Z167-145

TRAFFIC STUDY FOR

THE ADVANTAGE ACADEMY NORTH DUNCANVILLE CAMPUS

DALLAS, TEXAS

DeShazo Project No. 16133

Prepared for:

Advantage Academy
618 W Wheatland Road
Duncanville, Texas 75116

Prepared by:

DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 South Houston Street, Suite 330
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March 21, 2017

DeShazo Group

Traffic Study for

The Advantage Academy North Duncanville Campus

~ DeShazo Project No. 16133 ~

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EXECUTIVE SUMMARY

The services of DeShazo were retained by Advantage Academy to conduct a traffic study of the roadway network in the immediate vicinity of their North Duncanville campus in Dallas, Texas. Advantage Academy is an open-enrollment charter school serving 487 students in Pre-K through Grade 8. The school is proposing a major renovation of their campus and pursuing a zoning request to allow a total enrollment of 700 students.

The City of Dallas requested a traffic study as part of the zoning application to permit the proposed school expansion. The purpose of this study is to identify traffic and operational characteristics and determine if any improvements to the adjacent transportation system are needed to maintain an acceptable level of service, safety and appropriate access for both school and AAFES traffic. The study parameters used in this study are primarily subjective based upon engineering standards and practices from similar studies.

NOTE: This study includes a hypothetical scenario for a charter school to occupy a vacant property at 4201 Walton Walker in accordance with Specific Use Permit (SUP) No. 2174 with 528 students in Pre-K – Grade 8.

The following findings and recommendations are based upon buildout scenarios in accordance with the development scenarios outlined in the *Study Parameters* section of this report.

FINDING 1: Results of this analysis indicate that all study intersections currently operate at stable flow and acceptable levels-of-service. Peak hour periods are expected to remain at acceptable operational conditions with the addition of school-related traffic. It should be noted that merit of any recommended mitigation alternatives presented in this report warrant further evaluation at the discretion of the City of Dallas Mobility and Street Services Department.

FINDING 2: Results show that only a minimal amount of traffic is expected to interact with existing traffic along Joseph Hardin and Exchange Services. A hypothetical school at 4201 Walton Walker Boulevard would have a minimal impact to the intersection at Exchange Services and Walton Walker.

FINDING 3: Existing traffic volumes (including pedestrians) do not meet the criteria for the installation of an all-way stop control. However, school peak (and off-peak) observations suggest that an all-way stop control would likely provide a safer pedestrian environment.

FINDING 4: Results of proposed school conditions (i.e. reversed flow of drop-off and pick-up traffic operations at 4010 Joseph Hardin) indicate that the northbound right-turn movement will decrease as a result of the proposed reassignment of school traffic flow at 4010 Joseph Hardin. In turn, westbound left-turn volume will increase, resulting in a significant delay for the minor street approach.

- RECOMMENDATION 1: DeShazo recommends the installation of an all-way stop at the intersection of Joseph Hardin and Exchange Services in order to accommodate the proposed school peak operations.

  NOTE: DeShazo had previously deferred this decision at the discretion to the City of Dallas in a previous study of this intersection. However, under no circumstance should an all-way stop constitute a substitute for the need of an adult school crossing guard during school peak hours

- RECOMMENDATION 2: Findings of this analysis support the recommendation to reverse school traffic flow at 4010 Joseph Hardin. Results from the *TMP for Advantage Academy* dated February 8, 2017—upon complete enforcement of the recommendations presented therein—further indicate that no queuing of vehicles will extend onto public rights-of-way as a result of internal queuing constraints. This technical review is supported by numerous field observations dating back to 2009.

FINDING 5: Findings of this analysis indicate that all adjacent roadways adequately accommodate existing traffic and provides plenty of capacity for the proposed school expansion and a hypothetical school at 4201 Walton Walker.

- RECOMMENDATION 3: Upgrade all pedestrian crosswalks and replace all school and pedestrian traffic signs adjacent to the school and the AAFES headquarters.

  IMPORTANT: Pedestrian crosswalks should not be considered an absolute enhancement to provide pedestrian safety. Pedestrians are prone to be less cautious when crossing a street at a dedicated pavement marking, giving responsibility of action to approaching vehicles instead.

FINDING 6: Results from the traffic analysis indicate that the intersection of Walton Walker at Exchange Services will continue to operate at acceptable levels-of-service with the addition of school-related traffic.

- RECOMMENDATION 4: DeShazo recommends a re-evaluation of existing traffic signal timing settings at Walton Walker and Exchange Services. An optimization of the split settings would dedicate more green time to the eastbound approach without a significant impact to the overall intersection. The recommended optimization is not expected to impact progression along the corridor; the nearest signalized intersection is located one mile to the north at Walton Walker and Kiest Boulevard and one mile to the west at Ledbetter Drive and Westmoreland Road. The City of Dallas should further consider a lead-lead phase for north- and south-bound left turns. The intersection lane geometry allows both movements to operate simultaneously.

- RECOMMENDATION 5: As needed, school officials should conduct meetings with AAFES and neighborhood representatives to address any problems concerning school traffic and identify solutions in the interest of all involved parties.

END

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Traffic. Transportation Planning. Parking. Design.

Technical Memorandum

To: *Mobility & Street Services Department, City of Dallas*
CC: *Angela McDonald* — Advantage Academy
Donzie "Chip" Lilly, PE — Army & Air Force Exchange Service
From: *David Nevarez, P.E.* — DeShazo Group, Inc.
Date: March 21, 2017
Re: Traffic Study for The Advantage Academy North Duncanville Campus in Dallas, Texas
DeShazo Project Number 16133; ***Case Number Z167-145***

INTRODUCTION

DeShazo Group, Inc. (DeShazo) is an engineering consulting firm providing licensed professional engineers and urban planners skilled in traffic engineering, parking and transportation-related fields. The services of DeShazo were retained by Advantage Academy to conduct a traffic study of the roadway network in the immediate vicinity of their North Duncanville campus in Dallas, Texas.

Advantage Academy is an open-enrollment charter school serving 487 students in Pre-K through Grade 8. The North Duncanville campus operates in two separate City blocks physically separated by Joseph Hardin Drive. 315 students in Pre-K through Grade 5 currently attend classes at 4010 Joseph Hardin; a separate building at 4009 Joseph Hardin currently serves 172 students in grades 6 through 8. A site location map is provided as reference in ***Exhibit 1***.

The school is proposing a major renovation of their campus. The school plans to retain 260 students in Pre-K through Grade 3 (a decrease of 55 students from existing conditions) at 4010 Joseph Hardin. The remaining Grades 4 through 8 would occupy the proposed expansion of the school building at 4011 Joseph Hardin. Advantage Academy is therefore pursuing a zoning request to allow a total enrollment of 700 students.

The school is also located adjacent to the Army and Air Force Exchange Services (Exchange or AAFES) headquarters. AAFES provides retail support to the U.S. Army and Air Force worldwide. It is also a major employer in Dallas with up to 2,800 full- and part-time associates currently employed at 3911 S. Walton Walker Boulevard. Employee parking is distributed throughout their campus with secured vehicular access on Joseph Hardin and Exchange Service.

DeShazo previously prepared a series of traffic management plans to document current and projected traffic operations for Advantage Academy since 2009. More recently, DeShazo conducted a study of the vehicular and pedestrian traffic operations at the intersection of Joseph Hardin and Exchange Service. A summary of these studies is included in this report; full copies are available upon request.

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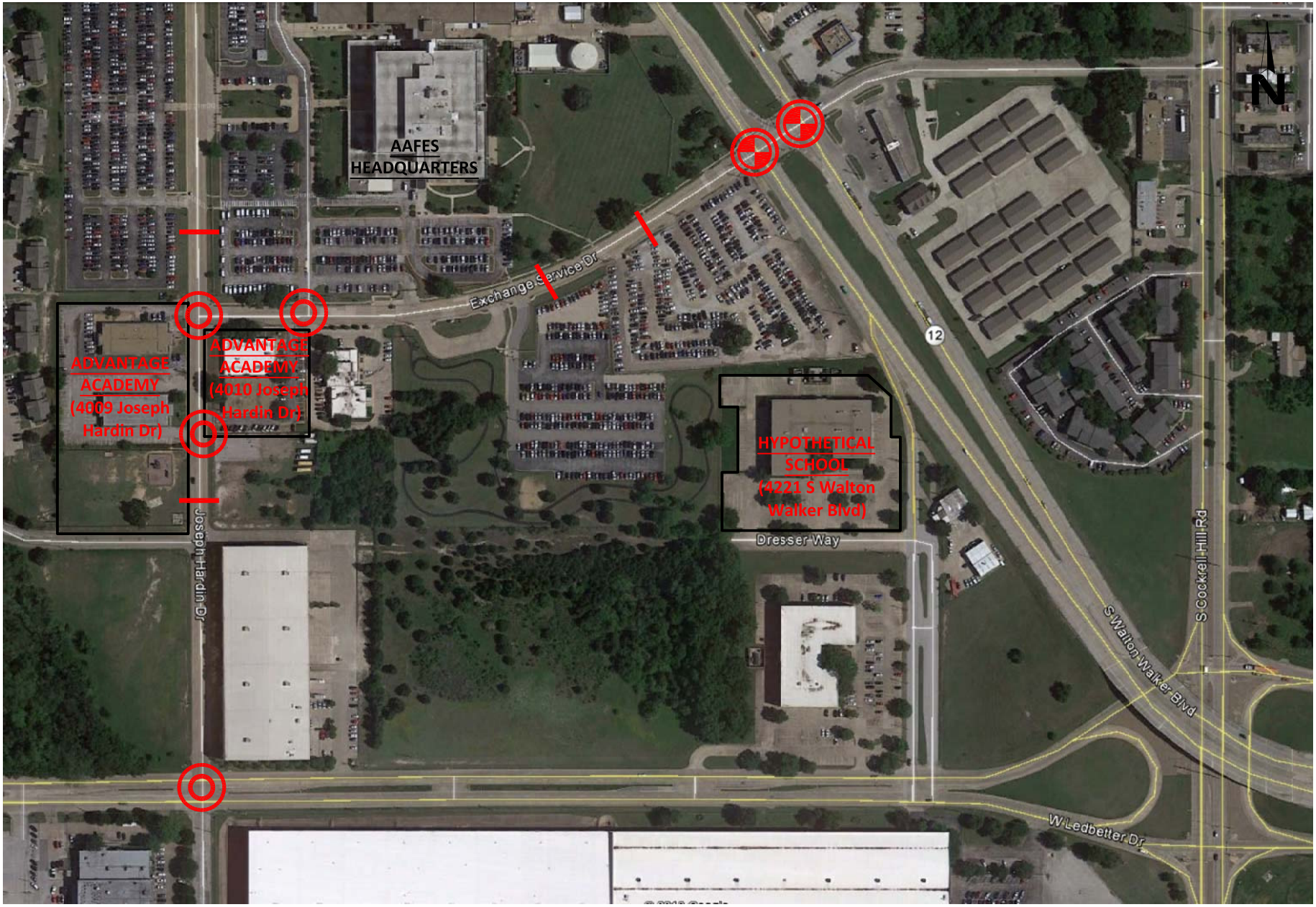

EXHIBIT 1

Study Location Map

Traffic Study for Advantage Academy
Dallas, Texas

- *Study Intersection (6:30-8:30 AM; 2:00-6:00 PM)*
- *Study Roadway (Bi-Direction, 24-hours) Link*

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DeShazo Group, Inc. Job No. 16133 Exhibit Created on 003-06-2017

Purpose

The City of Dallas requested a traffic study as part of the zoning application to permit the proposed school expansion. The purpose of this study is to identify traffic and operational characteristics and determine if any improvements to the adjacent transportation system are needed to maintain an acceptable level of service, safety and appropriate access for both school and AAFES traffic.

To achieve these objectives, this report includes a summary the traffic operational characteristics of the background conditions within a designated study area. Based upon results of this analysis, DeShazo may recommend measures to mitigate traffic impacts that unduly affect safety and/or operational efficiency.

This study is a site-specific investigation of traffic conditions in a localized area. Findings and recommendations presented in this study are intended to provide information to the public and the City of Dallas regarding potential transportation improvements that may be warranted. But also, this study is intended to provide a credible basis upon which the governing agency may determine whether some actions are required as a condition of the school project's approval. This traffic study was prepared in accordance with industry and local standards by registered professional engineers employed by DeShazo.

Study Parameters

The study parameters used in this study are primarily subjective based upon engineering standards and practices from similar studies. Specific parameters were initially presented to AAFES representatives and City of Dallas staff at the outset of the study. Field observations, quantitative and qualitative data as well as AAFES representatives input were taken into consideration to develop the study scope. The following scenarios are included in this analysis:

NOTE: Advantage Academy submitted a permit application to occupy an existing building located at 4201 S Walton Walker. The City of Dallas granted Specific Use Permit (SUP) No. 2174 on January 25, 2016 to allow the operations of a charter school for grades Pre-K through Grade 8 with up to 528 students. The school administration, however, is no longer pursuing the development of this property. Although DeShazo found no record or indication of any plans to occupy this building, this study includes a hypothetical scenario for a school to occupy 4201 S Walton Walker in accordance with the approved SUP.

1. Existing Condition
2. Proposed School Condition *(assuming proposed enrollment for Advantage Academy)*
3. Theoretical Condition *(including traffic from hypothetical school at 4201 Walton Walker)*
4. Horizon Condition *(five years after school buildout)*

The study further analyzed day-to-day traffic operations at time periods that were considered representative of the overall most critical conditions on the public roadway system. The following periods were analyzed based upon the prevailing traffic conditions and observed trip generation characteristics of both Advantage Academy and AAFES traffic.

A. AM Peak Hour *(from 7:00 to 8:00 AM)*
B. School Peak Hour *(from 3:30 to 4:30 PM)*
C. PM Peak Hour *(from 4:30 to 5:30 PM)*

Study Area

This study consists of both quantitative and qualitative traffic observations at specific locations believed to be critical to understand the impact of school traffic operations on the adjacent street network. The extent of the study area is discretionary but generally commensurate with the scale of the traffic generated by the school. The specific locations included in the study area are listed next and depicted in **Exhibit 1**.

Intersections:

(a) Joseph Hardin Drive and Ledbetter Drive: *STOP-controlled on Joseph Hardin Drive*
(b) Joseph Hardin Drive and School Driveway 1: *STOP-controlled on school driveway*
(c) Joseph Hardin Drive and Exchange Service Drive: *STOP-controlled on Exchange Service Drive*
(d) Exchange Service Drive and School/AAFES Driveway: *STOP-controlled on driveways*
(e) Exchange Service Drive and School/AAFES Driveway: *STOP-controlled on driveways*
(f) Exchange Service Drive and S Walton Walker Boulevard: *traffic-signal-controlled*

Roadway Links:

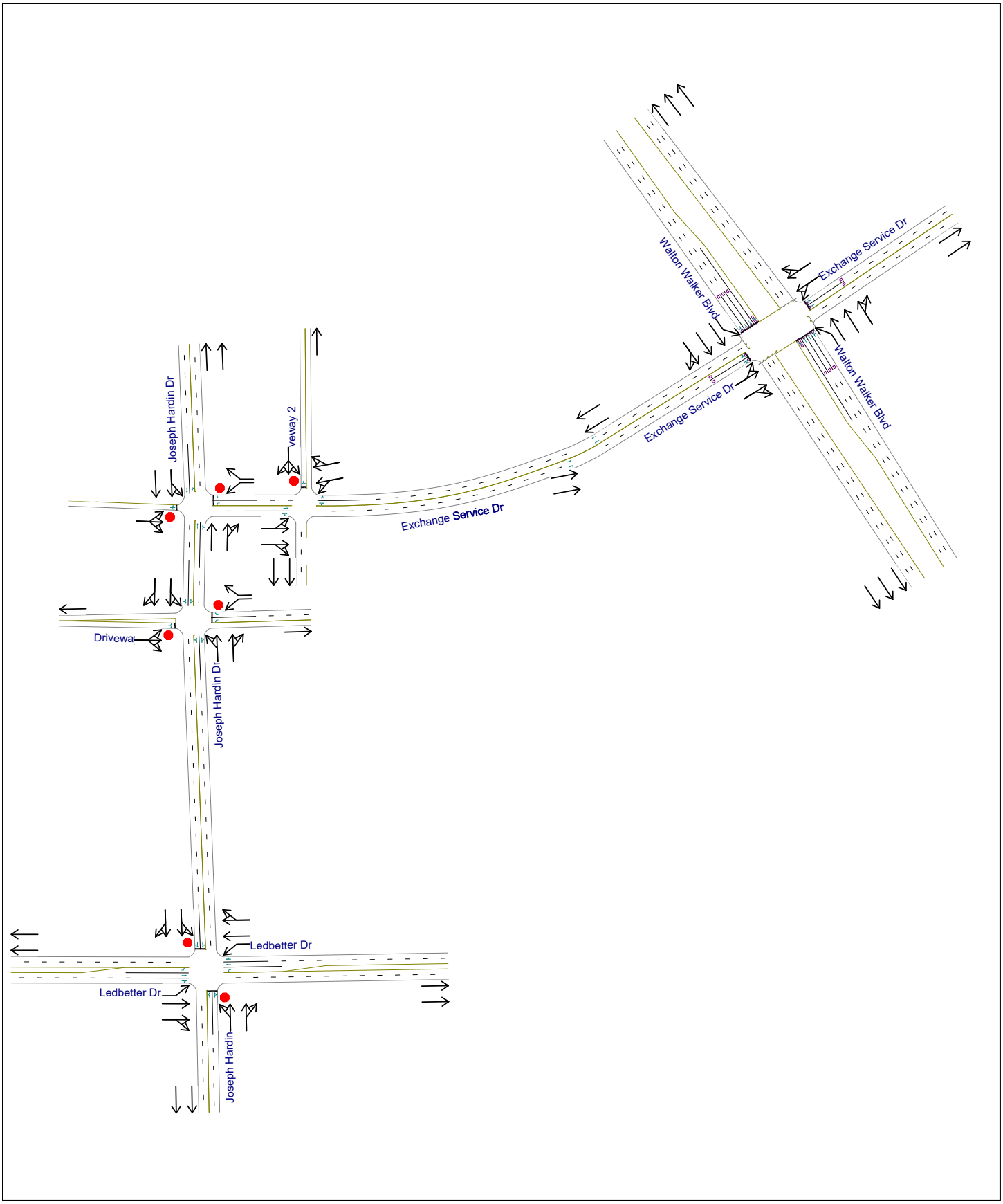
(A) Joseph Hardin Drive
- Existing operation and cross-section: *four lanes, two-way operation, undivided*
- City of Dallas Thoroughfare Plan Designation: *None (assumed collector)*
- Current Daily Traffic Volume: 1,950 (March 8, 2017, north of Exchange Service Dr)
  3,300 (March 8, 2017, south of Exchange Service Dr)
- Posted Speed Limit: 30 MPH; 20 MPH school zone (when flashing)

(B) Exchange Services Drive
- Existing operation and cross-section: *four lanes, two-way operation, undivided*
- City of Dallas Thoroughfare Plan Designation: *None (assumed collector)*
- Current Daily Traffic Volume: 2,250 (March 8, 2017, west of AAFES parking lot driveway)
  3,050 (March 8, 2017, east of AAFES parking lot driveway)
- Assumed Speed Limit: 30 MPH

Existing roadway lane geometry is depicted in **Exhibit 2**.

Exhibit 2. Existing Roadway Lane Geometry

North ^
Not to Scale



TRAFFIC ANALYSIS

Approach

Traffic studies rely on empirical data to quantify conditions on public roadways and assess information relative to street capacity. Findings from such studies result in recommendations that attempt to optimize traffic control operations. Current traffic volume data were collected on a typical day throughout the study area to represent existing conditions. Where applicable, growth factors were applied to project future background traffic at proposed conditions. Then, traffic generated by the proposed school expansion was rerouted and projected using the standard three-step approach: trip generation, trip distribution, and traffic assignment. The impact of site-plus-background traffic was analyzed by adding site-generated traffic to the background traffic. In addition, given the characteristics of the study area, a *qualitative* approach with detailed observations of existing traffic conditions during school peak periods was also incorporated in the analysis.

Background Traffic Volume Data

Existing Volumes

Current traffic volumes were collected during the analysis periods at each study intersection on March 8 and March 9, 2017 using video devices. Existing daily traffic volumes are graphically presented in Figures 1 through 4. Existing traffic turning counts are summarized in **Exhibit 3**; detailed data are provided in the **Appendix**.

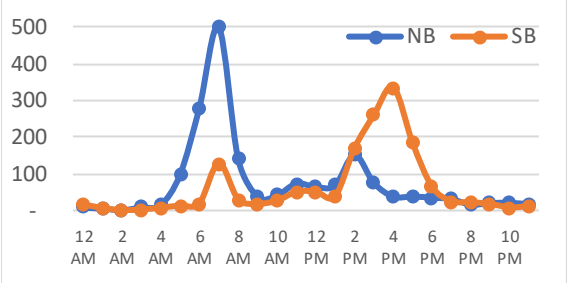


Figure 1. Hourly Traffic Counts on Joseph Hardin Drive (South of Exchange Service Dr)

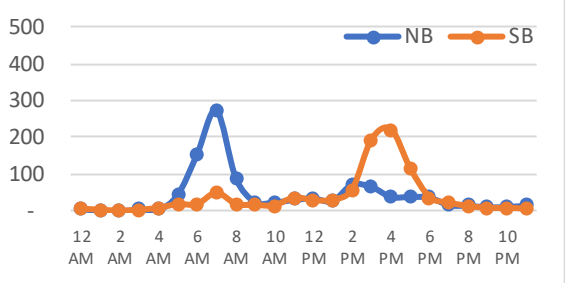


Figure 2. Hourly Traffic Counts on Joseph Hardin Drive (North of Exchange Service Dr)

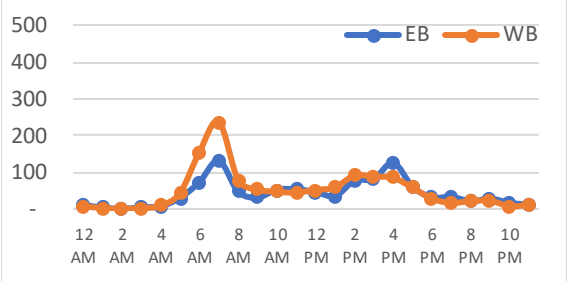


Figure 3. Hourly Traffic Counts on Exchange Service Drive (West of AAFES Driveway)

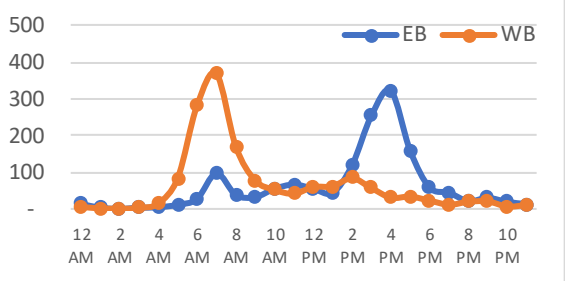


Figure 4. Hourly Traffic Counts on Exchange Service Drive (East of AAFES Driveway)

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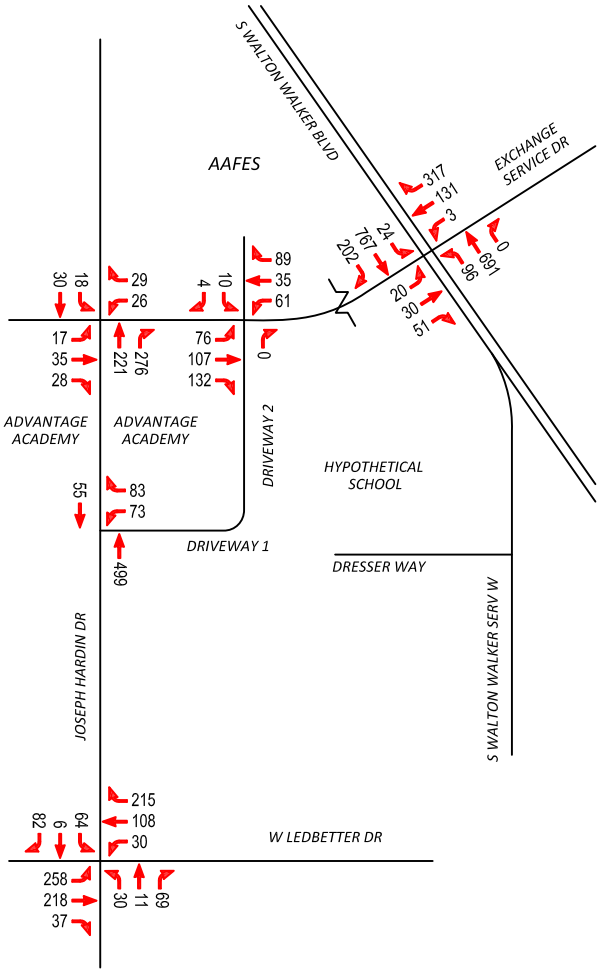
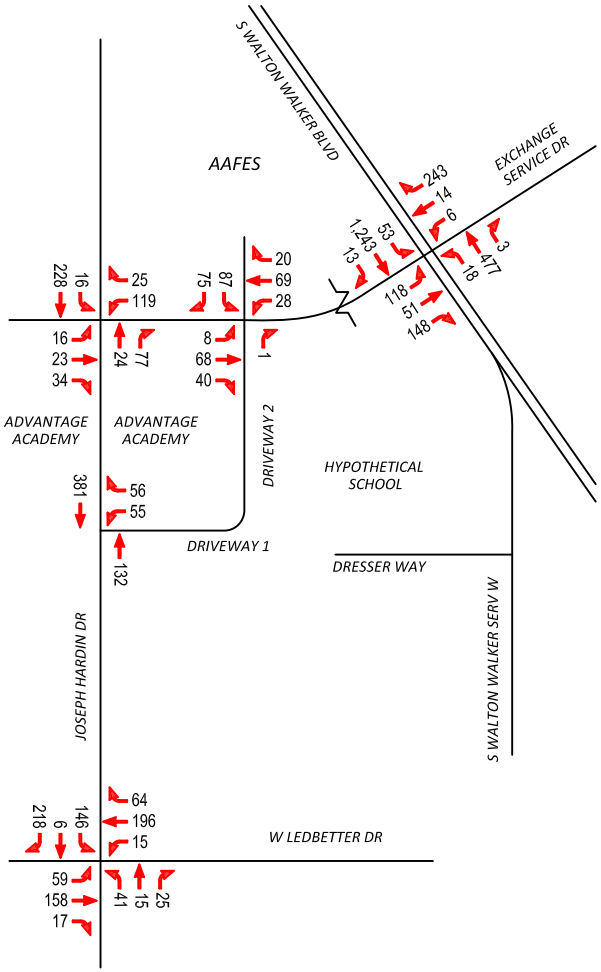
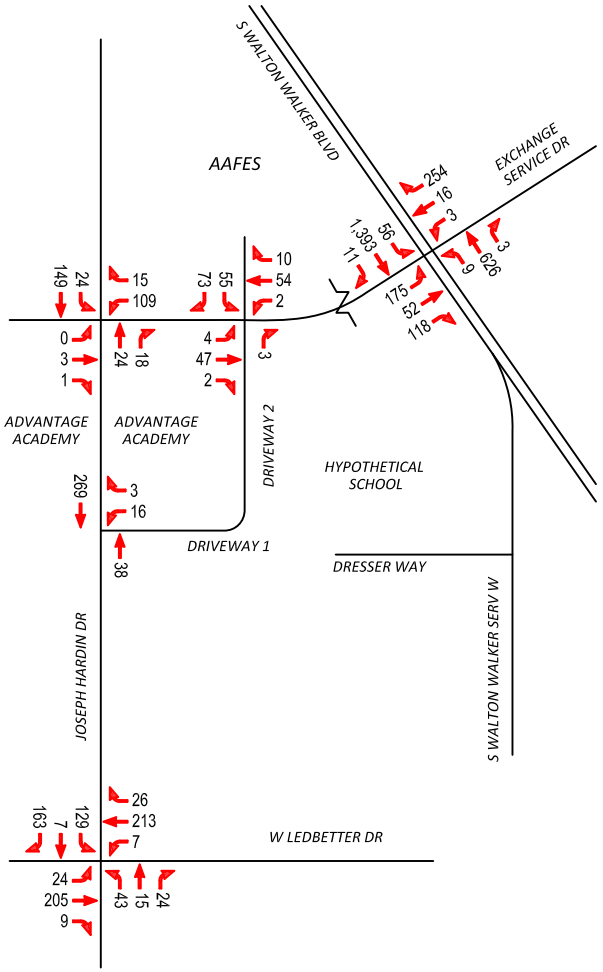
AM PEAK HOUR



SCHOOL PM PEAK HOUR



PM PEAK HOUR



* Vehicular counts only, excluding pedestrians

EXHIBIT 3

Existing Peak Hour Traffic

Traffic Study for Advantage Academy
Dallas, Texas

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Projected Background Traffic Volumes

Background traffic growth is defined as the normal, anticipated growth of traffic that is not directly related to either school or any adjacent development. Background traffic volumes were calculated for the study area intersections by applying an assumed growth rate for each condition. Annual growth rates were ascertained based upon review of historical traffic conditions as well as subjective evaluations of adjacent developments and land uses:

- Vehicular traffic along Joseph Hardin and Exchange Service is directly proportional to the traffic generated by adjacent properties and existing land uses. Although AAFES traffic may fluctuate weekly depending on the number of employees and visitors, variations should not constitute a significant percent of the observed traffic. Given this consideration, this analysis assumes no anticipated growth attributed to AAFES. However, traffic data were adjusted to include trips associated with 60 employees from upper management absent during the study data collection, in accordance with information provided by AAFES representatives.
- **Table 1** provides a review of historical traffic data along major thoroughfares in the study site. Traffic volumes on thoroughfares in the vicinity of the study site appear to generally be trending up. Thus, DeShazo assumed an annual growth rate of *three percent* to determine background traffic on Walton Walker based on a calculated weighted average from the past five years. An annual *one percent* growth was also applied to Ledbetter.

Table 1. Historical Daily Traffic Volume Growth Trend

ROADWAY SEGMENT	DAILY VOLUME (DATE)	ANNUAL GROWTH
S Walton Walker	13,974 ('15)[A]	15.49%
North of Exchange Service Dr	12,100 ('14)[A]	11.49%
	10,853 ('13)[A]	-6.44%
	11,600 ('12)[A]	-1.69%
	11,800 ('11)[A]	--

Data Source: A =TxDOT Saturation Counts

Site-Related Traffic

Trip Generation

Trip generation is calculated in terms of "trip-ends." A trip-end is a one-way vehicular trip entering or exiting a site driveway (i.e., a single vehicle entering and exiting a site represents two trip-ends). Trip generation for the school was calculated using both actual, empirical data and rates published by the Institute of Transportation Engineers (ITE) *Trip Generation* manual (9th Edition). ITE *Trip Generation* is a compilation of actual, vehicular traffic volume generation data and statistics by land use as collected over several decades by creditable sources across the country. Using the ITE equations and rates is an accepted methodology to calculate the projected site-generated traffic volumes for many land uses (though engineering judgment is strongly advised).

The *Trip Generation* manual provides a selective list of land uses of which *Private School (K-8)* is the most representative of a charter school—generating more trips than traditional public schools. Table 2 presents a comparison of trip generation values calculated from published rates and actual, empirical data collected from school driveways on March 8 and 9, 2017.

Table 2. Comparison of Trip Generation Values for Advantage Academy
(Provided as reference only, based on 487 students)

METHODOLOGY	AM PEAK HOUR			SCHOOL PM PEAK HOUR		
	TOTAL	IN	OUT	TOTAL	IN	OUT
ITE Fitted Curve Equations:	*T = 0.90X + 3.01*	55%	45%	*T = 0.61X - 4.70*	47%	53%
	= 441	= 243	= 198	= 292	= 137	= 155
Advantage Academy Observed Trip-Ends:	546	308	238	411	193	219
	1.12 ***Trip-end per student***	***56%***	***44%***	**0.84** ***Trip-end per student***	***47%***	***53%***

Actual trips generated by Advantage Academy are higher than DeShazo's selected ITE average rate. In order to present a reasonable projection of trips, proposed conditions were calculated based upon the (higher) observed rates. The following tables provide the calculated net increase in trip-ends generated by the proposed expansion of Advantage Academy and a hypothetical school at 4201 S. Walton Walker.

Table 3. Projected Trip Generation Summary for Advantage Academy

QUANTITY	AM PEAK HOUR			SCHOOL PM PEAK HOUR		
	TOTAL	IN	OUT	TOTAL	IN	OUT
213 students	239	134	105	179	84	95

Table 4. Projected Trip Generation Summary for Hypothetical School at 4201

QUANTITY	AM PEAK HOUR			SCHOOL PM PEAK HOUR		
	TOTAL	IN	OUT	TOTAL	IN	OUT
528 Students	591	331	260	444	208	235

Trip Distribution and Assignment

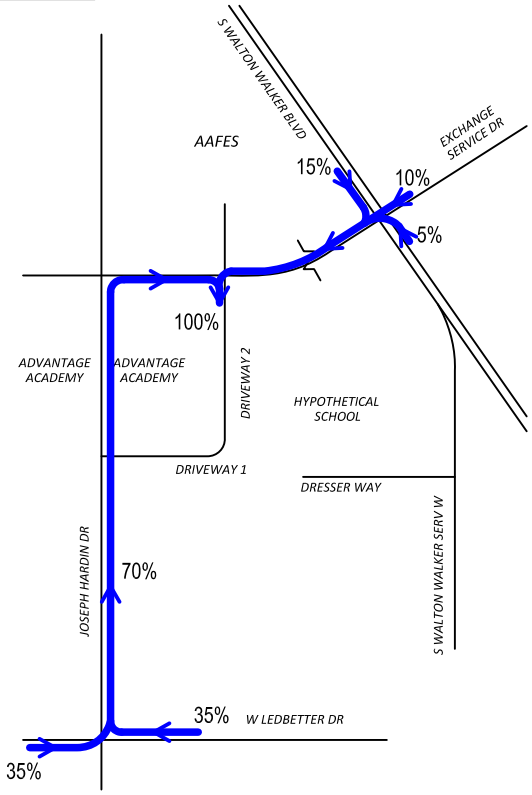
The distribution and assignment of site-generated trip ends to the surrounding roadway system was proportionally estimated based upon directional characteristics of existing local traffic, roadway features, and regional demographics. Separate traffic assignments were generated for each school as depicted in **Exhibit 4A** and **Exhibit 4B**.

Site-Generated Traffic Volumes

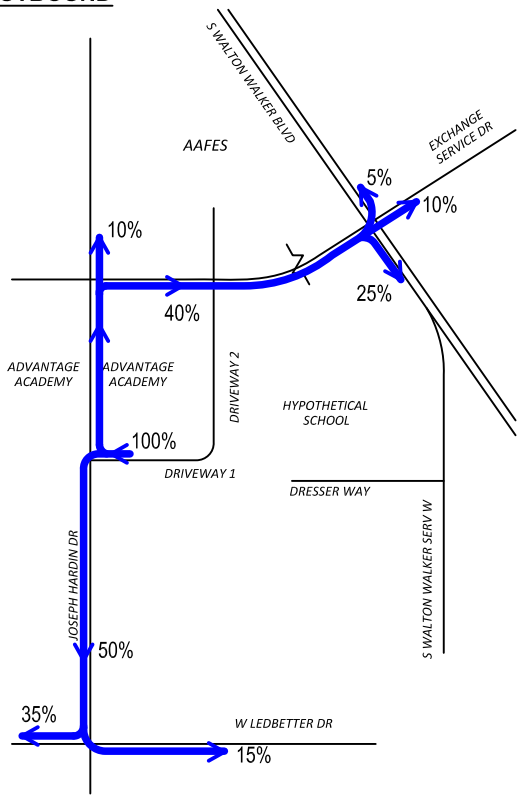
Site-generated traffic was calculated by multiplying the trip generation value (from **Table 3** and **Table 4**) by the corresponding traffic assignments (from **Exhibit 4A** and **Exhibit 4B**). The resulting peak period traffic volumes are graphically summarized in **Exhibits 5**—Proposed School Condition, **Exhibit 6**—Proposed Conditions (plus hypothetical school), and **Exhibit 7**—Horizon Conditions.

Existing Traffic Assignment (4010 Joseph Hardin Drive)

INBOUND



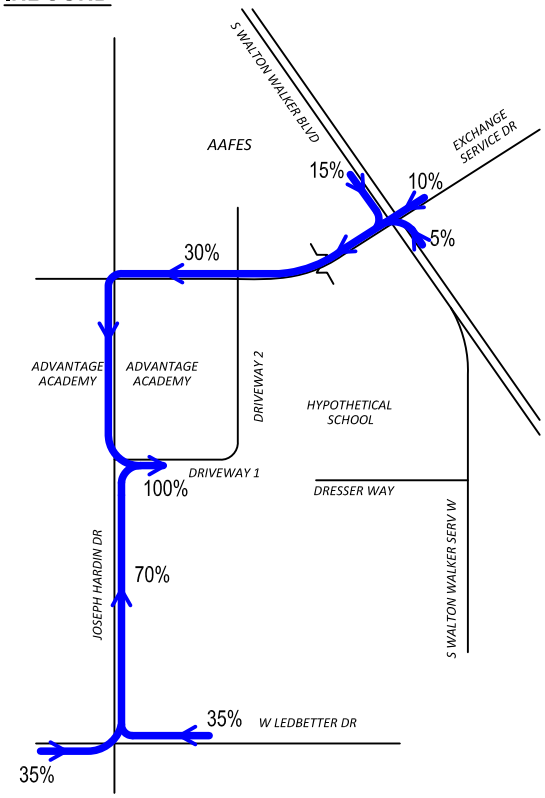
OUTBOUND



N.T.S.

Redirected Traffic Assignment (4010 Joseph Hardin Drive)

INBOUND



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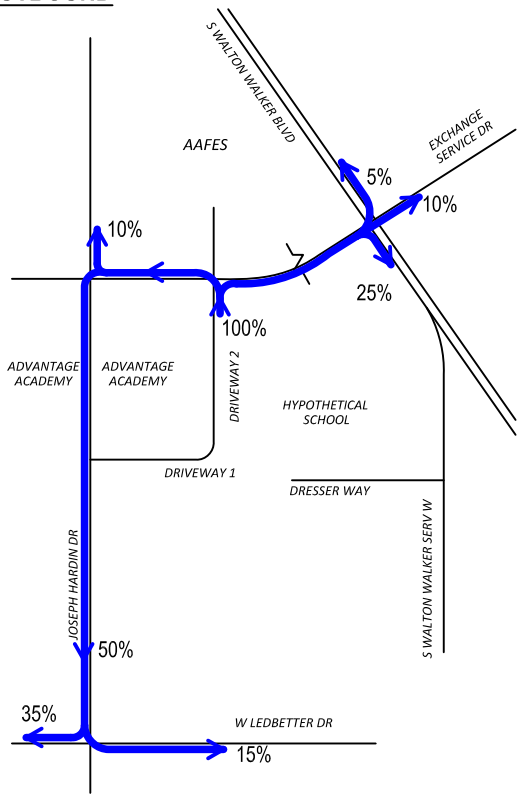

EXHIBIT 4A

Traffic Assignment
Traffic Study for Advantage Academy
Dallas, Texas

DeShazo Group, Inc.
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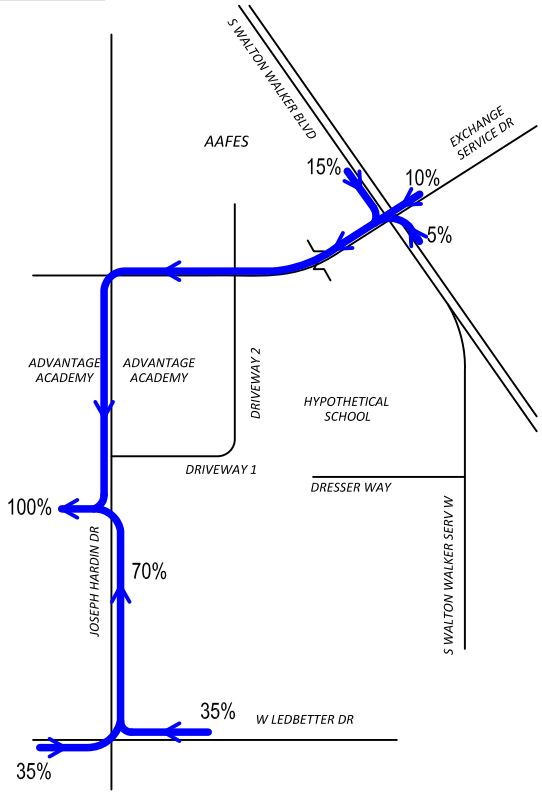
Proposed Traffic Assignment (4009 - 4011 Joseph Hardin Drive)

N.T.S.

INBOUND



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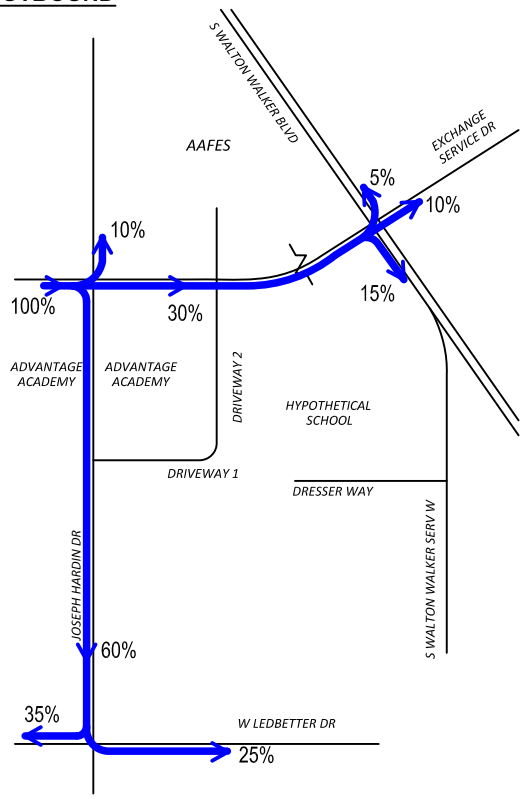
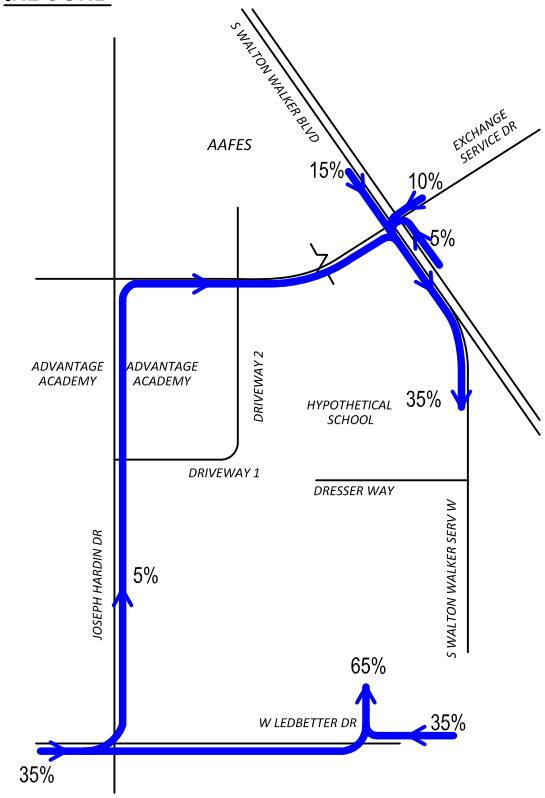


Theoretical School (4221 S Walton Walker Boulevard)

INBOUND



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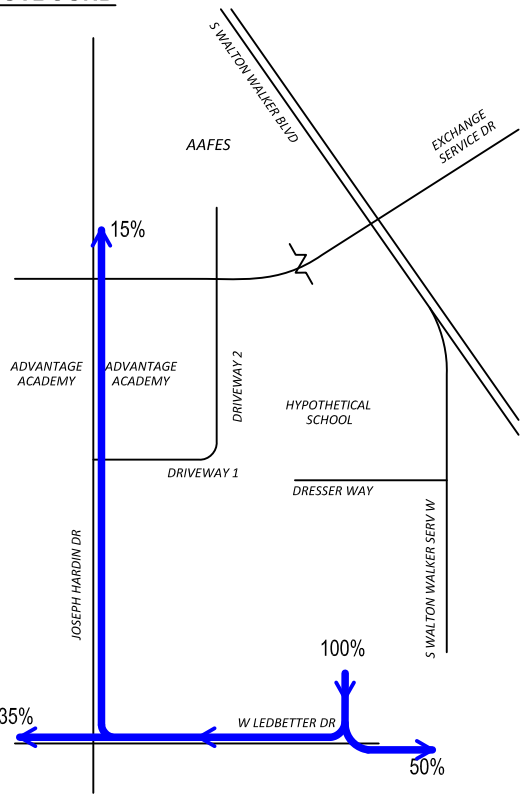

EXHIBIT 4B

Traffic Assignment

Traffic Study for Advantage Academy
Dallas, Texas

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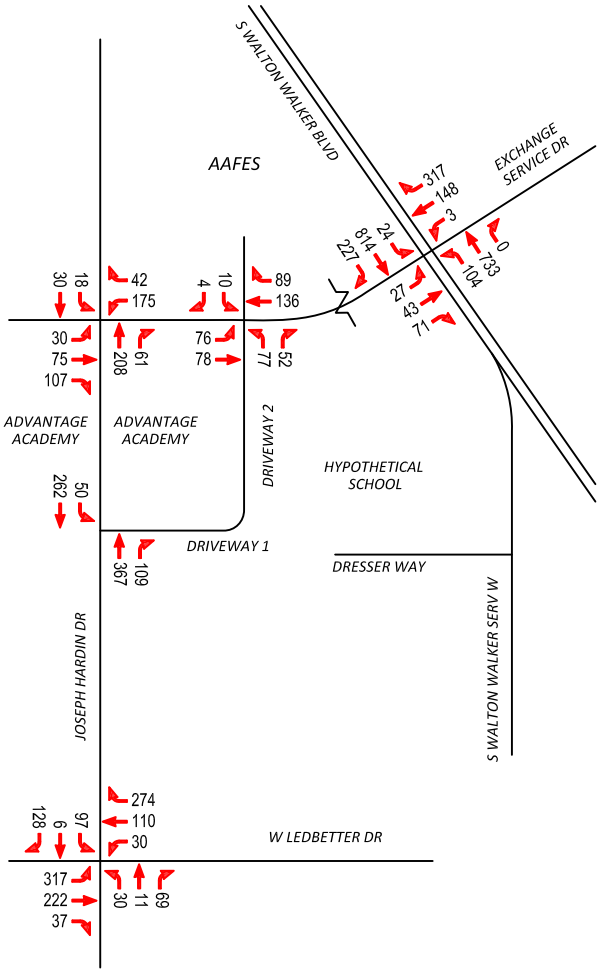
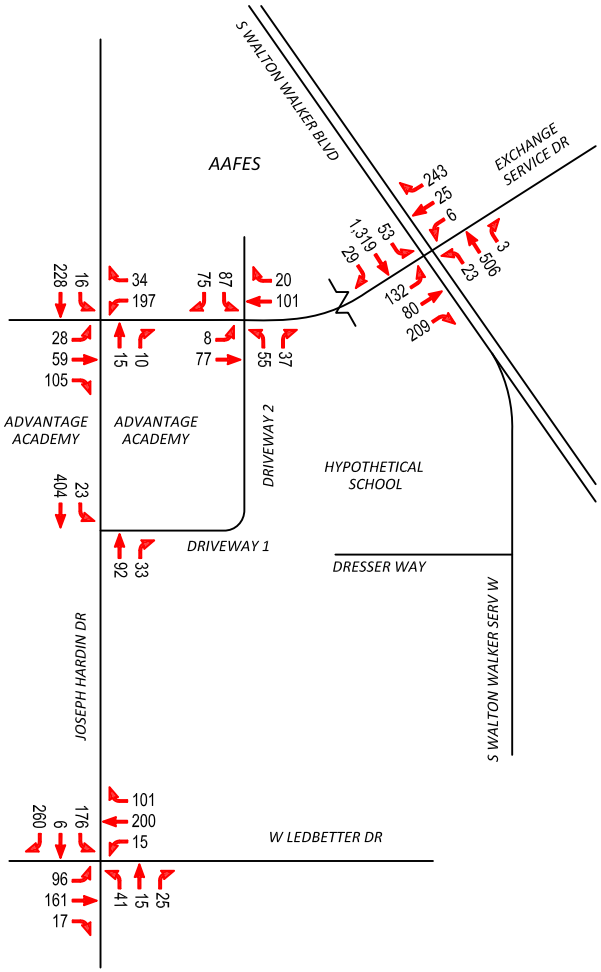
DeShazo Group, Inc. Job No. 16133.03 Exhibit Created on 03-16-2017

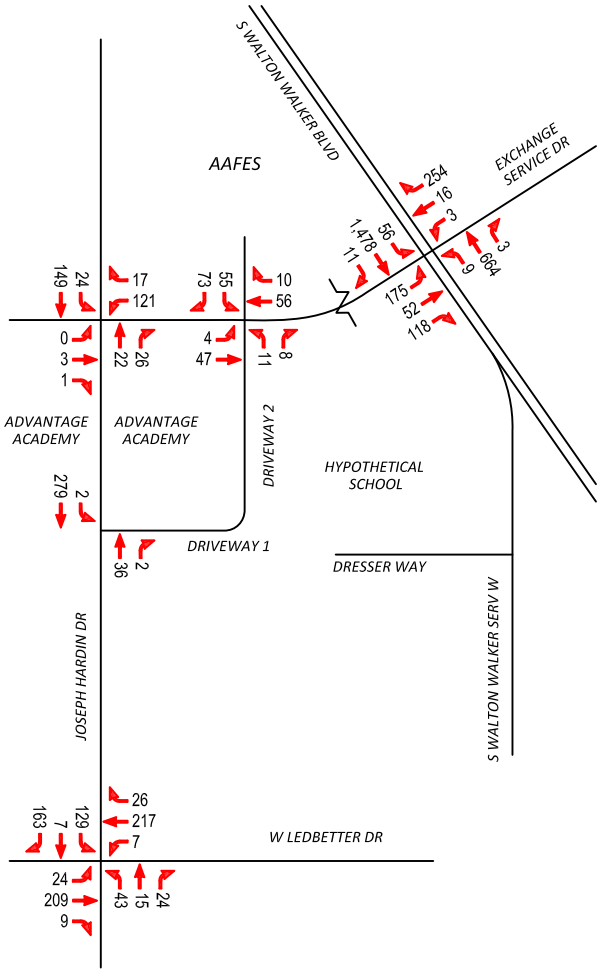
AM PEAK HOUR



SCHOOL PM PEAK HOUR



PM PEAK HOUR



* Vehicular counts only, excluding pedestrians

EXHIBIT 5

Proposed Condition Peak Hour Traffic

Traffic Study for Advantage Academy
Dallas, Texas

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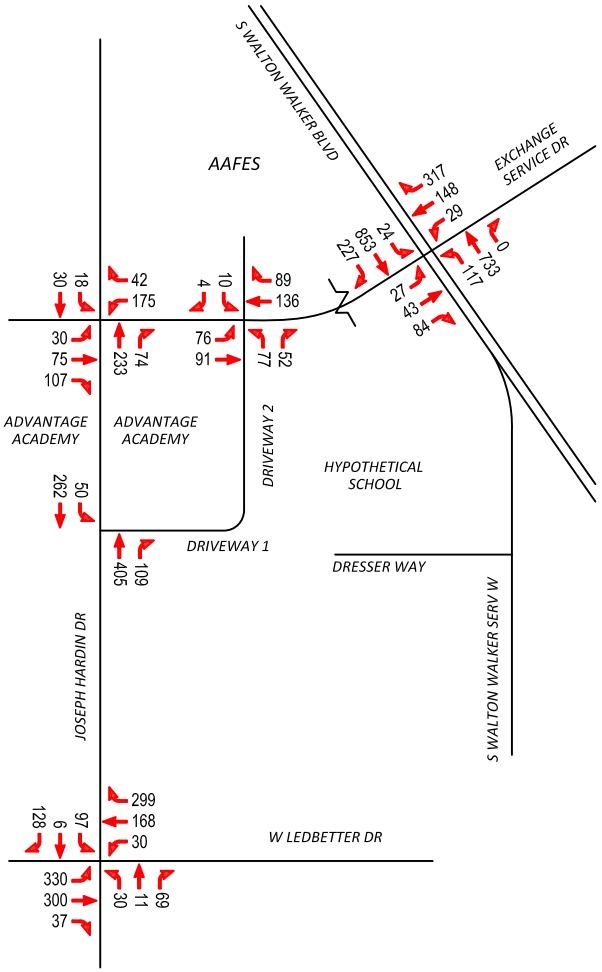
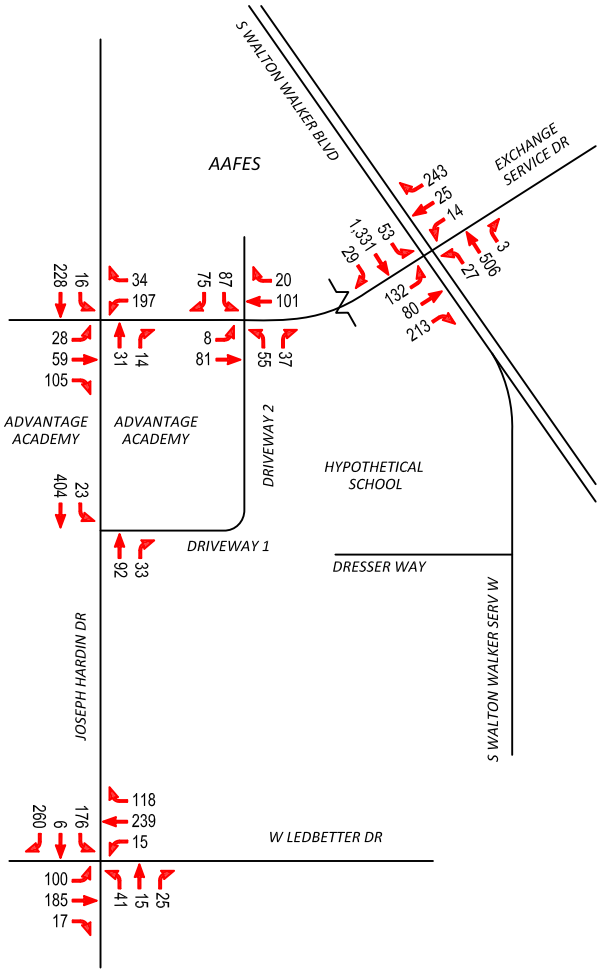
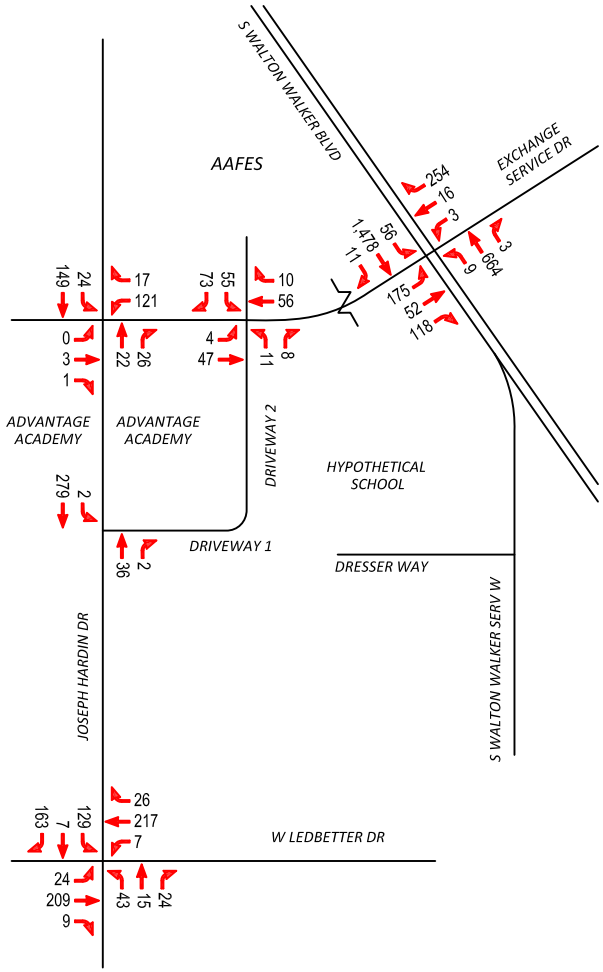
AM PEAK HOUR



SCHOOL PM PEAK HOUR



PM PEAK HOUR



* Vehicular counts only, excluding pedestrians

EXHIBIT 6

Theoretical Condition Peak Hour Traffic (Including Hypothetical School)

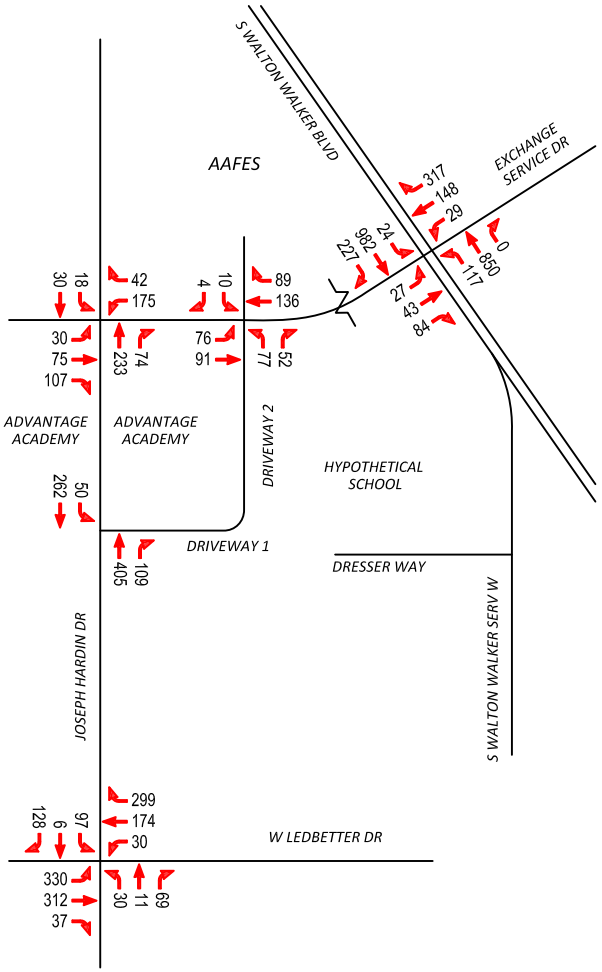
Traffic Study for Advantage Academy
Dallas, Texas

DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 S. Houston St. Suite 330
Dallas, Texas 75202
(214) 748.6740

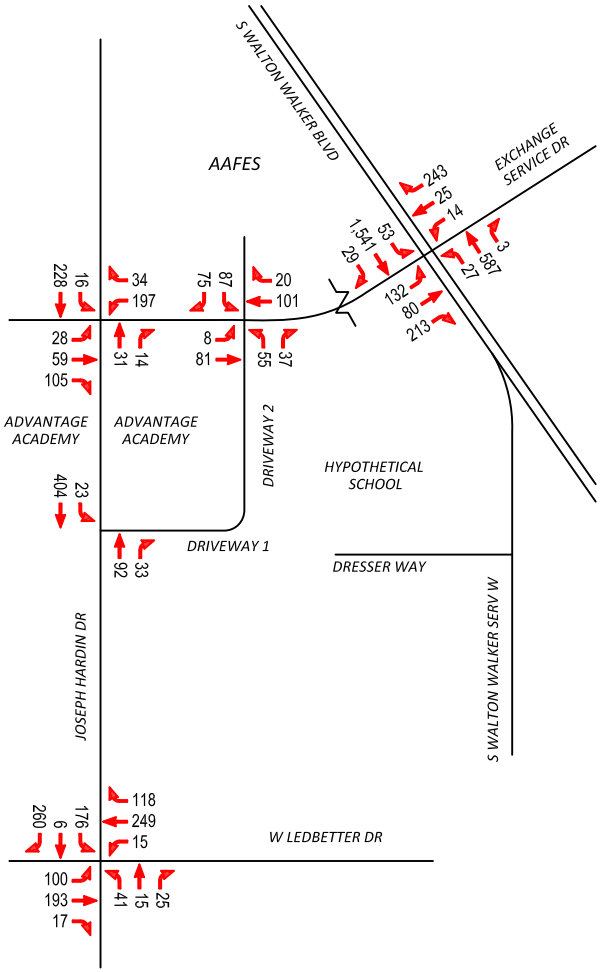
DeShazo Group

DeShazo Group, Inc. Job No. 16133.03 Exhibit Created on 03-16-2017

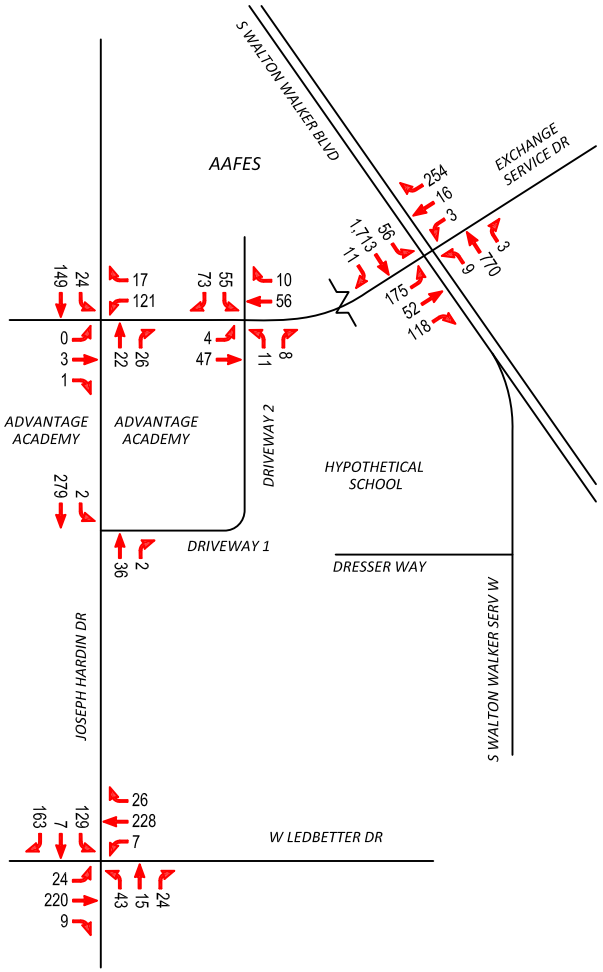
AM PEAK HOUR



SCHOOL PM PEAK HOUR



PM PEAK HOUR



* Vehicular counts only, excluding pedestrians

EXHIBIT 7

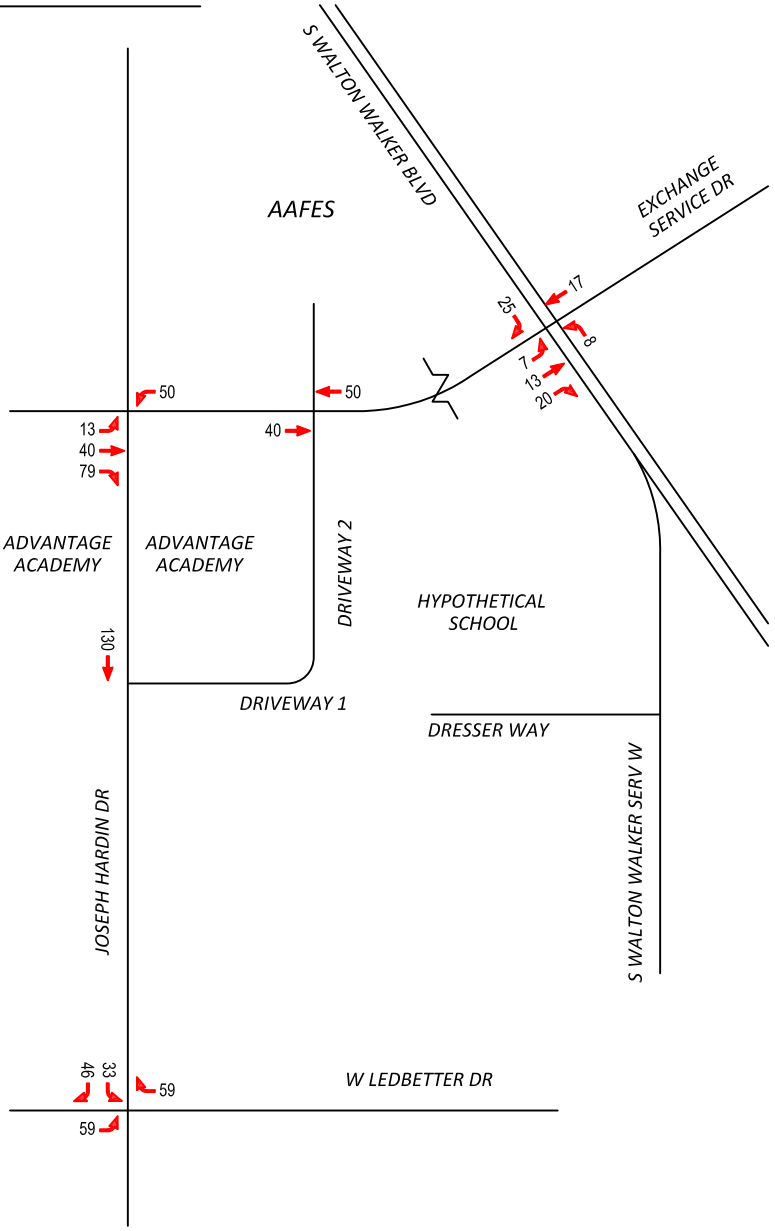
Horizon Peak Hour Traffic

Traffic Study for Advantage Academy
Dallas, Texas

DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 S. Houston St. Suite 330
Dallas, Texas 75202
(214) 748.6740

DeShazo Group

AM PEAK HOUR



SCHOOL PM PEAK HOUR

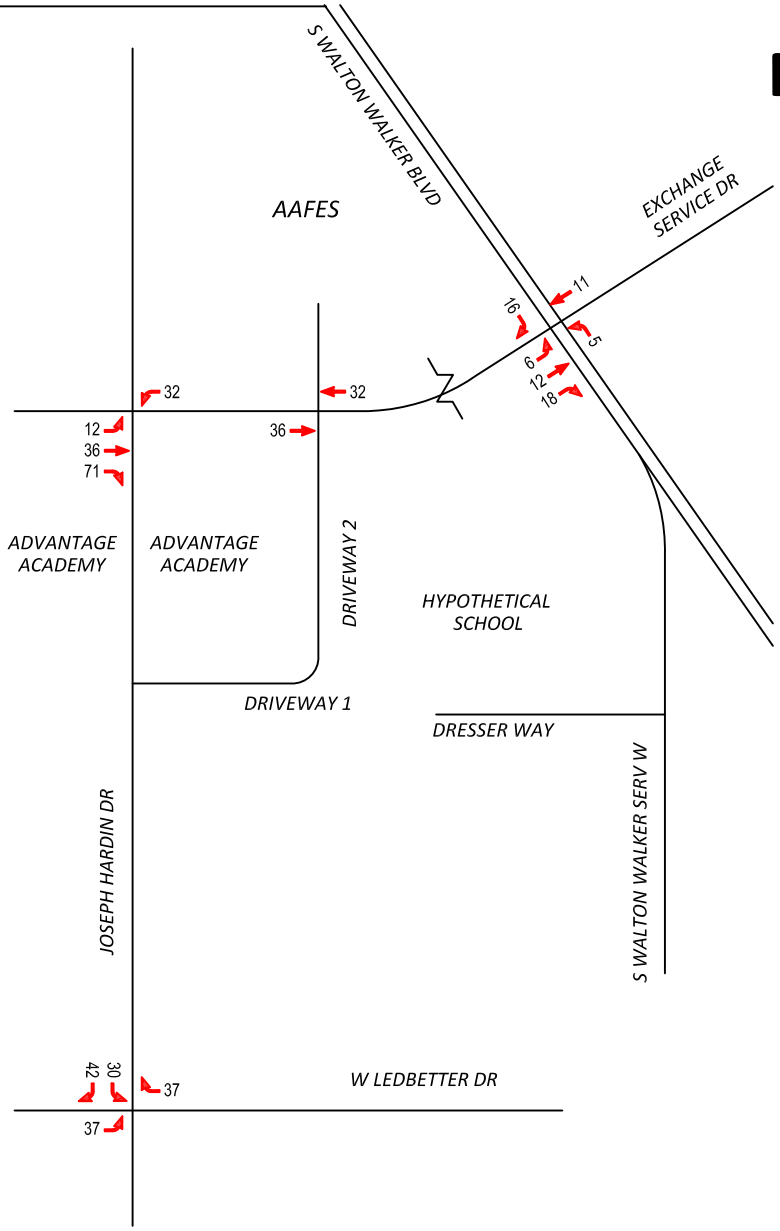


EXHIBIT 8

Site Generated Peak Hour Traffic - Proposed Condition

Traffic Study for Advantage Academy
Dallas, Texas

DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 S. Houston St. Suite 330
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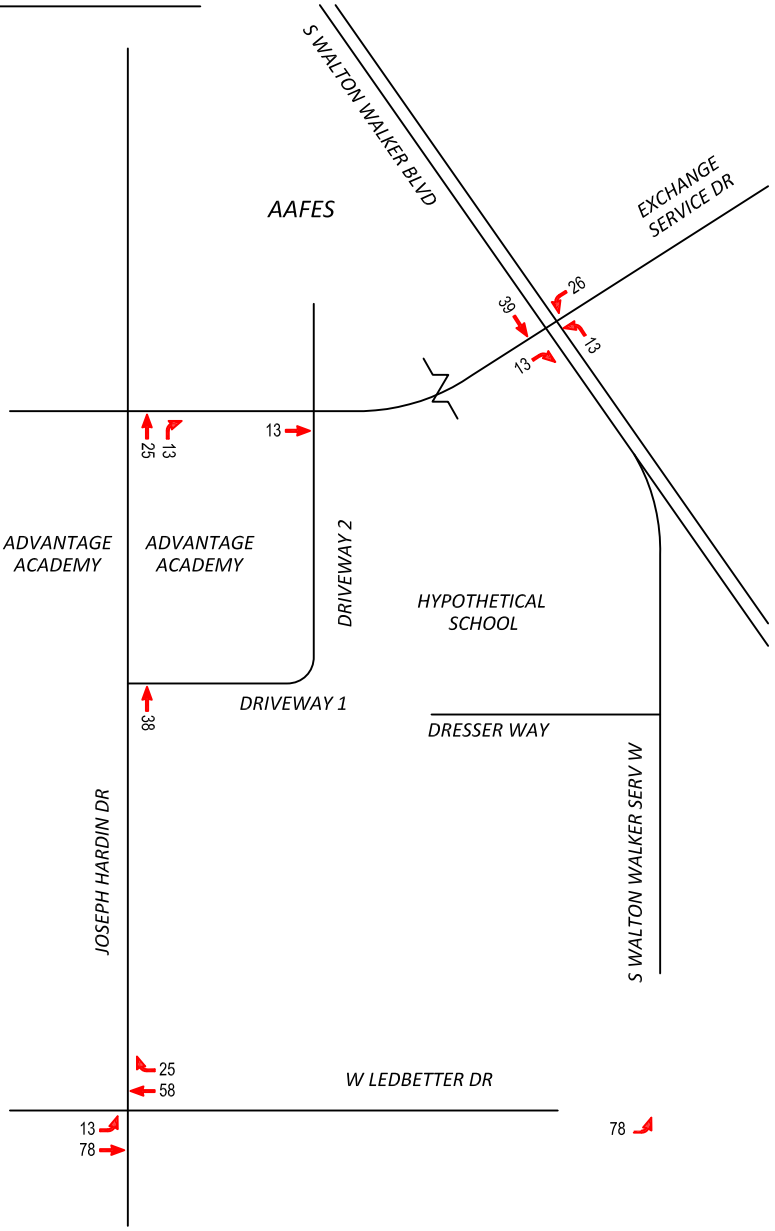
(214) 748.6740

DeShazo Group, Inc. Job No. 16133.03 Exhibit Created on 03-16-2017

DeShazo Group

DeShazo Group, Inc. Job No. 16133.03 Exhibit Created on 03-16-2017

AM PEAK HOUR



SCHOOL PM PEAK HOUR

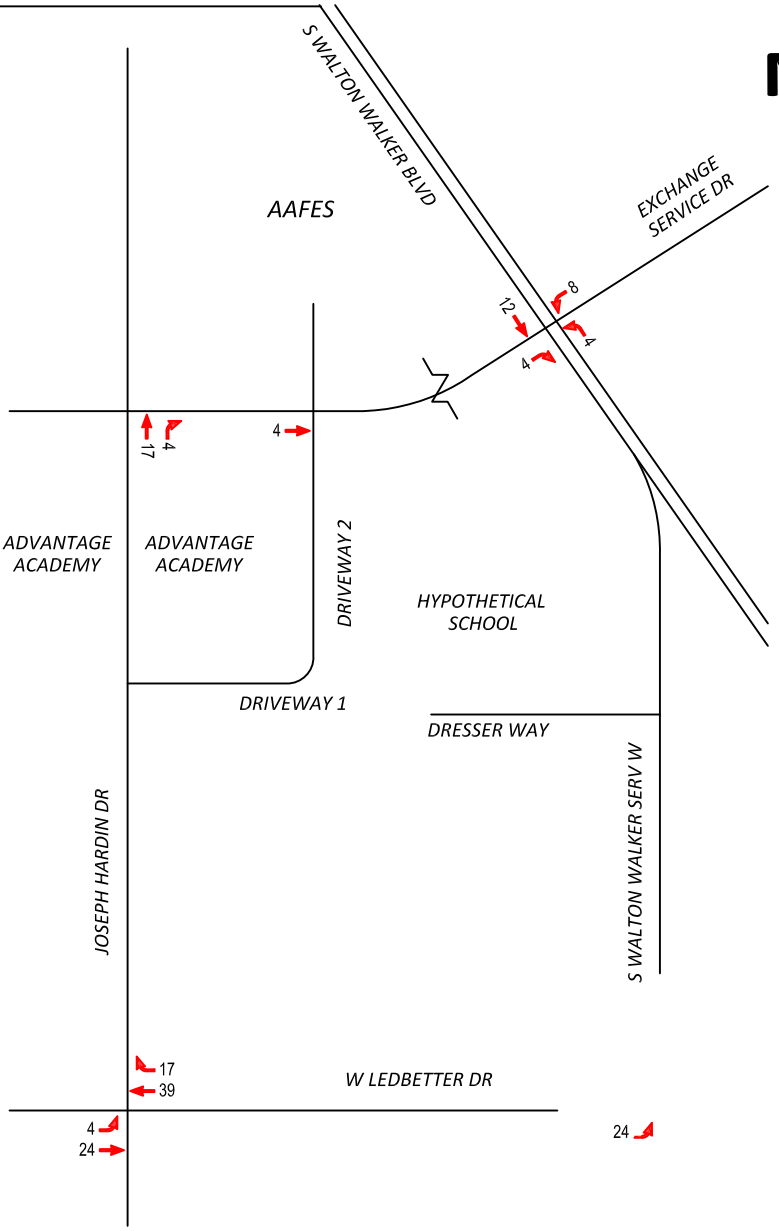


EXHIBIT 9

Site Generated Peak Hour Traffic - Hypothetical School

Traffic Study for Advantage Academy
Dallas, Texas

DeShazo Group, Inc.
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Traffic Operational Analysis

Description

The level of performance of roadway intersections was measured through an analysis of volume and capacity that considers various physical and operational characteristics of the system. An industry-standardized methodology for this type of analysis was developed by the Transportation Research Board and is presented in the Highway Capacity Manual (HCM). HCM uses the term "Level of Service" (or, LOS) to qualitatively describe the efficiency using a letter grade of A through F. Generally, LOS can be described as follows:

LOS *A* = free, unobstructed flow
LOS *B* = reasonably free flow
LOS *C* = stable flow
LOS *D* = approaching unstable flow
LOS *E* = unstable flow, operating at design capacity
LOS *F* = operating over design capacity

Traffic operational analysis is typically measured in one-hour periods during day-to-day peak conditions. In most urban settings, *LOS C* or better is desirable, albeit *LOS D* is considered to be acceptable. Nevertheless, periods of LOS *E* or *F* conditions are not uncommon for brief periods of time at major transportation facilities. In some cases, measures to add more capacity through operational changes can be identified to increase efficiency and sometimes improve conditions. LOS is determined based upon the calculated average seconds of delay per vehicle. For signalized intersections, the average delay per vehicle can be effectively calculated for the entire intersection; however, for unsignalized intersections the average delay per vehicle is calculated only by approach or by individual traffic maneuvers that must stop or yield right-of-way.

The following table summarizes the LOS criteria for signalized and unsignalized intersections as defined in the latest edition of the *Highway Capacity Manual*.

	Signalized Intersection (Average Delay per Vehicle)	**Unsignalized Intersection (Average Delay per Vehicle)**
LOS *A*	≤ 10	≤ 10
LOS *B*	>10 - ≤20	>10 - ≤15
LOS *C*	>20 - ≤35	>15 - ≤25
LOS *D*	>35 - ≤55	>25 - ≤35
LOS *E*	>55 - ≤80	>35 - ≤50
LOS *F*	>80	>50

Analysis of Traffic Volumes

Determination of the traffic impact associated with the Project is measured by comparing the incremental change in operational conditions during peak periods with and without site-related traffic. Intersection capacity analyses presented in this study were performed using the *Synchro 9th Edition* software. **Table 4** and **Table 5** provide a summary of the peak period intersection operational conditions under the analysis conditions presented previously. Detailed software output is provided in **Appendix D**.

Table 4. Peak Hour Intersection Capacity Analysis Results Summary (Signalized Intersections)

Intersection Traffic Movement	Existing Conditions			Proposed Conditions			Theoretical Buildout			Horizon Conditions		
	AM	School PM	PM	AM	School PM	PM	AM	School PM	PM	AM	School PM	PM
Walton Walker *at*	B	C	C	B	C	B	B	C	B	B	C	B
Exchange Service Dr	13.7	21.1	20.1	15.2	27.3	19.8	16.5	28.7	19.8	17.1	29.0	19.2
Optimized Timings*	--	--	--	B 14.8	B 18.0	B 15.5	B 16.2	B 18.7	B 15.5	B 16.6	B 19.5	B 16.0

Table 5. Peak Hour Intersection Capacity Analysis Results Summary (Unsignalized Intersections)

Intersection Traffic Movement	Existing Conditions			Proposed Conditions			Theoretical Buildout			Horizon Conditions		
	AM	School PM	PM	AM	School PM	PM	AM	School PM	PM	AM	School PM	PM
Joseph Hardin												
at Ledbetter Dr												
EBL	A	A	A	A	A	A	B	A	A	B	A	A
SBLT	F	D	D	F	F	D	F	F	D	F	F	D
SBTR	B	B	B	B	B	B	C	B	B	C	B	B
Joseph Hardin												
at Driveway 1												
EBLR	A	B	A	B	B	A	B	B	A	B	B	A
WBL	C	C	B	--	--	--	--	--	--	--	--	--
WBR	B	A	A	--	--	--	--	--	--	--	--	--
SBL	--	--	--	A	A	A	A	A	A	A	A	A
Joseph Hardin												
at Exchange Serv												
EBL	B	C	B	B	F	B	B	F	B	B	F	B
WBL	C	F	B	D	F	C	D	F	C	D	F	C
WBR	B	B	A	A	B	A	A	B	A	A	B	A
SBLT	A	A	A	A	A	A	A	A	A	A	A	A
Exchange Service												
at Driveway 1												
EBLT	A	A	A	A	A	A	A	A	A	A	A	A
WBLT	A	A	A	--	--	--	--	--	--	--	--	--
NBL	--	--	--	B	B	B	B	B	B	B	B	B
NBR	--	--	--	A	A	A	A	A	A	A	A	A
SBLTR	B	B	B	B	B	B	B	B	B	B	B	B

KEY: A, B, C, D, E, F = Level-of-Service
NB, SB, EB, WB = North-, South-, East-, Westbound approach
L, T, R = Left, Through, Right Approach turning movement
(##.#) = Average delay in seconds per vehicle

Summary of Findings

NOTE: Recommendations for public improvements within the study area presented in this report reflect the opinion of DeShazo based solely upon technical analysis and professional judgment and are not intended to define, imply, or allocate funding sources or required improvements.

Overall Traffic Operations

Results of this analysis indicate that all study intersections currently operate at stable flow and acceptable levels-of-service. Peak hour periods are expected to remain at acceptable operational conditions with the addition of school-related traffic. The projected peak hour turning movement volumes do not warrant consideration of any mitigation alternatives.

Evaluation of Hypothetical School at 4201 S Walton Walker Blvd

Findings show that only a minimal amount of traffic is expected to interact with existing traffic along Joseph Hardin and Exchange Services. This study assumes that only five percent (5%) of the total inbound traffic and zero percent (0%) of the outbound traffic generated by a hypothetical school would travel through Joseph Hardin and/or Exchange Services. Furthermore, a hypothetical school would have a minimal impact to the intersection at Exchange Services and Walton Walker—adding 1.3 seconds to the overall intersection average delays.

Evaluation of Exchange Service Drive at Joseph Hardin Drive

The intersection of Exchange Service at Joseph Hardin currently operates as a minor-street stop control. An adult crossing guard assists pedestrians during school peak hours. Existing traffic volumes (including pedestrians) do not meet the criteria for the installation of an all-way stop control. However, school peak (and off-peak) observations suggest that an all-way stop control would likely provide a safer pedestrian environment. It should be noted that this intersection is already effectively operating under such conditions with the presence of a crossing guard, who frequently stops traffic to cross pedestrians.

Furthermore, findings of this analysis indicate that the northbound right-turn movement will decrease as a result of the proposed reassignment of school traffic flow at 4010 Joseph Hardin. In turn, westbound left-turn volume will increase, resulting in a significant delay for the minor street approach. DeShazo thus recommends the installation of an all-way stop in order to accommodate the proposed school peak operations. DeShazo had previously deferred this decision at the discretion to the City of Dallas in a previous study of this intersection. However, under no circumstance should an all-way stop constitute a substitute for the need of an adult school crossing guard during school peak hours

Table 6. HCM 95th Percentile Queue Length (in Vehicles)
for Westbound Left Turns on Exchange Service at Joseph Hardin

Stop Control Scenario	Existing Conditions			Proposed Conditions			Theoretical Buildout		
	AM	School PM	PM	AM	School PM	PM	AM	School PM	PM
Minor Street Stop Control	0.3	6.2	2.2	4.1	***21.2***	2.7	4.6	***22.1***	2.7
All-Way Stop Control	0.2	1.2	2.5	2.3	2.8	3.1	2.4	2.9	3.1

Exchange Service Drive at School/AAFES Driveway

Findings of this analysis support the recommendation to reverse school traffic flow at 4010 Joseph Hardin. Current school traffic operations are highly influenced by the presence of school staff controlling and monitoring pick-up operations. The reversal of traffic flow will eliminate any overlap between unwarranted, excessive queueing from school inbound traffic and AAFES outbound traffic on Exchange Service. It will also reduce the amount right-turning vehicles interacting with pedestrians at the intersection of Joseph Hardin and Exchange Service.

Results from the *TMP for Advantage Academy* dated February 8, 2017—upon complete enforcement of the recommendations presented therein—further indicate that no queuing of vehicles will extend onto public rights-of-way as a result of internal queuing constraints. This technical review is supported by numerous field observations dating back to 2009.

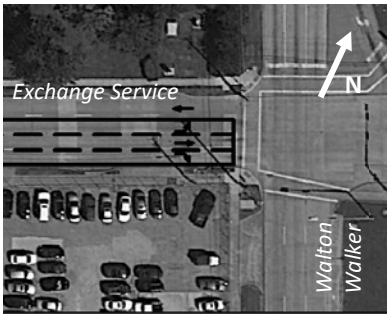
Exchange Service Drive at Walton Walker Boulevard

Traffic signal operational parameters used in this analysis were based upon actual, existing traffic signal timing settings observed on the field at the time of traffic data collection. The traffic signal at Walton Walker and Exchange Service is currently running on 90- and 100-second cycles during the morning and afternoon periods, respectively. The signal is also operating as permissive/ protected mode with a left-turn arrow immediately followed by an exclusive, protected left-turn phase for north- and south-bound approaches. East- and west-bound approaches allow left-turning vehicles to find gaps in oncoming traffic.

Although this study indicates that this intersection will continue to operate at acceptable levels-of-service with the addition of school-related traffic, three scenarios were evaluated as alternatives to further optimize existing conditions.

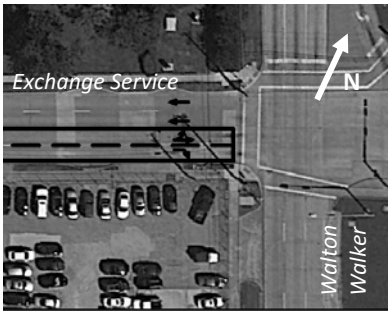
Alternative 1: *Dedicated westbound approach lanes*

- **Result**: Changing the intersection lane geometry to provide a dedicated lane for each movement would improve the approaching delay at the expense of the overall level of service of the overall. This alternative would also incur a disproportionate cost that is not commensurate to its benefits.



Alternative 2: *Restripe existing westbound lanes*

- **Result**: Changing the intersection lane geometry to provide a dedicated right-turn lane and a shared left-through provides no significant improvement to either the westbound approach or the overall intersection.



Alternative 3: *Timing Settings Optimization*

- **Result**: An optimization of the split settings would dedicate more green time to eastbound approaching traffic on Exchange Services without a significant impact to the overall intersection. **Figure 6** presents the optimized settings recorded in this analysis. **Table 7** further tabulates the *relative* improvement as 95th percentile queue lengths from *Synchro* output sheets. The recommended optimization is not expected to impact progression along this corridor; the nearest signalized intersection is located approx. 0.95 miles to the north at Walton Walker and Kiest Boulevard and 0.95 miles to the west at Ledbetter Drive and Westmoreland Road.

Figure 5. EXISTING Split and Phases (PM)

Figure 6. OPTIMIZED Split and Phases (PM)

The City of Dallas should further analyze this intersection and consider a lead-lead phase for north- and south-bound left turns. The intersection lane geometry would allow both movements to operate simultaneously.

Table 7. HCM 50th Percentile Queue Length (in Feet)
for Eastbound Approach on Exchange Service at Walton Walker

Scenario	Traffic Approach	Existing Conditions			Proposed Conditions			Theoretical Buildout		
		AM	School PM	PM	AM	School PM	PM	AM	School PM	PM
EXISTING CONDITIONS	EB	22’	131’	131’	32’	172’	131’	32’	176’	131’
OPTIMIZED SETTINGS	EB	--	--	--	30’	122’	93’	29’	126’	93’

Traffic Operational Analysis —Roadway Links

Roadway capacity analysis is a comparison of actual or forecasted traffic volumes to the theoretically optimum roadway capacity. The capacity of the roadway link is predominantly a function of the roadway's cross-section. However, other more theoretical factors also apply, such as the character of environment and the functional classification of the roadway. Generally, roadway link capacity is less critical than intersection capacity; however, it can provide a gage of the utilization of given roadway.

Based upon the roadway description of the study area provided on *Page 4* of this report, Exchange Service Drive is considered a collector or local street with a theoretical capacity of 525 vehicles per hour per lane, in accordance with "hourly service volume" guidelines recommended by the North Central Texas Council of Governments (NCTCOG)—the metropolitan planning agency for the Dallas-Fort Worth region. The utilization of this roadway was calculated as the volume-to-capacity ratio. A link capacity analysis for Exchange Service Drive is provided in Table 6 based on the following NCTCOG's level-of-service denominations.

V/C Ratio $\leq$ 45% is LOS *A/B*,
V/C Ratio > 45% and $\leq$ 65% is LOS *C*,
V/C Ratio > 65% and $\leq$ 80% is LOS *D*,
V/C Ratio < 80% and $\leq$ 100% is LOS *E*,
V/C Ratio $\geq$ 100% is LOS *F*

Table 6. Roadway Link Capacity Analysis for Exchange Service Drive
(collector/local, four lanes, undivided)

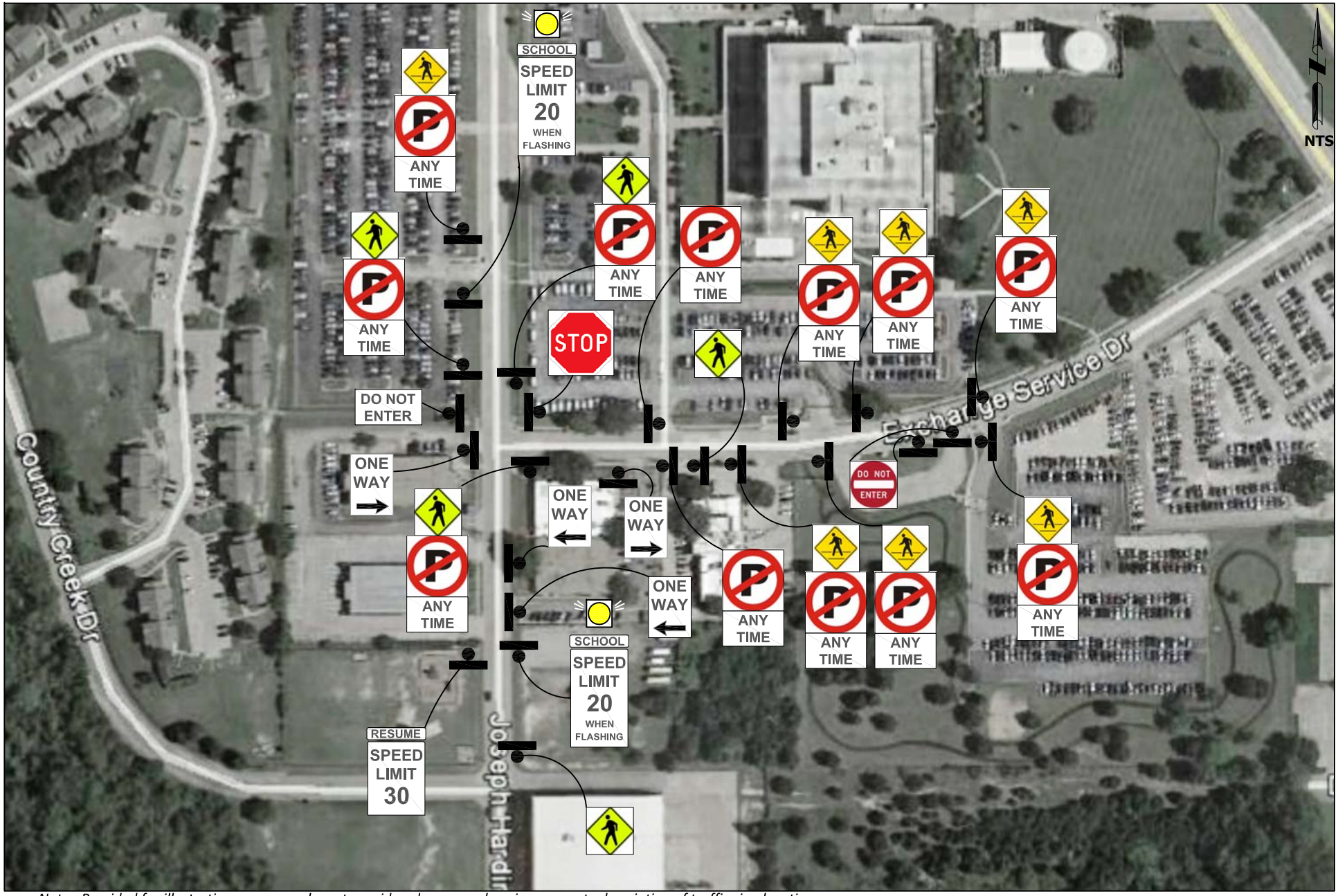
STUDY PEAK HOUR	CONDITION	HOURLY COUNTS	PHF	PHV	THEORETICAL CAPACITY	V/C	LOS
AM Peak	Existing Conditions	530	0.80	663	2,100 vph	0.32	A/B
	Proposed School Condition	620	0.80	775	2,100 vph	0.37	A/B
	Hypothetical School Condition	646	0.80	808	2,100 vph	0.38	A/B
	Horizon Conditions	646	0.80	808	2,100 vph	0.38	A/B
School Peak	Existing Conditions	430	0.77	558	2,100 vph	0.27	A/B
	Proposed School Condition	498	0.77	646	2,100 vph	0.31	A/B
	Hypothetical School Condition	506	0.77	656	2,100 vph	0.31	A/B
	Horizon Conditions	506	0.77	656	2,100 vph	0.31	A/B
PM Peak	Existing Conditions	381	0.79	482	2,100 vph	0.23	A/B
	Proposed School Condition	381	0.79	482	2,100 vph	0.23	A/B
	Hypothetical School Condition	381	0.79	482	2,100 vph	0.23	A/B
	Horizon Conditions	381	0.79	482	2,100 vph	0.23	A/B

Findings of this analysis indicate that the roadway adequately accommodates the existing traffic and provides plenty of capacity for the proposed school expansion and the hypothetical school. No roadway mitigation measures are required.

Traffic Sign Inventory

Roadway operations should also be considered a principal factor in the evaluation of roadway operations. DeShazo did not detect excessive speeds during field observations. **Exhibit 10** provides an inventory of existing traffic signs. This inventory provides an overall depiction of existing traffic controls by which traffic currently operates as well as existing restrictions and operations. DeShazo recommends that all signs including midblock pedestrian crosswalks be re-striped.

DeShazo Group



Note : Provided for illustration purpose only, not considered a comprehensive, accurate description of traffic sign locations.

EXHIBIT 10

Existing Traffic Signs

Traffic Study for Advantage Academy
Dallas, Texas

- Existing Traffic Sign

DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 S. Houston St. Suite 330
Dallas, Texas 75202
(214) 748.6740

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The following findings and recommendations are based upon buildout scenarios in accordance with the development scenarios outlined in the *Study Parameters* section of this report.

FINDING 1: Results of this analysis indicate that all study intersections currently operate at stable flow and acceptable levels-of-service. Peak hour periods are expected to remain at acceptable operational conditions with the addition of school-related traffic. It should be noted that merit of any recommended mitigation alternatives presented in this report warrant further evaluation at the discretion of the City of Dallas Mobility and Street Services Department.

FINDING 2: Results show that only a minimal amount of traffic is expected to interact with existing traffic along Joseph Hardin and Exchange Services. A hypothetical school at 4201 Walton Walker Boulevard would have a minimal impact to the intersection at Exchange Services and Walton Walker.

FINDING 3: Existing traffic volumes (including pedestrians) do not meet the criteria for the installation of an all-way stop control. However, school peak (and off-peak) observations suggest that an all-way stop control would likely provide a safer pedestrian environment.

FINDING 4: Results of proposed school conditions (i.e. reversed flow of drop-off and pick-up traffic operations at 4010 Joseph Hardin) indicate that the northbound right-turn movement will decrease as a result of the proposed reassignment of school traffic flow at 4010 Joseph Hardin. In turn, westbound left-turn volume will increase, resulting in a significant delay for the minor street approach.

- RECOMMENDATION 1: DeShazo recommends the installation of an all-way stop at the intersection of Joseph Hardin and Exchange Services in order to accommodate the proposed school peak operations.

  NOTE: DeShazo had previously deferred this decision at the discretion to the City of Dallas in a previous study of this intersection. However, under no circumstance should an all-way stop constitute a substitute for the need of an adult school crossing guard during school peak hours

- RECOMMENDATION 2: Findings of this analysis support the recommendation to reverse school traffic flow at 4010 Joseph Hardin. Results from the *TMP for Advantage Academy* dated February 8, 2017—upon complete enforcement of the recommendations presented therein—further indicate that no queuing of vehicles will extend onto public rights-of-way as a result of internal queuing constraints. This technical review is supported by numerous field observations dating back to 2009.

FINDING 5: Findings of this analysis indicate that all adjacent roadways adequately accommodate existing traffic and provides plenty of capacity for the proposed school expansion and a hypothetical school at 4201 Walton Walker.

- RECOMMENDATION 3: Upgrade all pedestrian crosswalks and replace all school and pedestrian traffic signs adjacent to the school and the AAFES headquarters.

  IMPORTANT: Pedestrian crosswalks should not be considered an absolute enhancement to provide pedestrian safety. Pedestrians are prone to be less cautious when crossing a street at a dedicated pavement marking, giving responsibility of action to approaching vehicles instead.

FINDING 6: Results from the traffic analysis indicate that the intersection of Walton Walker at Exchange Services will continue to operate at acceptable levels-of-service with the addition of school-related traffic.

- RECOMMENDATION 4: DeShazo recommends a re-evaluation of existing traffic signal timing settings at Walton Walker and Exchange Services. An optimization of the split settings would dedicate more green time to the eastbound approach without a significant impact to the overall intersection. The recommended optimization is not expected to impact progression along the corridor; the nearest signalized intersection is located one mile to the north at Walton Walker and Kiest Boulevard and one mile to the west at Ledbetter Drive and Westmoreland Road. The City of Dallas should further consider a lead-lead phase for north- and south-bound left turns. The intersection lane geometry allows both movements to operate simultaneously.

- RECOMMENDATION 5: As needed, school officials should conduct meetings with AAFES and neighborhood representatives to address any problems concerning school traffic and identify solutions in the interest of all involved parties.

END OF MEMO

Appendix A. Traffic Volume Data

Intersection Traffic Movements

DeShazo Group, Inc.

Location: ***Joesph Hardin Dr at W Ledbetter Dr***
City/State: ***Dallas, Texas***
Day/Date: ***Wednesday, March 8, 2017***
Project-ID #: ***16133-01***
Data Source: ***CJ Hensch***

Data Collector(s): ***Camera***
Weather Conditions: ***Mild/Normal Conditions***
Traffic Control: ***Unsignalized***
Description: ***Minor-Street STOP Controlled***

Time of Count		Northbound on *Joseph Hardin Dr*					Southbound on *Joseph Hardin Dr*					Eastbound on *W Ledbetter Dr*					Westbound on *W Ledbetter Dr*				
Begin	**End**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**
6:30 AM	6:45 AM	0	0	6	2	7	0	0	1	1	6	0	0	40	37	21	0	0	30	34	33
6:45 AM	7:00 AM	0	0	5	1	6	0	0	5	0	4	0	0	59	45	25	1	0	15	35	51
7:00 AM	**7:15 AM**	**0**	**0**	**11**	**6**	**35**	**0**	**0**	**8**	**1**	**9**	**0**	**0**	**56**	**59**	**13**	**0**	**0**	**4**	**17**	**49**
7:15 AM	**7:30 AM**	**0**	**0**	**7**	**2**	**22**	**0**	**0**	**13**	**0**	**20**	**0**	**1**	**79**	**43**	**7**	**0**	**0**	**13**	**29**	**60**
7:30 AM	**7:45 AM**	**0**	**0**	**8**	**1**	**10**	**0**	**0**	**21**	**1**	**26**	**0**	**1**	**75**	**65**	**5**	**0**	**0**	**6**	**28**	**60**
7:45 AM	**8:00 AM**	**0**	**0**	**4**	**2**	**2**	**0**	**0**	**22**	**4**	**27**	**1**	**0**	**48**	**51**	**12**	**0**	**0**	**7**	**34**	**46**
8:00 AM	8:15 AM	0	0	5	2	2	0	0	6	1	7	0	0	34	36	8	0	1	4	35	30
8:15 AM	8:30 AM	0	0	9	2	3	0	0	2	0	4	0	0	17	29	8	0	1	6	25	10
Intersection PHV:				*30*	*11*	*69*			*64*	*6*	*82*			*258*	*218*	*37*			*30*	*108*	*215*
PHF:				*0.68*	*0.46*	*0.49*			*0.73*	*0.38*	*0.76*			*0.82*	*0.84*	*0.71*			*0.58*	*0.79*	*0.90*
Intersection Peak Hour: 7:00 AM - 8:00 AM																				*Intersection PHF: 0.92*	
Study Area PHV:				**30**	**11**	**69**			**64**	**6**	**82**			**258**	**218**	**37**			**30**	**108**	**215**
PHF:				**0.68**	**0.46**	**0.49**			**0.73**	**0.38**	**0.76**			**0.82**	**0.84**	**0.71**			**0.58**	**0.79**	**0.90**
Study Peak Hour: 7:00 AM - 8:00 AM																				**Study Area PHF: 0.92**	
2:30 PM	2:45 PM	0	0	13	8	10	0	0	29	1	42	0	0	16	44	15	0	0	15	41	15
2:45 PM	3:00 PM	1	0	10	4	6	1	0	8	1	20	0	0	17	37	7	0	0	12	36	11
3:00 PM	*3:15 PM*	*0*	*0*	*37*	*11*	*27*	*0*	*0*	*24*	*0*	*49*	*0*	*0*	*14*	*33*	*4*	*0*	*0*	*4*	*45*	*18*
3:15 PM	*3:30 PM*	*0*	*0*	*18*	*7*	*4*	*0*	*0*	*19*	*3*	*22*	*0*	*0*	*5*	*55*	*6*	*0*	*2*	*6*	*46*	*11*
3:30 PM	*3:45 PM*	*0*	*0*	*9*	*6*	*8*	*0*	*0*	*38*	*1*	*70*	*0*	*0*	*3*	*41*	*5*	*0*	*0*	*3*	*45*	*10*
3:45 PM	*4:00 PM*	*0*	*0*	*10*	*3*	*6*	*0*	*0*	*25*	*3*	*36*	*0*	*0*	*6*	*40*	*2*	*0*	*0*	*4*	*50*	*16*
4:00 PM	4:15 PM	0	0	13	3	7	0	0	54	1	68	0	0	6	34	4	0	4	3	59	8
4:15 PM	4:30 PM	0	0	9	3	4	0	0	29	1	44	0	0	5	43	6	1	1	5	42	5
Intersection PHV:				*74*	*27*	*45*			*106*	*7*	*177*			*28*	*169*	*17*			*17*	*186*	*55*
PHF:				*0.50*	*0.61*	*0.42*			*0.70*	*0.58*	*0.63*			*0.50*	*0.77*	*0.71*			*0.71*	*0.93*	*0.76*
Intersection Peak Hour: 3:00 PM - 4:00 PM																				*Intersection PHF: 0.85*	
Study Area PHV:				**41**	**15**	**25**			**146**	**6**	**218**			**20**	**158**	**17**			**15**	**196**	**39**
PHF:				**0.79**	**0.63**	**0.78**			**0.68**	**0.50**	**0.78**			**0.83**	**0.92**	**0.71**			**0.75**	**0.83**	**0.61**
Study Peak Hour: 3:30 PM - 4:30 PM																				**Study Area PHF: 0.85**	
4:00 PM	4:15 PM	0	0	13	3	7	0	0	54	1	68	0	0	6	34	4	0	4	3	59	8
4:15 PM	4:30 PM	0	0	9	3	4	0	0	29	1	44	0	0	5	43	6	1	1	5	42	5
4:30 PM	4:45 PM	0	0	12	6	4	0	0	52	2	60	1	1	6	35	5	0	0	5	49	10
4:45 PM	5:00 PM	0	0	9	1	6	0	0	26	1	27	0	0	6	51	2	0	0	0	66	6
5:00 PM	5:15 PM	0	0	14	4	10	0	0	29	3	46	0	0	8	61	0	0	0	2	49	5
5:15 PM	5:30 PM	0	0	8	4	4	0	0	22	1	30	0	0	4	58	2	0	0	0	49	5
5:30 PM	5:45 PM	0	0	6	4	3	0	0	18	4	20	0	0	5	53	3	0	0	5	47	6
5:45 PM	6:00 PM	0	0	4	0	2	0	0	16	4	13	0	2	8	35	4	0	0	2	64	3
Intersection PHV:				*74*	*27*	*45*			*106*	*7*	*177*			*28*	*169*	*17*			*17*	*186*	*55*
PHF:				*0.50*	*0.61*	*0.42*			*0.70*	*0.58*	*0.63*			*0.50*	*0.77*	*0.71*			*0.71*	*0.93*	*0.76*
Intersection Peak Hour: 3:00 PM - 4:00 PM																				*Intersection PHF: 0.85*	
Study Area PHV:				**43**	**15**	**24**			**129**	**7**	**163**			**24**	**205**	**9**			**7**	**213**	**26**
PHF:				**0.77**	**0.63**	**0.60**			**0.62**	**0.58**	**0.68**			**0.75**	**0.84**	**0.45**			**0.35**	**0.81**	**0.65**
Study Peak Hour: 4:30 PM - 5:30 PM																				**Study Area PHF: 0.87**	

Observations:

DeShazo Group

File: C2X3HRS - 4L&12Mv_Peds.XLS

Intersection Traffic Movements

DeShazo Group, Inc.

Location: ***Joseph Hardin Dr at Driveway 1***
City/State: ***Dallas, Texas***
Day/Date: ***Wednesday, March 8, 2017***
Project-ID #: ***16133-02***
Data Source: ***CJ Hensch***

Data Collector(s): ***Camera***
Weather Conditions: ***Mild/Normal Conditions***
Traffic Control: ***Unsignalized***
Description: ***Minor-Street STOP Controlled***

Time of Count		Northbound on *Joseph Hardin Dr*					Southbound on *Joseph Hardin Dr*					Eastbound on *Driveway 1*					Westbound on *Driveway 1*				
Begin	**End**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**
6:30 AM	6:45 AM	0	0	0	71	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	7:00 AM	0	0	0	103	0	1	0	0	8	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	**7:15 AM**	**1**	**0**	**0**	**113**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**
7:15 AM	**7:30 AM**	**2**	**0**	**0**	**133**	**0**	**2**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**18**
7:30 AM	**7:45 AM**	**0**	**0**	**1**	**152**	**0**	**2**	**0**	**0**	**16**	**0**	**2**	**0**	**1**	**0**	**1**	**1**	**0**	**25**	**0**	**27**
7:45 AM	**8:00 AM**	**1**	**0**	**1**	**101**	**0**	**0**	**0**	**0**	**19**	**1**	**0**	**0**	**1**	**0**	**5**	**1**	**0**	**35**	**2**	**38**
8:00 AM	8:15 AM	0	0	0	57	0	1	0	0	7	1	1	0	0	0	3	2	0	2	0	5
8:15 AM	8:30 AM	0	0	0	39	0	1	0	0	6	0	0	0	1	0	0	1	0	0	0	0
Intersection PHV:				*2*	*499*	*0*			*0*	*55*	*1*			*2*	*0*	*6*			*73*	*2*	*83*
PHF:				*0.50*	*0.82*	*0.00*			*0.00*	*0.72*	*0.25*			*0.50*	*0.00*	*0.30*			*0.52*	*0.25*	*0.55*
Intersection Peak Hour: 7:00 AM - 8:00 AM																				*Intersection PHF:*	*0.81*
Study Area PHV:				**2**	**499**	**0**			**0**	**55**	**1**			**2**	**0**	**6**			**73**	**2**	**83**
PHF:				**0.50**	**0.82**	**0.00**			**0.00**	**0.72**	**0.25**			**0.50**	**0.00**	**0.30**			**0.52**	**0.25**	**0.55**
Study Peak Hour: 7:00 AM - 8:00 AM																				**Study Area PHF:**	**0.80**
2:30 PM	*2:45 PM*	*0*	*0*	*3*	*21*	*0*	*1*	*0*	*0*	*49*	*0*	*0*	*0*	*2*	*0*	*11*	*1*	*0*	*13*	*0*	*18*
2:45 PM	*3:00 PM*	*0*	*0*	*1*	*34*	*0*	*0*	*0*	*0*	*20*	*1*	*0*	*0*	*3*	*0*	*3*	*0*	*0*	*6*	*0*	*7*
3:00 PM	*3:15 PM*	*0*	*0*	*0*	*24*	*0*	*0*	*0*	*0*	*54*	*0*	*0*	*0*	*0*	*0*	*2*	*2*	*0*	*4*	*0*	*1*
3:15 PM	3:30 PM	0	0	0	22	0	0	0	0	35	0	0	0	0	0	2	1	0	9	0	1
3:30 PM	3:45 PM	0	0	0	19	0	0	0	0	92	0	0	0	0	0	3	0	0	0	0	3
3:45 PM	4:00 PM	0	0	0	11	0	0	0	0	66	0	0	0	0	0	0	0	0	1	0	0
4:00 PM	4:15 PM	0	0	0	12	0	0	0	0	100	0	0	0	0	0	0	0	0	1	0	0
4:15 PM	4:30 PM	0	0	0	9	0	0	0	0	72	0	0	0	0	0	0	0	0	0	0	0
Intersection PHV:				*5*	*120*	*0*			*0*	*130*	*1*			*6*	*0*	*28*			*54*	*1*	*54*
PHF:				*0.42*	*0.73*	*0.00*			*0.00*	*0.60*	*0.25*			*0.50*	*0.00*	*0.58*			*0.44*	*0.25*	*0.48*
Intersection Peak Hour: 2:15 PM - 3:15 PM																				*Intersection PHF:*	*0.82*
Study Area PHV:				**0**	**51**	**0**			**0**	**330**	**0**			**0**	**0**	**3**			**2**	**0**	**3**
PHF:				**0.00**	**0.67**	**0.00**			**0.00**	**0.83**	**0.00**			**0.00**	**0.00**	**0.25**			**0.50**	**0.00**	**0.25**
Study Peak Hour: 3:30 PM - 4:30 PM																				**Study Area PHF:**	**0.83**
4:00 PM	4:15 PM	0	0	0	12	0	0	0	0	100	0	0	0	0	0	0	0	0	1	0	0
4:15 PM	4:30 PM	0	0	0	9	0	0	0	0	72	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4:45 PM	0	0	0	9	0	1	0	0	89	0	0	0	0	0	2	1	0	9	1	0
4:45 PM	5:00 PM	0	0	0	9	0	0	0	0	57	0	0	0	0	0	1	2	0	2	0	1
5:00 PM	5:15 PM	0	0	1	9	0	0	0	0	70	0	0	0	0	0	0	0	0	3	0	1
5:15 PM	5:30 PM	0	0	0	11	0	0	0	0	53	0	0	0	0	0	0	0	0	2	0	1
5:30 PM	5:45 PM	0	0	0	10	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	6:00 PM	0	0	0	8	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0
Intersection PHV:				*5*	*120*	*0*			*0*	*130*	*1*			*6*	*0*	*28*			*54*	*1*	*54*
PHF:				*0.42*	*0.73*	*0.00*			*0.00*	*0.60*	*0.25*			*0.50*	*0.00*	*0.58*			*0.44*	*0.25*	*0.48*
Intersection Peak Hour: 2:15 PM - 3:15 PM																				*Intersection PHF:*	*0.82*
Study Area PHV:				**1**	**38**	**0**			**0**	**269**	**0**			**0**	**0**	**3**			**16**	**1**	**3**
PHF:				**0.25**	**0.86**	**0.00**			**0.00**	**0.76**	**0.00**			**0.00**	**0.00**	**0.38**			**0.44**	**0.25**	**0.75**
Study Peak Hour: 4:30 PM - 5:30 PM																				**Study Area PHF:**	**0.75**

Observations:

DeShazo Group

File: C2X3HRS - 4L&12Mv_Peds.XLS

Intersection Traffic Movements

DeShazo Group, Inc.

Location: ***Joseph Hardin Dr at Exchange Service Dr***
City/State: ***Dallas, Texas***
Day/Date: ***Wednesday, March 8, 2017***
Project-ID #: ***16133-03***
Data Source: ***CJ Hensch***
Data Collector(s): ***Camera***
Weather Conditions: ***Mild/Normal Conditions***
Traffic Control: ***Unsignalized***
Description: ***Minor-Street STOP Controlled***

Time of Count		Northbound on *Joseph Hardin Dr*					Southbound on *Joseph Hardin Dr*					Eastbound on *School Driveway*					Westbound on *Exchange Service Dr*				
Begin	**End**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**
6:30 AM	6:45 AM	0	0	0	34	42	0	0	1	2	0	0	0	0	0	0	0	0	1	0	3
6:45 AM	7:00 AM	0	0	0	61	40	0	0	4	1	0	1	0	2	0	1	1	0	5	0	2
7:00 AM	**7:15 AM**	**0**	**0**	**0**	**54**	**59**	**1**	**0**	**2**	**8**	**0**	**2**	**0**	**2**	**2**	**1**	**4**	**0**	**5**	**0**	**6**
7:15 AM	**7:30 AM**	**0**	**1**	**0**	**56**	**83**	**4**	**0**	**7**	**6**	**0**	**47**	**0**	**0**	**12**	**9**	**20**	**0**	**5**	**0**	**7**
7:30 AM	**7:45 AM**	**0**	**0**	**0**	**58**	**88**	**0**	**0**	**6**	**11**	**0**	**26**	**0**	**10**	**10**	**10**	**30**	**0**	**9**	**0**	**7**
7:45 AM	**8:00 AM**	**0**	**0**	**0**	**53**	**46**	**0**	**0**	**3**	**5**	**0**	**17**	**0**	**5**	**11**	**8**	**21**	**0**	**7**	**0**	**9**
8:00 AM	8:15 AM	0	0	0	30	28	0	0	1	4	0	24	0	1	1	2	3	0	1	0	3
8:15 AM	8:30 AM	0	0	0	16	12	1	0	3	1	0	5	0	0	0	1	7	0	5	0	3
Intersection PHV:				*0*	*221*	*276*			*18*	*30*	*0*			*17*	*35*	*28*			*26*	*0*	*29*
PHF:				*0.00*	*0.95*	*0.78*			*0.64*	*0.68*	*0.00*			*0.43*	*0.73*	*0.70*			*0.72*	*0.00*	*0.81*
Intersection Peak Hour: 7:00 AM - 8:00 AM																				*Intersection PHF: 0.81*	
Study Area PHV:				**0**	**221**	**276**			**18**	**30**	**0**			**17**	**35**	**28**			**26**	**0**	**29**
PHF:				**0.00**	**0.95**	**0.78**			**0.64**	**0.68**	**0.00**			**0.43**	**0.73**	**0.70**			**0.72**	**0.00**	**0.81**
Study Peak Hour: 7:00 AM - 8:00 AM																				**Study Area PHF: 0.80**	
2:30 PM	2:45 PM	0	0	0	10	21	0	0	5	17	0	28	0	10	17	20	40	0	15	0	2
2:45 PM	3:00 PM	0	0	0	14	15	0	0	3	11	0	14	0	3	1	8	17	0	6	0	1
3:00 PM	3:15 PM	0	0	0	12	16	1	0	4	48	0	9	0	2	5	5	8	0	18	0	4
3:15 PM	3:30 PM	0	0	0	10	8	0	0	1	15	1	10	0	1	0	1	8	0	8	0	2
3:30 PM	*3:45 PM*	*4*	*0*	*0*	*6*	*10*	*0*	*0*	*6*	*75*	*0*	*3*	*0*	*0*	*3*	*0*	*8*	*0*	*34*	*0*	*14*
3:45 PM	*4:00 PM*	*0*	*0*	*0*	*7*	*3*	*0*	*0*	*5*	*41*	*0*	*2*	*0*	*0*	*1*	*0*	*0*	*0*	*18*	*1*	*3*
4:00 PM	*4:15 PM*	*0*	*0*	*0*	*4*	*6*	*0*	*0*	*4*	*75*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*39*	*0*	*7*
4:15 PM	*4:30 PM*	*0*	*0*	*0*	*7*	*1*	*0*	*0*	*1*	*37*	*0*	*2*	*0*	*0*	*0*	*1*	*2*	*0*	*28*	*1*	*1*
Intersection PHV:				*0*	*24*	*20*			*16*	*228*	*0*			*1*	*4*	*2*			*119*	*2*	*25*
PHF:				*0.00*	*0.86*	*0.50*			*0.67*	*0.76*	*0.00*			*0.25*	*0.33*	*0.50*			*0.76*	*0.50*	*0.45*
Intersection Peak Hour: 3:30 PM - 4:30 PM																				*Intersection PHF: 0.74*	
Study Area PHV:				**0**	**24**	**20**			**16**	**228**	**0**			**1**	**4**	**2**			**119**	**2**	**25**
PHF:				**0.00**	**0.86**	**0.50**			**0.67**	**0.76**	**0.00**			**0.25**	**0.33**	**0.50**			**0.76**	**0.50**	**0.45**
Study Peak Hour: 3:30 PM - 4:30 PM																				**Study Area PHF: 0.72**	
4:00 PM	*4:15 PM*	*0*	*0*	*0*	*4*	*6*	*0*	*0*	*4*	*75*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*39*	*0*	*7*
4:15 PM	*4:30 PM*	*0*	*0*	*0*	*7*	*1*	*0*	*0*	*1*	*37*	*0*	*2*	*0*	*0*	*0*	*1*	*2*	*0*	*28*	*1*	*1*
4:30 PM	4:45 PM	0	0	0	8	3	1	0	11	58	0	0	0	0	2	0	0	0	36	0	4
4:45 PM	5:00 PM	0	0	0	2	9	0	0	5	25	0	0	0	0	0	0	0	0	22	0	5
5:00 PM	5:15 PM	0	0	0	7	2	0	0	7	38	1	0	0	0	0	1	0	0	25	0	5
5:15 PM	5:30 PM	0	1	0	7	4	0	0	1	28	0	0	0	0	1	0	0	0	26	0	1
5:30 PM	5:45 PM	0	0	0	7	3	0	0	4	17	0	0	0	0	0	0	1	0	11	0	4
5:45 PM	6:00 PM	0	0	0	7	2	0	0	1	16	0	0	0	0	0	0	0	0	18	0	1
Intersection PHV:				*0*	*24*	*20*			*16*	*228*	*0*			*1*	*4*	*2*			*119*	*2*	*25*
PHF:				*0.00*	*0.86*	*0.50*			*0.67*	*0.76*	*0.00*			*0.25*	*0.33*	*0.50*			*0.76*	*0.50*	*0.45*
Intersection Peak Hour: 3:30 PM - 4:30 PM																				*Intersection PHF: 0.74*	
Study Area PHV:				**0**	**24**	**18**			**24**	**149**	**1**			**0**	**3**	**1**			**109**	**0**	**15**
PHF:				**0.00**	**0.75**	**0.50**			**0.55**	**0.64**	**0.25**			**0.00**	**0.38**	**0.25**			**0.76**	**0.00**	**0.75**
Study Peak Hour: 4:30 PM - 5:30 PM																				**Study Area PHF: 0.70**	

Observations:

DeShazo Group

File: C2X3HRS - 4L&12Mv_Peds.XLS

Intersection Traffic Movements

DeShazo Group, Inc.

Location: ***Exchange Service Dr at Driveway 2***
City/State: ***Dallas, Texas***
Day/Date: ***Thursday, March 9, 2017***
Project-ID #: ***16133-04***
Data Source: ***CJ Hensch***

Data Collector(s): ***Camera***
Weather Conditions: ***Mild/Normal Conditions***
Traffic Control: ***Unsignalized***
Description: ***Minor-Street STOP Controlled***

Time of Count		Northbound on *Driveway 2*					Southbound on *AAFES Driveway*					Eastbound on *Exchange Service Dr*					Westbound on *Exchange Service Dr*				
Begin	**End**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**
6:30 AM	6:45 AM	0	0	0	0	0	0	0	3	0	0	0	0	30	17	0	0	0	0	3	27
6:45 AM	7:00 AM	0	0	0	0	0	0	0	1	0	2	0	0	35	15	3	0	0	0	1	60
7:00 AM	**7:15 AM**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**26**	**22**	**12**	**0**	**0**	**5**	**7**	**27**
7:15 AM	**7:30 AM**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**21**	**26**	**40**	**0**	**0**	**11**	**9**	**30**
7:30 AM	**7:45 AM**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**1**	**0**	**19**	**33**	**43**	**4**	**0**	**27**	**12**	**18**
7:45 AM	**8:00 AM**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**10**	**26**	**37**	**1**	**0**	**18**	**7**	**14**
8:00 AM	8:15 AM	0	0	0	0	0	0	0	4	0	4	0	0	10	15	3	1	0	2	6	14
8:15 AM	8:30 AM	0	0	0	0	0	0	0	2	0	1	0	0	7	11	1	1	0	2	12	13
Intersection PHV:				*0*	*0*	*0*			*11*	*0*	*5*			*101*	*96*	*98*			*43*	*29*	*135*
PHF:				*0.00*	*0.00*	*0.00*			*0.55*	*0.00*	*0.63*			*0.72*	*0.73*	*0.57*			*0.40*	*0.60*	*0.56*
Intersection Peak Hour: 6:45 AM - 7:45 AM																				*Intersection PHF: 0.82*	
Study Area PHV:				**0**	**0**	**0**			**10**	**0**	**4**			**76**	**107**	**132**			**61**	**35**	**89**
PHF:				**0.00**	**0.00**	**0.00**			**0.50**	**0.00**	**1.00**			**0.73**	**0.81**	**0.77**			**0.56**	**0.73**	**0.74**
Study Peak Hour: 7:00 AM - 8:00 AM																				**Study Area PHF: 0.80**	
2:30 PM	2:45 PM	0	0	0	0	0	0	0	7	0	7	0	0	3	2	2	3	0	2	6	7
2:45 PM	3:00 PM	0	0	2	0	0	1	0	4	0	7	2	0	2	5	5	0	0	2	7	3
3:00 PM	3:15 PM	0	0	0	0	0	0	0	16	0	5	1	0	4	9	8	0	0	6	11	9
3:15 PM	*3:30 PM*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*3*	*0*	*6*	*1*	*0*	*2*	*18*	*17*	*0*	*0*	*13*	*12*	*10*
3:30 PM	*3:45 PM*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*26*	*0*	*22*	*3*	*0*	*3*	*14*	*18*	*1*	*0*	*8*	*29*	*4*
3:45 PM	*4:00 PM*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*19*	*0*	*13*	*1*	*0*	*3*	*23*	*13*	*0*	*0*	*12*	*15*	*6*
4:00 PM	*4:15 PM*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*24*	*0*	*32*	*0*	*0*	*1*	*18*	*5*	*0*	*0*	*7*	*12*	*6*
4:15 PM	4:30 PM	0	0	0	0	1	0	0	18	0	8	0	0	1	13	4	4	0	1	13	4
Intersection PHV:				*0*	*0*	*0*			*72*	*0*	*73*			*9*	*73*	*53*			*40*	*68*	*26*
PHF:				*0.00*	*0.00*	*0.00*			*0.69*	*0.00*	*0.57*			*0.75*	*0.79*	*0.74*			*0.77*	*0.59*	*0.65*
Intersection Peak Hour: 3:15 PM - 4:15 PM																				*Intersection PHF: 0.83*	
Study Area PHV:				**0**	**0**	**1**			**87**	**0**	**75**			**8**	**68**	**40**			**28**	**69**	**20**
PHF:				**0.00**	**0.00**	**0.00**			**0.69**	**0.00**	**0.57**			**0.75**	**0.79**	**0.74**			**0.77**	**0.59**	**0.65**
Study Peak Hour: 3:30 PM - 4:30 PM																				**Study Area PHF: 0.79**	
4:00 PM	*4:15 PM*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*24*	*0*	*32*	*0*	*0*	*1*	*18*	*5*	*0*	*0*	*7*	*12*	*6*
4:15 PM	4:30 PM	0	0	0	0	1	0	0	18	0	8	0	0	1	13	4	4	0	1	13	4
4:30 PM	4:45 PM	0	0	0	0	2	0	0	24	0	25	0	0	2	18	0	1	0	1	22	5
4:45 PM	5:00 PM	0	0	0	0	1	0	0	11	0	15	0	0	2	16	0	2	0	0	14	3
5:00 PM	5:15 PM	0	0	0	0	0	0	0	12	0	18	0	0	0	8	2	0	0	0	10	0
5:15 PM	5:30 PM	0	0	0	0	0	0	0	8	0	15	0	0	0	5	0	0	0	1	8	2
5:30 PM	5:45 PM	0	0	0	0	0	0	0	9	0	11	1	0	3	6	0	1	0	0	4	3
5:45 PM	6:00 PM	0	0	0	0	0	0	0	3	0	5	0	0	1	1	0	0	0	0	8	3
Intersection PHV:				*0*	*0*	*0*			*72*	*0*	*73*			*9*	*73*	*53*			*40*	*68*	*26*
PHF:				*0.00*	*0.00*	*0.00*			*0.69*	*0.00*	*0.57*			*0.75*	*0.79*	*0.74*			*0.77*	*0.59*	*0.65*
Intersection Peak Hour: 3:15 PM - 4:15 PM																				*Intersection PHF: 0.83*	
Study Area PHV:				**0**	**0**	**3**			**55**	**0**	**73**			**4**	**47**	**2**			**2**	**54**	**10**
PHF:				**0.00**	**0.00**	**0.38**			**0.57**	**0.00**	**0.73**			**0.50**	**0.65**	**0.25**			**0.50**	**0.61**	**0.50**
Study Peak Hour: 4:30 PM - 5:30 PM																				**Study Area PHF: 0.63**	

Observations:

DeShazo Group

File: C2X3HRS - 4L&12Mv_Peds.XLS

Intersection Traffic Movements

DeShazo Group, Inc.

Location: ***Exchange Services Dr at S Walton Walker Blvd***
City/State: ***Dallas, Texas***
Day/Date: ***Wednesday, March 8, 2017***
Project-ID #: ***16133-05***
Data Source: ***CJ Hensch***

Data Collector(s): ***Camera***
Weather Conditions: ***Mild/Normal Conditions***
Traffic Control: ***Signalized***

Time of Count		Northbound on S Walton Walker Blvd					Southbound on S Walton Walker Blvd					Eastbound on Exchange Service Dr					Westbound on Exchange Service Dr				
Begin	**End**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**	**Ped**	**U**	**L**	**T**	**R**
6:30 AM	6:45 AM	0	0	7	145	0	0	0	6	125	30	0	0	1	3	5	0	0	0	22	67
6:45 AM	7:00 AM	0	0	26	155	0	1	0	7	134	68	2	0	3	0	8	0	0	0	22	86
7:00 AM	**7:15 AM**	**0**	**0**	**16**	**155**	**0**	**0**	**0**	**5**	**148**	**34**	**0**	**0**	**4**	**3**	**8**	**0**	**0**	**1**	**20**	**97**
7:15 AM	**7:30 AM**	**0**	**0**	**24**	**185**	**0**	**0**	**0**	**2**	**188**	**55**	**0**	**0**	**2**	**8**	**14**	**0**	**0**	**0**	**34**	**73**
7:30 AM	**7:45 AM**	**0**	**0**	**23**	**188**	**0**	**0**	**0**	**10**	**212**	**50**	**0**	**0**	**6**	**14**	**14**	**0**	**0**	**1**	**39**	**87**
7:45 AM	**8:00 AM**	**0**	**0**	**18**	**163**	**0**	**0**	**0**	**7**	**219**	**33**	**1**	**0**	**8**	**5**	**15**	**0**	**0**	**1**	**23**	**60**
8:00 AM	8:15 AM	0	0	9	146	1	0	0	6	178	31	1	0	3	1	3	0	0	1	6	45
8:15 AM	8:30 AM	0	0	6	126	0	0	0	4	140	41	0	0	4	1	3	0	0	1	6	50
Intersection PHV:				*81*	*691*	*0*			*24*	*767*	*172*			*20*	*30*	*51*			*3*	*116*	*317*
PHF:				*0.84*	*0.92*	*0.00*			*0.60*	*0.88*	*0.78*			*0.63*	*0.54*	*0.85*			*0.75*	*0.74*	*0.82*
Intersection Peak Hour: 7:00 AM - 8:00 AM																				*Intersection PHF: 0.88*	
Study Area PHV:				**81**	**691**	**0**			**24**	**767**	**172**			**20**	**30**	**51**			**3**	**116**	**317**
PHF:				**0.84**	**0.92**	**0.00**			**0.60**	**0.88**	**0.78**			**0.63**	**0.54**	**0.85**			**0.75**	**0.74**	**0.82**
Study Peak Hour: 7:00 AM - 8:00 AM																				**Study Area PHF: 0.88**	
2:30 PM	2:45 PM	0	0	6	102	0	0	0	13	215	10	0	0	17	6	30	0	0	0	8	73
2:45 PM	3:00 PM	0	0	4	80	0	2	0	10	221	4	2	0	6	3	10	0	0	9	2	49
3:00 PM	3:15 PM	0	0	9	105	0	0	0	11	255	1	0	0	23	8	25	0	0	0	6	41
3:15 PM	3:30 PM	0	0	3	110	1	0	0	7	271	6	4	0	15	9	17	0	0	1	3	53
3:30 PM	3:45 PM	0	0	6	128	2	0	0	12	303	4	0	0	38	14	53	0	0	1	3	72
3:45 PM	4:00 PM	0	0	5	104	0	1	0	14	299	4	0	0	16	11	30	0	0	3	4	46
4:00 PM	4:15 PM	0	0	3	125	0	1	0	11	332	3	0	0	48	16	35	1	0	1	3	63
4:15 PM	4:30 PM	0	0	4	120	1	0	0	16	309	2	0	0	16	10	30	1	0	1	4	62
Intersection PHV:				*9*	*626*	*3*			*56*	*1,393*	*11*			*145*	*37*	*103*			*3*	*16*	*254*
PHF:				*0.45*	*0.97*	*0.38*			*0.70*	*0.95*	*0.69*			*0.84*	*0.58*	*0.72*			*0.38*	*0.80*	*0.89*
Intersection Peak Hour: 4:30 PM - 5:30 PM																				*Intersection PHF: 0.97*	
Study Area PHV:				**18**	**477**	**3**			**53**	**1,243**	**13**			**118**	**51**	**148**			**6**	**14**	**243**
PHF:				**0.75**	**0.93**	**0.38**			**0.83**	**0.94**	**0.81**			**0.61**	**0.80**	**0.70**			**0.50**	**0.88**	**0.84**
Study Peak Hour: 3:30 PM - 4:30 PM																				**Study Area PHF: 0.93**	
4:00 PM	4:15 PM	0	0	3	125	0	1	0	11	332	3	0	0	48	16	35	1	0	1	3	63
4:15 PM	4:30 PM	0	0	4	120	1	0	0	16	309	2	0	0	16	10	30	1	0	1	4	62
4:30 PM	*4:45 PM*	*0*	*0*	*1*	*152*	*0*	*0*	*0*	*11*	*325*	*2*	*0*	*0*	*41*	*16*	*36*	*0*	*0*	*0*	*5*	*67*
4:45 PM	*5:00 PM*	*0*	*0*	*1*	*158*	*1*	*0*	*0*	*14*	*368*	*3*	*0*	*0*	*43*	*10*	*36*	*0*	*0*	*0*	*5*	*48*
5:00 PM	*5:15 PM*	*0*	*0*	*5*	*155*	*0*	*0*	*0*	*20*	*352*	*4*	*0*	*0*	*35*	*1*	*18*	*0*	*0*	*1*	*1*	*68*
5:15 PM	*5:30 PM*	*0*	*0*	*2*	*161*	*2*	*0*	*0*	*11*	*348*	*2*	*0*	*0*	*26*	*10*	*13*	*0*	*0*	*2*	*5*	*71*
5:30 PM	5:45 PM	0	0	3	145	1	1	0	16	371	0	0	0	17	1	16	0	0	1	6	39
5:45 PM	6:00 PM	0	0	1	130	1	0	0	8	395	4	0	0	10	3	8	0	0	0	3	35
Intersection PHV:				*9*	*626*	*3*			*56*	*1,393*	*11*			*145*	*37*	*103*			*3*	*16*	*254*
PHF:				*0.45*	*0.97*	*0.38*			*0.70*	*0.95*	*0.69*			*0.84*	*0.58*	*0.72*			*0.38*	*0.80*	*0.89*
Intersection Peak Hour: 4:30 PM - 5:30 PM																				*Intersection PHF: 0.97*	
Study Area PHV:				**9**	**626**	**3**			**56**	**1,393**	**11**			**145**	**37**	**103**			**3**	**16**	**254**
PHF:				**0.45**	**0.97**	**0.38**			**0.70**	**0.95**	**0.69**			**0.84**	**0.58**	**0.72**			**0.38**	**0.80**	**0.89**
Study Peak Hour: 4:30 PM - 5:30 PM																				**Study Area PHF: 0.97**	

Observations:

DeShazo Group

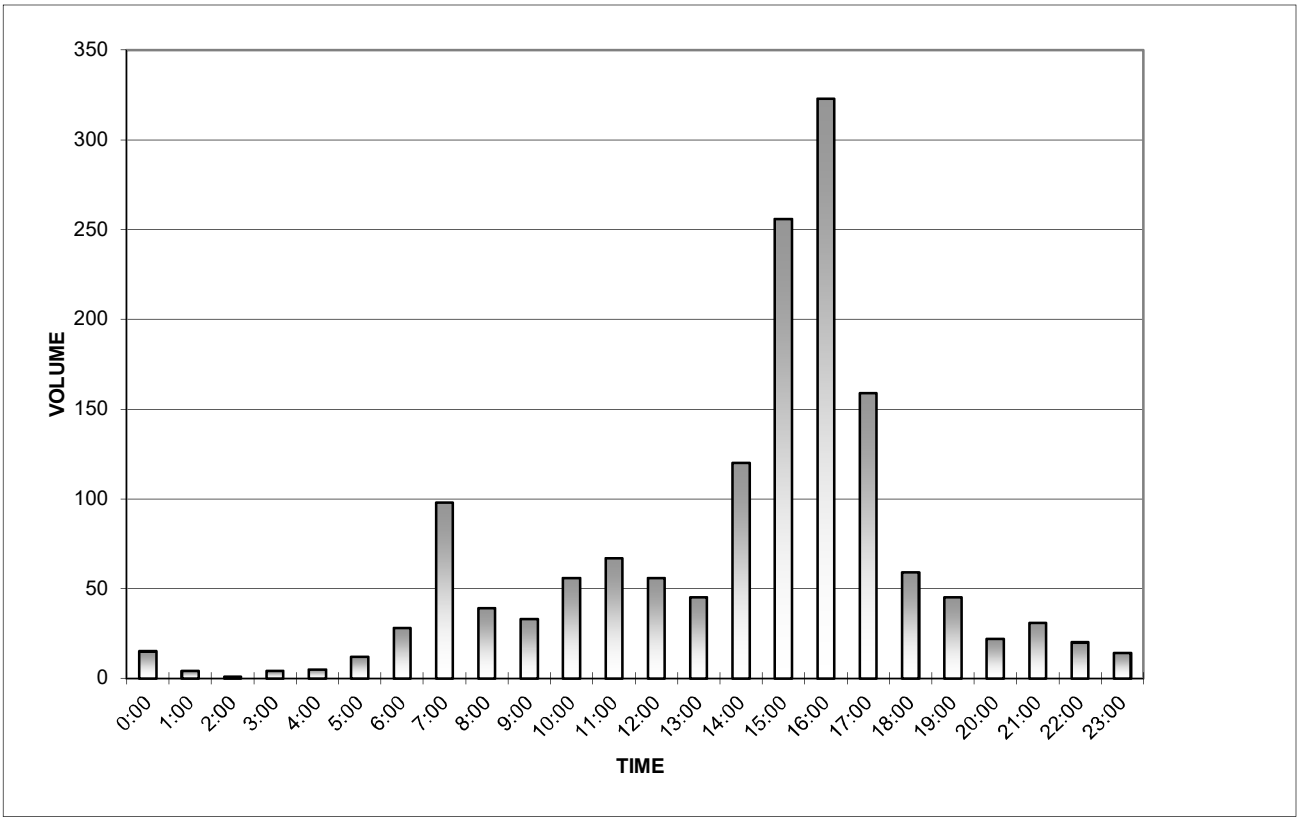
File: C2X3HRS - 4L&12Mv_Peds.XLS

EB Exchange Service Drive West of S Walton Walker Boulevard

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	8	3	2	2	15
1:00	3	1	0	0	4
2:00	0	0	1	0	1
3:00	3	0	1	0	4
4:00	1	1	1	2	5
5:00	2	1	3	6	12
6:00	6	6	9	7	28
7:00	16	22	32	28	98
8:00	7	7	10	15	39
9:00	7	9	10	7	33
10:00	12	7	20	17	56
11:00	14	13	26	14	67
12:00	17	16	14	9	56
13:00	15	14	11	5	45
14:00	20	27	53	20	120
15:00	63	34	103	56	256
16:00	97	54	91	81	323
17:00	59	44	35	21	159
18:00	23	20	8	8	59
19:00	20	7	12	6	45
20:00	7	6	7	2	22
21:00	6	12	6	7	31
22:00	13	3	2	2	20
23:00	5	1	4	4	14
				TOTAL:	1512

The A.M. peak hour from 7:00 to 8:00 is 98
The P.M. peak hour from 16:00 to 17:00 is 323

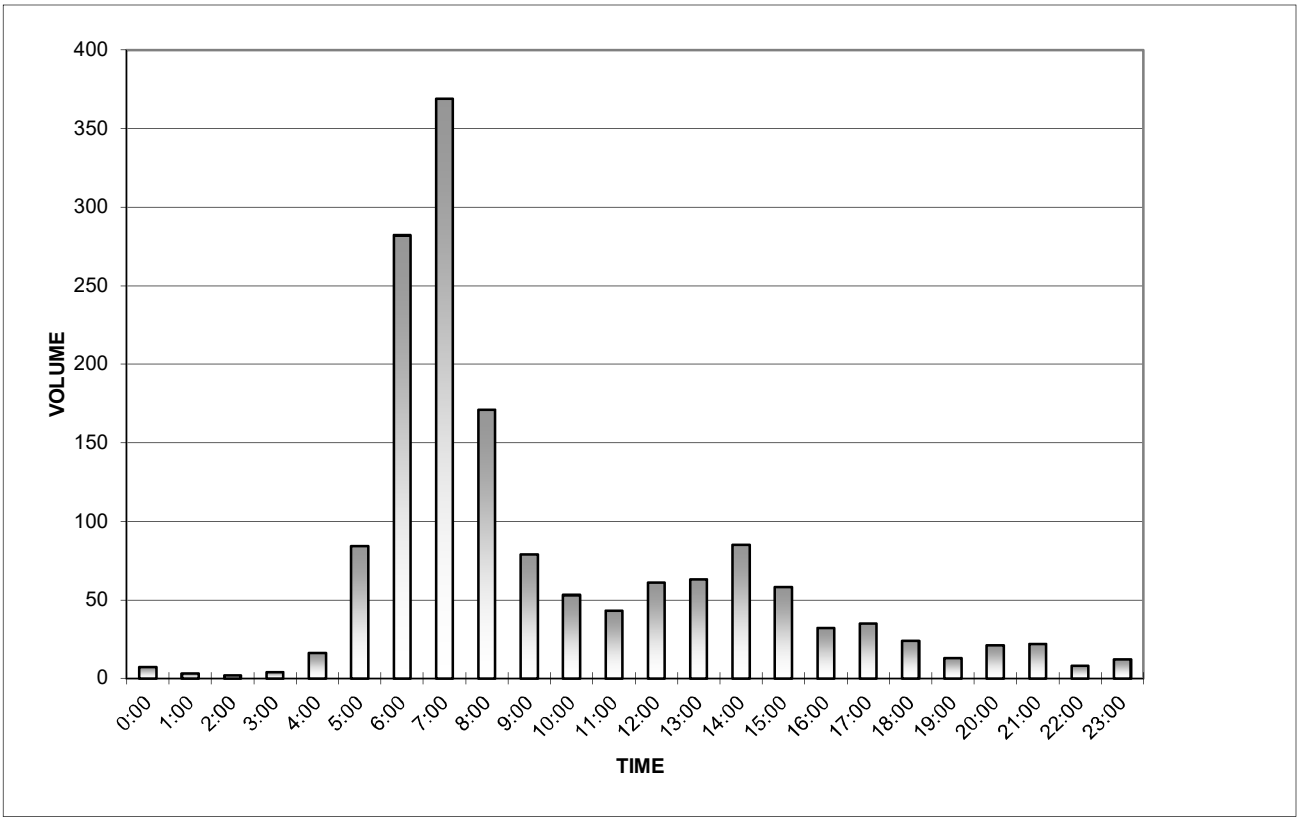


WB Exchange Service Drive West of S Walton Walker Boulevard

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	2	3	1	1	7
1:00	0	2	1	0	3
2:00	0	0	0	2	2
3:00	0	0	2	2	4
4:00	2	1	5	8	16
5:00	6	15	20	43	84
6:00	48	61	61	112	282
7:00	71	109	117	72	369
8:00	47	52	44	28	171
9:00	23	18	24	14	79
10:00	15	7	12	19	53
11:00	5	10	16	12	43
12:00	13	17	19	12	61
13:00	16	13	13	21	63
14:00	20	31	21	13	85
15:00	15	12	17	14	58
16:00	7	9	8	8	32
17:00	8	9	11	7	35
18:00	7	9	6	2	24
19:00	4	3	3	3	13
20:00	6	6	7	2	21
21:00	3	7	9	3	22
22:00	3	0	1	4	8
23:00	4	1	7	0	12
				TOTAL:	1547

The A.M. peak hour from 6:45 to 7:45 is 409
The P.M. peak hour from 14:15 to 15:15 is 80

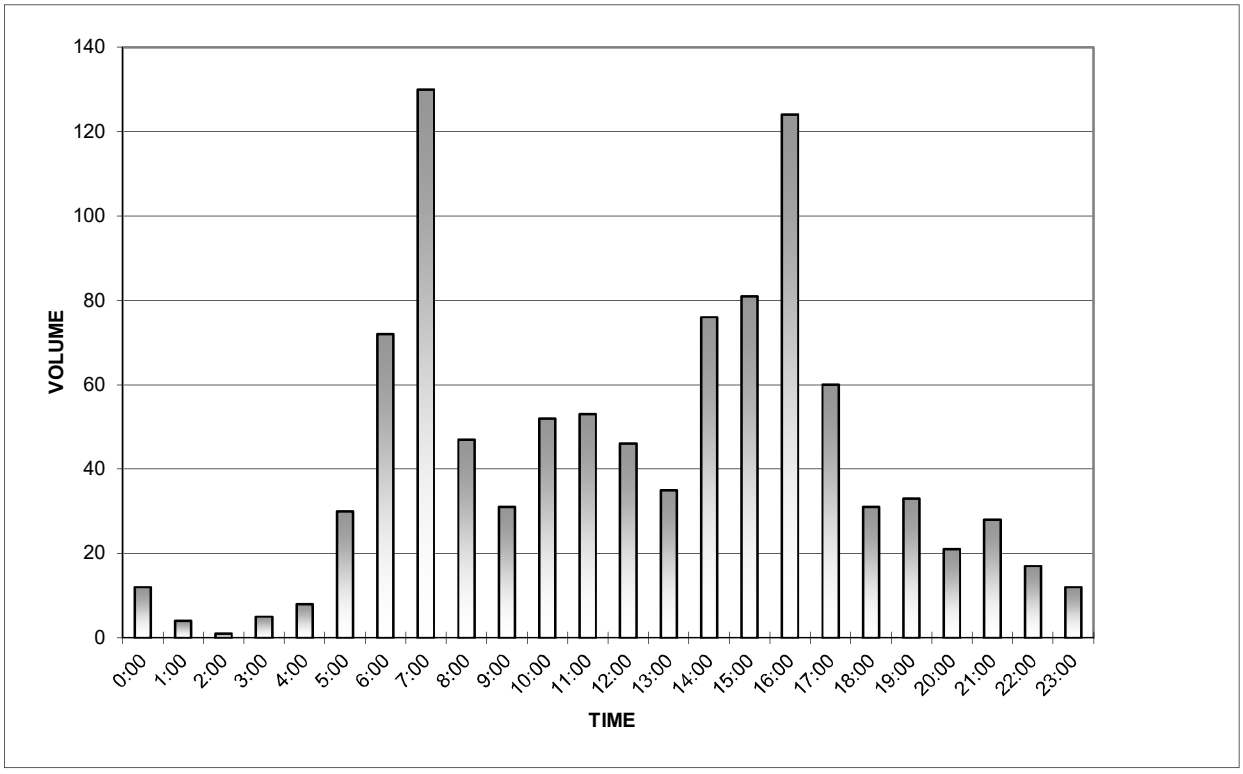


EB Exchange Service Drive West of Parking Lot on Exchange Service Drive and S Walton Walker Boulevard

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	7	1	2	2	12
1:00	3	1	0	0	4
2:00	0	0	1	0	1
3:00	3	0	2	0	5
4:00	0	1	3	4	8
5:00	2	3	8	17	30
6:00	14	17	21	20	72
7:00	31	39	36	24	130
8:00	13	9	14	11	47
9:00	7	7	11	6	31
10:00	13	6	20	13	52
11:00	9	9	18	17	53
12:00	13	11	16	6	46
13:00	13	10	8	4	35
14:00	13	21	31	11	76
15:00	24	12	26	19	81
16:00	36	16	40	32	124
17:00	24	14	15	7	60
18:00	11	9	6	5	31
19:00	13	6	10	4	33
20:00	7	6	6	2	21
21:00	6	11	6	5	28
22:00	10	3	2	2	17
23:00	4	1	4	3	12
				TOTAL:	1009

The A.M. peak hour from 7:00 to 8:00 is 130
The P.M. peak hour from 16:00 to 17:00 is 124

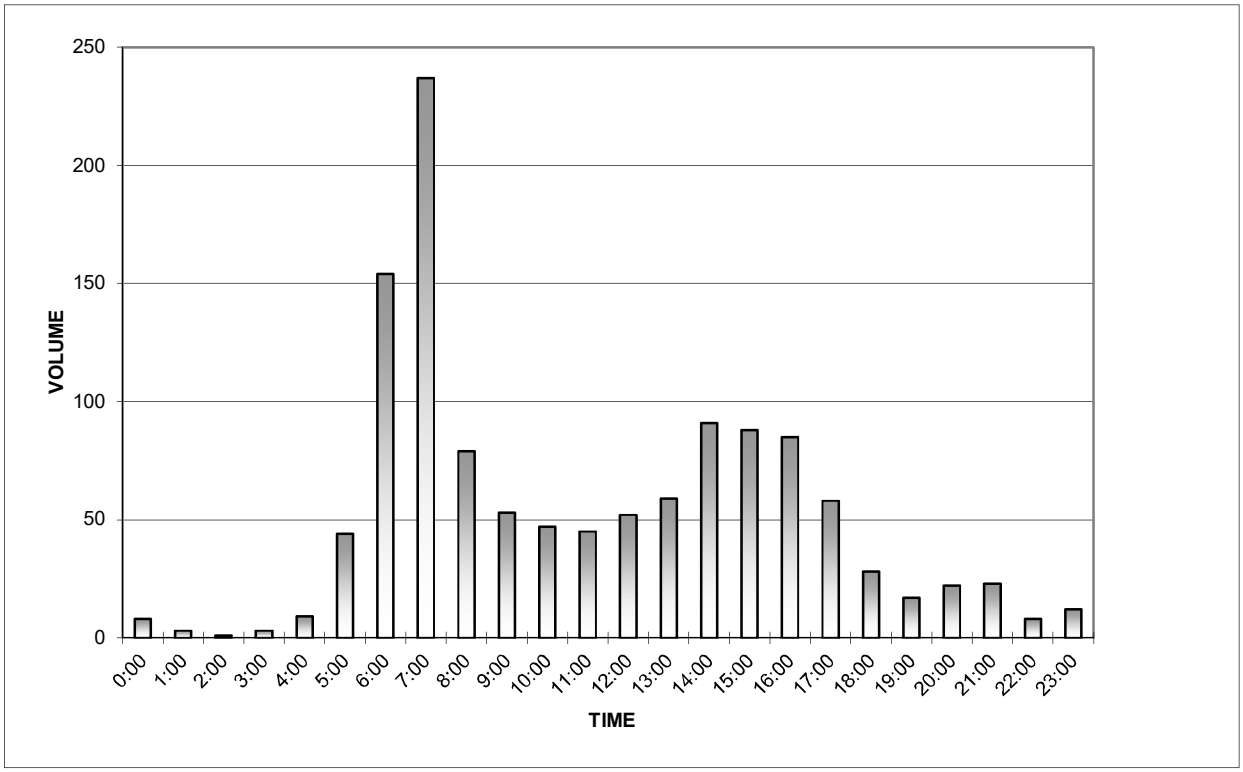


WB Exchange Service Drive West of Parking Lot on Exchange Service Drive and S Walton Walker Boulevard

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	2	4	1	1	8
1:00	0	2	1	0	3
2:00	0	0	0	1	1
3:00	0	0	1	2	3
4:00	2	0	5	2	9
5:00	2	8	14	20	44
6:00	27	34	28	65	154
7:00	42	63	81	51	237
8:00	21	20	25	13	79
9:00	10	18	20	5	53
10:00	15	3	10	19	47
11:00	6	10	17	12	45
12:00	9	13	19	11	52
13:00	16	10	15	18	59
14:00	18	32	28	13	91
15:00	28	14	30	16	88
16:00	27	20	24	14	85
17:00	19	16	13	10	58
18:00	8	8	7	5	28
19:00	6	3	3	5	17
20:00	7	7	6	2	22
21:00	4	7	8	4	23
22:00	3	0	1	4	8
23:00	4	1	7	0	12
				TOTAL:	1226

The A.M. peak hour from 6:45 to 7:45 is 251
The P.M. peak hour from 14:15 to 15:15 is 101

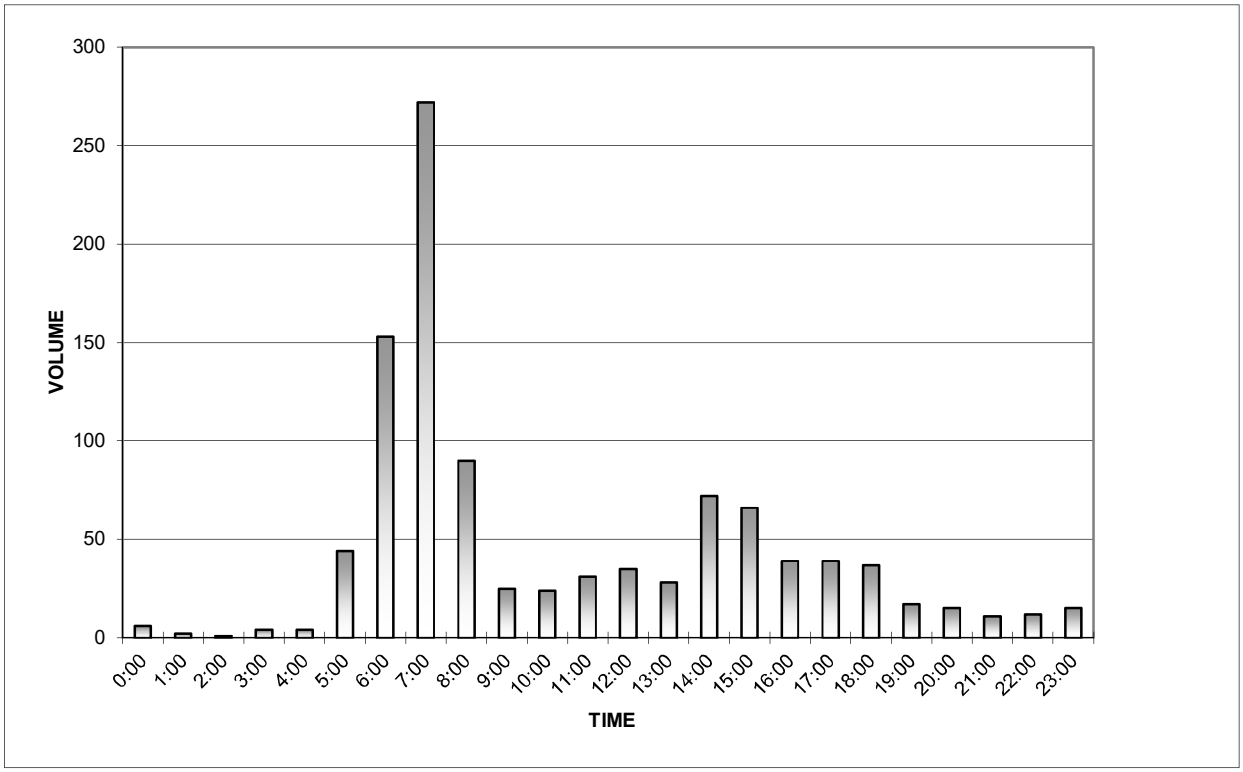


NB Joseph Hardin Drive North of Exchange Service Drive

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	1	2	1	2	6
1:00	1	0	0	1	2
2:00	1	0	0	0	1
3:00	2	0	1	1	4
4:00	1	0	1	2	4
5:00	5	5	13	21	44
6:00	21	32	36	64	153
7:00	66	59	76	71	272
8:00	38	18	23	11	90
9:00	4	6	10	5	25
10:00	8	4	5	7	24
11:00	9	2	13	7	31
12:00	10	8	9	8	35
13:00	11	7	4	6	28
14:00	19	14	21	18	72
15:00	21	11	25	9	66
16:00	12	8	10	9	39
17:00	13	11	10	5	39
18:00	10	13	5	9	37
19:00	5	3	6	3	17
20:00	1	6	3	5	15
21:00	3	6	1	1	11
22:00	7	4	0	1	12
23:00	8	2	2	3	15
				TOTAL:	1042

The A.M. peak hour from 7:00 to 8:00 is 272
The P.M. peak hour from 14:45 to 15:45 is 75

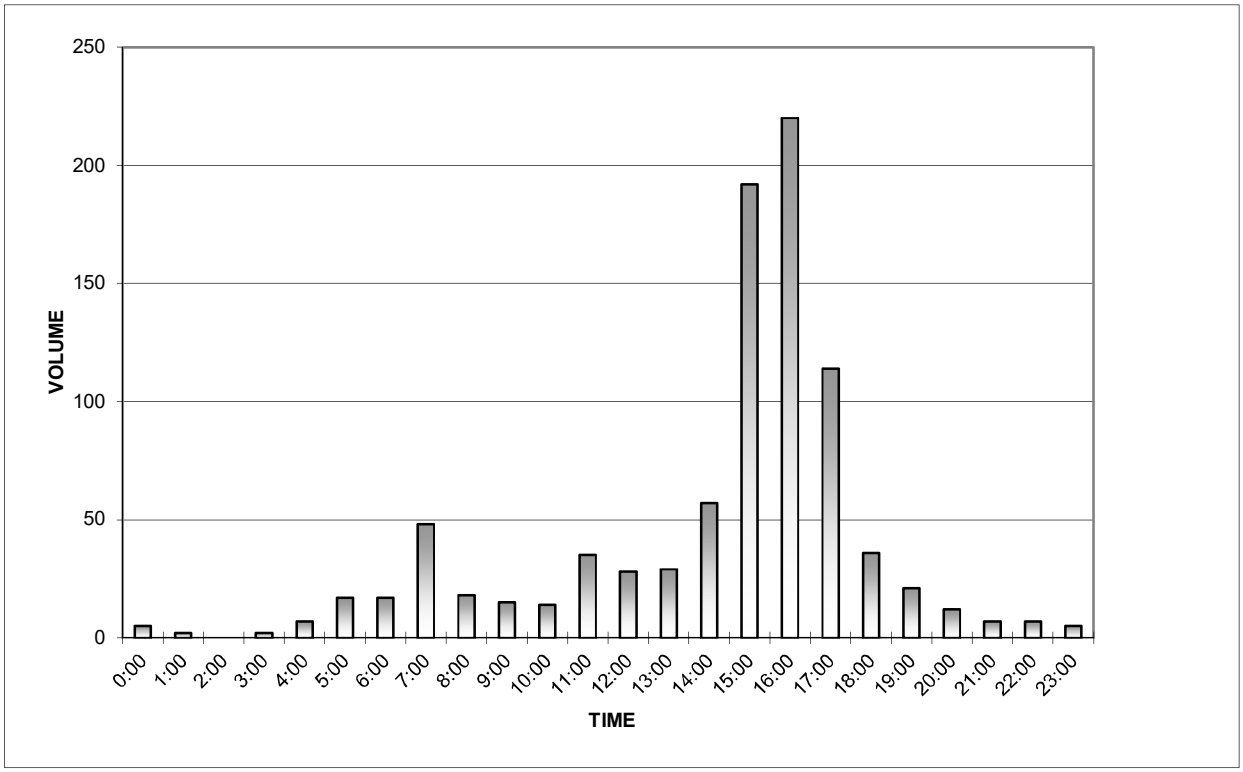


SB Joseph Hardin Drive North of Exchange Service Drive

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	2	2	1	0	5
1:00	2	0	0	0	2
2:00	0	0	0	0	0
3:00	0	1	0	1	2
4:00	1	0	3	3	7
5:00	4	3	4	6	17
6:00	5	4	3	5	17
7:00	10	12	17	9	48
8:00	5	4	6	3	18
9:00	3	5	5	2	15
10:00	0	2	7	5	14
11:00	6	7	7	15	35
12:00	10	6	9	3	28
13:00	10	6	5	8	29
14:00	9	11	23	14	57
15:00	49	19	80	44	192
16:00	83	39	70	28	220
17:00	47	31	22	14	114
18:00	10	8	11	7	36
19:00	9	4	5	3	21
20:00	4	4	3	1	12
21:00	3	0	4	0	7
22:00	1	1	5	0	7
23:00	1	0	0	4	5
				TOTAL:	908

The A.M. peak hour from 7:00 to 8:00 is 48
The P.M. peak hour from 15:30 to 16:30 is 246

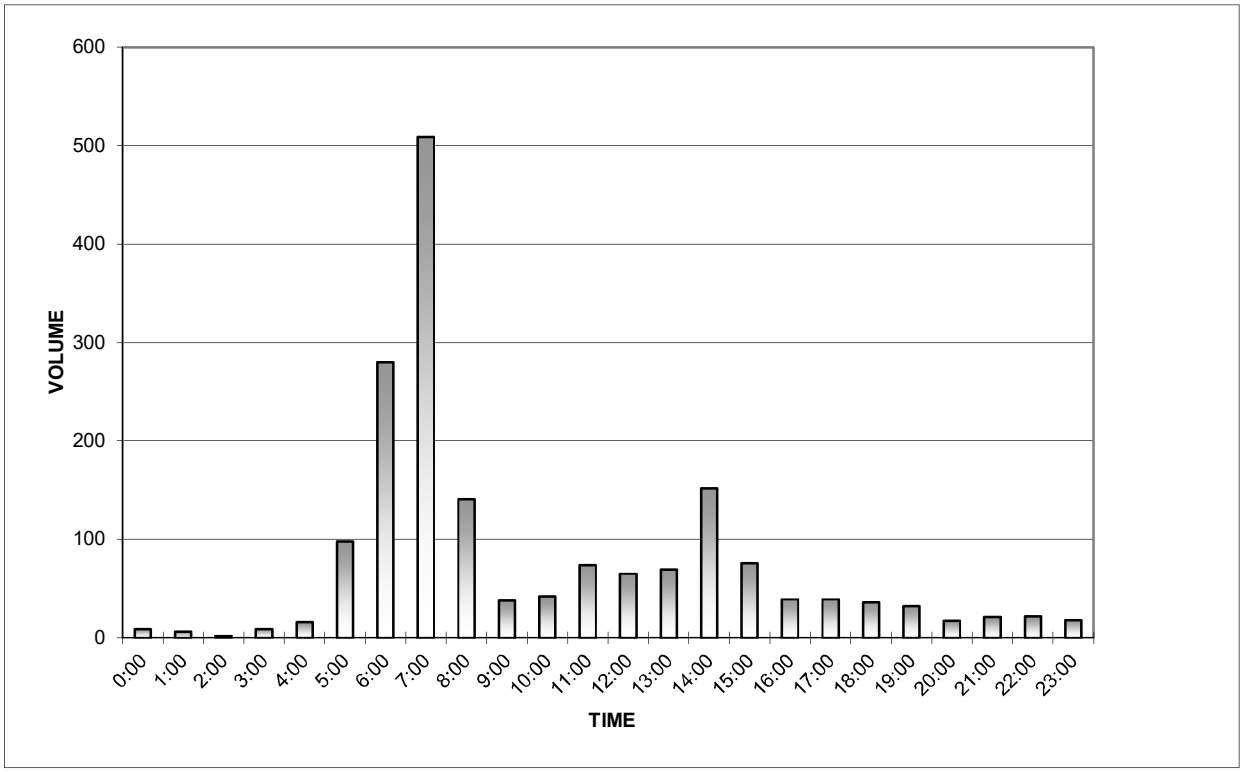


NB Joseph Hardin Drive South of School Driveway

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	3	2	2	2	9
1:00	3	1	0	2	6
2:00	1	0	1	0	2
3:00	3	1	3	2	9
4:00	1	2	5	8	16
5:00	8	14	25	51	98
6:00	42	64	69	105	280
7:00	114	137	153	105	509
8:00	67	29	27	18	141
9:00	9	8	14	7	38
10:00	10	8	12	12	42
11:00	9	10	28	27	74
12:00	13	18	19	15	65
13:00	19	16	17	17	69
14:00	41	47	26	38	152
15:00	25	21	20	10	76
16:00	13	8	9	9	39
17:00	10	12	9	8	39
18:00	8	12	6	10	36
19:00	9	7	10	6	32
20:00	2	5	5	5	17
21:00	6	9	2	4	21
22:00	6	7	3	6	22
23:00	9	2	3	4	18
				TOTAL:	1810

The A.M. peak hour from 7:00 to 8:00 is 509
The P.M. peak hour from 14:15 to 15:15 is 136

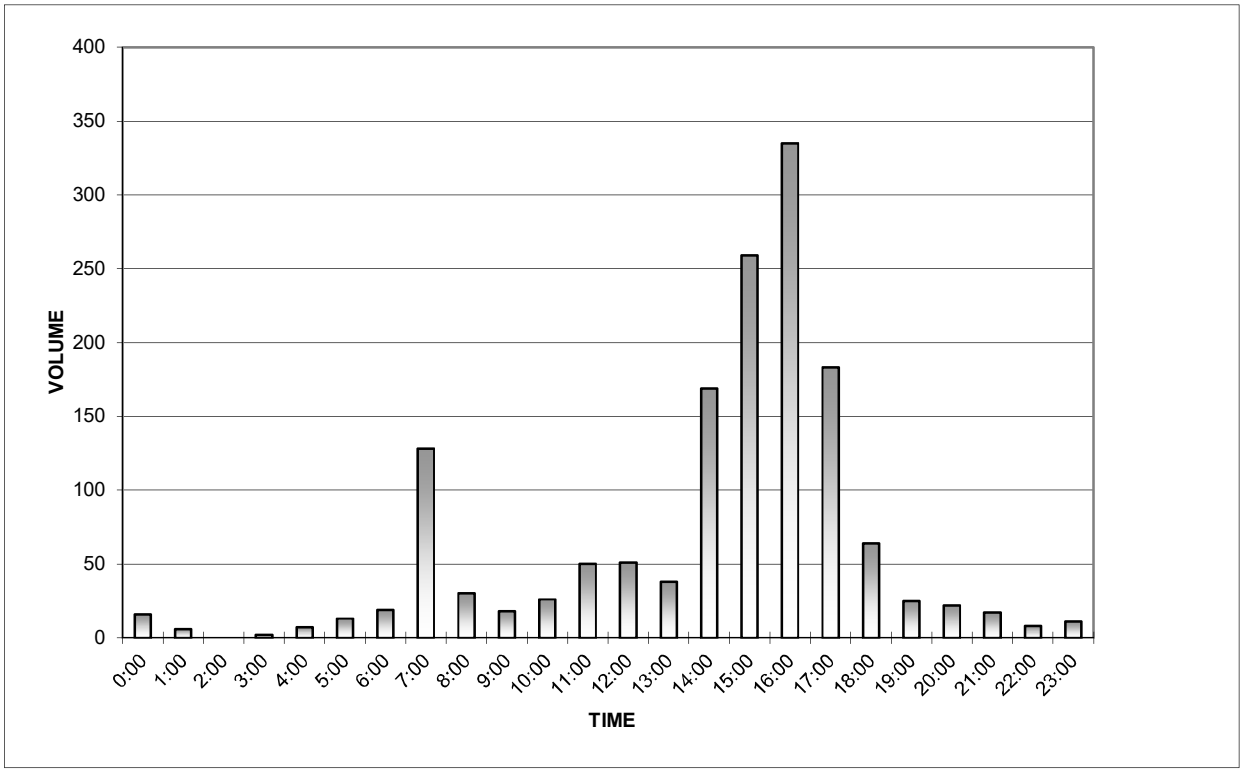


SB Joseph Hardin Drive South of School Driveway

Date Began:
3/8/2017

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	4	5	6	1	16
1:00	2	3	1	0	6
2:00	0	0	0	0	0
3:00	0	0	1	1	2
4:00	1	0	3	3	7
5:00	2	4	3	4	13
6:00	5	3	4	7	19
7:00	13	23	38	54	128
8:00	12	6	10	2	30
9:00	5	4	7	2	18
10:00	1	5	10	10	26
11:00	9	12	14	15	50
12:00	11	12	18	10	51
13:00	13	3	13	9	38
14:00	22	44	76	27	169
15:00	55	40	103	61	259
16:00	106	68	97	64	335
17:00	71	51	33	28	183
18:00	19	9	24	12	64
19:00	10	7	3	5	25
20:00	8	7	5	2	22
21:00	7	3	6	1	17
22:00	1	1	5	1	8
23:00	3	0	5	3	11
				TOTAL:	1497

The A.M. peak hour from 7:00 to 8:00 is 128
The P.M. peak hour from 15:30 to 16:30 is 338



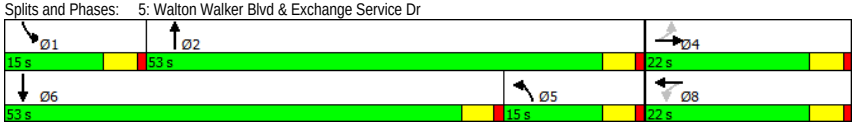
Appendix B. Detailed Intersection Capacity Analysis Results

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	30	51	3	131	317	96	691	0	24	767	202
Future Volume (vph)	20	30	51	3	131	317	96	691	0	24	767	202
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	32	56	60	4	177	387	114	751	0	40	872	259
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	0	0	568	0	114	751	0	40	1131	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	53.0		15.0	53.0	
Total Split (%)	24.4%	24.4%		24.4%	24.4%		16.7%	58.9%		16.7%	58.9%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		12.4			12.4		9.3	53.1		7.4	49.3	
Actuated g/C Ratio		0.15			0.15		0.11	0.65		0.09	0.60	
v/c Ratio		0.43			0.75		0.57	0.23		0.25	0.38	
Control Delay		23.9			19.4		48.2	7.8		41.0	9.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.9			19.4		48.2	7.8		41.0	9.1	
LOS		C			B		D	A		D	A	
Approach Delay		23.9			19.4			13.1			10.2	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		22			56		58	62		21	100	
Queue Length 95th (ft)		22			66		108	101		34	141	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		469			933		230	3298		230	3007	
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		0.32			0.61		0.50	0.23		0.17	0.38	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 13.7	Intersection LOS: B

Intersection Capacity Utilization 54.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	22

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	258	218	37	30	108	215	30	11	69	64	6	82
Future Vol, veh/h	258	218	37	30	108	215	30	11	69	64	6	82
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	84	71	58	79	90	68	46	49	73	38	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	315	260	52	52	137	239	44	24	141	88	16	108

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	376	0	0	312	0	0	1095	1394	156	1131	1301	188
Stage 1	-	-	-	-	-	-	915	915	-	360	360	-
Stage 2	-	-	-	-	-	-	180	479	-	771	941	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1179	-	-	1245	-	-	168	140	862	158	160	822
Stage 1	-	-	-	-	-	-	294	350	-	631	625	-
Stage 2	-	-	-	-	-	-	804	553	-	359	340	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1179	-	-	1245	-	-	101	98	862	~ 84	112	822
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	98	-	~ 84	112	-
Stage 1	-	-	-	-	-	-	215	256	-	462	599	-
Stage 2	-	-	-	-	-	-	652	530	-	200	249	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	1	31.9	106
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	100	535	1179	-	-	1245	-	-	86	574
HCM Lane V/C Ratio	0.561	0.286	0.267	-	-	0.042	-	-	1.111	0.202
HCM Control Delay (s)	79.5	14.4	9.2	-	-	8	-	-	218.7	12.9
HCM Lane LOS	F	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	2.6	1.2	1.1	-	-	0.1	-	-	6.6	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	6	73	2	83	2	499	0	0	55	1
Future Vol, veh/h	2	0	6	73	2	83	2	499	0	0	55	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	30	92	92	92	50	82	92	92	72	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	20	79	2	90	4	609	0	0	76	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	391	695	40	655	697	304	80	0	-	-	-	0
Stage 1	78	78	-	617	617	-	-	-	-	-	-	-
Stage 2	313	617	-	38	80	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	543	364	1022	351	363	692	1516	-	0	0	-	-
Stage 1	922	829	-	444	479	-	-	-	0	0	-	-
Stage 2	672	479	-	972	828	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	469	363	1022	343	362	692	1516	-	-	-	-	-
Mov Cap-2 Maneuver	469	363	-	343	362	-	-	-	-	-	-	-
Stage 1	918	829	-	442	477	-	-	-	-	-	-	-
Stage 2	579	477	-	953	828	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	14.6	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1516	-	854	343	692	-	-
HCM Lane V/C Ratio	0.003	-	0.028	0.231	0.13	-	-
HCM Control Delay (s)	7.4	0	9.3	18.6	11	-	-
HCM Lane LOS	A	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.9	0.4	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	35	28	26	0	29	0	221	276	18	30	0
Future Vol, veh/h	17	35	28	26	0	29	0	221	276	18	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	43	73	70	72	73	81	95	95	78	64	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	48	40	36	0	36	0	233	354	28	44	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	216	686	22	512	-	293	-	0	0	586	0	0
Stage 1	100	100	-	410	-	-	-	-	-	-	-	-
Stage 2	116	586	-	102	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	722	369	1050	445	0	703	0	-	-	985	-	0
Stage 1	895	811	-	589	0	-	0	-	-	-	-	0
Stage 2	876	495	-	893	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	670	358	1050	376	-	703	-	-	-	985	-	-
Mov Cap-2 Maneuver	670	358	-	376	-	-	-	-	-	-	-	-
Stage 1	895	787	-	589	-	-	-	-	-	-	-	-
Stage 2	831	495	-	783	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	13	0	3.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	552	376	703	985	-
HCM Lane V/C Ratio	-	-	0.231	0.096	0.051	0.029	-
HCM Control Delay (s)	-	-	13.5	15.6	10.4	8.8	0.1
HCM Lane LOS	-	-	B	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0.3	0.2	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	107	132	61	35	89	0	0	0	10	0	4
Future Vol, veh/h	76	107	132	61	35	89	0	0	0	10	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	81	92	92	73	74	92	92	92	50	92	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	132	143	66	48	120	0	0	0	20	0	4

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	168	0	0	276	0	0	515	725	84
Stage 1	-	-	-	-	-	-	241	241	-
Stage 2	-	-	-	-	-	-	274	484	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	1407	-	-	1284	-	-	489	350	958
Stage 1	-	-	-	-	-	-	776	705	-
Stage 2	-	-	-	-	-	-	747	550	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1407	-	-	1284	-	-	420	0	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	420	0	-
Stage 1	-	-	-	-	-	-	731	0	-
Stage 2	-	-	-	-	-	-	681	0	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	2.3	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1407	-	-	1284	-	-	463
HCM Lane V/C Ratio	0.074	-	-	0.052	-	-	0.052
HCM Control Delay (s)	7.8	0.1	-	8	0.1	-	13.2
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-	-	0.2

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	17	35	28	0	26	0	29	0	0	221	276
Future Vol, veh/h	0	17	35	28	0	26	0	29	0	0	221	276
Peak Hour Factor	0.92	0.43	0.73	0.70	0.92	0.72	0.73	0.81	0.92	0.95	0.95	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	40	48	40	0	36	0	36	0	0	233	354
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	10.5	9.3	12.1
HCM LOS	B	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	21%	100%	0%	64%	0%
Vol Thru, %	100%	21%	44%	0%	0%	36%	100%
Vol Right, %	0%	79%	35%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	350	80	26	29	28	20
LT Vol	0	0	17	26	0	18	0
Through Vol	147	74	35	0	0	10	20
RT Vol	0	276	28	0	29	0	0
Lane Flow Rate	155	431	127	36	36	43	29
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.224	0.556	0.208	0.068	0.055	0.072	0.046
Departure Headway (Hd)	5.194	4.639	5.865	6.785	5.571	6.01	5.685
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	687	772	607	531	647	590	623
Service Time	2.953	2.397	3.954	4.485	3.271	3.807	3.482
HCM Lane V/C Ratio	0.226	0.558	0.209	0.068	0.056	0.073	0.047
HCM Control Delay	9.5	13.1	10.5	10	8.6	9.3	8.8
HCM Lane LOS	A	B	B	A	A	A	A
HCM 95th-tile Q	0.9	3.5	0.8	0.2	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	18	30	0
Future Vol, veh/h	0	18	30	0
Peak Hour Factor	0.92	0.64	0.68	0.68
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	44	0
Number of Lanes	0	0	2	0

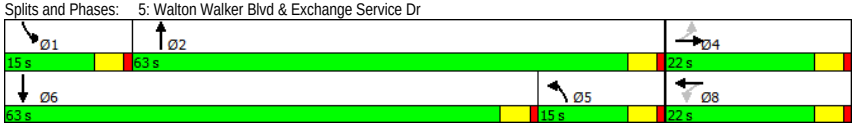
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.1
HCM LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	68	191	6	14	243	18	477	3	53	1243	13
Future Volume (vph)	126	68	191	6	14	243	18	477	3	53	1243	13
Adj. Flow (vph)	207	85	273	12	16	289	24	513	8	64	1322	34
Lane Group Flow (vph)	0	565	0	0	317	0	24	521	0	64	1356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		7.7	58.7		8.5	63.7	
Actuated g/C Ratio		0.18			0.18		0.08	0.61		0.09	0.66	
v/c Ratio		1.00			0.46		0.17	0.17		0.41	0.40	
Control Delay		64.8			8.5		44.3	8.8		50.4	8.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		64.8			8.5		44.3	8.8		50.4	8.7	
LOS		E			A		D	A		D	A	
Approach Delay		64.8			8.5			10.3			10.6	
Approach LOS		E			A			B			B	
Queue Length 50th (ft)		~131			7		14	49		39	95	
Queue Length 95th (ft)		#195			43		32	69		74	200	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		565			691		194	3104		194	3361	
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		1.00			0.46		0.12	0.17		0.33	0.40	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 96
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15
~ 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.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	10.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	158	17	15	196	64	41	15	25	146	6	218
Future Vol, veh/h	59	158	17	15	196	64	41	15	25	146	6	218
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	71	75	83	70	79	63	78	68	50	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	172	24	20	236	91	52	24	32	215	12	279

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	328	0	0	196	0	0	483	687	98	555	653	164
Stage 1	-	-	-	-	-	-	319	319	-	322	322	-
Stage 2	-	-	-	-	-	-	164	368	-	233	331	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1228	-	-	1374	-	-	467	368	939	414	385	852
Stage 1	-	-	-	-	-	-	667	652	-	664	650	-
Stage 2	-	-	-	-	-	-	822	620	-	749	644	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1228	-	-	1374	-	-	290	343	939	359	358	852
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	343	-	359	358	-
Stage 1	-	-	-	-	-	-	630	616	-	627	641	-
Stage 2	-	-	-	-	-	-	534	611	-	657	608	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0.4	16.5	19.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	299	639	1228	-	-	1374	-	-	359	828
HCM Lane V/C Ratio	0.213	0.069	0.055	-	-	0.015	-	-	0.615	0.345
HCM Control Delay (s)	20.3	11.1	8.1	-	-	7.7	-	-	29.8	11.6
HCM Lane LOS	C	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.8	0.2	0.2	-	-	0	-	-	3.9	1.5

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	28	55	0	56	0	132	0	0	381	0
Future Vol, veh/h	6	0	28	55	0	56	0	132	0	0	381	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	58	44	92	58	67	67	67	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	48	125	0	97	0	197	0	0	459	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	558	656	230	427	-	99	459	0	-	-	-	0
Stage 1	459	459	-	197	-	-	-	-	-	-	-	-
Stage 2	99	197	-	230	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	412	384	772	512	0	937	1098	-	0	0	-	-
Stage 1	551	565	-	786	0	-	-	-	0	0	-	-
Stage 2	896	737	-	752	0	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	370	384	772	480	-	937	1098	-	-	-	-	-
Mov Cap-2 Maneuver	370	384	-	480	-	-	-	-	-	-	-	-
Stage 1	551	565	-	786	-	-	-	-	-	-	-	-
Stage 2	804	737	-	705	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	12.6	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1098	-	635	480	937	-	-
HCM Lane V/C Ratio	-	-	0.095	0.26	0.103	-	-
HCM Control Delay (s)	0	-	11.3	15.1	9.3	-	-
HCM Lane LOS	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	1	0.3	-	-

Intersection	
Int Delay, s/veh	20.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	23	34	119	0	25	0	24	77	16	228	0
Future Vol, veh/h	16	23	34	119	0	25	0	24	77	16	228	0
Conflicting Peds, #/hr	0	0	118	0	0	0	0	0	191	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	34	43	76	50	45	86	86	50	67	76	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	68	79	157	0	56	0	28	154	24	300	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	362	721	268	646	-	282	-	0	0	373	0	0
Stage 1	348	348	-	296	-	-	-	-	-	-	-	-
Stage 2	14	373	-	350	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	569	352	730	357	0	715	0	-	-	1182	-	0
Stage 1	641	633	-	688	0	-	0	-	-	-	-	0
Stage 2	1004	617	-	639	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	506	281	648	182	-	585	-	-	-	1182	-	-
Mov Cap-2 Maneuver	506	281	-	182	-	-	-	-	-	-	-	-
Stage 1	641	618	-	688	-	-	-	-	-	-	-	-
Stage 2	909	505	-	433	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.1	66.8	0	0.7
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	423	182	585	1182	-
HCM Lane V/C Ratio	-	-	0.441	0.86	0.095	0.02	-
HCM Control Delay (s)	-	-	20.1	86.3	11.8	8.1	0.1
HCM Lane LOS	-	-	C	F	B	A	A
HCM 95th %tile Q(veh)	-	-	2.2	6.2	0.3	0.1	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	68	40	28	69	20	0	0	0	87	0	75
Future Vol, veh/h	8	68	40	28	69	20	0	0	0	87	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	75	56	58	59	83	92	92	92	84	92	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	91	71	48	117	24	0	0	0	104	0	127

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	141	0	0	162	0	0	295	412	71
Stage 1	-	-	-	-	-	-	226	226	-
Stage 2	-	-	-	-	-	-	69	186	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	1440	-	-	1414	-	-	672	529	977
Stage 1	-	-	-	-	-	-	790	716	-
Stage 2	-	-	-	-	-	-	946	745	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1440	-	-	1414	-	-	641	0	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	641	0	-
Stage 1	-	-	-	-	-	-	761	0	-
Stage 2	-	-	-	-	-	-	937	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	2	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1440	-	-	1414	-	-	791
HCM Lane V/C Ratio	0.008	-	-	0.034	-	-	0.292
HCM Control Delay (s)	7.5	0	-	7.6	0.1	-	11.4
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	1.2

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	16	23	34	0	119	0	25	0	0	24	77
Future Vol, veh/h	0	16	23	34	0	119	0	25	0	0	24	77
Peak Hour Factor	0.92	0.40	0.34	0.43	0.92	0.76	0.50	0.45	0.92	0.86	0.86	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	40	68	79	0	157	0	56	0	0	28	154
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.9	11.4	10.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	22%	100%	0%	17%	0%
Vol Thru, %	100%	9%	32%	0%	0%	83%	100%
Vol Right, %	0%	91%	47%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	85	73	119	25	92	152
LT Vol	0	0	16	119	0	16	0
Through Vol	16	8	23	0	0	76	152
RT Vol	0	77	34	0	25	0	0
Lane Flow Rate	19	163	187	157	56	124	200
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.032	0.255	0.315	0.294	0.085	0.211	0.335
Departure Headway (Hd)	6.276	5.632	6.081	6.754	5.538	6.126	6.038
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	569	635	590	532	646	585	596
Service Time	4.027	3.382	4.128	4.501	3.285	3.87	3.781
HCM Lane V/C Ratio	0.033	0.257	0.317	0.295	0.087	0.212	0.336
HCM Control Delay	9.2	10.3	11.9	12.3	8.8	10.5	11.8
HCM Lane LOS	A	B	B	B	A	B	B
HCM 95th-tile Q	0.1	1	1.3	1.2	0.3	0.8	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	16	228	0
Future Vol, veh/h	0	16	228	0
Peak Hour Factor	0.92	0.67	0.76	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	24	300	0
Number of Lanes	0	0	2	0

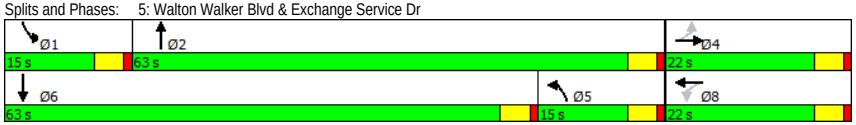
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.3
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	626	3	56	1393	11
Future Volume (vph)	175	52	118	3	16	254	9	626	3	56	1393	11
Adj. Flow (vph)	208	90	164	8	20	285	20	645	8	80	1466	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	653	0	80	1482	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		7.7	58.7		8.9	64.0	
Actuated g/C Ratio		0.18			0.18		0.08	0.61		0.09	0.66	
v/c Ratio		0.99			0.41		0.14	0.21		0.49	0.44	
Control Delay		72.4			8.0		43.8	9.2		53.0	9.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		72.4			8.0		43.8	9.2		53.0	9.1	
LOS		E			A		D	A		D	A	
Approach Delay		72.4			8.0			10.2			11.3	
Approach LOS		E			A			B			B	
Queue Length 50th (ft)		~131			7		12	65		49	109	
Queue Length 95th (ft)		100			30		17	87		73	225	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		468			755		193	3093		193	3371	
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		0.99			0.41		0.10	0.21		0.41	0.44	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 96.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	205	9	7	213	26	43	15	24	129	7	163
Future Vol, veh/h	24	205	9	7	213	26	43	15	24	129	7	163
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	84	45	35	81	65	77	63	60	62	58	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	244	20	20	263	40	56	24	40	208	12	240

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	303	0	0	264	0	0	497	662	132	522	652	151
Stage 1	-	-	-	-	-	-	319	319	-	323	323	-
Stage 2	-	-	-	-	-	-	178	343	-	199	329	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1255	-	-	1297	-	-	456	381	893	438	386	868
Stage 1	-	-	-	-	-	-	667	652	-	663	649	-
Stage 2	-	-	-	-	-	-	806	636	-	784	645	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1255	-	-	1297	-	-	312	366	893	385	370	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	366	-	385	370	-
Stage 1	-	-	-	-	-	-	650	635	-	646	639	-
Stage 2	-	-	-	-	-	-	564	626	-	702	629	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	15.6	17.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	320	671	1255	-	-	1297	-	-	385	840
HCM Lane V/C Ratio	0.212	0.077	0.026	-	-	0.015	-	-	0.556	0.293
HCM Control Delay (s)	19.2	10.8	7.9	-	-	7.8	-	-	25.4	11
HCM Lane LOS	C	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.8	0.3	0.1	-	-	0	-	-	3.3	1.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	16	1	3	1	38	0	0	269	0
Future Vol, veh/h	0	0	3	16	1	3	1	38	0	0	269	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	38	38	38	44	92	75	25	86	86	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	36	1	4	4	44	0	0	354	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	385	406	177	229	406	22	354	0	-	-	-	0
Stage 1	354	354	-	52	52	-	-	-	-	-	-	-
Stage 2	31	52	-	177	354	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	548	533	835	707	533	1050	1201	-	0	0	-	-
Stage 1	636	629	-	954	851	-	-	-	0	0	-	-
Stage 2	981	851	-	808	629	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	544	531	835	699	531	1050	1201	-	-	-	-	-
Mov Cap-2 Maneuver	544	531	-	699	531	-	-	-	-	-	-	-
Stage 1	634	629	-	951	848	-	-	-	-	-	-	-
Stage 2	973	848	-	800	629	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	10.2	0.7	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1201	-	835	699	1050	-	-
HCM Lane V/C Ratio	0.003	-	0.009	0.052	0.004	-	-
HCM Control Delay (s)	8	0	9.4	10.4	8.4	-	-
HCM Lane LOS	A	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	1	109	0	15	0	24	18	24	149	0
Future Vol, veh/h	0	3	1	109	0	15	0	24	18	24	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	64	25	38	50	25	75	75	50	55	64	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	4	287	0	60	0	32	36	44	233	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	336	388	116	256	-	34	-	0	0	68	0	0
Stage 1	320	320	-	50	-	-	-	-	-	-	-	-
Stage 2	16	68	-	206	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	594	545	914	676	0	1032	0	-	-	1531	-	0
Stage 1	666	651	-	957	0	-	0	-	-	-	-	0
Stage 2	1001	838	-	777	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	545	527	914	652	-	1032	-	-	-	1531	-	-
Mov Cap-2 Maneuver	545	527	-	652	-	-	-	-	-	-	-	-
Stage 1	666	630	-	957	-	-	-	-	-	-	-	-
Stage 2	943	838	-	743	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	13.7	0	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	655	652	1032	1531	-
HCM Lane V/C Ratio	-	-	0.013	0.44	0.058	0.029	-
HCM Control Delay (s)	-	-	10.6	14.8	8.7	7.4	0.1
HCM Lane LOS	-	-	B	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0	2.2	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	47	2	2	54	10	0	0	0	55	0	73
Future Vol, veh/h	4	47	2	2	54	10	0	0	0	55	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	65	25	50	61	50	92	92	92	57	92	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	72	8	4	89	20	0	0	0	96	0	100

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	109	0	0	80	0	0	159	203	54
Stage 1	-	-	-	-	-	-	107	107	-
Stage 2	-	-	-	-	-	-	52	96	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	1479	-	-	1516	-	-	792	692	1002
Stage 1	-	-	-	-	-	-	887	806	-
Stage 2	-	-	-	-	-	-	954	815	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1479	-	-	1516	-	-	787	686	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	787	686	-
Stage 1	-	-	-	-	-	-	882	804	-
Stage 2	-	-	-	-	-	-	948	810	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0.3	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1479	-	-	1516	-	-	883
HCM Lane V/C Ratio	0.005	-	-	0.003	-	-	0.223
HCM Control Delay (s)	7.4	0	-	7.4	0	-	10.2
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.8

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	1	0	109	0	15	0	0	24	18
Future Vol, veh/h	0	0	3	1	0	109	0	15	0	0	24	18
Peak Hour Factor	0.92	0.55	0.64	0.25	0.92	0.38	0.50	0.25	0.92	0.75	0.75	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	4	0	287	0	60	0	0	32	36
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	9	12.9	8.7
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	33%	0%
Vol Thru, %	100%	31%	75%	0%	0%	67%	100%
Vol Right, %	0%	69%	25%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	26	4	109	15	74	99
LT Vol	0	0	0	109	0	24	0
Through Vol	16	8	3	0	0	50	99
RT Vol	0	18	1	0	15	0	0
Lane Flow Rate	21	47	9	287	60	121	155
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.035	0.07	0.014	0.472	0.079	0.195	0.242
Departure Headway (Hd)	5.886	5.395	5.869	5.93	4.725	5.782	5.617
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	602	657	614	605	751	617	635
Service Time	3.68	3.189	3.869	3.703	2.497	3.551	3.387
HCM Lane V/C Ratio	0.035	0.072	0.015	0.474	0.08	0.196	0.244
HCM Control Delay	8.9	8.6	9	14	7.9	10	10.2
HCM Lane LOS	A	A	A	B	A	A	B
HCM 95th-tile Q	0.1	0.2	0	2.5	0.3	0.7	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	24	149	0
Future Vol, veh/h	0	24	149	0
Peak Hour Factor	0.92	0.55	0.64	0.25
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	233	0
Number of Lanes	0	0	2	0

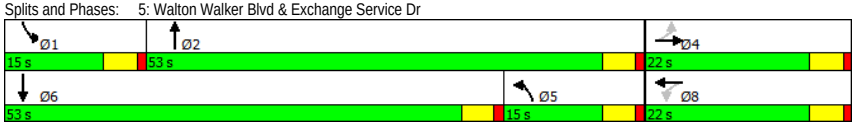
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.1
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	43	71	3	148	317	104	733	0	24	814	227
Future Volume (vph)	27	43	71	3	148	317	104	733	0	24	814	227
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	43	80	84	4	200	387	124	797	0	40	925	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	207	0	0	591	0	124	797	0	40	1216	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	53.0		15.0	53.0	
Total Split (%)	24.4%	24.4%		24.4%	24.4%		16.7%	58.9%		16.7%	58.9%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		13.4			13.4		9.6	55.3		7.4	48.7	
Actuated g/C Ratio		0.16			0.16		0.11	0.65		0.09	0.57	
v/c Ratio		0.56			0.78		0.63	0.24		0.26	0.43	
Control Delay		25.3			22.1		51.8	8.0		41.6	10.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		25.3			22.1		51.8	8.0		41.6	10.1	
LOS		C			C		D	A		D	B	
Approach Delay		25.3			22.1			13.9			11.1	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		32			67		65	69		21	115	
Queue Length 95th (ft)		27			79		116	108		34	155	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		463			894		219	3299		219	2860	
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		0.45			0.66		0.57	0.24		0.18	0.43	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 85.2	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 15.2	Intersection LOS: B

Intersection Capacity Utilization 60.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

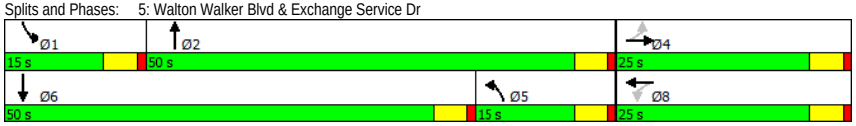


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	43	71	3	148	317	104	733	0	24	814	227
Future Volume (vph)	27	43	71	3	148	317	104	733	0	24	814	227
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	43	80	84	4	200	387	124	797	0	40	925	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	207	0	0	591	0	124	797	0	40	1216	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	25.0	25.0		25.0	25.0		15.0	50.0		15.0	50.0	
Total Split (%)	27.8%	27.8%		27.8%	27.8%		16.7%	55.6%		16.7%	55.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		13.8			13.8		9.5	50.3		7.4	46.4	
Actuated g/C Ratio		0.17			0.17		0.12	0.62		0.09	0.58	
v/c Ratio		0.52			0.74		0.59	0.25		0.25	0.42	
Control Delay		23.3			19.9		48.6	8.8		40.2	10.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.3			19.9		48.6	8.8		40.2	10.5	
LOS		C			B		D	A		D	B	
Approach Delay		23.3			19.9			14.1			11.4	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		30			65		62	69		20	115	
Queue Length 95th (ft)		26			76		116	117		34	169	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		558			1034		235	3174		235	2877	
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		0.37			0.57		0.53	0.25		0.17	0.42	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 80.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 14.8		Intersection LOS: B	

Intersection Capacity Utilization 60.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	90.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	317	222	37	30	110	274	30	11	69	97	6	128
Future Vol, veh/h	317	222	37	30	110	274	30	11	69	97	6	128
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	84	71	58	79	90	68	46	49	73	38	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	387	264	52	52	139	304	44	24	141	133	16	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	444	0	0	316	0	0	1245	1611	158	1312	1485	222
Stage 1	-	-	-	-	-	-	1064	1064	-	395	395	-
Stage 2	-	-	-	-	-	-	181	547	-	917	1090	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1112	-	-	1241	-	-	130	103	859	~ 116	124	782
Stage 1	-	-	-	-	-	-	238	298	-	602	603	-
Stage 2	-	-	-	-	-	-	803	516	-	293	289	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1112	-	-	1241	-	-	62	64	859	~ 50	77	782
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	64	-	~ 50	77	-
Stage 1	-	-	-	-	-	-	155	194	-	392	578	-
Stage 2	-	-	-	-	-	-	587	494	-	140	188	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.5	0.8	65.7	$ 437
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	62	436	1112	-	-	1241	-	-	51	555
HCM Lane V/C Ratio	0.904	0.35	0.348	-	-	0.042	-	-	2.76	0.318
HCM Control Delay (s)	196.8	17.6	10	-	-	8	-	-	$ 966.1	14.5
HCM Lane LOS	F	C	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	4.2	1.6	1.6	-	-	0.1	-	-	14.8	1.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	6	0	0	0	2	367	109	50	262	1
Future Vol, veh/h	2	0	6	0	0	0	2	367	109	50	262	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	30	92	92	92	50	82	92	92	72	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	20	0	0	0	4	448	118	54	364	4

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	707	1049	184				368	0	0	566	0	0
Stage 1	475	475	-				-	-	-	-	-	-
Stage 2	232	574	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	370	226	827				1187	-	-	1002	-	-
Stage 1	592	556	-				-	-	-	-	-	-
Stage 2	785	501	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	343	0	827				1187	-	-	1002	-	-
Mov Cap-2 Maneuver	343	0	-				-	-	-	-	-	-
Stage 1	552	0	-				-	-	-	-	-	-
Stage 2	781	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.1	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1187	-	-	670	1002	-	-
HCM Lane V/C Ratio	0.003	-	-	0.036	0.054	-	-
HCM Control Delay (s)	8	0	-	10.6	8.8	0.2	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	-	-

Intersection													
Int Delay, s/veh	12.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	75	107	175	0	42	0	208	61	18	30	0
Future Vol, veh/h	30	75	107	175	0	42	0	208	61	18	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	43	73	70	72	73	81	95	95	78	64	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	103	153	243	0	52	0	219	78	28	44	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	209	397	22	388	-	149	-	0	0	297	0	0
Stage 1	100	100	-	258	-	-	-	-	-	-	-	-
Stage 2	109	297	-	130	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	730	539	1050	545	0	871	0	-	-	1261	-	0
Stage 1	895	811	-	724	0	-	0	-	-	-	-	0
Stage 2	885	666	-	860	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	674	527	1050	389	-	871	-	-	-	1261	-	-
Mov Cap-2 Maneuver	674	527	-	389	-	-	-	-	-	-	-	-
Stage 1	895	792	-	724	-	-	-	-	-	-	-	-
Stage 2	832	666	-	625	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	25.1	0	3.1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	733	389	871	1261	-
HCM Lane V/C Ratio	-	-	0.444	0.625	0.06	0.022	-
HCM Control Delay (s)	-	-	13.8	28.5	9.4	7.9	0
HCM Lane LOS	-	-	B	D	A	A	A
HCM 95th %tile Q(veh)	-	-	2.3	4.1	0.2	0.1	-

Intersection													
Int Delay, s/veh	4.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	78	0	0	136	89	77	0	52	10	0	4
Future Vol, veh/h	76	78	0	0	136	89	77	0	52	10	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	81	92	92	73	74	92	92	92	50	92	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	96	0	0	186	120	84	0	57	20	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	307	0	-	-	-	0	398	-	48	502	551	153
Stage 1	-	-	-	-	-	-	305	-	-	246	246	-
Stage 2	-	-	-	-	-	-	93	-	-	256	305	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1250	-	0	0	-	-	536	0	1011	452	441	866
Stage 1	-	-	0	0	-	-	680	0	-	736	701	-
Stage 2	-	-	0	0	-	-	904	0	-	726	661	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1250	-	-	-	-	-	498	-	1011	398	402	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	498	-	-	398	402	-
Stage 1	-	-	-	-	-	-	620	-	-	671	701	-
Stage 2	-	-	-	-	-	-	900	-	-	625	603	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.3	0	11.7	13.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	498	1011	1250	-	-	-	437
HCM Lane V/C Ratio	0.168	0.056	0.083	-	-	-	0.055
HCM Control Delay (s)	13.7	8.8	8.1	0.1	-	-	13.7
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0.2	0.3	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	30	75	107	0	175	0	42	0	0	208	61
Future Vol, veh/h	0	30	75	107	0	175	0	42	0	0	208	61
Peak Hour Factor	0.92	0.43	0.73	0.70	0.92	0.72	0.73	0.81	0.92	0.95	0.95	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	103	153	0	243	0	52	0	0	219	78
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	15.5	13.7	11.3
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	14%	100%	0%	64%	0%
Vol Thru, %	100%	53%	35%	0%	0%	36%	100%
Vol Right, %	0%	47%	50%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	139	130	212	175	42	28	20
LT Vol	0	0	30	175	0	18	0
Through Vol	139	69	75	0	0	10	20
RT Vol	0	61	107	0	42	0	0
Lane Flow Rate	146	151	325	243	52	43	29
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.264	0.259	0.532	0.449	0.078	0.087	0.057
Departure Headway (Hd)	6.512	6.178	5.881	6.651	5.434	7.273	6.944
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	550	579	612	540	656	490	513
Service Time	4.27	3.936	3.934	4.406	3.189	5.048	4.719
HCM Lane V/C Ratio	0.265	0.261	0.531	0.45	0.079	0.088	0.057
HCM Control Delay	11.6	11.1	15.5	14.8	8.7	10.7	10.1
HCM Lane LOS	B	B	C	B	A	B	B
HCM 95th-tile Q	1.1	1	3.1	2.3	0.3	0.3	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	18	30	0
Future Vol, veh/h	0	18	30	0
Peak Hour Factor	0.92	0.64	0.68	0.68
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	44	0
Number of Lanes	0	0	2	0

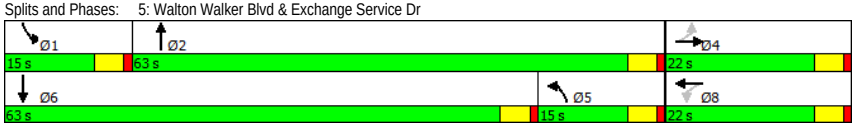
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.5
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	80	209	6	25	243	23	506	3	53	1319	29
Future Volume (vph)	132	80	209	6	25	243	23	506	3	53	1319	29
Peak Hour Factor	0.61	0.80	0.70	0.50	0.88	0.84	0.75	0.93	0.38	0.83	0.94	0.38
Adj. Flow (vph)	216	100	299	12	28	289	31	544	8	64	1403	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	615	0	0	329	0	31	552	0	64	1479	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		8.2	58.7		8.5	61.1	
Actuated g/C Ratio		0.18			0.18		0.09	0.61		0.09	0.64	
v/c Ratio		1.09			0.49		0.21	0.18		0.41	0.46	
Control Delay		90.9			9.6		44.7	8.8		50.4	10.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		90.9			9.6		44.7	8.8		50.4	10.3	
LOS		F			A		D	A		D	B	
Approach Delay		90.9			9.6			10.7			12.0	
Approach LOS		F			A			B			B	
Queue Length 50th (ft)		~172			11		18	53		39	178	
Queue Length 95th (ft)		#229			47		39	73		74	224	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		565			672		194	3104		194	3214	
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		1.09			0.49		0.16	0.18		0.33	0.46	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 96	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 27.3	Intersection LOS: C

Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15
~ 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.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

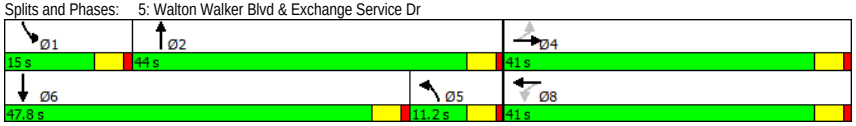


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	80	209	6	25	243	23	506	3	53	1319	29
Future Volume (vph)	132	80	209	6	25	243	23	506	3	53	1319	29
Peak Hour Factor	0.61	0.80	0.70	0.50	0.88	0.84	0.75	0.93	0.38	0.83	0.94	0.38
Adj. Flow (vph)	216	100	299	12	28	289	31	544	8	64	1403	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	615	0	0	329	0	31	552	0	64	1479	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	41.0	41.0		41.0	41.0		11.2	44.0		15.0	47.8	
Total Split (%)	41.0%	41.0%		41.0%	41.0%		11.2%	44.0%		15.0%	47.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		23.6			23.6		6.4	41.9		8.2	45.9	
Actuated g/C Ratio		0.28			0.28		0.08	0.49		0.10	0.54	
v/c Ratio		0.81			0.33		0.23	0.22		0.37	0.54	
Control Delay		29.2			5.3		46.0	15.0		45.7	16.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		29.2			5.3		46.0	15.0		45.7	16.0	
LOS		C			A		D	B		D	B	
Approach Delay		29.2			5.3			16.6			17.2	
Approach LOS		C			A			B			B	
Queue Length 50th (ft)		122			8		16	62		34	200	
Queue Length 95th (ft)		150			35		41	113		74	320	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		1101			1413		142	2503		223	2734	
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		0.56			0.23		0.22	0.22		0.29	0.54	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 84.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 18.2		Intersection LOS: B	

Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	20.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	96	161	17	15	200	101	41	15	25	176	6	260
Future Vol, veh/h	96	161	17	15	200	101	41	15	25	176	6	260
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	71	75	83	70	79	63	78	68	50	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	110	175	24	20	241	144	52	24	32	259	12	333

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	385	0	0	199	0	0	574	833	99	673	773	193
Stage 1	-	-	-	-	-	-	408	408	-	353	353	-
Stage 2	-	-	-	-	-	-	166	425	-	320	420	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1170	-	-	1371	-	-	402	303	937	341	328	816
Stage 1	-	-	-	-	-	-	591	595	-	637	629	-
Stage 2	-	-	-	-	-	-	820	585	-	666	588	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	1371	-	-	212	271	937	282	293	816
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	271	-	282	293	-
Stage 1	-	-	-	-	-	-	535	539	-	577	620	-
Stage 2	-	-	-	-	-	-	469	576	-	557	533	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	0.4	21.3	41.8
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	221	563	1170	-	-	1371	-	-	282	791
HCM Lane V/C Ratio	0.289	0.078	0.094	-	-	0.015	-	-	0.939	0.429
HCM Control Delay (s)	27.8	11.9	8.4	-	-	7.7	-	-	78.8	12.9
HCM Lane LOS	D	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.1	0.3	0.3	-	-	0	-	-	8.9	2.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	28	0	0	0	0	92	33	23	404	0
Future Vol, veh/h	6	0	28	0	0	0	0	92	33	23	404	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	58	44	92	58	67	67	67	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	48	0	0	0	0	137	49	28	487	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	611	729	243				487	0	0	187	0	0
Stage 1	542	542	-				-	-	-	-	-	-
Stage 2	69	187	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	425	348	758				1072	-	-	1385	-	-
Stage 1	547	518	-				-	-	-	-	-	-
Stage 2	946	744	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	413	0	758				1072	-	-	1385	-	-
Mov Cap-2 Maneuver	413	0	-				-	-	-	-	-	-
Stage 1	532	0	-				-	-	-	-	-	-
Stage 2	946	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	650	1385	-	-
HCM Lane V/C Ratio	-	-	-	0.093	0.02	-	-
HCM Control Delay (s)	0	-	-	11.1	7.7	0.1	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	148.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	59	105	197	0	34	0	15	10	16	228	0
Future Vol, veh/h	28	59	105	197	0	34	0	15	10	16	228	0
Conflicting Peds, #/hr	0	0	90	0	0	0	0	0	164	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	34	43	76	50	45	86	86	50	67	76	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	174	244	259	0	76	0	17	20	24	300	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	357	549	240	566	-	183	-	0	0	201	0	0
Stage 1	348	348	-	191	-	-	-	-	-	-	-	-
Stage 2	9	201	-	375	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	574	442	761	407	0	828	0	-	-	1368	-	0
Stage 1	641	633	-	792	0	-	0	-	-	-	-	0
Stage 2	1011	734	-	618	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	504	365	696	~ 126	-	699	-	-	-	1368	-	-
Mov Cap-2 Maneuver	504	365	-	~ 126	-	-	-	-	-	-	-	-
Stage 1	641	620	-	792	-	-	-	-	-	-	-	-
Stage 2	902	619	-	~ 259	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	60.6	$ 435.7	0	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	505	126	699	1368	-
HCM Lane V/C Ratio	-	-	0.966	2.057	0.108	0.017	-
HCM Control Delay (s)	-	-	60.6	$ 559.6	10.8	7.7	0.1
HCM Lane LOS	-	-	F	F	B	A	A
HCM 95th %tile Q(veh)	-	-	12.5	21.2	0.4	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	77	0	0	101	20	55	0	37	87	0	75
Future Vol, veh/h	8	77	0	0	101	20	55	0	37	87	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	75	56	58	59	83	92	92	92	84	92	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	103	0	0	171	24	60	0	40	104	0	127

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	195	0	-	-	-	0	213	-	51	258	310	98
Stage 1	-	-	-	-	-	-	127	-	-	183	183	-
Stage 2	-	-	-	-	-	-	86	-	-	75	127	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1375	-	0	0	-	-	725	0	1006	674	603	939
Stage 1	-	-	0	0	-	-	863	0	-	801	747	-
Stage 2	-	-	0	0	-	-	912	0	-	926	790	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1375	-	-	-	-	-	623	-	1006	643	598	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	-	-	643	598	-
Stage 1	-	-	-	-	-	-	855	-	-	794	747	-
Stage 2	-	-	-	-	-	-	789	-	-	881	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	10.3	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	623	1006	1375	-	-	-	778
HCM Lane V/C Ratio	0.096	0.04	0.009	-	-	-	0.297
HCM Control Delay (s)	11.4	8.7	7.6	0	-	-	11.6
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	-	1.2

Intersection	
Intersection Delay, s/veh	20.4
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	28	59	105	0	197	0	34	0	0	15	10
Future Vol, veh/h	0	28	59	105	0	197	0	34	0	0	15	10
Peak Hour Factor	0.92	0.40	0.34	0.43	0.92	0.76	0.50	0.45	0.92	0.86	0.86	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	174	244	0	259	0	76	0	0	17	20
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	29.6	15	10.6
HCM LOS	D	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	15%	100%	0%	17%	0%
Vol Thru, %	100%	33%	31%	0%	0%	83%	100%
Vol Right, %	0%	67%	55%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	15	192	197	34	92	152
LT Vol	0	0	28	197	0	16	0
Through Vol	10	5	59	0	0	76	152
RT Vol	0	10	105	0	34	0	0
Lane Flow Rate	12	26	488	259	76	124	200
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.025	0.053	0.808	0.501	0.121	0.243	0.388
Departure Headway (Hd)	7.83	7.348	5.966	6.964	5.742	7.066	6.977
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	460	490	605	516	620	505	512
Service Time	5.53	5.048	4.035	4.746	3.523	4.848	4.759
HCM Lane V/C Ratio	0.026	0.053	0.807	0.502	0.123	0.246	0.391
HCM Control Delay	10.7	10.5	29.6	16.6	9.3	12.1	14.2
HCM Lane LOS	B	B	D	C	A	B	B
HCM 95th-tile Q	0.1	0.2	8.1	2.8	0.4	0.9	1.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	16	228	0
Future Vol, veh/h	0	16	228	0
Peak Hour Factor	0.92	0.67	0.76	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	24	300	0
Number of Lanes	0	0	2	0

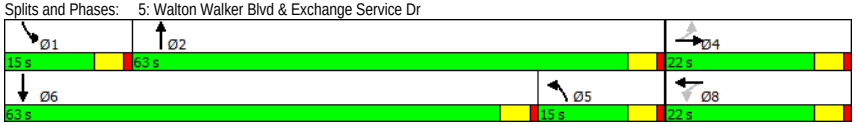
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	13.4
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Future Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Adj. Flow (vph)	208	90	164	8	20	285	20	685	8	80	1556	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	693	0	80	1572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		7.7	58.7		8.9	64.0	
Actuated g/C Ratio		0.18			0.18		0.08	0.61		0.09	0.66	
v/c Ratio		0.99			0.41		0.14	0.22		0.49	0.47	
Control Delay		72.4			8.0		43.8	9.3		53.0	9.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		72.4			8.0		43.8	9.3		53.0	9.3	
LOS		E			A		D	A		D	A	
Approach Delay		72.4			8.0			10.2			11.5	
Approach LOS		E			A			B			B	
Queue Length 50th (ft)		~131			7		12	70		49	118	
Queue Length 95th (ft)		100			30		17	93		73	245	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		468			755		193	3093		193	3370	
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		0.99			0.41		0.10	0.22		0.41	0.47	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 96.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

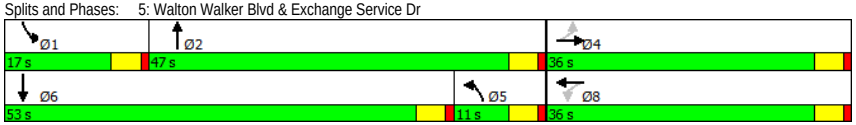


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Future Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Adj. Flow (vph)	208	90	164	8	20	285	20	685	8	80	1556	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	693	0	80	1572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	36.0	36.0		36.0	36.0		11.0	47.0		17.0	53.0	
Total Split (%)	36.0%	36.0%		36.0%	36.0%		11.0%	47.0%		17.0%	53.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		19.3			19.3		6.2	44.9		9.1	52.1	
Actuated g/C Ratio		0.23			0.23		0.07	0.53		0.11	0.62	
v/c Ratio		0.78			0.36		0.16	0.26		0.42	0.50	
Control Delay		32.8			5.9		43.8	13.1		44.5	11.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		32.8			5.9		43.8	13.1		44.5	11.6	
LOS		C			A		D	B		D	B	
Approach Delay		32.8			5.9			13.9			13.2	
Approach LOS		C			A			B			B	
Queue Length 50th (ft)		93			6		10	72		40	127	
Queue Length 95th (ft)		75			25		17	128		69	297	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		917			1264		138	2701		266	3132	
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		0.50			0.25		0.14	0.26		0.30	0.50	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 84.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 15.5 — Intersection LOS: B
Intersection Capacity Utilization 67.1% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	209	9	7	217	26	43	15	24	129	7	163
Future Vol, veh/h	24	209	9	7	217	26	43	15	24	129	7	163
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	84	45	35	81	65	77	63	60	62	58	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	249	20	20	268	40	56	24	40	208	12	240

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	269	0	0	504	672	134	529	662	154
Stage 1	-	-	-	-	-	-	324	324	-	328	328	-
Stage 2	-	-	-	-	-	-	180	348	-	201	334	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1249	-	-	1292	-	-	451	376	890	433	381	864
Stage 1	-	-	-	-	-	-	662	648	-	659	646	-
Stage 2	-	-	-	-	-	-	804	633	-	782	642	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1292	-	-	308	361	890	381	365	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	308	361	-	381	365	-
Stage 1	-	-	-	-	-	-	645	631	-	642	636	-
Stage 2	-	-	-	-	-	-	561	623	-	700	626	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	15.8	18
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	316	666	1249	-	-	1292	-	-	381	836
HCM Lane V/C Ratio	0.214	0.078	0.026	-	-	0.015	-	-	0.562	0.294
HCM Control Delay (s)	19.5	10.9	8	-	-	7.8	-	-	25.9	11.1
HCM Lane LOS	C	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.8	0.3	0.1	-	-	0	-	-	3.3	1.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	0	0	0	1	36	2	2	279	0
Future Vol, veh/h	0	0	3	0	0	0	1	36	2	2	279	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	38	38	38	44	92	75	25	86	86	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	0	0	0	4	42	2	3	367	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	401	424	184				367	0	0	44	0	0
Stage 1	372	372	-				-	-	-	-	-	-
Stage 2	29	52	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	577	520	827				1188	-	-	1563	-	-
Stage 1	667	617	-				-	-	-	-	-	-
Stage 2	990	851	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	574	0	827				1188	-	-	1563	-	-
Mov Cap-2 Maneuver	574	0	-				-	-	-	-	-	-
Stage 1	666	0	-				-	-	-	-	-	-
Stage 2	987	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.7	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1188	-	-	827	1563	-	-
HCM Lane V/C Ratio	0.003	-	-	0.01	0.002	-	-
HCM Control Delay (s)	8	0	-	9.4	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection													
Int Delay, s/veh	8.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	1	121	0	17	0	22	26	24	149	0
Future Vol, veh/h	0	3	1	121	0	17	0	22	26	24	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	64	25	38	50	25	75	75	50	55	64	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	4	318	0	68	0	29	52	44	233	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	335	401	116	261	-	41	-	0	0	81	0	0
Stage 1	320	320	-	55	-	-	-	-	-	-	-	-
Stage 2	15	81	-	206	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	595	536	914	671	0	1021	0	-	-	1515	-	0
Stage 1	666	651	-	951	0	-	0	-	-	-	-	0
Stage 2	1003	827	-	777	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	541	518	914	647	-	1021	-	-	-	1515	-	-
Mov Cap-2 Maneuver	541	518	-	647	-	-	-	-	-	-	-	-
Stage 1	666	630	-	951	-	-	-	-	-	-	-	-
Stage 2	936	827	-	743	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	14.6	0	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	647	647	1021	1515	-
HCM Lane V/C Ratio	-	-	0.013	0.492	0.067	0.029	-
HCM Control Delay (s)	-	-	10.6	15.8	8.8	7.4	0.1
HCM Lane LOS	-	-	B	C	A	A	A
HCM 95th %tile Q(veh)	-	-	0	2.7	0.2	0.1	-

Intersection													
Int Delay, s/veh	5.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	47	0	0	56	10	11	0	8	55	0	73
Future Vol, veh/h	4	47	0	0	56	10	11	0	8	55	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	65	25	50	61	50	92	92	92	57	92	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	72	0	0	92	20	12	0	9	96	0	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	112	0	-	-	-	0	134	-	36	154	190	56
Stage 1	-	-	-	-	-	-	88	-	-	102	102	-
Stage 2	-	-	-	-	-	-	46	-	-	52	88	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1475	-	0	0	-	-	824	0	1029	798	704	999
Stage 1	-	-	0	0	-	-	910	0	-	893	810	-
Stage 2	-	-	0	0	-	-	962	0	-	954	821	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1475	-	-	-	-	-	738	-	1029	788	700	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	738	-	-	788	700	-
Stage 1	-	-	-	-	-	-	905	-	-	888	810	-
Stage 2	-	-	-	-	-	-	866	-	-	940	816	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	9.4	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	738	1029	1475	-	-	-	883
HCM Lane V/C Ratio	0.016	0.008	0.005	-	-	-	0.223
HCM Control Delay (s)	10	8.5	7.5	0	-	-	10.2
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0	0	-	-	-	0.8

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	1	0	121	0	17	0	0	22	26
Future Vol, veh/h	0	0	3	1	0	121	0	17	0	0	22	26
Peak Hour Factor	0.92	0.55	0.64	0.25	0.92	0.38	0.50	0.25	0.92	0.75	0.75	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	4	0	318	0	68	0	0	29	52
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	9.1	14	8.9
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	33%	0%
Vol Thru, %	100%	22%	75%	0%	0%	67%	100%
Vol Right, %	0%	78%	25%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	33	4	121	17	74	99
LT Vol	0	0	0	121	0	24	0
Through Vol	15	7	3	0	0	50	99
RT Vol	0	26	1	0	17	0	0
Lane Flow Rate	20	62	9	318	68	121	155
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.033	0.096	0.014	0.528	0.09	0.199	0.248
Departure Headway (Hd)	6.12	5.566	5.994	5.97	4.764	5.91	5.745
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	589	647	600	599	743	603	619
Service Time	3.82	3.266	3.998	3.758	2.552	3.696	3.532
HCM Lane V/C Ratio	0.034	0.096	0.015	0.531	0.092	0.201	0.25
HCM Control Delay	9	8.9	9.1	15.3	8	10.2	10.4
HCM Lane LOS	A	A	A	C	A	B	B
HCM 95th-tile Q	0.1	0.3	0	3.1	0.3	0.7	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	24	149	0
Future Vol, veh/h	0	24	149	0
Peak Hour Factor	0.92	0.55	0.64	0.25
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	233	0
Number of Lanes	0	0	2	0

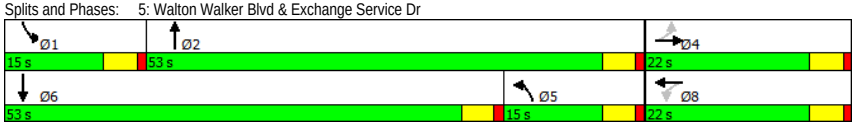
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.3
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	43	84	29	148	317	117	733	0	24	853	227
Future Volume (vph)	27	43	84	29	148	317	117	733	0	24	853	227
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	43	80	99	39	200	387	139	797	0	40	969	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	626	0	139	797	0	40	1260	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	53.0		15.0	53.0	
Total Split (%)	24.4%	24.4%		24.4%	24.4%		16.7%	58.9%		16.7%	58.9%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		14.2			14.2		9.9	55.5		7.5	48.6	
Actuated g/C Ratio		0.16			0.16		0.11	0.64		0.09	0.56	
v/c Ratio		0.57			0.82		0.69	0.24		0.26	0.45	
Control Delay		24.1			25.5		56.1	8.2		41.9	10.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		24.1			25.5		56.1	8.2		41.9	10.7	
LOS		C			C		E	A		D	B	
Approach Delay		24.1			25.5			15.3			11.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		32			80		75	73		21	128	
Queue Length 95th (ft)		26			90		#140	108		34	163	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		461			865		216	3271		216	2825	
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		0.48			0.72		0.64	0.24		0.19	0.45	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 86.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 16.5		Intersection LOS: B	

Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

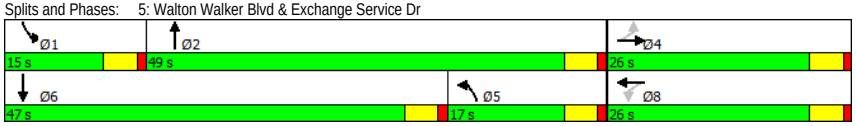


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	43	84	29	148	317	117	733	0	24	853	227
Future Volume (vph)	27	43	84	29	148	317	117	733	0	24	853	227
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	43	80	99	39	200	387	139	797	0	40	969	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	626	0	139	797	0	40	1260	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	26.0	26.0		26.0	26.0		17.0	49.0		15.0	47.0	
Total Split (%)	28.9%	28.9%		28.9%	28.9%		18.9%	54.4%		16.7%	52.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		15.1			15.1		10.6	50.6		7.4	42.8	
Actuated g/C Ratio		0.18			0.18		0.13	0.62		0.09	0.52	
v/c Ratio		0.51			0.77		0.61	0.25		0.25	0.48	
Control Delay		20.8			21.7		46.9	9.3		40.5	13.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		20.8			21.7		46.9	9.3		40.5	13.0	
LOS		C			C		D	A		D	B	
Approach Delay		20.8			21.7			14.9			13.8	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		29			75		69	72		20	134	
Queue Length 95th (ft)		25			86		125	120		34	194	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		580			1018		271	3134		228	2613	
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		0.38			0.61		0.51	0.25		0.18	0.48	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 82.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 16.2	Intersection LOS: B

Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	164.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	330	300	37	30	168	299	30	11	69	97	6	128
Future Vol, veh/h	330	300	37	30	168	299	30	11	69	97	6	128
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	84	71	58	79	90	68	46	49	73	38	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	402	357	52	52	213	332	44	24	141	133	16	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	545	0	0	409	0	0	1406	1836	205	1477	1696	272
Stage 1	-	-	-	-	-	-	1188	1188	-	482	482	-
Stage 2	-	-	-	-	-	-	218	648	-	995	1214	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1020	-	-	1146	-	-	99	75	802	~ 88	92	726
Stage 1	-	-	-	-	-	-	200	260	-	534	552	-
Stage 2	-	-	-	-	-	-	764	464	-	262	253	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1020	-	-	1146	-	-	~ 40	43	802	~ 28	53	726
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 40	43	-	~ 28	53	-
Stage 1	-	-	-	-	-	-	121	158	-	324	527	-
Stage 2	-	-	-	-	-	-	543	443	-	~ 111	153	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.4	0.7	131.1	$ 901.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	41	337	1020	-	-	1146	-	-	29	463
HCM Lane V/C Ratio	1.368	0.453	0.395	-	-	0.045	-	-	4.854	0.381
HCM Control Delay (s)	$ 422.3	24.2	10.8	-	-	8.3	-	-	$ 2007.9	17.5
HCM Lane LOS	F	C	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	5.6	2.3	1.9	-	-	0.1	-	-	17.1	1.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	6	0	0	0	2	405	109	50	262	1
Future Vol, veh/h	2	0	6	0	0	0	2	405	109	50	262	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	30	92	92	92	50	82	92	92	72	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	20	0	0	0	4	494	118	54	364	4

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	730	1095	184				368	0	0	612	0	0
Stage 1	475	475	-				-	-	-	-	-	-
Stage 2	255	620	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	357	212	827				1187	-	-	963	-	-
Stage 1	592	556	-				-	-	-	-	-	-
Stage 2	764	478	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	330	0	827				1187	-	-	963	-	-
Mov Cap-2 Maneuver	330	0	-				-	-	-	-	-	-
Stage 1	550	0	-				-	-	-	-	-	-
Stage 2	760	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.1	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1187	-	-	661	963	-	-
HCM Lane V/C Ratio	0.003	-	-	0.036	0.056	-	-
HCM Control Delay (s)	8	0	-	10.7	9	0.2	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	-	-

Intersection													
Int Delay, s/veh	12.9												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	75	107	175	0	42	0	233	74	18	30	0
Future Vol, veh/h	30	75	107	175	0	42	0	233	74	18	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	43	73	70	72	73	81	95	95	78	64	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	103	153	243	0	52	0	245	95	28	44	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	223	440	22	423	-	170	-	0	0	340	0	0
Stage 1	100	100	-	293	-	-	-	-	-	-	-	-
Stage 2	123	340	-	130	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	714	510	1050	515	0	844	0	-	-	1216	-	0
Stage 1	895	811	-	691	0	-	0	-	-	-	-	0
Stage 2	868	638	-	860	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	658	498	1050	364	-	844	-	-	-	1216	-	-
Mov Cap-2 Maneuver	658	498	-	364	-	-	-	-	-	-	-	-
Stage 1	895	792	-	691	-	-	-	-	-	-	-	-
Stage 2	815	638	-	624	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	28.6	0	3.1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	711	364	844	1216	-
HCM Lane V/C Ratio	-	-	0.458	0.668	0.061	0.023	-
HCM Control Delay (s)	-	-	14.3	32.7	9.5	8	0
HCM Lane LOS	-	-	B	D	A	A	A
HCM 95th %tile Q(veh)	-	-	2.4	4.6	0.2	0.1	-

Intersection													
Int Delay, s/veh	4.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	91	0	0	136	89	77	0	52	10	0	4
Future Vol, veh/h	76	91	0	0	136	89	77	0	52	10	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	81	92	92	73	74	92	92	92	50	92	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	112	0	0	186	120	84	0	57	20	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	307	0	-	-	-	0	414	-	56	510	567	153
Stage 1	-	-	-	-	-	-	321	-	-	246	246	-
Stage 2	-	-	-	-	-	-	93	-	-	264	321	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1250	-	0	0	-	-	523	0	999	446	432	866
Stage 1	-	-	0	0	-	-	665	0	-	736	701	-
Stage 2	-	-	0	0	-	-	904	0	-	718	650	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1250	-	-	-	-	-	485	-	999	392	394	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	485	-	-	392	394	-
Stage 1	-	-	-	-	-	-	606	-	-	670	701	-
Stage 2	-	-	-	-	-	-	900	-	-	617	592	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4	0	11.9	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	485	999	1250	-	-	-	431
HCM Lane V/C Ratio	0.173	0.057	0.083	-	-	-	0.056
HCM Control Delay (s)	14	8.8	8.1	0.1	-	-	13.8
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0.2	0.3	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	30	75	107	0	175	0	42	0	0	233	74
Future Vol, veh/h	0	30	75	107	0	175	0	42	0	0	233	74
Peak Hour Factor	0.92	0.43	0.73	0.70	0.92	0.72	0.73	0.81	0.92	0.95	0.95	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	103	153	0	243	0	52	0	0	245	95
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	16	14.1	11.9
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	14%	100%	0%	64%	0%
Vol Thru, %	100%	51%	35%	0%	0%	36%	100%
Vol Right, %	0%	49%	50%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	152	212	175	42	28	20
LT Vol	0	0	30	175	0	18	0
Through Vol	155	78	75	0	0	10	20
RT Vol	0	74	107	0	42	0	0
Lane Flow Rate	164	177	325	243	52	43	29
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.297	0.304	0.543	0.459	0.08	0.088	0.058
Departure Headway (Hd)	6.546	6.198	6.011	6.796	5.578	7.39	7.06
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	578	599	527	639	482	504
Service Time	4.31	3.962	4.069	4.558	3.339	5.176	4.846
HCM Lane V/C Ratio	0.299	0.306	0.543	0.461	0.081	0.089	0.058
HCM Control Delay	12.1	11.7	16	15.2	8.8	10.9	10.3
HCM Lane LOS	B	B	C	C	A	B	B
HCM 95th-tile Q	1.2	1.3	3.3	2.4	0.3	0.3	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	18	30	0
Future Vol, veh/h	0	18	30	0
Peak Hour Factor	0.92	0.64	0.68	0.68
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	44	0
Number of Lanes	0	0	2	0

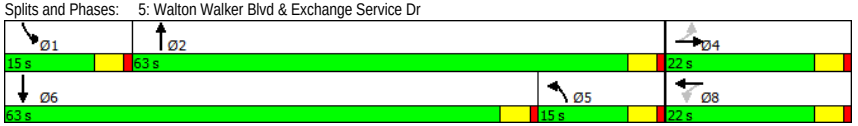
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.7
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	80	213	14	25	243	27	506	3	53	1331	29
Future Volume (vph)	132	80	213	14	25	243	27	506	3	53	1331	29
Peak Hour Factor	0.61	0.80	0.70	0.50	0.88	0.84	0.75	0.93	0.38	0.83	0.94	0.38
Adj. Flow (vph)	216	100	304	28	28	289	36	544	8	64	1416	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	620	0	0	345	0	36	552	0	64	1492	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		8.2	58.7		8.5	61.1	
Actuated g/C Ratio		0.18			0.18		0.09	0.61		0.09	0.64	
v/c Ratio		1.11			0.57		0.24	0.18		0.41	0.46	
Control Delay		96.8			11.8		45.4	8.8		50.4	10.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		96.8			11.8		45.4	8.8		50.4	10.4	
LOS		F			B		D	A		D	B	
Approach Delay		96.8			11.8			11.1			12.0	
Approach LOS		F			B			B			B	
Queue Length 50th (ft)		~176			15		21	53		39	180	
Queue Length 95th (ft)		#233			55		43	73		74	226	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		560			608		194	3104		194	3214	
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		1.11			0.57		0.19	0.18		0.33	0.46	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 96	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 28.7	Intersection LOS: C

Intersection Capacity Utilization 67.4% ICU Level of Service C
Analysis Period (min) 15
~ 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.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

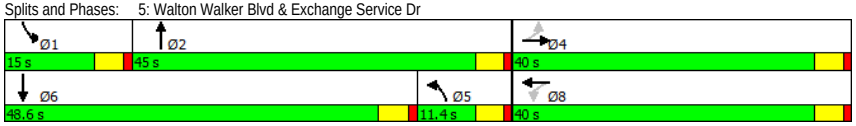


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	80	213	14	25	243	27	506	3	53	1331	29
Future Volume (vph)	132	80	213	14	25	243	27	506	3	53	1331	29
Peak Hour Factor	0.61	0.80	0.70	0.50	0.88	0.84	0.75	0.93	0.38	0.83	0.94	0.38
Adj. Flow (vph)	216	100	304	28	28	289	36	544	8	64	1416	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	620	0	0	345	0	36	552	0	64	1492	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	40.0	40.0		40.0	40.0		11.4	45.0		15.0	48.6	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		11.4%	45.0%		15.0%	48.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		24.1			24.1		6.5	42.8		8.3	46.8	
Actuated g/C Ratio		0.28			0.28		0.08	0.50		0.10	0.54	
v/c Ratio		0.82			0.37		0.27	0.22		0.38	0.54	
Control Delay		30.6			6.2		47.2	15.0		46.5	16.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		30.6			6.2		47.2	15.0		46.5	16.2	
LOS		C			A		D	B		D	B	
Approach Delay		30.6			6.2			16.9			17.4	
Approach LOS		C			A			B			B	
Queue Length 50th (ft)		126			12		20	64		34	209	
Queue Length 95th (ft)		155			40		45	111		74	319	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		1046			1263		144	2515		219	2738	
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		0.59			0.27		0.25	0.22		0.29	0.54	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 86.3			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 18.7		Intersection LOS: B	

Intersection Capacity Utilization 67.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	28.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	185	17	15	239	118	41	15	25	176	6	260
Future Vol, veh/h	100	185	17	15	239	118	41	15	25	176	6	260
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	71	75	83	70	79	63	78	68	50	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	201	24	20	288	169	52	24	32	259	12	333

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	457	0	0	225	0	0	633	940	113	754	867	228
Stage 1	-	-	-	-	-	-	443	443	-	412	412	-
Stage 2	-	-	-	-	-	-	190	497	-	342	455	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1100	-	-	1341	-	-	364	262	918	298	289	775
Stage 1	-	-	-	-	-	-	564	574	-	588	593	-
Stage 2	-	-	-	-	-	-	794	543	-	646	567	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1100	-	-	1341	-	-	182	231	918	~ 241	255	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	182	231	-	~ 241	255	-
Stage 1	-	-	-	-	-	-	505	514	-	527	584	-
Stage 2	-	-	-	-	-	-	437	535	-	532	508	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0.3	24.9	65.1
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	190	508	1100	-	-	1341	-	-	241	748
HCM Lane V/C Ratio	0.336	0.087	0.104	-	-	0.015	-	-	1.099	0.454
HCM Control Delay (s)	33.2	12.8	8.7	-	-	7.7	-	-	131	13.7
HCM Lane LOS	D	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.4	0.3	0.3	-	-	0	-	-	11.6	2.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	28	0	0	0	0	92	33	23	404	0
Future Vol, veh/h	6	0	28	0	0	0	0	92	33	23	404	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	58	44	92	58	67	67	67	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	48	0	0	0	0	137	49	28	487	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	611	729	243				487	0	0	187	0	0
Stage 1	542	542	-				-	-	-	-	-	-
Stage 2	69	187	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	425	348	758				1072	-	-	1385	-	-
Stage 1	547	518	-				-	-	-	-	-	-
Stage 2	946	744	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	413	0	758				1072	-	-	1385	-	-
Mov Cap-2 Maneuver	413	0	-				-	-	-	-	-	-
Stage 1	532	0	-				-	-	-	-	-	-
Stage 2	946	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	650	1385	-	-
HCM Lane V/C Ratio	-	-	-	0.093	0.02	-	-
HCM Control Delay (s)	0	-	-	11.1	7.7	0.1	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	161.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	59	105	197	0	34	0	31	14	16	228	0
Future Vol, veh/h	28	59	105	197	0	34	0	31	14	16	228	0
Conflicting Peds, #/hr	0	0	90	0	0	0	0	0	164	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	34	43	76	50	45	86	86	50	67	76	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	174	244	259	0	76	0	36	28	24	300	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	366	576	240	589	-	196	-	0	0	228	0	0
Stage 1	348	348	-	214	-	-	-	-	-	-	-	-
Stage 2	18	228	-	375	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	565	426	761	392	0	812	0	-	-	1337	-	0
Stage 1	641	633	-	768	0	-	0	-	-	-	-	0
Stage 2	999	714	-	618	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	494	352	696	~ 118	-	685	-	-	-	1337	-	-
Mov Cap-2 Maneuver	494	352	-	~ 118	-	-	-	-	-	-	-	-
Stage 1	641	619	-	768	-	-	-	-	-	-	-	-
Stage 2	889	602	-	~ 258	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	65.8	$ 486.6	0	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	495	118	685	1337	-
HCM Lane V/C Ratio	-	-	0.985	2.197	0.11	0.018	-
HCM Control Delay (s)	-	-	65.8	$ 625.2	10.9	7.7	0.1
HCM Lane LOS	-	-	F	F	B	A	A
HCM 95th %tile Q(veh)	-	-	13.1	22.1	0.4	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	81	0	0	101	20	55	0	37	87	0	75
Future Vol, veh/h	8	81	0	0	101	20	55	0	37	87	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	75	56	58	59	83	92	92	92	84	92	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	108	0	0	171	24	60	0	40	104	0	127

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	195	0	-	-	-	0	218	-	54	261	315	98
Stage 1	-	-	-	-	-	-	132	-	-	183	183	-
Stage 2	-	-	-	-	-	-	86	-	-	78	132	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1375	-	0	0	-	-	719	0	1002	671	599	939
Stage 1	-	-	0	0	-	-	858	0	-	801	747	-
Stage 2	-	-	0	0	-	-	912	0	-	922	786	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1375	-	-	-	-	-	617	-	1002	640	594	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	617	-	-	640	594	-
Stage 1	-	-	-	-	-	-	850	-	-	794	747	-
Stage 2	-	-	-	-	-	-	789	-	-	877	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	10.4	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	617	1002	1375	-	-	-	776
HCM Lane V/C Ratio	0.097	0.04	0.009	-	-	-	0.297
HCM Control Delay (s)	11.5	8.7	7.6	0	-	-	11.6
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	-	1.2

Intersection	
Intersection Delay, s/veh	21.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	28	59	105	0	197	0	34	0	0	31	14
Future Vol, veh/h	0	28	59	105	0	197	0	34	0	0	31	14
Peak Hour Factor	0.92	0.40	0.34	0.43	0.92	0.76	0.50	0.45	0.92	0.86	0.86	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	174	244	0	259	0	76	0	0	36	28
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	32	15.7	11
HCM LOS	D	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	15%	100%	0%	17%	0%
Vol Thru, %	100%	42%	31%	0%	0%	83%	100%
Vol Right, %	0%	58%	55%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	24	192	197	34	92	152
LT Vol	0	0	28	197	0	16	0
Through Vol	21	10	59	0	0	76	152
RT Vol	0	14	105	0	34	0	0
Lane Flow Rate	24	40	488	259	76	124	200
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.053	0.083	0.826	0.519	0.126	0.251	0.4
Departure Headway (Hd)	7.898	7.482	6.204	7.207	5.982	7.285	7.196
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	455	480	585	503	601	496	502
Service Time	5.625	5.208	4.204	4.925	3.7	4.998	4.908
HCM Lane V/C Ratio	0.053	0.083	0.834	0.515	0.126	0.25	0.398
HCM Control Delay	11.1	10.9	32	17.5	9.6	12.4	14.6
HCM Lane LOS	B	B	D	C	A	B	B
HCM 95th-tile Q	0.2	0.3	8.5	2.9	0.4	1	1.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	16	228	0
Future Vol, veh/h	0	16	228	0
Peak Hour Factor	0.92	0.67	0.76	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	24	300	0
Number of Lanes	0	0	2	0

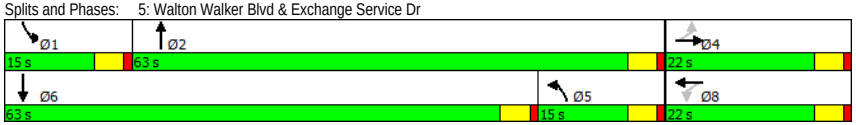
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	13.8
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Future Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Adj. Flow (vph)	208	90	164	8	20	285	20	685	8	80	1556	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	693	0	80	1572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		7.7	58.7		8.9	64.0	
Actuated g/C Ratio		0.18			0.18		0.08	0.61		0.09	0.66	
v/c Ratio		0.99			0.41		0.14	0.22		0.49	0.47	
Control Delay		72.4			8.0		43.8	9.3		53.0	9.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		72.4			8.0		43.8	9.3		53.0	9.3	
LOS		E			A		D	A		D	A	
Approach Delay		72.4			8.0			10.2			11.5	
Approach LOS		E			A			B			B	
Queue Length 50th (ft)		~131			7		12	70		49	118	
Queue Length 95th (ft)		100			30		17	93		73	245	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		468			755		193	3093		193	3370	
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		0.99			0.41		0.10	0.22		0.41	0.47	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 96.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

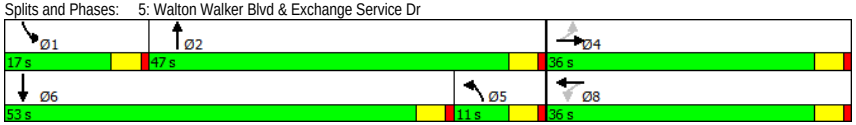


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Future Volume (vph)	175	52	118	3	16	254	9	664	3	56	1478	11
Adj. Flow (vph)	208	90	164	8	20	285	20	685	8	80	1556	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	693	0	80	1572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	36.0	36.0		36.0	36.0		11.0	47.0		17.0	53.0	
Total Split (%)	36.0%	36.0%		36.0%	36.0%		11.0%	47.0%		17.0%	53.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		19.3			19.3		6.2	44.9		9.1	52.1	
Actuated g/C Ratio		0.23			0.23		0.07	0.53		0.11	0.62	
v/c Ratio		0.78			0.36		0.16	0.26		0.42	0.50	
Control Delay		32.8			5.9		43.8	13.1		44.5	11.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		32.8			5.9		43.8	13.1		44.5	11.6	
LOS		C			A		D	B		D	B	
Approach Delay		32.8			5.9			13.9			13.2	
Approach LOS		C			A			B			B	
Queue Length 50th (ft)		93			6		10	72		40	127	
Queue Length 95th (ft)		75			25		17	128		69	297	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		917			1264		138	2701		266	3132	
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		0.50			0.25		0.14	0.26		0.30	0.50	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 84.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 15.5 Intersection LOS: B
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection													
Int Delay, s/veh	8.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	209	9	7	217	26	43	15	24	129	7	163
Future Vol, veh/h	24	209	9	7	217	26	43	15	24	129	7	163
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	84	45	35	81	65	77	63	60	62	58	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	249	20	20	268	40	56	24	40	208	12	240

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	269	0	0	504	672	134	529	662	154
Stage 1	-	-	-	-	-	-	324	324	-	328	328	-
Stage 2	-	-	-	-	-	-	180	348	-	201	334	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1249	-	-	1292	-	-	451	376	890	433	381	864
Stage 1	-	-	-	-	-	-	662	648	-	659	646	-
Stage 2	-	-	-	-	-	-	804	633	-	782	642	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1292	-	-	308	361	890	381	365	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	308	361	-	381	365	-
Stage 1	-	-	-	-	-	-	645	631	-	642	636	-
Stage 2	-	-	-	-	-	-	561	623	-	700	626	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	15.8	18
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	316	666	1249	-	-	1292	-	-	381	836
HCM Lane V/C Ratio	0.214	0.078	0.026	-	-	0.015	-	-	0.562	0.294
HCM Control Delay (s)	19.5	10.9	8	-	-	7.8	-	-	25.9	11.1
HCM Lane LOS	C	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.8	0.3	0.1	-	-	0	-	-	3.3	1.2

Intersection													
Int Delay, s/veh	0.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	0	0	0	1	36	2	2	279	0
Future Vol, veh/h	0	0	3	0	0	0	1	36	2	2	279	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	38	38	38	44	92	75	25	86	86	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	0	0	0	4	42	2	3	367	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	401	424	184				367	0	0	44	0	0
Stage 1	372	372	-				-	-	-	-	-	-
Stage 2	29	52	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	577	520	827				1188	-	-	1563	-	-
Stage 1	667	617	-				-	-	-	-	-	-
Stage 2	990	851	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	574	0	827				1188	-	-	1563	-	-
Mov Cap-2 Maneuver	574	0	-				-	-	-	-	-	-
Stage 1	666	0	-				-	-	-	-	-	-
Stage 2	987	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.7	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1188	-	-	827	1563	-	-
HCM Lane V/C Ratio	0.003	-	-	0.01	0.002	-	-
HCM Control Delay (s)	8	0	-	9.4	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection													
Int Delay, s/veh	8.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	1	121	0	17	0	22	26	24	149	0
Future Vol, veh/h	0	3	1	121	0	17	0	22	26	24	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	64	25	38	50	25	75	75	50	55	64	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	4	318	0	68	0	29	52	44	233	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	335	401	116	261	-	41	-	0	0	81	0	0
Stage 1	320	320	-	55	-	-	-	-	-	-	-	-
Stage 2	15	81	-	206	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	595	536	914	671	0	1021	0	-	-	1515	-	0
Stage 1	666	651	-	951	0	-	0	-	-	-	-	0
Stage 2	1003	827	-	777	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	541	518	914	647	-	1021	-	-	-	1515	-	-
Mov Cap-2 Maneuver	541	518	-	647	-	-	-	-	-	-	-	-
Stage 1	666	630	-	951	-	-	-	-	-	-	-	-
Stage 2	936	827	-	743	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	14.6	0	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	647	647	1021	1515	-
HCM Lane V/C Ratio	-	-	0.013	0.492	0.067	0.029	-
HCM Control Delay (s)	-	-	10.6	15.8	8.8	7.4	0.1
HCM Lane LOS	-	-	B	C	A	A	A
HCM 95th %tile Q(veh)	-	-	0	2.7	0.2	0.1	-

Intersection													
Int Delay, s/veh	5.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	47	0	0	56	10	11	0	8	55	0	73
Future Vol, veh/h	4	47	0	0	56	10	11	0	8	55	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	65	25	50	61	50	92	92	92	57	92	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	72	0	0	92	20	12	0	9	96	0	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	112	0	-	-	-	0	134	-	36	154	190	56
Stage 1	-	-	-	-	-	-	88	-	-	102	102	-
Stage 2	-	-	-	-	-	-	46	-	-	52	88	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1475	-	0	0	-	-	824	0	1029	798	704	999
Stage 1	-	-	0	0	-	-	910	0	-	893	810	-
Stage 2	-	-	0	0	-	-	962	0	-	954	821	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1475	-	-	-	-	-	738	-	1029	788	700	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	738	-	-	788	700	-
Stage 1	-	-	-	-	-	-	905	-	-	888	810	-
Stage 2	-	-	-	-	-	-	866	-	-	940	816	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	9.4	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	738	1029	1475	-	-	-	883
HCM Lane V/C Ratio	0.016	0.008	0.005	-	-	-	0.223
HCM Control Delay (s)	10	8.5	7.5	0	-	-	10.2
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0	0	-	-	-	0.8

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	1	0	121	0	17	0	0	22	26
Future Vol, veh/h	0	0	3	1	0	121	0	17	0	0	22	26
Peak Hour Factor	0.92	0.55	0.64	0.25	0.92	0.38	0.50	0.25	0.92	0.75	0.75	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	4	0	318	0	68	0	0	29	52
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	9.1	14	8.9
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	33%	0%
Vol Thru, %	100%	22%	75%	0%	0%	67%	100%
Vol Right, %	0%	78%	25%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	33	4	121	17	74	99
LT Vol	0	0	0	121	0	24	0
Through Vol	15	7	3	0	0	50	99
RT Vol	0	26	1	0	17	0	0
Lane Flow Rate	20	62	9	318	68	121	155
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.033	0.096	0.014	0.528	0.09	0.199	0.248
Departure Headway (Hd)	6.12	5.566	5.994	5.97	4.764	5.91	5.745
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	589	647	600	599	743	603	619
Service Time	3.82	3.266	3.998	3.758	2.552	3.696	3.532
HCM Lane V/C Ratio	0.034	0.096	0.015	0.531	0.092	0.201	0.25
HCM Control Delay	9	8.9	9.1	15.3	8	10.2	10.4
HCM Lane LOS	A	A	A	C	A	B	B
HCM 95th-tile Q	0.1	0.3	0	3.1	0.3	0.7	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	24	149	0
Future Vol, veh/h	0	24	149	0
Peak Hour Factor	0.92	0.55	0.64	0.25
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	233	0
Number of Lanes	0	0	2	0

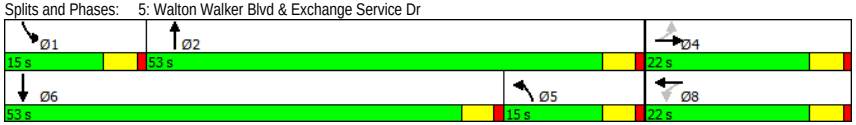
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.3
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	43	84	29	148	317	117	850	0	24	982	227
Future Volume (vph)	27	43	84	29	148	317	117	850	0	24	982	227
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	43	80	99	39	200	387	139	924	0	40	1116	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	626	0	139	924	0	40	1407	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	53.0		15.0	53.0	
Total Split (%)	24.4%	24.4%		24.4%	24.4%		16.7%	58.9%		16.7%	58.9%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		14.9			14.9		9.9	55.4		7.5	48.6	
Actuated g/C Ratio		0.17			0.17		0.11	0.64		0.09	0.56	
v/c Ratio		0.55			0.83		0.69	0.29		0.26	0.50	
Control Delay		23.6			28.3		56.8	8.7		42.1	11.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.6			28.3		56.8	8.7		42.1	11.9	
LOS		C			C		E	A		D	B	
Approach Delay		23.6			28.3			15.0			12.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		32			92		77	91		22	159	
Queue Length 95th (ft)		26			102		#140	127		34	193	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		454			832		214	3240		214	2804	
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		0.49			0.75		0.65	0.29		0.19	0.50	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.1	Intersection LOS: B

Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

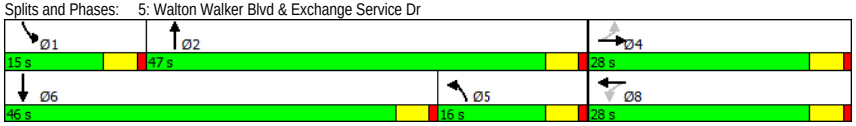


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	41	81	29	144	317	116	850	0	24	982	222
Future Volume (vph)	26	41	81	29	144	317	116	850	0	24	982	222
Peak Hour Factor	0.63	0.54	0.85	0.75	0.74	0.82	0.84	0.92	0.92	0.60	0.88	0.78
Adj. Flow (vph)	41	76	95	39	195	387	138	924	0	40	1116	285
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	0	621	0	138	924	0	40	1401	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	28.0	28.0		28.0	28.0		16.0	47.0		15.0	46.0	
Total Split (%)	31.1%	31.1%		31.1%	31.1%		17.8%	52.2%		16.7%	51.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		15.9			15.9		10.2	49.2		7.4	41.8	
Actuated g/C Ratio		0.20			0.20		0.13	0.60		0.09	0.51	
v/c Ratio		0.45			0.76		0.62	0.30		0.25	0.54	
Control Delay		18.7			22.2		48.3	10.2		40.2	14.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		18.7			22.2		48.3	10.2		40.2	14.3	
LOS		B			C		D	B		D	B	
Approach Delay		18.7			22.2			15.1			15.1	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		27			82		68	88		20	160	
Queue Length 95th (ft)		23			91		125	148		34	233	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		658			1068		251	3070		229	2572	
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		0.32			0.58		0.55	0.30		0.17	0.54	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.6	Intersection LOS: B

Intersection Capacity Utilization 64.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	169.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	330	312	37	30	174	299	30	11	69	97	6	128
Future Vol, veh/h	330	312	37	30	174	299	30	11	69	97	6	128
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	84	71	58	79	90	68	46	49	73	38	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	402	371	52	52	220	332	44	24	141	133	16	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	552	0	0	424	0	0	1423	1858	212	1493	1718	276
Stage 1	-	-	-	-	-	-	1202	1202	-	490	490	-
Stage 2	-	-	-	-	-	-	221	656	-	1003	1228	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1014	-	-	1132	-	-	96	73	793	~ 85	89	721
Stage 1	-	-	-	-	-	-	196	256	-	529	547	-
Stage 2	-	-	-	-	-	-	761	460	-	259	249	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1014	-	-	1132	-	-	~ 38	42	793	~ 27	51	721
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 38	42	-	~ 27	51	-
Stage 1	-	-	-	-	-	-	118	155	-	319	522	-
Stage 2	-	-	-	-	-	-	540	439	-	~ 109	150	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.3	0.7	141.6	$ 939.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	39	330	1014	-	-	1132	-	-	28	454
HCM Lane V/C Ratio	1.438	0.463	0.397	-	-	0.046	-	-	5.028	0.388
HCM Control Delay (s)	$ 459.3	25	10.9	-	-	8.3	-	-	$ 2094.3	17.9
HCM Lane LOS	F	D	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	5.8	2.3	1.9	-	-	0.1	-	-	17.2	1.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	6	0	0	0	2	405	109	50	262	1
Future Vol, veh/h	2	0	6	0	0	0	2	405	109	50	262	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	30	92	92	92	50	82	92	92	72	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	20	0	0	0	4	494	118	54	364	4

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	730	1095	184				368	0	0	612	0	0
Stage 1	475	475	-				-	-	-	-	-	-
Stage 2	255	620	-				-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	357	212	827				1187	-	-	963	-	-
Stage 1	592	556	-				-	-	-	-	-	-
Stage 2	764	478	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	330	0	827				1187	-	-	963	-	-
Mov Cap-2 Maneuver	330	0	-				-	-	-	-	-	-
Stage 1	550	0	-				-	-	-	-	-	-
Stage 2	760	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.1	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1187	-	-	661	963	-	-
HCM Lane V/C Ratio	0.003	-	-	0.036	0.056	-	-
HCM Control Delay (s)	8	0	-	10.7	9	0.2	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	-	-

Intersection													
Int Delay, s/veh	12.9												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	75	107	175	0	42	0	233	74	18	30	0
Future Vol, veh/h	30	75	107	175	0	42	0	233	74	18	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	43	73	70	72	73	81	95	95	78	64	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	103	153	243	0	52	0	245	95	28	44	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	223	440	22	423	-	170	-	0	0	340	0	0
Stage 1	100	100	-	293	-	-	-	-	-	-	-	-
Stage 2	123	340	-	130	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	714	510	1050	515	0	844	0	-	-	1216	-	0
Stage 1	895	811	-	691	0	-	0	-	-	-	-	0
Stage 2	868	638	-	860	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	658	498	1050	364	-	844	-	-	-	1216	-	-
Mov Cap-2 Maneuver	658	498	-	364	-	-	-	-	-	-	-	-
Stage 1	895	792	-	691	-	-	-	-	-	-	-	-
Stage 2	815	638	-	624	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	28.6	0	3.1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	711	364	844	1216	-
HCM Lane V/C Ratio	-	-	0.458	0.668	0.061	0.023	-
HCM Control Delay (s)	-	-	14.3	32.7	9.5	8	0
HCM Lane LOS	-	-	B	D	A	A	A
HCM 95th %tile Q(veh)	-	-	2.4	4.6	0.2	0.1	-

Intersection													
Int Delay, s/veh	4.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	91	0	0	136	89	77	0	52	10	0	4
Future Vol, veh/h	76	91	0	0	136	89	77	0	52	10	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	81	92	92	73	74	92	92	92	50	92	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	112	0	0	186	120	84	0	57	20	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	307	0	-	-	-	0	414	-	56	510	567	153
Stage 1	-	-	-	-	-	-	321	-	-	246	246	-
Stage 2	-	-	-	-	-	-	93	-	-	264	321	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1250	-	0	0	-	-	523	0	999	446	432	866
Stage 1	-	-	0	0	-	-	665	0	-	736	701	-
Stage 2	-	-	0	0	-	-	904	0	-	718	650	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1250	-	-	-	-	-	485	-	999	392	394	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	485	-	-	392	394	-
Stage 1	-	-	-	-	-	-	606	-	-	670	701	-
Stage 2	-	-	-	-	-	-	900	-	-	617	592	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4	0	11.9	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	485	999	1250	-	-	-	431
HCM Lane V/C Ratio	0.173	0.057	0.083	-	-	-	0.056
HCM Control Delay (s)	14	8.8	8.1	0.1	-	-	13.8
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0.2	0.3	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	30	75	107	0	175	0	42	0	0	233	74
Future Vol, veh/h	0	30	75	107	0	175	0	42	0	0	233	74
Peak Hour Factor	0.92	0.43	0.73	0.70	0.92	0.72	0.73	0.81	0.92	0.95	0.95	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	103	153	0	243	0	52	0	0	245	95
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	16	14.1	11.9
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	14%	100%	0%	64%	0%
Vol Thru, %	100%	51%	35%	0%	0%	36%	100%
Vol Right, %	0%	49%	50%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	152	212	175	42	28	20
LT Vol	0	0	30	175	0	18	0
Through Vol	155	78	75	0	0	10	20
RT Vol	0	74	107	0	42	0	0
Lane Flow Rate	164	177	325	243	52	43	29
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.297	0.304	0.543	0.459	0.08	0.088	0.058
Departure Headway (Hd)	6.546	6.198	6.011	6.796	5.578	7.39	7.06
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	578	599	527	639	482	504
Service Time	4.31	3.962	4.069	4.558	3.339	5.176	4.846
HCM Lane V/C Ratio	0.299	0.306	0.543	0.461	0.081	0.089	0.058
HCM Control Delay	12.1	11.7	16	15.2	8.8	10.9	10.3
HCM Lane LOS	B	B	C	C	A	B	B
HCM 95th-tile Q	1.2	1.3	3.3	2.4	0.3	0.3	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	18	30	0
Future Vol, veh/h	0	18	30	0
Peak Hour Factor	0.92	0.64	0.68	0.68
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	44	0
Number of Lanes	0	0	2	0

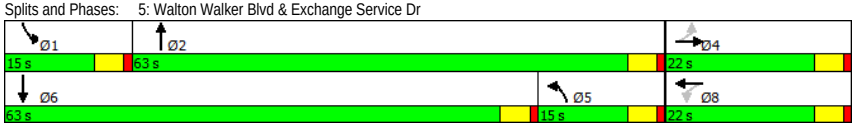
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.7
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	80	213	14	25	243	27	587	3	53	1541	29
Future Volume (vph)	132	80	213	14	25	243	27	587	3	53	1541	29
Peak Hour Factor	0.61	0.80	0.70	0.50	0.88	0.84	0.75	0.93	0.38	0.83	0.94	0.38
Adj. Flow (vph)	216	100	304	28	28	289	36	631	8	64	1639	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	620	0	0	345	0	36	639	0	64	1715	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		8.2	58.7		8.5	61.1	
Actuated g/C Ratio		0.18			0.18		0.09	0.61		0.09	0.64	
v/c Ratio		1.13			0.57		0.24	0.21		0.41	0.53	
Control Delay		105.3			11.8		45.4	9.0		50.4	11.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		105.3			11.8		45.4	9.0		50.4	11.2	
LOS		F			B		D	A		D	B	
Approach Delay		105.3			11.8			11.0			12.6	
Approach LOS		F			B			B			B	
Queue Length 50th (ft)		~184			15		21	62		39	222	
Queue Length 95th (ft)		#241			55		43	85		74	276	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		550			608		194	3104		194	3217	
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		1.13			0.57		0.19	0.21		0.33	0.53	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 96	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 29.0	Intersection LOS: C

Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15
~ 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.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

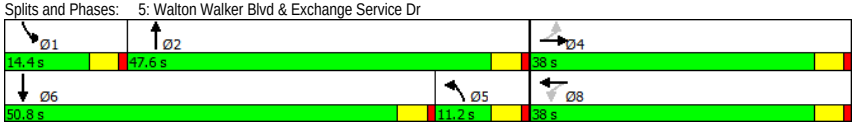


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	79	212	14	24	243	27	587	3	53	1541	28
Future Volume (vph)	132	79	212	14	24	243	27	587	3	53	1541	28
Adj. Flow (vph)	216	99	303	28	27	289	36	631	8	64	1639	74
Lane Group Flow (vph)	0	618	0	0	344	0	36	639	0	64	1713	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	38.0	38.0		38.0	38.0		11.2	47.6		14.4	50.8	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		11.2%	47.6%		14.4%	50.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		24.7			24.7		6.4	44.9		8.2	48.9	
Actuated g/C Ratio		0.28			0.28		0.07	0.51		0.09	0.55	
v/c Ratio		0.84			0.37		0.28	0.25		0.40	0.62	
Control Delay		33.5			6.4		48.9	14.8		48.4	17.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		33.5			6.4		48.9	14.8		48.4	17.1	
LOS		C			A		D	B		D	B	
Approach Delay		33.5			6.4			16.7			18.2	
Approach LOS		C			A			B			B	
Queue Length 50th (ft)		135			12		20	78		36	262	
Queue Length 95th (ft)		165			41		45	122		75	370	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		957			1172		135	2564		200	2784	
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		0.65			0.29		0.27	0.25		0.32	0.62	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 88.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 19.5 Intersection LOS: B
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	30.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	193	17	15	249	118	41	15	25	176	6	260
Future Vol, veh/h	100	193	17	15	249	118	41	15	25	176	6	260
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	71	75	83	70	79	63	78	68	50	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	210	24	20	300	169	52	24	32	259	12	333

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	469	0	0	234	0	0	648	961	117	771	888	234
Stage 1	-	-	-	-	-	-	452	452	-	424	424	-
Stage 2	-	-	-	-	-	-	196	509	-	347	464	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1089	-	-	1331	-	-	355	255	913	290	281	768
Stage 1	-	-	-	-	-	-	557	569	-	578	585	-
Stage 2	-	-	-	-	-	-	787	536	-	642	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1089	-	-	1331	-	-	176	225	913	~ 234	248	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	176	225	-	~ 234	248	-
Stage 1	-	-	-	-	-	-	498	509	-	517	576	-
Stage 2	-	-	-	-	-	-	430	528	-	528	503	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0.3	25.9	70.7
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	183	499	1089	-	-	1331	-	-	234	741
HCM Lane V/C Ratio	0.349	0.088	0.106	-	-	0.015	-	-	1.132	0.458
HCM Control Delay (s)	34.8	12.9	8.7	-	-	7.7	-	-	143.4	13.9
HCM Lane LOS	D	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.5	0.3	0.4	-	-	0	-	-	12.1	2.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	28	0	0	0	0	92	33	23	404	0
Future Vol, veh/h	6	0	28	0	0	0	0	92	33	23	404	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	58	44	92	58	67	67	67	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	48	0	0	0	0	137	49	28	487	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	611	729	243	487	0	0	187	0	0
Stage 1	542	542	-	-	-	-	-	-	-
Stage 2	69	187	-	-	-	-	-	-	-
Critical Hdwy	6.84	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	5.84	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	425	348	758	1072	-	-	1385	-	-
Stage 1	547	518	-	-	-	-	-	-	-
Stage 2	946	744	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	413	0	758	1072	-	-	1385	-	-
Mov Cap-2 Maneuver	413	0	-	-	-	-	-	-	-
Stage 1	532	0	-	-	-	-	-	-	-
Stage 2	946	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	650	1385	-	-
HCM Lane V/C Ratio	-	-	-	0.093	0.02	-	-
HCM Control Delay (s)	0	-	-	11.1	7.7	0.1	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	161.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	59	105	197	0	34	0	31	14	16	228	0
Future Vol, veh/h	28	59	105	197	0	34	0	31	14	16	228	0
Conflicting Peds, #/hr	0	0	90	0	0	0	0	0	164	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	34	43	76	50	45	86	86	50	67	76	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	174	244	259	0	76	0	36	28	24	300	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	366	576	240	589	-	196	-	0	0	228	0	0
Stage 1	348	348	-	214	-	-	-	-	-	-	-	-
Stage 2	18	228	-	375	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	565	426	761	392	0	812	0	-	-	1337	-	0
Stage 1	641	633	-	768	0	-	0	-	-	-	-	0
Stage 2	999	714	-	618	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	494	352	696	~ 118	-	685	-	-	-	1337	-	-
Mov Cap-2 Maneuver	494	352	-	~ 118	-	-	-	-	-	-	-	-
Stage 1	641	619	-	768	-	-	-	-	-	-	-	-
Stage 2	889	602	-	~ 258	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	65.8	$ 486.6	0	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	495	118	685	1337	-
HCM Lane V/C Ratio	-	-	0.985	2.197	0.11	0.018	-
HCM Control Delay (s)	-	-	65.8	$ 625.2	10.9	7.7	0.1
HCM Lane LOS	-	-	F	F	B	A	A
HCM 95th %tile Q(veh)	-	-	13.1	22.1	0.4	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	81	0	0	101	20	55	0	37	87	0	75
Future Vol, veh/h	8	81	0	0	101	20	55	0	37	87	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	75	56	58	59	83	92	92	92	84	92	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	108	0	0	171	24	60	0	40	104	0	127

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	195	0	-	-	-	0	218	-	54	261	315	98
Stage 1	-	-	-	-	-	-	132	-	-	183	183	-
Stage 2	-	-	-	-	-	-	86	-	-	78	132	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1375	-	0	0	-	-	719	0	1002	671	599	939
Stage 1	-	-	0	0	-	-	858	0	-	801	747	-
Stage 2	-	-	0	0	-	-	912	0	-	922	786	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1375	-	-	-	-	-	617	-	1002	640	594	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	617	-	-	640	594	-
Stage 1	-	-	-	-	-	-	850	-	-	794	747	-
Stage 2	-	-	-	-	-	-	789	-	-	877	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	10.4	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	617	1002	1375	-	-	-	776
HCM Lane V/C Ratio	0.097	0.04	0.009	-	-	-	0.297
HCM Control Delay (s)	11.5	8.7	7.6	0	-	-	11.6
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	-	1.2

Intersection	
Intersection Delay, s/veh	21.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	28	59	105	0	197	0	34	0	0	31	14
Future Vol, veh/h	0	28	59	105	0	197	0	34	0	0	31	14
Peak Hour Factor	0.92	0.40	0.34	0.43	0.92	0.76	0.50	0.45	0.92	0.86	0.86	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	174	244	0	259	0	76	0	0	36	28
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	32	15.7	11
HCM LOS	D	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	15%	100%	0%	17%	0%
Vol Thru, %	100%	42%	31%	0%	0%	83%	100%
Vol Right, %	0%	58%	55%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	24	192	197	34	92	152
LT Vol	0	0	28	197	0	16	0
Through Vol	21	10	59	0	0	76	152
RT Vol	0	14	105	0	34	0	0
Lane Flow Rate	24	40	488	259	76	124	200
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.053	0.083	0.826	0.519	0.126	0.251	0.4
Departure Headway (Hd)	7.898	7.482	6.204	7.207	5.982	7.285	7.196
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	455	480	585	503	601	496	502
Service Time	5.625	5.208	4.204	4.925	3.7	4.998	4.908
HCM Lane V/C Ratio	0.053	0.083	0.834	0.515	0.126	0.25	0.398
HCM Control Delay	11.1	10.9	32	17.5	9.6	12.4	14.6
HCM Lane LOS	B	B	D	C	A	B	B
HCM 95th-tile Q	0.2	0.3	8.5	2.9	0.4	1	1.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	16	228	0
Future Vol, veh/h	0	16	228	0
Peak Hour Factor	0.92	0.67	0.76	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	24	300	0
Number of Lanes	0	0	2	0

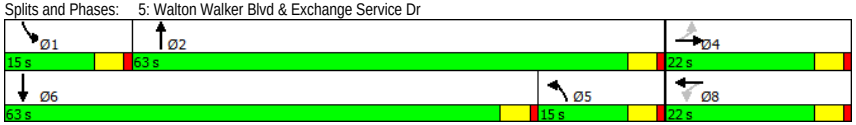
Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	13.8
HCM LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	770	3	56	1713	11
Future Volume (vph)	175	52	118	3	16	254	9	770	3	56	1713	11
Adj. Flow (vph)	208	90	164	8	20	285	20	794	8	80	1803	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	802	0	80	1819	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	22.0	22.0		22.0	22.0		15.0	63.0		15.0	63.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		15.0%	63.0%		15.0%	63.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		17.6			17.6		7.7	58.7		8.9	64.0	
Actuated g/C Ratio		0.18			0.18		0.08	0.61		0.09	0.66	
v/c Ratio		0.99			0.41		0.14	0.26		0.49	0.54	
Control Delay		72.4			8.0		43.8	9.5		53.0	10.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		72.4			8.0		43.8	9.5		53.0	10.2	
LOS		E			A		D	A		D	B	
Approach Delay		72.4			8.0			10.4			12.0	
Approach LOS		E			A			B			B	
Queue Length 50th (ft)		~131			7		12	84		49	147	
Queue Length 95th (ft)		100			30		17	108		73	301	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		468			755		193	3095		193	3373	
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		0.99			0.41		0.10	0.26		0.41	0.54	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 96.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 19.2 Intersection LOS: B
Intersection Capacity Utilization 71.6% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr

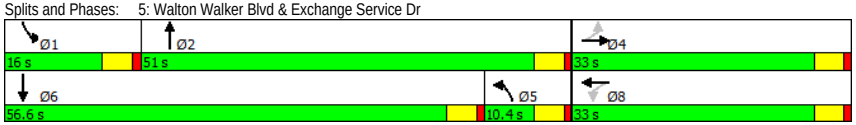


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	52	118	3	16	254	9	770	3	56	1713	11
Future Volume (vph)	175	52	118	3	16	254	9	770	3	56	1713	11
Adj. Flow (vph)	208	90	164	8	20	285	20	794	8	80	1803	16
Lane Group Flow (vph)	0	462	0	0	313	0	20	802	0	80	1819	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			70			70	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	33.0	33.0		33.0	33.0		10.4	51.0		16.0	56.6	
Total Split (%)	33.0%	33.0%		33.0%	33.0%		10.4%	51.0%		16.0%	56.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)		19.9			19.9		5.8	48.5		9.0	55.9	
Actuated g/C Ratio		0.22			0.22		0.07	0.55		0.10	0.63	
v/c Ratio		0.80			0.36		0.17	0.29		0.44	0.57	
Control Delay		35.8			6.1		46.7	13.0		47.7	12.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		35.8			6.1		46.7	13.0		47.7	12.2	
LOS		D			A		D	B		D	B	
Approach Delay		35.8			6.1			13.8			13.7	
Approach LOS		D			A			B			B	
Queue Length 50th (ft)		101			6		11	89		43	165	
Queue Length 95th (ft)		80			26		18	145		73	356	
Internal Link Dist (ft)		437			393			567			501	
Turn Bay Length (ft)							220			210		
Base Capacity (vph)		795			1127		119	2784		232	3203	
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		0.58			0.28		0.17	0.29		0.34	0.57	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 88.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 71.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Walton Walker Blvd & Exchange Service Dr



Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	220	9	7	228	26	43	15	24	129	7	163
Future Vol, veh/h	24	220	9	7	228	26	43	15	24	129	7	163
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	140	-	-	130	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	84	45	35	81	65	77	63	60	62	58	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	262	20	20	281	40	56	24	40	208	12	240

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	282	0	0	524	698	141	549	688	161
Stage 1	-	-	-	-	-	-	337	337	-	341	341	-
Stage 2	-	-	-	-	-	-	187	361	-	208	347	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1236	-	-	1277	-	-	436	363	881	419	368	855
Stage 1	-	-	-	-	-	-	651	640	-	647	637	-
Stage 2	-	-	-	-	-	-	797	624	-	775	633	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1236	-	-	1277	-	-	296	348	881	367	353	855
Mov Cap-2 Maneuver	-	-	-	-	-	-	296	348	-	367	353	-
Stage 1	-	-	-	-	-	-	634	623	-	630	627	-
Stage 2	-	-	-	-	-	-	554	614	-	693	617	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.5	16.2	18.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	304	652	1236	-	-	1277	-	-	367	826
HCM Lane V/C Ratio	0.223	0.08	0.026	-	-	0.016	-	-	0.583	0.298
HCM Control Delay (s)	20.2	11	8	-	-	7.9	-	-	27.7	11.2
HCM Lane LOS	C	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.8	0.3	0.1	-	-	0	-	-	3.5	1.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	0	0	0	1	36	2	2	279	0
Future Vol, veh/h	0	0	3	0	0	0	1	36	2	2	279	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	38	38	38	44	92	75	25	86	86	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	0	0	0	4	42	2	3	367	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	401	424	184				367	0	0	44	0	0
Stage 1	372	372	-				-	-	-	-	-	-
Stage 2	29	52	-				-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94				4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32				2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	534	520	827				1188	-	-	1563	-	-
Stage 1	621	617	-				-	-	-	-	-	-
Stage 2	984	851	-				-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	532	517	827				1188	-	-	1563	-	-
Mov Cap-2 Maneuver	532	517	-				-	-	-	-	-	-
Stage 1	619	616	-				-	-	-	-	-	-
Stage 2	981	848	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.7	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1188	-	-	827	1563	-	-
HCM Lane V/C Ratio	0.003	-	-	0.01	0.002	-	-
HCM Control Delay (s)	8	0	-	9.4	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	1	121	0	17	0	22	26	24	149	0
Future Vol, veh/h	0	3	1	121	0	17	0	22	26	24	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	64	25	38	50	25	75	75	50	55	64	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	4	318	0	68	0	29	52	44	233	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	335	401	116	261	-	41	-	0	0	81	0	0
Stage 1	320	320	-	55	-	-	-	-	-	-	-	-
Stage 2	15	81	-	206	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	-	6.94	-	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	-	3.32	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	595	536	914	671	0	1021	0	-	-	1515	-	0
Stage 1	666	651	-	951	0	-	0	-	-	-	-	0
Stage 2	1003	827	-	777	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	541	518	914	647	-	1021	-	-	-	1515	-	-
Mov Cap-2 Maneuver	541	518	-	647	-	-	-	-	-	-	-	-
Stage 1	666	630	-	951	-	-	-	-	-	-	-	-
Stage 2	936	827	-	743	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	14.6	0	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	647	647	1021	1515	-
HCM Lane V/C Ratio	-	-	0.013	0.492	0.067	0.029	-
HCM Control Delay (s)	-	-	10.6	15.8	8.8	7.4	0.1
HCM Lane LOS	-	-	B	C	A	A	A
HCM 95th %tile Q(veh)	-	-	0	2.7	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	47	0	0	56	10	11	0	8	55	0	73
Future Vol, veh/h	4	47	0	0	56	10	11	0	8	55	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	65	25	50	61	50	92	92	92	57	92	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	72	0	0	92	20	12	0	9	96	0	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	112	0	-	-	-	0	134	-	36	154	190	56
Stage 1	-	-	-	-	-	-	88	-	-	102	102	-
Stage 2	-	-	-	-	-	-	46	-	-	52	88	-
Critical Hdwy	4.14	-	-	-	-	-	7.54	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.52	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1475	-	0	0	-	-	824	0	1029	798	704	999
Stage 1	-	-	0	0	-	-	910	0	-	893	810	-
Stage 2	-	-	0	0	-	-	962	0	-	954	821	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1475	-	-	-	-	-	738	-	1029	788	700	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	738	-	-	788	700	-
Stage 1	-	-	-	-	-	-	905	-	-	888	810	-
Stage 2	-	-	-	-	-	-	866	-	-	940	816	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	9.4	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	738	1029	1475	-	-	-	883
HCM Lane V/C Ratio	0.016	0.008	0.005	-	-	-	0.223
HCM Control Delay (s)	10	8.5	7.5	0	-	-	10.2
HCM Lane LOS	B	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0	0	-	-	-	0.8

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	1	0	121	0	17	0	0	22	26
Future Vol, veh/h	0	0	3	1	0	121	0	17	0	0	22	26
Peak Hour Factor	0.92	0.55	0.64	0.25	0.92	0.38	0.50	0.25	0.92	0.75	0.75	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	4	0	318	0	68	0	0	29	52
Number of Lanes	0	0	1	0	0	1	0	1	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	9.1	14	8.9
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	33%	0%
Vol Thru, %	100%	22%	75%	0%	0%	67%	100%
Vol Right, %	0%	78%	25%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	33	4	121	17	74	99
LT Vol	0	0	0	121	0	24	0
Through Vol	15	7	3	0	0	50	99
RT Vol	0	26	1	0	17	0	0
Lane Flow Rate	20	62	9	318	68	121	155
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.033	0.096	0.014	0.528	0.09	0.199	0.248
Departure Headway (Hd)	6.12	5.566	5.994	5.97	4.764	5.91	5.745
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	589	647	600	599	743	603	619
Service Time	3.82	3.266	3.998	3.758	2.552	3.696	3.532
HCM Lane V/C Ratio	0.034	0.096	0.015	0.531	0.092	0.201	0.25
HCM Control Delay	9	8.9	9.1	15.3	8	10.2	10.4
HCM Lane LOS	A	A	A	C	A	B	B
HCM 95th-tile Q	0.1	0.3	0	3.1	0.3	0.7	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	24	149	0
Future Vol, veh/h	0	24	149	0
Peak Hour Factor	0.92	0.55	0.64	0.25
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	233	0
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.3
HCM LOS	B