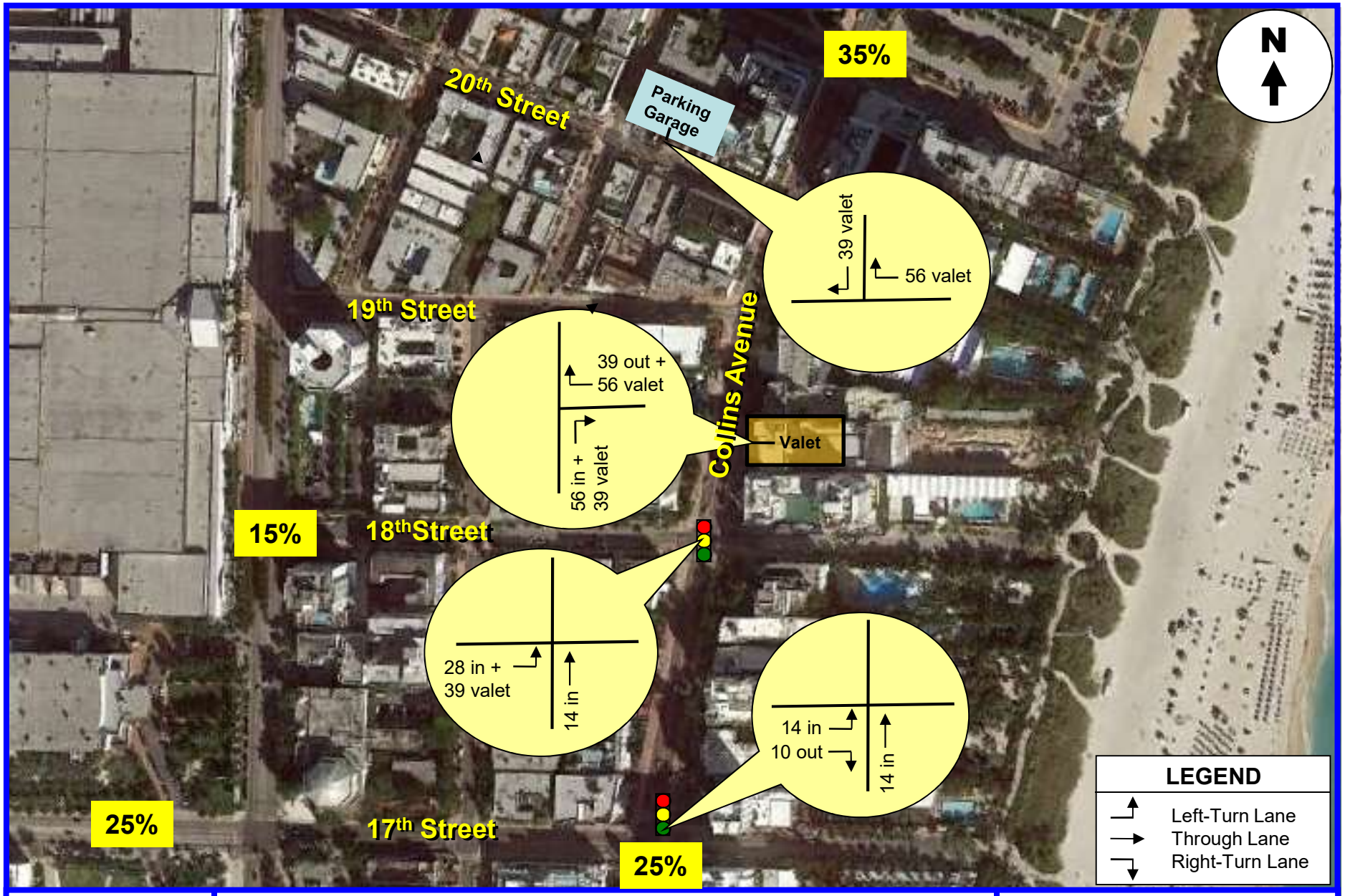
FIGURE 4
601 Washington
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

NEW PROJECT TRAFFIC ASSIGNMENT
(Weekday New Peak Hour Trips)

FIGURE 4
Haddon Hall
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

NEW PROJECT TRAFFIC ASSIGNMENT
(Weekday New Peak Hour Trips)

FIGURE 4
Nautilus South Beach
Miami Beach, Florida

APPENDIX F

Future Turning Movement Volumes

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Washington Avenue and 17 Street
PM Peak Hour

Description	Washington Avenue Northbound			Washington Avenue Southbound			17 Street Eastbound			17 Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2016)	323	348	98	7	122	85	105	233	204	79	259	18
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2016 Peak Season Traffic	329	355	100	7	124	87	107	238	208	81	264	18
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Committed Developments												
Haddon Hall		4										
Nautilius								24				
601 Washington					31							
Time Out Market		17	4		25					5		
- Pass By												
2020 Background Traffic	350	398	110	8	188	92	114	276	221	91	280	19
1600 Washington		6	1		8					3		
2020 Total Traffic	**350**	**404**	**111**	**8**	**196**	**92**	**114**	**276**	**221**	**94**	**280**	**19**

Traf Tech
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FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Washington Avenue and 16 Street
PM Peak Hour

Description	Washington Avenue Northbound			Washington Avenue Southbound			16 Street Eastbound			16 Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2016)	75	525	78	68	426	112	71	104	49	70	153	133
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2016 Peak Season Traffic	77	536	80	69	435	114	72	106	50	71	156	136
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Committed Developments												
Haddon Hall		4										
Nautilius												
601 Washington					31							
Time Out Market	5					30	21	4	2		5	
- Pass By												
2020 Background Traffic	86	572	84	74	492	151	98	117	55	76	171	144
1600 Washington	4					10	7	1	3		2	
2020 Total Traffic	**90**	**572**	**84**	**74**	**492**	**161**	**105**	**118**	**58**	**76**	**173**	**144**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Washington Avenue and 15 Street
PM Peak Hour

Description	Washington Avenue Northbound			Washington Avenue Southbound			15 Street Eastbound			15 Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2016)	62	557	0	0	487	49	93	0	109			
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2016 Peak Season Traffic	63	568	0	0	497	50	95	0	111	0	0	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Committed Developments												
Haddon Hall		4										
Nautilius												
601 Washington					31							
Time Out Market		5			2							
- Pass By												
2020 Background Traffic	67	612	0	0	560	53	101	0	118	0	0	0
1600 Washington		4			3							
2020 Total Traffic	**67**	**616**	**0**	**0**	**563**	**53**	**101**	**0**	**118**	**0**	**0**	**0**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Drexel Avenue and 16 Street
PM Peak Hour

Description	Drexel Avenue Northbound			Drexel Avenue Southbound			16 Street Eastbound			16 Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2016)	24	5	14	5	2	25	28	172	27	23	302	42
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2016 Peak Season Traffic	24	5	14	5	2	26	29	175	28	23	308	43
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Committed Developments												
Haddon Hall												
Nautilius												
601 Washington												
Time Out Market			18	26				17		14	12	22
- Pass By												
2020 Background Traffic	26	5	33	31	2	27	30	203	29	39	339	67
1600 Washington			5	9				5		4	4	7
2020 Total Traffic	**26**	**5**	**38**	**40**	**2**	**27**	**30**	**208**	**29**	**43**	**343**	**74**

Traf Tech
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FUTURE TURNING MOVEMENT VOLUME ANALYSIS

16 Street and Garage Entrance
PM Peak Hour

Description	Garage Entrance Northbound			Garage Entrance Southbound			16 Street Eastbound			16 Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2016)				18	0	35	8	204	0	0	309	21
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2016 Peak Season Traffic	0	0	0	18	0	36	8	208	0	0	315	21
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Committed Developments												
Haddon Hall												
Nautilius												
601 Washington												
Time Out Market				27		48	49					28
- Pass By							12	-12			-12	12
2020 Background Traffic	0	0	0	46	0	86	70	209	0	0	323	63
1600 Washington				11		15	19					16
2020 Total Traffic	**0**	**0**	**0**	**57**	**0**	**101**	**89**	**209**	**0**	**0**	**323**	**79**

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FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Alton Road and 16th Street
PM Peak Hour

Description	Alton Road Northbound			Alton Road Southbound			16th Street Eastbound			16th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/4/2016)	49	890	139	127	775	53	51	62	49	101	54	114
Season Adjustment Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2016 Peak Season Traffic	49	890	139	127	775	53	51	62	49	101	54	114
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Committed Developments												
Haddon Hall												
Nautilius												
601 Washington												
Time Out Market			12					5		8	4	
- Pass By												
2020 Background Traffic	52	945	160	135	823	56	54	71	52	115	61	121
1600 Washington			3					2		3	1	
2020 Total Traffic	**52**	**945**	**163**	**135**	**823**	**56**	**54**	**73**	**52**	**118**	**62**	**121**

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APPENDIX G

Intersection Capacity Analyses

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	238	208	81	264	18	329	355	100	7	124	87
Future Volume (vph)	107	238	208	81	264	18	329	355	100	7	124	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.4		7.4	7.4		6.0	6.3		6.3	6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	1.00		1.00	0.98		1.00	0.96	
Flpb, ped/bikes	0.99	1.00		0.95	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.93		1.00	0.99		1.00	0.97		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1760	3099		1676	3496		1732	3369		1717	3187	
Flt Permitted	0.38	1.00		0.48	1.00		0.50	1.00		0.47	1.00	
Satd. Flow (perm)	710	3099		843	3496		903	3369		855	3187	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	115	256	224	87	284	19	354	382	108	8	133	94
RTOR Reduction (vph)	0	151	0	0	6	0	0	25	0	0	67	0
Lane Group Flow (vph)	115	329	0	87	297	0	354	465	0	8	160	0
Confl. Peds. (#/hr)	23		88	88		23	56		46	46		56
Confl. Bikes (#/hr)			21			4			2			20
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	29.3	29.3		14.8	14.8		47.0	47.0		25.8	25.8	
Effective Green, g (s)	29.3	29.3		14.8	14.8		47.0	47.0		25.8	25.8	
Actuated g/C Ratio	0.33	0.33		0.16	0.16		0.52	0.52		0.29	0.29	
Clearance Time (s)	7.1	7.4		7.4	7.4		6.0	6.3		6.3	6.3	
Vehicle Extension (s)	2.0	2.5		2.5	2.5		2.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	317	1008		138	574		611	1759		245	913	
v/s Ratio Prot	0.03	c0.11			0.08		c0.10	0.14			0.05	
v/s Ratio Perm	0.09			c0.10			c0.20			0.01		
v/c Ratio	0.36	0.33		0.63	0.52		0.58	0.26		0.03	0.18	
Uniform Delay, d1	22.2	22.9		35.1	34.3		13.2	11.9		23.1	24.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		7.9	0.6		0.8	0.4		0.2	0.4	
Delay (s)	22.5	23.0		43.0	34.9		14.0	12.3		23.4	24.5	
Level of Service	C	C		D	C		B	B		C	C	
Approach Delay (s)		22.9			36.7			13.0			24.5	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	26.8
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

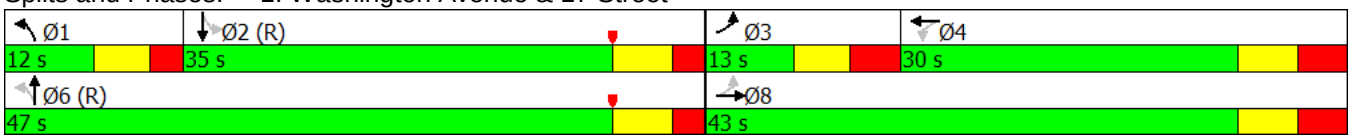
1: Washington Avenue & 17 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	107	238	81	264	329	355	7	124
Future Volume (vph)	107	238	81	264	329	355	7	124
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases	3	8		4	1	6		2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	4	4	1	6	2	2
Switch Phase								
Minimum Initial (s)	5.0	7.0	7.0	7.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.1	30.4	30.4	30.4	11.0	27.3	29.3	29.3
Total Split (s)	13.0	43.0	30.0	30.0	12.0	47.0	35.0	35.0
Total Split (%)	14.4%	47.8%	33.3%	33.3%	13.3%	52.2%	38.9%	38.9%
Yellow Time (s)	3.7	4.0	4.0	4.0	3.7	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.4	7.4	7.4	6.0	6.3	6.3	6.3
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	28.2	27.9	14.8	14.8	48.7	48.4	27.3	27.3
Actuated g/C Ratio	0.31	0.31	0.16	0.16	0.54	0.54	0.30	0.30
v/c Ratio	0.36	0.43	0.63	0.52	0.57	0.27	0.03	0.22
Control Delay	22.6	12.2	53.5	35.8	18.7	12.5	33.1	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	12.2	53.5	35.8	18.7	12.5	33.1	18.7
LOS	C	B	D	D	B	B	C	B
Approach Delay		14.2		39.7		15.1		19.2
Approach LOS		B		D		B		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 73 (81%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 20.0 Intersection LOS: B
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Washington Avenue & 17 Street



1: Washington Avenue & 17 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	480	87	303	354	490	8	227
v/c Ratio	0.36	0.43	0.63	0.52	0.57	0.27	0.03	0.22
Control Delay	22.6	12.2	53.5	35.8	18.7	12.5	33.1	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	12.2	53.5	35.8	18.7	12.5	33.1	18.7
Queue Length 50th (ft)	46	55	47	82	115	69	3	30
Queue Length 95th (ft)	70	76	88	110	228	127	18	73
Internal Link Dist (ft)		319		336		1078		264
Turn Bay Length (ft)	210		215		200		150	
Base Capacity (vph)	321	1392	211	884	626	1872	325	1272
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.34	0.41	0.34	0.57	0.26	0.02	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	106	50	71	156	136	77	536	80	69	435	114
Future Volume (veh/h)	72	106	50	71	156	136	77	536	80	69	435	114
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.91	0.99		0.91	0.93		0.79	0.94		0.81
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	80	118	56	79	173	151	86	596	89	77	483	127
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	150	61	142	291	515	454	1602	238	519	1602	415
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	1.00	1.00	1.00	0.04	0.61	0.61
Sat Flow, veh/h	210	483	196	319	937	1446	751	2973	441	1774	2639	683
Grp Volume(v), veh/h	254	0	0	252	0	151	86	353	332	77	321	289
Grp Sat Flow(s),veh/h/ln	888	0	0	1256	0	1446	751	1770	1645	1774	1770	1552
Q Serve(g_s), s	14.1	0.0	0.0	0.0	0.0	8.3	0.6	0.0	0.0	2.0	9.6	9.9
Cycle Q Clear(g_c), s	32.1	0.0	0.0	18.0	0.0	8.3	3.0	0.0	0.0	2.0	9.6	9.9
Prop In Lane	0.31		0.22	0.31		1.00	1.00		0.27	1.00		0.44
Lane Grp Cap(c), veh/h	319	0	0	434	0	515	454	953	886	519	1074	942
V/C Ratio(X)	0.80	0.00	0.00	0.58	0.00	0.29	0.19	0.37	0.37	0.15	0.30	0.31
Avail Cap(c_a), veh/h	322	0	0	436	0	517	454	953	886	526	1074	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.90	0.90	0.90	0.95	0.95	0.95
Uniform Delay (d), s/veh	39.8	0.0	0.0	31.5	0.0	25.8	0.1	0.0	0.0	9.3	10.4	10.4
Incr Delay (d2), s/veh	12.5	0.0	0.0	1.7	0.0	0.2	0.8	1.0	1.1	0.0	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	0.0	6.7	0.0	3.4	0.2	0.3	0.3	1.0	4.8	4.4
LnGrp Delay(d),s/veh	52.3	0.0	0.0	33.2	0.0	26.0	0.9	1.0	1.1	9.4	11.0	11.2
LnGrp LOS	D			C		C	A	A	A	A	B	B
Approach Vol, veh/h		254			403			771			687	
Approach Delay, s/veh		52.3			30.5			1.0			10.9	
Approach LOS		D			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		71.2		38.8	7.5	63.7		38.8
Change Period (Y+Rc), s		* 4.4		* 4.6	3.0	* 4.4		* 4.6
Max Green Setting (Gmax), s		* 67		* 34	5.0	* 59		* 34
Max Q Clear Time (g_c+I1), s		11.9		20.0	4.0	5.0		34.1
Green Ext Time (p_c), s		3.4		2.8	0.0	3.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

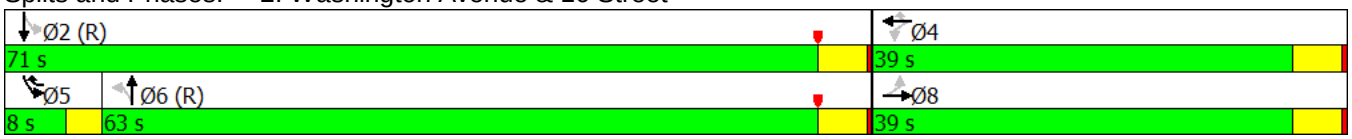
2: Washington Avenue & 16 Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	72	106	71	156	136	77	536	69	435
Future Volume (vph)	72	106	71	156	136	77	536	69	435
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	5		6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	5	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	37.6	37.6	37.6	37.6	9.0	25.4	25.4	9.0	25.4
Total Split (s)	39.0	39.0	39.0	39.0	8.0	63.0	63.0	8.0	71.0
Total Split (%)	35.5%	35.5%	35.5%	35.5%	7.3%	57.3%	57.3%	7.3%	64.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	0.6	0.6	0.6	0.6	0.0	0.4	0.4	0.0	0.4
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6		4.6	3.0	4.4	4.4	3.0	4.4
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		26.3		26.3	34.2	65.4	65.4	76.1	74.7
Actuated g/C Ratio		0.24		0.24	0.31	0.59	0.59	0.69	0.68
v/c Ratio		1.02		0.78	0.29	0.24	0.35	0.17	0.29
Control Delay		101.3		54.7	10.4	14.6	12.5	7.9	7.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		101.3		54.7	10.4	14.6	12.5	7.9	7.7
LOS		F		D	B	B	B	A	A
Approach Delay		101.3		38.1			12.7		7.7
Approach LOS		F		D			B		A

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 54 (49%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 90.7% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Washington Avenue & 16 Street



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	254	252	151	86	685	77	610
v/c Ratio	1.02	0.78	0.29	0.24	0.35	0.17	0.29
Control Delay	101.3	54.7	10.4	14.6	12.5	7.9	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.3	54.7	10.4	14.6	12.5	7.9	7.7
Queue Length 50th (ft)	~176	166	27	32	137	16	73
Queue Length 95th (ft)	#283	233	61	80	221	41	132
Internal Link Dist (ft)	170	490			480		1078
Turn Bay Length (ft)				120		100	
Base Capacity (vph)	324	427	523	364	1963	440	2088
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.59	0.29	0.24	0.35	0.17	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	95	111	63	568	497	50
Future Volume (vph)	95	111	63	568	497	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7			4.2	4.2	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.94			1.00	0.95	
Flpb, ped/bikes	1.00			0.98	1.00	
Frt	0.93			1.00	0.99	
Flt Protected	0.98			1.00	1.00	
Satd. Flow (prot)	1579			3441	3311	
Flt Permitted	0.98			0.82	1.00	
Satd. Flow (perm)	1579			2843	3311	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	123	70	631	552	56
RTOR Reduction (vph)	44	0	0	0	4	0
Lane Group Flow (vph)	185	0	0	701	604	0
Confl. Peds. (#/hr)	86	93	306			306
Confl. Bikes (#/hr)		4				5
Turn Type	Prot		Perm	NA	NA	
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	16.3			84.8	84.8	
Effective Green, g (s)	16.3			84.8	84.8	
Actuated g/C Ratio	0.15			0.77	0.77	
Clearance Time (s)	4.7			4.2	4.2	
Vehicle Extension (s)	1.0			1.0	1.0	
Lane Grp Cap (vph)	233			2191	2552	
v/s Ratio Prot	c0.12				0.18	
v/s Ratio Perm				c0.25		
v/c Ratio	0.79			0.32	0.24	
Uniform Delay, d1	45.2			3.8	3.5	
Progression Factor	1.00			1.00	0.68	
Incremental Delay, d2	15.7			0.4	0.2	
Delay (s)	60.9			4.2	2.6	
Level of Service	E			A	A	
Approach Delay (s)	60.9			4.2	2.6	
Approach LOS	E			A	A	

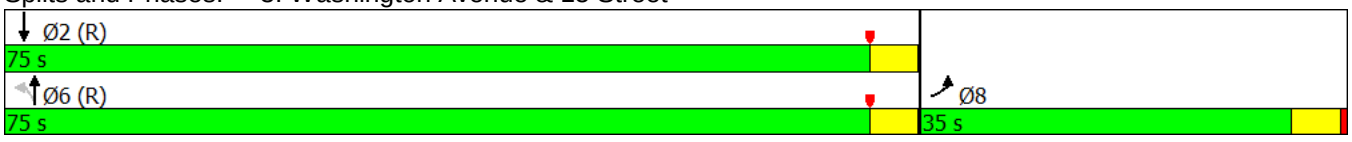
Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.9
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	95	63	568	497
Future Volume (vph)	95	63	568	497
Turn Type	Prot	Perm	NA	NA
Protected Phases	8		6	2
Permitted Phases		6		
Detector Phase	8	6	6	2
Switch Phase				
Minimum Initial (s)	5.0	7.0	7.0	7.0
Minimum Split (s)	33.7	27.2	27.2	27.2
Total Split (s)	35.0	75.0	75.0	75.0
Total Split (%)	31.8%	68.2%	68.2%	68.2%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	0.7	0.2	0.2	0.2
Lost Time Adjust (s)	0.0		0.0	0.0
Total Lost Time (s)	4.7		4.2	4.2
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Min	C-Min	C-Min
Act Effct Green (s)	16.3		84.8	84.8
Actuated g/C Ratio	0.15		0.77	0.77
v/c Ratio	0.82		0.32	0.24
Control Delay	57.4		4.9	2.9
Queue Delay	0.0		0.0	0.0
Total Delay	57.4		4.9	2.9
LOS	E		A	A
Approach Delay	57.4		4.9	2.9
Approach LOS	E		A	A

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 61 (55%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Washington Avenue & 15 Street



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	229	701	608
v/c Ratio	0.82	0.32	0.24
Control Delay	57.4	4.9	2.9
Queue Delay	0.0	0.0	0.0
Total Delay	57.4	4.9	2.9
Queue Length 50th (ft)	124	65	33
Queue Length 95th (ft)	195	122	58
Internal Link Dist (ft)	422	646	480
Turn Bay Length (ft)			
Base Capacity (vph)	472	2194	2556
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.32	0.24

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	29	175	28	23	308	43	24	5	14	5	2	26
Future Volume (veh/h)	29	175	28	23	308	43	24	5	14	5	2	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.87	0.95		0.88	0.96		0.93	0.95		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	32	194	31	26	342	48	27	6	16	6	2	29
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	559	82	115	604	81	419	109	189	153	81	471
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	97	1397	205	48	1509	203	699	273	471	121	203	1177
Grp Volume(v), veh/h	257	0	0	416	0	0	49	0	0	37	0	0
Grp Sat Flow(s),veh/h/ln	1699	0	0	1761	0	0	1443	0	0	1501	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	7.2	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0
Prop In Lane	0.12		0.12	0.06		0.12	0.55		0.33	0.16		0.78
Lane Grp Cap(c), veh/h	781	0	0	800	0	0	717	0	0	705	0	0
V/C Ratio(X)	0.33	0.00	0.00	0.52	0.00	0.00	0.07	0.00	0.00	0.05	0.00	0.00
Avail Cap(c_a), veh/h	781	0	0	800	0	0	717	0	0	705	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	0.0	0.0	9.4	0.0	0.0	7.4	0.0	0.0	7.4	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.4	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	4.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	9.5	0.0	0.0	11.8	0.0	0.0	7.6	0.0	0.0	7.5	0.0	0.0
LnGrp LOS	A			B			A			A		
Approach Vol, veh/h		257			416			49			37	
Approach Delay, s/veh		9.5			11.8			7.6			7.5	
Approach LOS		A			B			A			A	

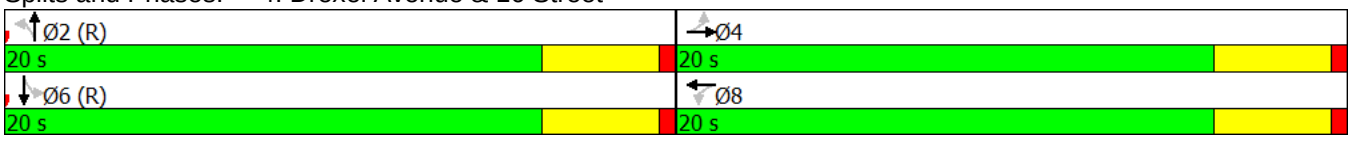
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		2.7		6.0		2.6		9.2
Green Ext Time (p_c), s		0.3		3.1		0.3		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	29	175	23	308	24	5	5	2
Future Volume (vph)	29	175	23	308	24	5	5	2
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.0		4.0		4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)		16.0		16.0		16.0		16.0
Actuated g/C Ratio		0.40		0.40		0.40		0.40
v/c Ratio		0.38		0.58		0.08		0.06
Control Delay		9.8		12.9		6.2		4.5
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		9.8		12.9		6.2		4.5
LOS		A		B		A		A
Approach Delay		9.8		12.9		6.2		4.5
Approach LOS		A		B		A		A

Intersection Summary	
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 43.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Drexel Avenue & 16 Street



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	257	416	49	37
v/c Ratio	0.38	0.58	0.08	0.06
Control Delay	9.8	12.9	6.2	4.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.8	12.9	6.2	4.5
Queue Length 50th (ft)	35	64	4	1
Queue Length 95th (ft)	74	127	17	12
Internal Link Dist (ft)	176	70	207	304
Turn Bay Length (ft)				
Base Capacity (vph)	678	715	618	634
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.58	0.08	0.06

Intersection Summary

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑		↰	↱
Traffic Vol, veh/h	8	208	315	21	18	36
Future Vol, veh/h	8	208	315	21	18	36
Conflicting Peds, #/hr	51	0	0	51	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	231	350	23	20	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	424	0	-	0	663	413
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	250	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1135	-	-	-	426	639
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1135	-	-	-	387	612
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1135	-	-	-	387	612
HCM Lane V/C Ratio	0.008	-	-	-	0.052	0.065
HCM Control Delay (s)	8.2	0	-	-	14.8	11.3
HCM Lane LOS	A	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	62	49	101	54	114	49	890	139	127	775	53
Future Volume (veh/h)	51	62	49	101	54	114	49	890	139	127	775	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	0.82	1.00	1.00	0.82	1.00	1.00	0.82	1.00	1.00	0.82
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	57	69	54	112	60	127	54	989	154	141	861	59
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	123	85	139	70	126	313	1600	249	233	1750	120
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	255	409	284	336	233	420	544	2506	390	441	2740	188
Grp Volume(v), veh/h	180	0	0	299	0	0	54	628	515	141	500	420
Grp Sat Flow(s),veh/h/ln	948	0	0	989	0	0	544	1593	1303	441	1593	1336
Q Serve(g_s), s	0.0	0.0	0.0	18.7	0.0	0.0	7.5	30.6	30.7	36.5	21.5	21.5
Cycle Q Clear(g_c), s	20.3	0.0	0.0	39.0	0.0	0.0	29.1	30.6	30.7	67.2	21.5	21.5
Prop In Lane	0.32		0.30	0.37		0.42	1.00		0.30	1.00		0.14
Lane Grp Cap(c), veh/h	321	0	0	335	0	0	313	1017	832	233	1017	853
V/C Ratio(X)	0.56	0.00	0.00	0.89	0.00	0.00	0.17	0.62	0.62	0.61	0.49	0.49
Avail Cap(c_a), veh/h	321	0	0	335	0	0	313	1017	832	233	1017	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	0.0	46.4	0.0	0.0	20.1	14.0	14.1	34.1	12.4	12.4
Incr Delay (d2), s/veh	2.5	0.0	0.0	24.9	0.0	0.0	1.2	2.8	3.4	11.2	1.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	0.0	13.0	0.0	0.0	1.2	14.1	11.8	5.1	9.9	8.4
LnGrp Delay(d),s/veh	40.9	0.0	0.0	71.3	0.0	0.0	21.3	16.8	17.5	45.3	14.1	14.4
LnGrp LOS	D			E			C	B	B	D	B	B
Approach Vol, veh/h		180			299			1197			1061	
Approach Delay, s/veh		40.9			71.3			17.3			18.4	
Approach LOS		D			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		87.0		43.0		87.0		43.0
Change Period (Y+Rc), s		* 4.2		* 4.6		* 4.2		* 4.6
Max Green Setting (Gmax), s		* 83		* 38		* 83		* 38
Max Q Clear Time (g_c+I1), s		32.7		22.3		69.2		41.0
Green Ext Time (p_c), s		9.5		2.4		6.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

6: Alton Road & 16th Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	51	62	101	54	49	890	127	775
Future Volume (vph)	51	62	101	54	49	890	127	775
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	38.0	38.0	38.0	38.0	79.0	79.0	79.0	79.0
Total Split (s)	43.0	43.0	43.0	43.0	87.0	87.0	87.0	87.0
Total Split (%)	33.1%	33.1%	33.1%	33.1%	66.9%	66.9%	66.9%	66.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.6	0.6	0.6	0.6	0.2	0.2	0.2	0.2
Lost Time Adjust (s)		-0.6		-0.6	-0.2	-0.2	-0.2	-0.2
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	None	None	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)		35.1		35.1	86.9	86.9	86.9	86.9
Actuated g/C Ratio		0.27		0.27	0.67	0.67	0.67	0.67
v/c Ratio		0.52		0.90	0.18	0.55	0.64	0.44
Control Delay		41.1		69.5	11.4	12.9	30.6	11.4
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		41.1		69.5	11.4	12.9	30.6	11.4
LOS		D		E	B	B	C	B
Approach Delay		41.1		69.5		12.8		14.0
Approach LOS		D		E		B		B

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 86 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 21.3 Intersection LOS: C
Intersection Capacity Utilization 76.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Alton Road & 16th Street

6: Alton Road & 16th Street

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	180	299	54	1143	141	920
v/c Ratio	0.52	0.90	0.18	0.55	0.64	0.44
Control Delay	41.1	69.5	11.4	12.9	30.6	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	69.5	11.4	12.9	30.6	11.4
Queue Length 50th (ft)	114	217	17	253	67	184
Queue Length 95th (ft)	187	#368	40	324	#200	238
Internal Link Dist (ft)	277	359		207		547
Turn Bay Length (ft)			115		115	
Base Capacity (vph)	386	373	301	2102	223	2121
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.80	0.18	0.54	0.63	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

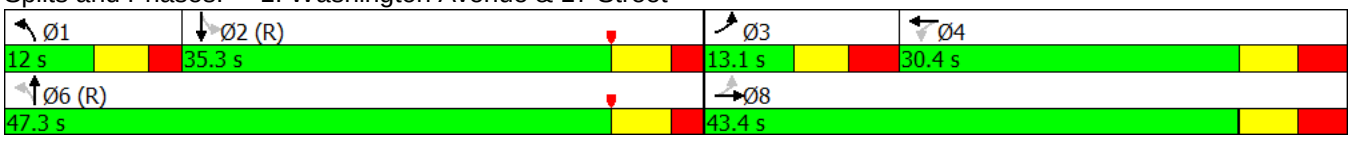
1: Washington Avenue & 17 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	114	275	91	280	350	398	8	188
Future Volume (vph)	114	275	91	280	350	398	8	188
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases	3	8		4	1	6		2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	4	4	1	6	2	2
Switch Phase								
Minimum Initial (s)	5.0	7.0	7.0	7.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.1	30.4	30.4	30.4	11.0	27.3	29.3	29.3
Total Split (s)	13.1	43.4	30.4	30.4	12.0	47.3	35.3	35.3
Total Split (%)	14.4%	47.8%	33.5%	33.5%	13.2%	52.1%	38.9%	38.9%
Yellow Time (s)	3.7	4.0	4.0	4.0	3.7	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.4	7.4	7.4	6.0	6.3	6.3	6.3
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	35.4	35.1	19.1	19.1	42.3	42.0	14.2	14.2
Actuated g/C Ratio	0.39	0.39	0.21	0.21	0.47	0.46	0.16	0.16
v/c Ratio	0.39	0.45	0.72	0.51	0.81	0.40	0.09	0.58
Control Delay	19.9	11.0	59.5	32.5	39.3	17.5	35.9	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	11.0	59.5	32.5	39.3	17.5	35.9	29.2
LOS	B	B	E	C	D	B	D	C
Approach Delay		12.7		38.8		26.4		29.4
Approach LOS		B		D		C		C

Intersection Summary

Cycle Length: 90.8
Actuated Cycle Length: 90.8
Offset: 73 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 86.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Washington Avenue & 17 Street



1: Washington Avenue & 17 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	534	98	321	376	546	9	301
v/c Ratio	0.39	0.45	0.72	0.51	0.81	0.40	0.09	0.58
Control Delay	19.9	11.0	59.5	32.5	39.3	17.5	35.9	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	11.0	59.5	32.5	39.3	17.5	35.9	29.2
Queue Length 50th (ft)	46	60	53	84	152	95	5	60
Queue Length 95th (ft)	66	79	97	107	#461	172	18	98
Internal Link Dist (ft)		319		336		1078		264
Turn Bay Length (ft)	210		215		200		150	
Base Capacity (vph)	317	1282	173	802	464	1452	209	956
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.42	0.57	0.40	0.81	0.38	0.04	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	275	221	91	280	19	350	398	110	8	188	92
Future Volume (vph)	114	275	221	91	280	19	350	398	110	8	188	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.4		7.4	7.4		6.0	6.3		6.3	6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	1.00		1.00	0.98		1.00	0.96	
Flpb, ped/bikes	0.99	1.00		0.95	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.93		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1425	2668		1362	2990		1414	2883		1393	2775	
Flt Permitted	0.41	1.00		0.45	1.00		0.37	1.00		0.45	1.00	
Satd. Flow (perm)	609	2668		650	2990		551	2883		657	2775	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	123	296	238	98	301	20	376	428	118	9	202	99
RTOR Reduction (vph)	0	146	0	0	6	0	0	27	0	0	83	0
Lane Group Flow (vph)	123	388	0	98	315	0	376	519	0	9	218	0
Confl. Peds. (#/hr)	23		88	88		23	56		46	46		56
Confl. Bikes (#/hr)			21			4			2			20
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	35.1	35.1		19.1	19.1		42.0	42.0		14.3	14.3	
Effective Green, g (s)	35.1	35.1		19.1	19.1		42.0	42.0		14.3	14.3	
Actuated g/C Ratio	0.39	0.39		0.21	0.21		0.46	0.46		0.16	0.16	
Clearance Time (s)	7.1	7.4		7.4	7.4		6.0	6.3		6.3	6.3	
Vehicle Extension (s)	2.0	2.5		2.5	2.5		2.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	315	1031		136	628		461	1333		103	437	
v/s Ratio Prot	0.04	c0.15			0.11		c0.19	0.18			0.08	
v/s Ratio Perm	0.11			c0.15			c0.18			0.01		
v/c Ratio	0.39	0.38		0.72	0.50		0.82	0.39		0.09	0.50	
Uniform Delay, d1	19.0	20.0		33.4	31.7		18.4	16.0		32.7	35.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.2		16.1	0.5		10.1	0.9		1.7	4.0	
Delay (s)	19.3	20.2		49.5	32.1		28.5	16.9		34.3	39.0	
Level of Service	B	C		D	C		C	B		C	D	
Approach Delay (s)		20.0			36.2			21.6			38.9	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	26.8
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	275	221	91	280	19	350	398	110	8	188	92
Future Volume (veh/h)	114	275	221	91	280	19	350	398	110	8	188	92
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.95		0.88	0.98		0.95	0.98		0.93
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1676	1676	1710	1676	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	123	296	238	98	301	20	376	428	118	9	202	99
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	621	456	253	702	46	416	1066	290	326	641	294
Arrive On Green	0.07	0.39	0.39	0.25	0.25	0.25	0.07	0.46	0.46	0.33	0.33	0.33
Sat Flow, veh/h	1597	1593	1168	741	2851	187	1597	2321	631	753	1958	899
Grp Volume(v), veh/h	123	296	238	98	167	154	376	292	254	9	162	139
Grp Sat Flow(s),veh/h/ln	1597	1593	1168	741	1593	1446	1597	1593	1359	753	1593	1265
Q Serve(g_s), s	5.1	12.7	14.2	10.6	8.0	8.2	6.0	11.0	11.3	0.7	6.9	7.6
Cycle Q Clear(g_c), s	5.1	12.7	14.2	11.7	8.0	8.2	6.0	11.0	11.3	0.7	6.9	7.6
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.46	1.00		0.71
Lane Grp Cap(c), veh/h	326	621	456	253	392	356	416	731	624	326	521	414
V/C Ratio(X)	0.38	0.48	0.52	0.39	0.43	0.43	0.90	0.40	0.41	0.03	0.31	0.34
Avail Cap(c_a), veh/h	326	630	462	258	403	365	416	731	624	326	521	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	20.8	21.2	30.7	28.9	28.9	28.9	16.3	16.4	20.8	22.9	23.1
Incr Delay (d2), s/veh	0.3	0.4	0.8	0.7	0.5	0.6	18.0	1.2	1.5	0.2	1.5	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.6	4.7	2.2	3.6	3.3	8.8	5.1	4.5	0.2	3.3	2.9
LnGrp Delay(d),s/veh	22.8	21.2	22.0	31.5	29.4	29.6	46.9	17.5	17.9	21.0	24.5	25.3
LnGrp LOS	C	C	C	C	C	C	D	B	B	C	C	C
Approach Vol, veh/h		657			419			922			310	
Approach Delay, s/veh		21.8			29.9			29.6			24.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	12.0	36.1	13.1	29.8		48.1		42.9
Change Period (Y+Rc), s	6.0	* 6.3	* 7.1	7.4		* 6.3		7.4
Max Green Setting (Gmax), s	6.0	* 29	* 6	23.0		* 41		36.0
Max Q Clear Time (g_c+I1), s	8.0	9.6	7.1	13.7		13.3		16.2
Green Ext Time (p_c), s	0.0	1.8	0.0	3.6		1.8		5.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

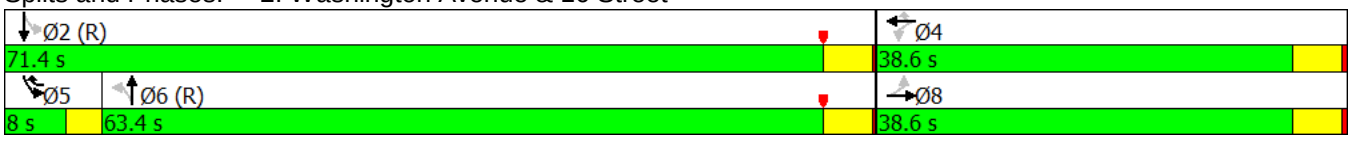
2: Washington Avenue & 16 Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	98	117	76	171	144	86	572	74	492
Future Volume (vph)	98	117	76	171	144	86	572	74	492
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	5		6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	5	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	37.6	37.6	37.6	37.6	9.0	25.4	25.4	9.0	25.4
Total Split (s)	38.6	38.6	38.6	38.6	8.0	63.4	63.4	8.0	71.4
Total Split (%)	35.1%	35.1%	35.1%	35.1%	7.3%	57.6%	57.6%	7.3%	64.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	0.6	0.6	0.6	0.6	0.0	0.4	0.4	0.0	0.4
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6		4.6	3.0	4.4	4.4	3.0	4.4
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		50.0		50.0	58.3	41.3	41.3	52.4	51.0
Actuated g/C Ratio		0.45		0.45	0.53	0.38	0.38	0.48	0.46
v/c Ratio		0.62		0.49	0.24	0.59	0.69	0.39	0.59
Control Delay		30.3		26.4	7.5	42.3	31.3	20.2	21.1
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		30.3		26.4	7.5	42.3	31.3	20.2	21.1
LOS		C		C	A	D	C	C	C
Approach Delay		30.3		19.5			32.6		21.0
Approach LOS		C		B			C		C

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 54 (49%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 96.2% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Washington Avenue & 16 Street



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	300	274	160	96	729	82	715
v/c Ratio	0.62	0.49	0.24	0.59	0.69	0.39	0.59
Control Delay	30.3	26.4	7.5	42.3	31.3	20.2	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	26.4	7.5	42.3	31.3	20.2	21.1
Queue Length 50th (ft)	156	138	23	53	215	30	165
Queue Length 95th (ft)	274	232	65	107	258	54	211
Internal Link Dist (ft)	170	490			480		1078
Turn Bay Length (ft)				120		100	
Base Capacity (vph)	484	554	669	234	1498	212	1576
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.49	0.24	0.41	0.49	0.39	0.45

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	117	55	76	171	144	86	572	84	74	492	151
Future Volume (vph)	98	117	55	76	171	144	86	572	84	74	492	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6	3.0	4.4	4.4		3.0	4.4	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			1.00	0.93	1.00	0.93		1.00	0.87	
Flpb, ped/bikes		0.98			0.99	1.00	0.81	1.00		0.98	1.00	
Frt		0.97			1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected		0.98			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1393			1467	1187	1159	2773		1404	2543	
Flt Permitted		0.74			0.82	1.00	0.37	1.00		0.23	1.00	
Satd. Flow (perm)		1051			1218	1187	447	2773		339	2543	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	130	61	84	190	160	96	636	93	82	547	168
RTOR Reduction (vph)	0	7	0	0	0	43	0	14	0	0	36	0
Lane Group Flow (vph)	0	293	0	0	274	117	96	715	0	82	679	0
Confl. Peds. (#/hr)	71		74	74		71	258		191	191		258
Confl. Bikes (#/hr)			7			8			11			13
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8			4	5		6		5	2	
Permitted Phases	8			4		4	6			2		
Actuated Green, G (s)		50.0			50.0	56.7	41.3	41.3		51.0	51.0	
Effective Green, g (s)		50.0			50.0	56.7	41.3	41.3		51.0	51.0	
Actuated g/C Ratio		0.45			0.45	0.52	0.38	0.38		0.46	0.46	
Clearance Time (s)		4.6			4.6	3.0	4.4	4.4		3.0	4.4	
Vehicle Extension (s)		2.5			2.5	2.0	1.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		477			553	611	167	1041		222	1179	
v/s Ratio Prot						0.01		c0.26		0.02	c0.27	
v/s Ratio Perm		c0.28			0.22	0.09	0.21			0.15		
v/c Ratio		0.62			0.50	0.19	0.57	0.69		0.37	0.58	
Uniform Delay, d1		22.7			21.1	14.3	27.4	28.9		18.4	21.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.0			0.5	0.1	13.6	3.7		0.4	2.0	
Delay (s)		24.7			21.6	14.4	41.0	32.6		18.8	23.6	
Level of Service		C			C	B	D	C		B	C	
Approach Delay (s)		24.7			19.0			33.6			23.1	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	117	55	76	171	144	86	572	84	74	492	151
Future Volume (veh/h)	98	117	55	76	171	144	86	572	84	74	492	151
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.91	1.00		0.91	0.96		0.79	0.94		0.81
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1676	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	109	130	61	84	190	160	96	636	93	82	547	168
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	86	33	135	270	415	365	1376	200	463	1310	398
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	1.00	1.00	1.00	0.04	0.61	0.61
Sat Flow, veh/h	137	279	106	299	873	1170	631	2548	371	1597	2151	654
Grp Volume(v), veh/h	300	0	0	274	0	160	96	396	333	82	404	311
Grp Sat Flow(s),veh/h/ln	522	0	0	1172	0	1170	631	1593	1326	1597	1593	1212
Q Serve(g_s), s	11.7	0.0	0.0	0.0	0.0	11.3	2.9	0.0	0.0	2.4	14.6	14.9
Cycle Q Clear(g_c), s	34.0	0.0	0.0	22.3	0.0	11.3	10.1	0.0	0.0	2.4	14.6	14.9
Prop In Lane	0.36		0.20	0.31		1.00	1.00		0.28	1.00		0.54
Lane Grp Cap(c), veh/h	206	0	0	405	0	415	365	860	716	463	970	738
V/C Ratio(X)	1.46	0.00	0.00	0.68	0.00	0.39	0.26	0.46	0.46	0.18	0.42	0.42
Avail Cap(c_a), veh/h	206	0	0	405	0	415	365	860	716	469	970	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.83	0.83	0.83	0.75	0.75	0.75
Uniform Delay (d), s/veh	44.7	0.0	0.0	33.3	0.0	26.8	0.6	0.0	0.0	9.3	11.3	11.3
Incr Delay (d2), s/veh	230.5	0.0	0.0	4.1	0.0	0.4	1.5	1.5	1.8	0.1	1.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	0.0	0.0	7.8	0.0	3.7	0.6	0.4	0.4	1.0	6.7	5.2
LnGrp Delay(d),s/veh	275.2	0.0	0.0	37.4	0.0	27.3	2.1	1.5	1.8	9.3	12.2	12.6
LnGrp LOS	F			D		C	A	A	A	A	B	B
Approach Vol, veh/h		300			434			825			797	
Approach Delay, s/veh		275.2			33.7			1.7			12.1	
Approach LOS		F			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		71.4		38.6	7.6	63.8		38.6
Change Period (Y+Rc), s		* 4.4		* 4.6	3.0	* 4.4		* 4.6
Max Green Setting (Gmax), s		* 67		* 34	5.0	* 59		* 34
Max Q Clear Time (g_c+I1), s		16.9		24.3	4.4	12.1		36.0
Green Ext Time (p_c), s		4.1		2.7	0.0	4.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Notes

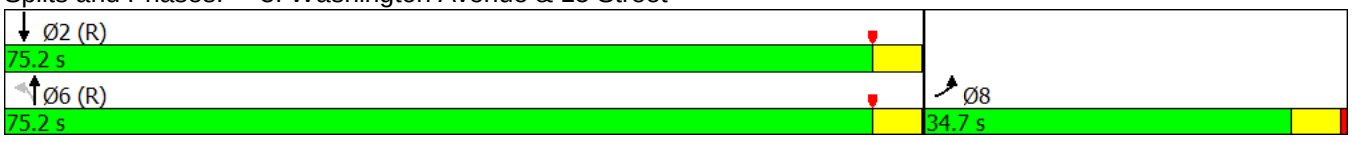
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

3: Washington Avenue & 15 Street

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	101	67	612	560
Future Volume (vph)	101	67	612	560
Turn Type	Prot	Perm	NA	NA
Protected Phases	8		6	2
Permitted Phases		6		
Detector Phase	8	6	6	2
Switch Phase				
Minimum Initial (s)	5.0	7.0	7.0	7.0
Minimum Split (s)	33.7	27.2	27.2	27.2
Total Split (s)	34.7	75.2	75.2	75.2
Total Split (%)	31.6%	68.4%	68.4%	68.4%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	0.7	0.2	0.2	0.2
Lost Time Adjust (s)	0.0		0.0	0.0
Total Lost Time (s)	4.7		4.2	4.2
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.5		80.5	80.5
Actuated g/C Ratio	0.19		0.73	0.73
v/c Ratio	0.86		0.43	0.33
Control Delay	60.5		7.7	6.4
Queue Delay	0.0		0.0	0.0
Total Delay	60.5		7.7	6.4
LOS	E		A	A
Approach Delay	60.5		7.7	6.4
Approach LOS	E		A	A

Intersection Summary	
Cycle Length: 109.9	
Actuated Cycle Length: 109.9	
Offset: 61 (56%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Washington Avenue & 15 Street



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	243	754	681
v/c Ratio	0.86	0.43	0.33
Control Delay	60.5	7.7	6.4
Queue Delay	0.0	0.0	0.0
Total Delay	60.5	7.7	6.4
Queue Length 50th (ft)	133	94	74
Queue Length 95th (ft)	207	178	140
Internal Link Dist (ft)	422	646	480
Turn Bay Length (ft)			
Base Capacity (vph)	388	1757	2088
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.63	0.43	0.33

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	101	118	67	612	560	53
Future Volume (vph)	101	118	67	612	560	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7			4.2	4.2	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.94			1.00	0.95	
Flpb, ped/bikes	1.00			0.98	1.00	
Frt	0.93			1.00	0.99	
Flt Protected	0.98			1.00	1.00	
Satd. Flow (prot)	1279			2953	2843	
Flt Permitted	0.98			0.81	1.00	
Satd. Flow (perm)	1279			2393	2843	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	131	74	680	622	59
RTOR Reduction (vph)	43	0	0	0	5	0
Lane Group Flow (vph)	200	0	0	754	676	0
Confl. Peds. (#/hr)	86	93	306			306
Confl. Bikes (#/hr)		4				5
Parking (#/hr)	0	0	0	0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	20.5			80.5	80.5	
Effective Green, g (s)	20.5			80.5	80.5	
Actuated g/C Ratio	0.19			0.73	0.73	
Clearance Time (s)	4.7			4.2	4.2	
Vehicle Extension (s)	1.0			1.0	1.0	
Lane Grp Cap (vph)	238			1752	2082	
v/s Ratio Prot	c0.16				0.24	
v/s Ratio Perm				c0.32		
v/c Ratio	0.84			0.43	0.32	
Uniform Delay, d1	43.1			5.7	5.2	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	21.3			0.8	0.4	
Delay (s)	64.4			6.5	5.6	
Level of Service	E			A	A	
Approach Delay (s)	64.4			6.5	5.6	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	8.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

4: Drexel Avenue & 16 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	30	203	39	339	26	5	31	2
Future Volume (vph)	30	203	39	339	26	5	31	2
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		6		2		4		8
Permitted Phases	6		2		4		8	
Detector Phase	6	6	2	2	4	4	8	8
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	7.0	7.0	7.0	7.0
Minimum Split (s)	31.0	31.0	31.0	31.0	30.1	30.1	30.1	30.1
Total Split (s)	45.0	45.0	45.0	45.0	26.1	26.1	26.1	26.1
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	0.1	0.1	0.1	0.1
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		4.1		4.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)		56.9		56.9		8.4		8.4
Actuated g/C Ratio		0.80		0.80		0.12		0.12
v/c Ratio		0.27		0.44		0.42		0.40
Control Delay		3.4		4.8		24.1		25.6
Queue Delay		0.0		0.5		0.0		0.0
Total Delay		3.4		5.2		24.1		25.6
LOS		A		A		C		C
Approach Delay		3.4		5.2		24.1		25.6
Approach LOS		A		A		C		C

Intersection Summary

Cycle Length: 71.1
Actuated Cycle Length: 71.1
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 58.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Drexel Avenue & 16 Street

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	291	494	72	66
v/c Ratio	0.27	0.44	0.42	0.40
Control Delay	3.4	4.8	24.1	25.6
Queue Delay	0.0	0.5	0.0	0.0
Total Delay	3.4	5.2	24.1	25.6
Queue Length 50th (ft)	25	51	15	15
Queue Length 95th (ft)	64	131	48	47
Internal Link Dist (ft)	176	70	207	304
Turn Bay Length (ft)				
Base Capacity (vph)	1086	1113	393	381
Starvation Cap Reductn	0	261	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.58	0.18	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	203	29	39	339	67	26	5	33	31	2	27
Future Volume (vph)	30	203	29	39	339	67	26	5	33	31	2	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			4.1			4.1	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			0.95			0.97	
Flpb, ped/bikes		1.00			1.00			0.99			0.98	
Frt		0.99			0.98			0.93			0.94	
Flt Protected		0.99			1.00			0.98			0.97	
Satd. Flow (prot)		1454			1445			1299			1308	
Flt Permitted		0.93			0.96			0.89			0.86	
Satd. Flow (perm)		1356			1387			1182			1160	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	226	32	43	377	74	29	6	37	34	2	30
RTOR Reduction (vph)	0	3	0	0	5	0	0	33	0	0	27	0
Lane Group Flow (vph)	0	288	0	0	489	0	0	39	0	0	39	0
Confl. Peds. (#/hr)	43		60	60		43	23		38	38		23
Confl. Bikes (#/hr)			40			28			5			4
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		55.0			55.0			7.0			7.0	
Effective Green, g (s)		55.0			55.0			7.0			7.0	
Actuated g/C Ratio		0.77			0.77			0.10			0.10	
Clearance Time (s)		5.0			5.0			4.1			4.1	
Vehicle Extension (s)		1.0			1.0			2.5			2.5	
Lane Grp Cap (vph)		1048			1072			116			114	
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.35			0.03			c0.03	
v/c Ratio		0.27			0.46			0.33			0.34	
Uniform Delay, d1		2.3			2.8			29.9			29.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			1.4			1.2			1.3	
Delay (s)		3.0			4.2			31.1			31.2	
Level of Service		A			A			C			C	
Approach Delay (s)		3.0			4.2			31.1			31.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	9.1
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	209	323	63	46	86
Future Volume (Veh/h)	70	209	323	63	46	86
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	78	232	359	70	51	96
Pedestrians			1		51	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		150	250			
pX, platoon unblocked	0.98				0.98	0.98
vC, conflicting volume	480				834	445
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	455				788	419
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				84	84
cM capacity (veh/h)	1033				313	592

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	310	429	51	96
Volume Left	78	0	51	0
Volume Right	0	70	0	96
cSH	1033	1700	313	592
Volume to Capacity	0.08	0.25	0.16	0.16
Queue Length 95th (ft)	6	0	14	14
Control Delay (s)	2.8	0.0	18.7	12.2
Lane LOS	A		C	B
Approach Delay (s)	2.8	0.0	14.5	
Approach LOS			B	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑		↰	↱
Traffic Vol, veh/h	70	209	323	63	46	86
Future Vol, veh/h	70	209	323	63	46	86
Conflicting Peds, #/hr	51	0	0	51	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	232	359	70	51	96

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	480	0	-	0	834	445
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1082	-	-	-	338	613
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	685	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1082	-	-	-	284	587
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1082	-	-	-	284	587
HCM Lane V/C Ratio	0.072	-	-	-	0.18	0.163
HCM Control Delay (s)	8.6	0	-	-	20.4	12.3
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6	0.6

6: Alton Road & 16th Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	71	115	61	52	945	135	823
Future Volume (vph)	54	71	115	61	52	945	135	823
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	38.0	38.0	38.0	38.0	79.0	79.0	79.0	79.0
Total Split (s)	42.6	42.6	42.6	42.6	87.2	87.2	87.2	87.2
Total Split (%)	32.8%	32.8%	32.8%	32.8%	67.2%	67.2%	67.2%	67.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.6	0.6	0.6	0.6	0.2	0.2	0.2	0.2
Lost Time Adjust (s)		-0.6		-0.6	-0.2	-0.2	-0.2	-0.2
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	None	None	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)		40.6		40.6	81.2	81.2	81.2	81.2
Actuated g/C Ratio		0.31		0.31	0.63	0.63	0.63	0.63
v/c Ratio		0.54		0.97	0.26	0.66	0.98	0.52
Control Delay		41.3		82.4	13.7	16.9	93.6	14.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		41.3		82.4	13.7	16.9	93.6	14.3
LOS		D		F	B	B	F	B
Approach Delay		41.3		82.4		16.8		24.8
Approach LOS		D		F		B		C

Intersection Summary

Cycle Length: 129.8
Actuated Cycle Length: 129.8
Offset: 86 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 28.9 Intersection LOS: C
Intersection Capacity Utilization 81.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Alton Road & 16th Street

6: Alton Road & 16th Street

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	197	330	58	1228	150	976
v/c Ratio	0.54	0.97	0.26	0.66	0.98	0.52
Control Delay	41.3	82.4	13.7	16.9	93.6	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	82.4	13.7	16.9	93.6	14.3
Queue Length 50th (ft)	129	~267	20	304	109	212
Queue Length 95th (ft)	214	#466	46	375	#264	263
Internal Link Dist (ft)	277	359		207		547
Turn Bay Length (ft)			115		115	
Base Capacity (vph)	363	341	229	1900	157	1919
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.97	0.25	0.65	0.96	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	71	52	115	61	121	52	945	160	135	823	56
Future Volume (vph)	54	71	52	115	61	121	52	945	160	135	823	56
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.95		1.00	0.98		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1415			1377		1429	2949		1433	2990	
Flt Permitted		0.79			0.74		0.24	1.00		0.16	1.00	
Satd. Flow (perm)		1128			1035		358	2949		246	2990	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	79	58	128	68	134	58	1050	178	150	914	62
RTOR Reduction (vph)	0	11	0	0	19	0	0	11	0	0	4	0
Lane Group Flow (vph)	0	186	0	0	311	0	58	1217	0	150	972	0
Confl. Peds. (#/hr)	20		5	5		20	7		2	2		7
Confl. Bikes (#/hr)												2
Parking (#/hr)	0	0	16	0	0	16	0	0	16	0	0	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.0			40.0		81.0	81.0		81.0	81.0	
Effective Green, g (s)		40.6			40.6		81.2	81.2		81.2	81.2	
Actuated g/C Ratio		0.31			0.31		0.63	0.63		0.63	0.63	
Clearance Time (s)		4.6			4.6		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		3.5			3.5		1.0	1.0		3.0	3.0	
Lane Grp Cap (vph)		352			323		223	1844		153	1870	
v/s Ratio Prot								0.41			0.33	
v/s Ratio Perm		0.16			c0.30		0.16			c0.61		
v/c Ratio		0.53			0.96		0.26	0.66		0.98	0.52	
Uniform Delay, d1		36.7			43.9		10.9	15.5		23.5	13.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.6			40.4		2.8	1.9		67.8	1.0	
Delay (s)		38.4			84.3		13.7	17.4		91.3	14.5	
Level of Service		D			F		B	B		F	B	
Approach Delay (s)		38.4			84.3			17.2			24.7	
Approach LOS		D			F			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	129.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Alton Road & 16th Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	71	52	115	61	121	52	945	160	135	823	56
Future Volume (veh/h)	54	71	52	115	61	121	52	945	160	135	823	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	0.82	1.00	1.00	0.82	1.00	1.00	0.82	1.00	1.00	0.82
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	60	79	58	128	68	134	58	1050	178	150	914	62
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	130	85	139	65	113	294	1586	268	208	1759	119
Arrive On Green	0.30	0.30	0.29	0.30	0.30	0.29	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	251	438	287	339	219	381	516	2473	418	407	2743	186
Grp Volume(v), veh/h	197	0	0	330	0	0	58	675	553	150	531	445
Grp Sat Flow(s),veh/h/ln	976	0	0	939	0	0	516	1593	1298	407	1593	1336
Q Serve(g_s), s	0.0	0.0	0.0	16.4	0.0	0.0	8.8	34.3	34.6	47.4	23.3	23.3
Cycle Q Clear(g_c), s	22.2	0.0	0.0	38.6	0.0	0.0	32.1	34.3	34.6	82.0	23.3	23.3
Prop In Lane	0.30		0.29	0.39		0.41	1.00		0.32	1.00		0.14
Lane Grp Cap(c), veh/h	326	0	0	317	0	0	294	1022	833	208	1022	857
V/C Ratio(X)	0.60	0.00	0.00	1.04	0.00	0.00	0.20	0.66	0.66	0.72	0.52	0.52
Avail Cap(c_a), veh/h	326	0	0	317	0	0	294	1022	833	208	1022	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	49.0	0.0	0.0	21.2	14.5	14.6	40.1	12.5	12.5
Incr Delay (d2), s/veh	3.4	0.0	0.0	61.5	0.0	0.0	1.5	3.4	4.1	19.3	1.9	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	0.0	16.8	0.0	0.0	1.4	16.0	13.2	6.5	10.7	9.1
LnGrp Delay(d),s/veh	42.9	0.0	0.0	110.5	0.0	0.0	22.7	17.9	18.7	59.4	14.4	14.8
LnGrp LOS	D			F			C	B	B	E	B	B
Approach Vol, veh/h		197			330			1286			1126	
Approach Delay, s/veh		42.9			110.5			18.4			20.6	
Approach LOS		D			F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		87.4		42.6		87.4		42.6
Change Period (Y+Rc), s		* 4.2		* 4.6		* 4.2		* 4.6
Max Green Setting (Gmax), s		* 83		* 38		* 83		* 38
Max Q Clear Time (g_c+I1), s		36.6		24.2		84.0		40.6
Green Ext Time (p_c), s		11.1		2.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

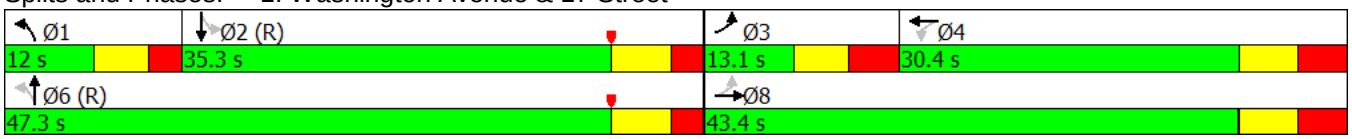
1: Washington Avenue & 17 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	114	275	94	280	350	404	8	196
Future Volume (vph)	114	275	94	280	350	404	8	196
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases	3	8		4	1	6		2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	4	4	1	6	2	2
Switch Phase								
Minimum Initial (s)	5.0	7.0	7.0	7.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.1	30.4	30.4	30.4	11.0	27.3	29.3	29.3
Total Split (s)	13.1	43.4	30.4	30.4	12.0	47.3	35.3	35.3
Total Split (%)	14.4%	47.8%	33.5%	33.5%	13.2%	52.1%	38.9%	38.9%
Yellow Time (s)	3.7	4.0	4.0	4.0	3.7	4.0	4.0	4.0
All-Red Time (s)	3.4	3.4	3.4	3.4	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.4	7.4	7.4	6.0	6.3	6.3	6.3
Lead/Lag	Lead		Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	35.7	35.4	19.5	19.5	42.0	41.7	14.4	14.4
Actuated g/C Ratio	0.39	0.39	0.21	0.21	0.46	0.46	0.16	0.16
v/c Ratio	0.39	0.45	0.73	0.50	0.83	0.41	0.09	0.60
Control Delay	19.7	10.9	59.9	32.0	41.4	17.8	35.4	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	10.9	59.9	32.0	41.4	17.8	35.4	30.6
LOS	B	B	E	C	D	B	D	C
Approach Delay		12.6		38.7		27.3		30.8
Approach LOS		B		D		C		C

Intersection Summary

Cycle Length: 90.8
Actuated Cycle Length: 90.8
Offset: 73 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 25.7 Intersection LOS: C
Intersection Capacity Utilization 86.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Washington Avenue & 17 Street



1: Washington Avenue & 17 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	534	101	321	376	553	9	310
v/c Ratio	0.39	0.45	0.73	0.50	0.83	0.41	0.09	0.60
Control Delay	19.7	10.9	59.9	32.0	41.4	17.8	35.4	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	10.9	59.9	32.0	41.4	17.8	35.4	30.6
Queue Length 50th (ft)	46	60	54	83	153	97	5	65
Queue Length 95th (ft)	66	78	100	107	#469	175	18	103
Internal Link Dist (ft)		319		336		1078		264
Turn Bay Length (ft)	210		215		200		150	
Base Capacity (vph)	319	1285	174	808	454	1448	208	953
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.42	0.58	0.40	0.83	0.38	0.04	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	275	221	94	280	19	350	404	111	8	196	92
Future Volume (vph)	114	275	221	94	280	19	350	404	111	8	196	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.4		7.4	7.4		6.0	6.3		6.3	6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	1.00		1.00	0.98		1.00	0.97	
Flpb, ped/bikes	0.99	1.00		0.95	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.93		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1425	2668		1362	2990		1415	2883		1394	2782	
Flt Permitted	0.41	1.00		0.45	1.00		0.36	1.00		0.45	1.00	
Satd. Flow (perm)	613	2668		650	2990		538	2883		653	2782	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	123	296	238	101	301	20	376	434	119	9	211	99
RTOR Reduction (vph)	0	145	0	0	5	0	0	27	0	0	76	0
Lane Group Flow (vph)	123	389	0	101	316	0	376	526	0	9	234	0
Confl. Peds. (#/hr)	23		88	88		23	56		46	46		56
Confl. Bikes (#/hr)			21			4			2			20
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	35.4	35.4		19.5	19.5		41.7	41.7		14.4	14.4	
Effective Green, g (s)	35.4	35.4		19.5	19.5		41.7	41.7		14.4	14.4	
Actuated g/C Ratio	0.39	0.39		0.21	0.21		0.46	0.46		0.16	0.16	
Clearance Time (s)	7.1	7.4		7.4	7.4		6.0	6.3		6.3	6.3	
Vehicle Extension (s)	2.0	2.5		2.5	2.5		2.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	317	1040		139	642		452	1324		103	441	
v/s Ratio Prot	0.04	c0.15			0.11		c0.19	0.18			0.08	
v/s Ratio Perm	0.11			c0.16			c0.19			0.01		
v/c Ratio	0.39	0.37		0.73	0.49		0.83	0.40		0.09	0.53	
Uniform Delay, d1	18.8	19.8		33.2	31.3		18.6	16.2		32.6	35.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.2		16.2	0.4		11.8	0.9		1.7	4.5	
Delay (s)	19.1	19.9		49.4	31.7		30.4	17.1		34.3	39.6	
Level of Service	B	B		D	C		C	B		C	D	
Approach Delay (s)		19.8			35.9			22.5			39.5	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	26.8
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Signalized Intersection Summary 6/11/2017

1: Washington Avenue & 17 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	275	221	94	280	19	350	404	111	8	196	92
Future Volume (veh/h)	114	275	221	94	280	19	350	404	111	8	196	92
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.95		0.88	0.98		0.95	0.98		0.93
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1676	1676	1710	1676	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	123	296	238	101	301	20	376	434	119	9	211	99
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	622	456	253	703	46	412	1066	289	324	650	287
Arrive On Green	0.07	0.39	0.39	0.25	0.25	0.25	0.07	0.46	0.46	0.33	0.33	0.33
Sat Flow, veh/h	1597	1593	1169	741	2851	187	1597	2323	629	748	1986	877
Grp Volume(v), veh/h	123	296	238	101	167	154	376	296	257	9	167	143
Grp Sat Flow(s),veh/h/ln	1597	1593	1169	741	1593	1446	1597	1593	1360	748	1593	1271
Q Serve(g_s), s	5.1	12.7	14.2	11.0	8.0	8.2	6.0	11.2	11.5	0.7	7.2	7.8
Cycle Q Clear(g_c), s	5.1	12.7	14.2	12.1	8.0	8.2	6.0	11.2	11.5	0.7	7.2	7.8
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.46	1.00		0.69
Lane Grp Cap(c), veh/h	326	622	456	253	393	356	412	731	624	324	521	416
V/C Ratio(X)	0.38	0.48	0.52	0.40	0.42	0.43	0.91	0.40	0.41	0.03	0.32	0.35
Avail Cap(c_a), veh/h	326	630	462	258	403	365	412	731	624	324	521	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	20.8	21.2	30.9	28.8	28.9	29.1	16.4	16.4	20.9	23.0	23.2
Incr Delay (d2), s/veh	0.3	0.4	0.8	0.8	0.5	0.6	18.3	1.2	1.4	0.2	1.6	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.6	4.7	2.3	3.6	3.3	8.9	5.2	4.5	0.2	3.4	3.0
LnGrp Delay(d),s/veh	22.8	21.2	22.0	31.6	29.4	29.5	47.4	17.5	17.8	21.0	24.6	25.5
LnGrp LOS	C	C	C	C	C	C	D	B	B	C	C	C
Approach Vol, veh/h		657			422			929			319	
Approach Delay, s/veh		21.8			30.0			29.7			24.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	12.0	36.1	13.1	29.8		48.1		42.9
Change Period (Y+Rc), s	6.0	* 6.3	* 7.1	7.4		* 6.3		7.4
Max Green Setting (Gmax), s	6.0	* 29	* 6	23.0		* 41		36.0
Max Q Clear Time (g_c+I1), s	8.0	9.8	7.1	14.1		13.5		16.2
Green Ext Time (p_c), s	0.0	1.8	0.0	3.5		1.8		5.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

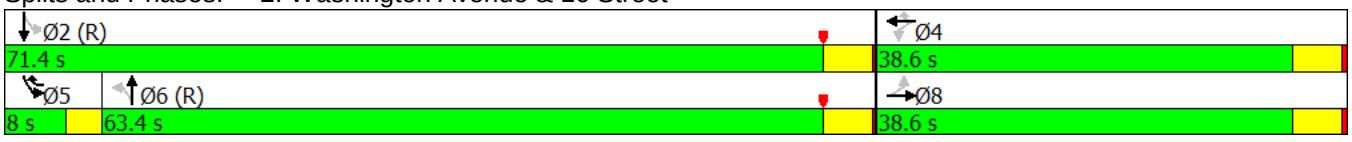
2: Washington Avenue & 16 Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	105	118	76	173	144	90	572	74	492
Future Volume (vph)	105	118	76	173	144	90	572	74	492
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	5		6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	5	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	37.6	37.6	37.6	37.6	9.0	25.4	25.4	9.0	25.4
Total Split (s)	38.6	38.6	38.6	38.6	8.0	63.4	63.4	8.0	71.4
Total Split (%)	35.1%	35.1%	35.1%	35.1%	7.3%	57.6%	57.6%	7.3%	64.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	0.6	0.6	0.6	0.6	0.0	0.4	0.4	0.0	0.4
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6		4.6	3.0	4.4	4.4	3.0	4.4
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		54.6		54.6	62.4	37.2	37.2	47.8	46.4
Actuated g/C Ratio		0.50		0.50	0.57	0.34	0.34	0.43	0.42
v/c Ratio		0.59		0.46	0.23	0.72	0.76	0.45	0.66
Control Delay		27.2		23.5	7.2	58.6	36.3	24.6	24.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		27.2		23.5	7.2	58.6	36.3	24.6	24.8
LOS		C		C	A	E	D	C	C
Approach Delay		27.2		17.5			39.0		24.8
Approach LOS		C		B			D		C

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 54 (49%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 28.7 Intersection LOS: C
Intersection Capacity Utilization 96.7% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Washington Avenue & 16 Street



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	312	276	160	100	729	82	726
v/c Ratio	0.59	0.46	0.23	0.72	0.76	0.45	0.66
Control Delay	27.2	23.5	7.2	58.6	36.3	24.6	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	23.5	7.2	58.6	36.3	24.6	24.8
Queue Length 50th (ft)	153	129	21	61	230	32	181
Queue Length 95th (ft)	#318	242	68	114	248	52	206
Internal Link Dist (ft)	170	490			480		1078
Turn Bay Length (ft)				120		100	
Base Capacity (vph)	531	605	708	220	1498	182	1563
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.46	0.23	0.45	0.49	0.45	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	118	58	76	173	144	90	572	84	74	492	161
Future Volume (vph)	105	118	58	76	173	144	90	572	84	74	492	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6	3.0	4.4	4.4		3.0	4.4	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			1.00	0.92	1.00	0.93		1.00	0.86	
Flpb, ped/bikes		0.98			0.99	1.00	0.82	1.00		0.98	1.00	
Frt		0.97			1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected		0.98			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1391			1467	1185	1177	2773		1410	2519	
Flt Permitted		0.75			0.82	1.00	0.34	1.00		0.20	1.00	
Satd. Flow (perm)		1060			1221	1185	421	2773		303	2519	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	131	64	84	192	160	100	636	93	82	547	179
RTOR Reduction (vph)	0	6	0	0	0	39	0	15	0	0	43	0
Lane Group Flow (vph)	0	306	0	0	276	121	100	714	0	82	683	0
Confl. Peds. (#/hr)	71		74	74		71	258		191	191		258
Confl. Bikes (#/hr)			7			8			11			13
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8			4	5		6		5	2	
Permitted Phases	8			4		4	6			2		
Actuated Green, G (s)		54.6			54.6	60.8	37.2	37.2		46.4	46.4	
Effective Green, g (s)		54.6			54.6	60.8	37.2	37.2		46.4	46.4	
Actuated g/C Ratio		0.50			0.50	0.55	0.34	0.34		0.42	0.42	
Clearance Time (s)		4.6			4.6	3.0	4.4	4.4		3.0	4.4	
Vehicle Extension (s)		2.5			2.5	2.0	1.0	1.0		2.0	1.0	
Lane Grp Cap (vph)		526			606	654	142	937		190	1062	
v/s Ratio Prot						0.01		c0.26		0.02	c0.27	
v/s Ratio Perm		c0.29			0.23	0.09	0.24			0.16		
v/c Ratio		0.58			0.46	0.18	0.70	0.76		0.43	0.64	
Uniform Delay, d1		19.6			18.0	12.3	31.6	32.4		21.3	25.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.4			0.4	0.0	25.4	5.8		0.6	3.0	
Delay (s)		21.0			18.4	12.3	57.0	38.3		21.9	28.2	
Level of Service		C			B	B	E	D		C	C	
Approach Delay (s)		21.0			16.2			40.5			27.6	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	118	58	76	173	144	90	572	84	74	492	161
Future Volume (veh/h)	105	118	58	76	173	144	90	572	84	74	492	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.91	1.00		0.91	0.96		0.79	0.94		0.81
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1676	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	117	131	64	84	192	160	100	636	93	82	547	179
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	80	32	136	274	415	360	1376	200	463	1284	416
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	1.00	1.00	1.00	0.04	0.61	0.61
Sat Flow, veh/h	143	260	104	302	887	1170	626	2548	371	1597	2108	683
Grp Volume(v), veh/h	312	0	0	276	0	160	100	396	333	82	412	314
Grp Sat Flow(s),veh/h/ln	506	0	0	1189	0	1170	626	1593	1326	1597	1593	1199
Q Serve(g_s), s	11.9	0.0	0.0	0.0	0.0	11.3	3.2	0.0	0.0	2.4	15.0	15.3
Cycle Q Clear(g_c), s	34.0	0.0	0.0	22.1	0.0	11.3	10.9	0.0	0.0	2.4	15.0	15.3
Prop In Lane	0.37		0.21	0.30		1.00	1.00		0.28	1.00		0.57
Lane Grp Cap(c), veh/h	202	0	0	410	0	415	360	860	716	463	970	730
V/C Ratio(X)	1.55	0.00	0.00	0.67	0.00	0.39	0.28	0.46	0.46	0.18	0.42	0.43
Avail Cap(c_a), veh/h	202	0	0	410	0	415	360	860	716	469	970	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.83	0.83	0.83	0.74	0.74	0.74
Uniform Delay (d), s/veh	45.3	0.0	0.0	33.2	0.0	26.8	0.7	0.0	0.0	9.3	11.3	11.4
Incr Delay (d2), s/veh	269.7	0.0	0.0	4.0	0.0	0.4	1.6	1.5	1.8	0.0	1.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.2	0.0	0.0	7.9	0.0	3.7	0.7	0.4	0.4	1.0	6.8	5.3
LnGrp Delay(d),s/veh	315.0	0.0	0.0	37.2	0.0	27.3	2.3	1.5	1.8	9.3	12.3	12.8
LnGrp LOS	F			D		C	A	A	A	A	B	B
Approach Vol, veh/h		312			436			829			808	
Approach Delay, s/veh		315.0			33.6			1.7			12.2	
Approach LOS		F			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		71.4		38.6	7.6	63.8		38.6
Change Period (Y+Rc), s		* 4.4		* 4.6	3.0	* 4.4		* 4.6
Max Green Setting (Gmax), s		* 67		* 34	5.0	* 59		* 34
Max Q Clear Time (g_c+I1), s		17.3		24.1	4.4	12.9		36.0
Green Ext Time (p_c), s		4.2		2.8	0.0	4.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Notes

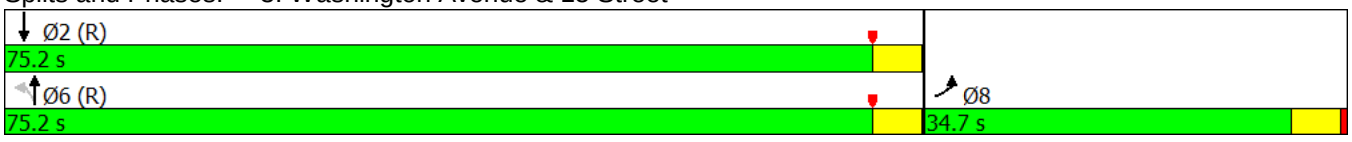
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

3: Washington Avenue & 15 Street

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	101	67	616	563
Future Volume (vph)	101	67	616	563
Turn Type	Prot	Perm	NA	NA
Protected Phases	8		6	2
Permitted Phases		6		
Detector Phase	8	6	6	2
Switch Phase				
Minimum Initial (s)	5.0	7.0	7.0	7.0
Minimum Split (s)	33.7	27.2	27.2	27.2
Total Split (s)	34.7	75.2	75.2	75.2
Total Split (%)	31.6%	68.4%	68.4%	68.4%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	0.7	0.2	0.2	0.2
Lost Time Adjust (s)	0.0		0.0	0.0
Total Lost Time (s)	4.7		4.2	4.2
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.5		80.5	80.5
Actuated g/C Ratio	0.19		0.73	0.73
v/c Ratio	0.86		0.43	0.33
Control Delay	60.5		7.7	6.4
Queue Delay	0.0		0.0	0.0
Total Delay	60.5		7.7	6.4
LOS	E		A	A
Approach Delay	60.5		7.7	6.4
Approach LOS	E		A	A

Intersection Summary	
Cycle Length: 109.9	
Actuated Cycle Length: 109.9	
Offset: 61 (56%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 75.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Washington Avenue & 15 Street



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	243	758	685
v/c Ratio	0.86	0.43	0.33
Control Delay	60.5	7.7	6.4
Queue Delay	0.0	0.0	0.0
Total Delay	60.5	7.7	6.4
Queue Length 50th (ft)	133	95	75
Queue Length 95th (ft)	207	180	141
Internal Link Dist (ft)	422	646	480
Turn Bay Length (ft)			
Base Capacity (vph)	388	1754	2089
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.63	0.43	0.33

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	101	118	67	616	563	53
Future Volume (vph)	101	118	67	616	563	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7			4.2	4.2	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.94			1.00	0.95	
Flpb, ped/bikes	1.00			0.98	1.00	
Frt	0.93			1.00	0.99	
Flt Protected	0.98			1.00	1.00	
Satd. Flow (prot)	1279			2954	2844	
Flt Permitted	0.98			0.81	1.00	
Satd. Flow (perm)	1279			2393	2844	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	131	74	684	626	59
RTOR Reduction (vph)	43	0	0	0	5	0
Lane Group Flow (vph)	200	0	0	758	680	0
Confl. Peds. (#/hr)	86	93	306			306
Confl. Bikes (#/hr)		4				5
Parking (#/hr)	0	0	0	0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	20.5			80.5	80.5	
Effective Green, g (s)	20.5			80.5	80.5	
Actuated g/C Ratio	0.19			0.73	0.73	
Clearance Time (s)	4.7			4.2	4.2	
Vehicle Extension (s)	1.0			1.0	1.0	
Lane Grp Cap (vph)	238			1752	2083	
v/s Ratio Prot	c0.16				0.24	
v/s Ratio Perm				c0.32		
v/c Ratio	0.84			0.43	0.33	
Uniform Delay, d1	43.1			5.8	5.2	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	21.3			0.8	0.4	
Delay (s)	64.4			6.5	5.6	
Level of Service	E			A	A	
Approach Delay (s)	64.4			6.5	5.6	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	8.9
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

4: Drexel Avenue & 16 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	30	208	43	343	26	5	40	2
Future Volume (vph)	30	208	43	343	26	5	40	2
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		6		2		4		8
Permitted Phases	6		2		4		8	
Detector Phase	6	6	2	2	4	4	8	8
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	7.0	7.0	7.0	7.0
Minimum Split (s)	31.0	31.0	31.0	31.0	30.1	30.1	30.1	30.1
Total Split (s)	45.0	45.0	45.0	45.0	26.1	26.1	26.1	26.1
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	0.1	0.1	0.1	0.1
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		4.1		4.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Min	C-Min	C-Min	C-Min	None	None	None	None
Act Effct Green (s)		56.3		56.3		8.9		8.9
Actuated g/C Ratio		0.79		0.79		0.13		0.13
v/c Ratio		0.28		0.47		0.42		0.45
Control Delay		3.7		5.3		22.4		27.6
Queue Delay		0.0		0.5		0.0		0.0
Total Delay		3.7		5.8		22.4		27.6
LOS		A		A		C		C
Approach Delay		3.7		5.8		22.4		27.6
Approach LOS		A		A		C		C

Intersection Summary

Cycle Length: 71.1
Actuated Cycle Length: 71.1
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 60.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Drexel Avenue & 16 Street

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	296	511	77	76
v/c Ratio	0.28	0.47	0.42	0.45
Control Delay	3.7	5.3	22.4	27.6
Queue Delay	0.0	0.5	0.0	0.0
Total Delay	3.7	5.8	22.4	27.6
Queue Length 50th (ft)	27	58	14	19
Queue Length 95th (ft)	71	152	49	53
Internal Link Dist (ft)	176	70	207	304
Turn Bay Length (ft)				
Base Capacity (vph)	1075	1092	392	373
Starvation Cap Reductn	0	238	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.60	0.20	0.20

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	208	29	43	343	74	26	5	38	40	2	27
Future Volume (vph)	30	208	29	43	343	74	26	5	38	40	2	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			4.1			4.1	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			0.95			0.97	
Flpb, ped/bikes		1.00			0.99			0.99			0.97	
Frt		0.99			0.98			0.93			0.95	
Flt Protected		0.99			1.00			0.98			0.97	
Satd. Flow (prot)		1455			1441			1293			1318	
Flt Permitted		0.93			0.95			0.89			0.84	
Satd. Flow (perm)		1355			1375			1168			1137	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	231	32	48	381	82	29	6	42	44	2	30
RTOR Reduction (vph)	0	3	0	0	5	0	0	38	0	0	27	0
Lane Group Flow (vph)	0	293	0	0	506	0	0	39	0	0	49	0
Confl. Peds. (#/hr)	43		60	60		43	23		38	38		23
Confl. Bikes (#/hr)			40			28			5			4
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		54.5			54.5			7.5			7.5	
Effective Green, g (s)		54.5			54.5			7.5			7.5	
Actuated g/C Ratio		0.77			0.77			0.11			0.11	
Clearance Time (s)		5.0			5.0			4.1			4.1	
Vehicle Extension (s)		1.0			1.0			2.5			2.5	
Lane Grp Cap (vph)		1038			1053			123			119	
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.37			0.03			c0.04	
v/c Ratio		0.28			0.48			0.32			0.41	
Uniform Delay, d1		2.5			3.1			29.4			29.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			1.6			1.1			1.7	
Delay (s)		3.2			4.6			30.5			31.4	
Level of Service		A			A			C			C	
Approach Delay (s)		3.2			4.6			30.5			31.4	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	9.1
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	89	209	323	79	57	101
Future Volume (Veh/h)	89	209	323	79	57	101
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	99	232	359	88	63	112
Pedestrians			1		51	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		150	250			
pX, platoon unblocked	0.97				0.98	0.97
vC, conflicting volume	498				885	454
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	468				828	423
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				78	81
cM capacity (veh/h)	1017				289	587

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	331	447	63	112
Volume Left	99	0	63	0
Volume Right	0	88	0	112
cSH	1017	1700	289	587
Volume to Capacity	0.10	0.26	0.22	0.19
Queue Length 95th (ft)	8	0	20	17
Control Delay (s)	3.4	0.0	20.9	12.6
Lane LOS	A		C	B
Approach Delay (s)	3.4	0.0	15.6	
Approach LOS			C	

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑		↰	↱
Traffic Vol, veh/h	89	209	323	79	57	101
Future Vol, veh/h	89	209	323	79	57	101
Conflicting Peds, #/hr	51	0	0	51	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	232	359	88	63	112

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	498	0	-	0	885	454
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	431	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1066	-	-	-	315	606
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1066	-	-	-	258	580
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1066	-	-	-	258	580
HCM Lane V/C Ratio	0.093	-	-	-	0.245	0.193
HCM Control Delay (s)	8.7	0	-	-	23.4	12.7
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9	0.7

6: Alton Road & 16th Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	73	118	62	52	945	135	823
Future Volume (vph)	54	73	118	62	52	945	135	823
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	38.0	38.0	38.0	38.0	79.0	79.0	79.0	79.0
Total Split (s)	42.6	42.6	42.6	42.6	87.2	87.2	87.2	87.2
Total Split (%)	32.8%	32.8%	32.8%	32.8%	67.2%	67.2%	67.2%	67.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.6	0.6	0.6	0.6	0.2	0.2	0.2	0.2
Lost Time Adjust (s)		-0.6		-0.6	-0.2	-0.2	-0.2	-0.2
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	None	None	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)		41.4		41.4	80.4	80.4	80.4	80.4
Actuated g/C Ratio		0.32		0.32	0.62	0.62	0.62	0.62
v/c Ratio		0.53		0.97	0.26	0.67	1.01	0.53
Control Delay		40.8		81.8	13.9	17.5	102.6	14.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		40.8		81.8	13.9	17.5	102.6	14.7
LOS		D		F	B	B	F	B
Approach Delay		40.8		81.8		17.3		26.4
Approach LOS		D		F		B		C

Intersection Summary

Cycle Length: 129.8
Actuated Cycle Length: 129.8
Offset: 86 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 29.7 Intersection LOS: C
Intersection Capacity Utilization 82.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 6: Alton Road & 16th Street

6: Alton Road & 16th Street

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	199	334	58	1231	150	976
v/c Ratio	0.53	0.97	0.26	0.67	1.01	0.53
Control Delay	40.8	81.8	13.9	17.5	102.6	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	81.8	13.9	17.5	102.6	14.7
Queue Length 50th (ft)	130	~284	20	304	112	212
Queue Length 95th (ft)	216	#477	46	376	#267	263
Internal Link Dist (ft)	277	359		207		547
Turn Bay Length (ft)			115		115	
Base Capacity (vph)	372	346	227	1901	154	1919
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.97	0.26	0.65	0.97	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	73	52	118	62	121	52	945	163	135	823	56
Future Volume (vph)	54	73	52	118	62	121	52	945	163	135	823	56
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.95		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1416			1378		1429	2948		1433	2990	
Flt Permitted		0.79			0.73		0.24	1.00		0.16	1.00	
Satd. Flow (perm)		1133			1032		355	2948		242	2990	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	81	58	131	69	134	58	1050	181	150	914	62
RTOR Reduction (vph)	0	11	0	0	18	0	0	11	0	0	4	0
Lane Group Flow (vph)	0	188	0	0	316	0	58	1220	0	150	972	0
Confl. Peds. (#/hr)	20		5	5		20	7		2	2		7
Confl. Bikes (#/hr)												2
Parking (#/hr)	0	0	16	0	0	16	0	0	16	0	0	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.8			40.8		80.2	80.2		80.2	80.2	
Effective Green, g (s)		41.4			41.4		80.4	80.4		80.4	80.4	
Actuated g/C Ratio		0.32			0.32		0.62	0.62		0.62	0.62	
Clearance Time (s)		4.6			4.6		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		3.5			3.5		1.0	1.0		3.0	3.0	
Lane Grp Cap (vph)		361			329		219	1826		149	1852	
v/s Ratio Prot								0.41			0.33	
v/s Ratio Perm		0.17			c0.31		0.16			c0.62		
v/c Ratio		0.52			0.96		0.26	0.67		1.01	0.52	
Uniform Delay, d1		36.1			43.4		11.2	16.0		24.7	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.6			39.4		2.9	2.0		75.5	1.1	
Delay (s)		37.7			82.8		14.2	18.0		100.2	15.0	
Level of Service		D			F		B	B		F	B	
Approach Delay (s)		37.7			82.8			17.8			26.3	
Approach LOS		D			F			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	129.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

6: Alton Road & 16th Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	73	52	118	62	121	52	945	163	135	823	56
Future Volume (veh/h)	54	73	52	118	62	121	52	945	163	135	823	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	0.82	1.00	1.00	0.82	1.00	1.00	0.82	1.00	1.00	0.82
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	60	81	58	131	69	134	58	1050	181	150	914	62
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	133	85	140	64	111	294	1582	272	207	1759	119
Arrive On Green	0.30	0.30	0.29	0.30	0.30	0.29	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	250	448	287	341	216	374	516	2466	424	406	2743	186
Grp Volume(v), veh/h	199	0	0	334	0	0	58	677	554	150	531	445
Grp Sat Flow(s),veh/h/ln	984	0	0	931	0	0	516	1593	1297	406	1593	1336
Q Serve(g_s), s	0.0	0.0	0.0	16.3	0.0	0.0	8.8	34.5	34.7	47.7	23.3	23.3
Cycle Q Clear(g_c), s	22.3	0.0	0.0	38.6	0.0	0.0	32.1	34.5	34.7	82.5	23.3	23.3
Prop In Lane	0.30		0.29	0.39		0.40	1.00		0.33	1.00		0.14
Lane Grp Cap(c), veh/h	328	0	0	315	0	0	294	1022	832	207	1022	857
V/C Ratio(X)	0.61	0.00	0.00	1.06	0.00	0.00	0.20	0.66	0.67	0.72	0.52	0.52
Avail Cap(c_a), veh/h	328	0	0	315	0	0	294	1022	832	207	1022	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	0.0	49.1	0.0	0.0	21.2	14.5	14.6	40.4	12.5	12.5
Incr Delay (d2), s/veh	3.5	0.0	0.0	67.5	0.0	0.0	1.5	3.4	4.2	19.7	1.9	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.0	17.2	0.0	0.0	1.4	16.0	13.3	6.5	10.7	9.1
LnGrp Delay(d),s/veh	42.9	0.0	0.0	116.5	0.0	0.0	22.7	17.9	18.8	60.0	14.4	14.8
LnGrp LOS	D			F			C	B	B	E	B	B
Approach Vol, veh/h		199			334			1289			1126	
Approach Delay, s/veh		42.9			116.5			18.5			20.6	
Approach LOS		D			F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		87.4		42.6		87.4		42.6
Change Period (Y+Rc), s		* 4.2		* 4.6		* 4.2		* 4.6
Max Green Setting (Gmax), s		* 83		* 38		* 83		* 38
Max Q Clear Time (g_c+I1), s		36.7		24.3		84.5		40.6
Green Ext Time (p_c), s		11.1		2.5		0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		32.1
HCM 2010 LOS		C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

1600 Washington Avenue

Traf Tech Engineering Traffic Study - June 2017

Supplement to Appendix B

Maneuvering and Loading

DREXEL AVENUE

277'-1"

SIDEWALK

PROPERTY LINE

23'-6"

1" = 30'

PEDESTAL
0' (CD-3) FRONT SETBACK REQUIRED
0' (CD-3) FRONT SETBACK PROVIDED

SIX STORY
EXISTING GARAGE

PEDESTAL
0' (CD-3) INTERIOR SIDE SETBACK REQUIRED
24' (CD-3) INTERIOR SIDE SETBACK PROVIDED

PEDESTAL
5' (CD-3) REAR SETBACK REQUIRED
41' (CD-3) REAR SETBACK PROVIDED

125'-7"

PROPERTY LINE

ALLEY

219'-11"

5'-2"

91'-1"

26'-8"

PEDESTAL
0' (CD-3) INTERIOR SIDE SETBACK REQUIRED
0' (CD-3) INTERIOR SIDE SETBACK PROVIDED

23'-6"

38'-2"

41'-2"

8'-4"

10'-6"

ALLEY

90'-2"

4'-10"

PROPERTY LINE

180'-1"

EXISTING 2 STORY
TO BE DEMOLISHED

45'-2"

FOUR STORY
EXISTING BUILDING

53'-2"

PROPERTY LINE

60'-2"

39'-10"

35.00

4.00

20.50

GARBAGE TRUCK feet

Width	:	8.00
Track	:	8.00
Lock to Lock Time	:	6.00
Steering Angle	:	36.20

1600 Washington

July/2017

Design Vehicle: 35' Garbage Truck

Vehicle Maneuvering Study

DREXEL AVENUE

277'-1"

23'-6"

SIDEWALK

PROPERTY LINE

1" = 30'

PEDESTAL
0' (CD-3) FRONT SETBACK REQUIRED
0' (CD-3) FRONT SETBACK PROVIDED

SIX STORY
EXISTING GARAGE

PEDESTAL
0' (CD-3) INTERIOR SIDE SETBACK REQUIRED
24' (CD-3) INTEROR SIDE SETBACK PROVIDED

PEDESTAL
5' (CD-3) REAR SETBACK REQUIRED
41' (CD-3) REAR SETBACK PROVIDED

125'-7"

PROPERTY LINE

ALLEY

219'-11"

5'-2"

91'-1"

26'-8"

PEDESTAL
0' (CD-3) INTERIOR SIDE SETBACK REQUIRED
0' (CD-3) INTERIOR SIDE SETBACK PROVIDED

23'-6"

38'-2"

41'-7"

8'-4"

10'-6"

ALLEY

90'-2"

4'-10"

PROPERTY LINE

180'-1"

EXISTING 2 STORY
TO BE DEMOLISHED

45'-2"

FOUR STORY
EXISTING BUILDING

53'-2"

PROPERTY LINE

60'-2"

39'-10"

30.00

4.00

20.00

SU	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.00
Steering Angle	: 31.80

1600 Washington

July/2017

Design Vehicle: Chevy Tahoe

Vehicle Maneuvering Study