October 5, 2018
PK# 3205-17.452

TRAFFIC IMPACT ANALYSIS

Project:
4205 Buena Vista
In Dallas, Texas

Prepared for:
City of Dallas

On behalf of:
LBS Realty Partners, LLC

Prepared by:

Steve E. Stoner

Steve E. Stoner, P.E., PTOE

Pacheco Koch

7557 Rambler Road, Suite 1400
Dallas, Texas 75231-2388
(972) 235-3031 www.pkce.com
TX.REG: ENGINEERING FIRM F-469
TX. REG. SURVEYING FIRM LS-100080-00

EXECUTIVE SUMMARY

The services of **Pacheco Koch** were retained by **LBS Realty Partners, LLC**, to prepare a Traffic Impact Analysis (TIA) for the proposed mixed-use development (the "Project") located at 4205 Buena Vista Street in Dallas, Texas. The Project is expected to contain approximately 8,175 square feet of ground-floor commercial uses, 10,000 square feet of office use, and 34 multifamily dwelling units. Buildout of the Project is estimated to occur 2021. A TIA is required for review by the City of Dallas as part of the Owner's request for creation of a new PD Subdistrict for the subject property.

The purpose of this report is to estimate the incremental impact on the background traffic operational conditions caused by the proposed development within a specific study area as determined by standardized engineering analyses. The study parameters used in this TIA are based upon the requirements of the city and are consistent with the standard industry practices used in similar studies.

Based upon the analyses performed herein, Pacheco Koch developed the following findings and recommendations, where applicable.

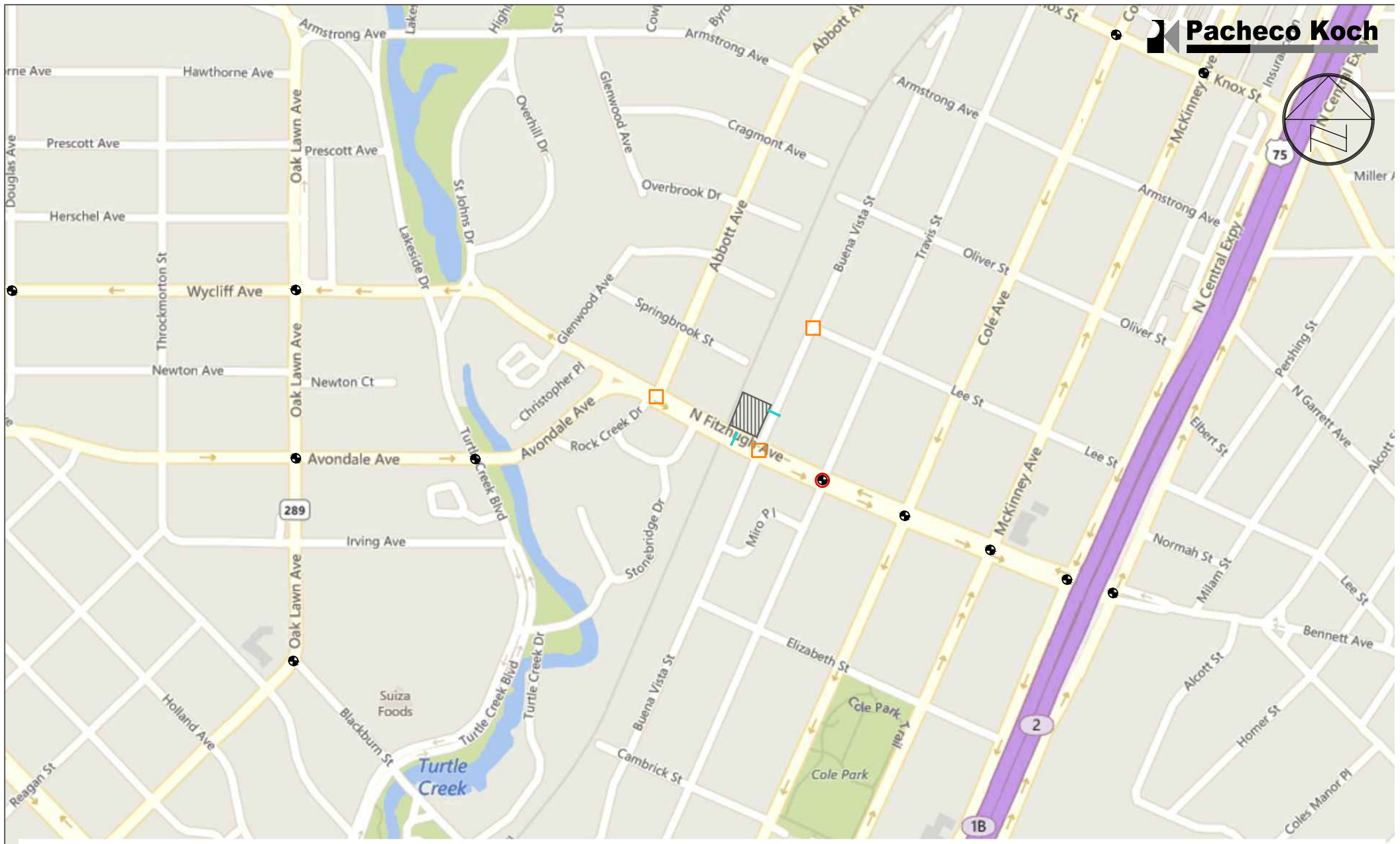
FINDING: N Fitzhugh Avenue is a major thoroughfare that carries high traffic volumes during peak hour periods. Currently, the roadway utilizes approximately 64% of the theoretical daily roadway capacity. Buena Vista Street is a low-volume local street that utilizes less than 20% of the theoretical daily roadway capacity.

FINDING: This study analyzed existing traffic operations during peak traffic periods at several intersections in the vicinity of the subject site. Study area intersections include the traffic-signal-controlled intersection of N Fitzhugh Avenue at Travis Street and the unsignalized intersections of N Fitzhugh Avenue at Buena Vista Street, N Fitzhugh Avenue at Abbott Avenue, and Buena Vista Street at Lee Street. The signalized intersection of Fitzhugh at Travis operates very efficiently with a very good Level of Service. The all-way stop-controlled intersection of Buena Vista at Lee also operates efficiently at a very good Level of Service. For the minor-street-STOP-controlled intersections of Fitzhugh at Buena Vista and Fitzhugh at Abbott, the minor street approaches and the left-turns from Fitzhugh experience moderate to heavy delays during peak traffic periods. Such conditions are common for unsignalized intersections on major roadways and cannot be operationally mitigated without installation of a traffic signal. However, neither intersection meets the warrant criteria required to install a traffic signal.

FINDING: After the addition of estimated background traffic growth and projected traffic generated by the proposed development, the traffic operations within the study area were reanalyzed. Each of the study area intersections will experience slight increases in average delay. However, the increases attributable to the project do not appreciably change the

traffic operational conditions that are otherwise expected to occur. Therefore, no required roadway or operational improvements are required to mitigate the impact of the proposed development.

END



Pacheco Koch

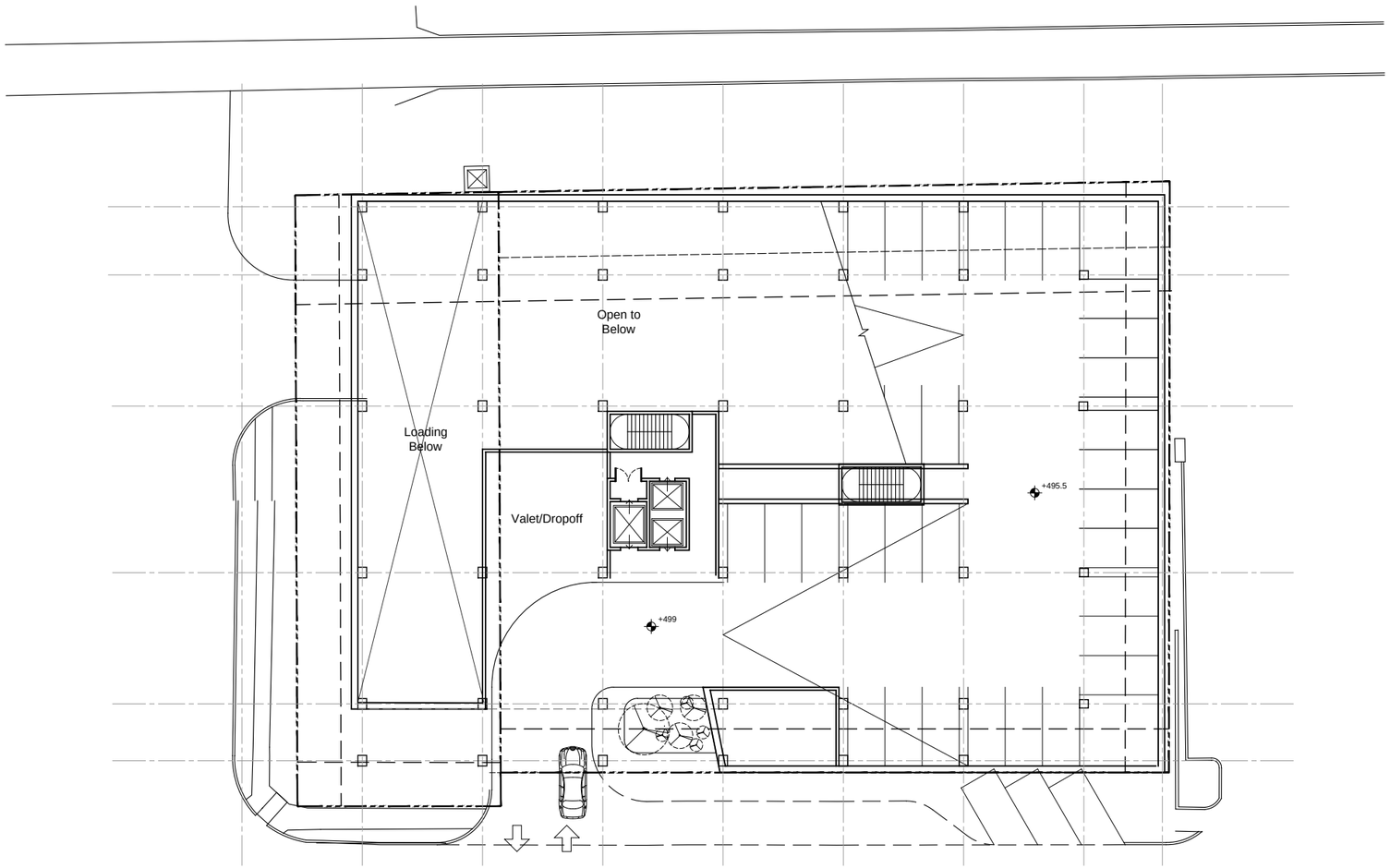
- Project Location
- Traffic Signal
- Study Area Intersection (Signalized)
- Study Area Intersection (Unsignalized)
- Road-Tube Counts

Site Location Map

4205 Buena Vista, Dallas, Texas

PK #3205-17.452 (HWL: 10/05/18)

EXHIBIT 1



1 Valet Entrance Level (499')

Scale: 1'-0" = 1/32"

Yin

Design Team

Michael Hsu Office Of Architecture

4910 Burnet Road
Austin, Texas 78756
Office (512) 706.4303
HsuOffice.com

Project

4205 Buena Vista St

Issue

Site Plan
5 September 2018

Drawing Title

Scale:

TRAFFIC IMPACT ANALYSIS
4205 Buena Vista
Dallas, Texas

TABLE OF CONTENTS

LIST OF TABLES:

LIST OF EXHIBITS:

LIST OF APPENDICES:

INTRODUCTION

The services of **Pacheco Koch** (PK) were retained by **LBS Realty Partners, LLC** to prepare a Traffic Impact Analysis for a proposed mixed-use development located at 4205 Buena Vista Street in Dallas, Texas. A proposed site plan for the Project, prepared by **Michael Hsu - Office of Architecture**, and a site location map (**Exhibit *1***) are provided following the EXECUTIVE SUMMARY section of this report.

In order to facilitate development of the Project, LBS Realty Partners, LLC (the "Applicant") has made a request to the City of Dallas (the "Approving Agency") for creation of a new PD Subdistrict for the subject property. As part of application process for this request, submittal of a TIA by the Applicant to the Approving Agency is required.

This TIA was prepared by traffic engineers at Pacheco Koch (the "Engineer") in accordance with industry and local standards. Pacheco Koch is a licensed engineering firm based in Dallas, Texas, that provides professional engineering and related services.

Purpose

A Traffic Impact Analysis (TIA) is a engineering study used to provide information on the projected off-site impacts produced by a specific Project on the traffic operations of public traffic facilities. Commissioning a TIA may be required by an Approving Agency when an Applicant is seeking approvals or entitlements for the Project, such as a change in zoning rights. Using standardized analysis methodologies, if the findings of the TIA indicate that the direct impacts attributed to a Project result in degradation of the conditions that would otherwise occur from an "acceptable" condition to an "unacceptable" condition, the Approving Agency may, within certain legal parameters, require the Applicant to fund the improvement(s) needed to mitigate the impacts. A TIA is used to identify when such instances are projected to occur.

A TIA should be prepared by a licensed Engineer skilled in the principles of traffic and transportation engineering and planning. The general methodologies, processes, and guidelines used in a TIA are established by industry standards—which are maintained by organizations such as the Institute of Transportation Engineers (ITE) and others—although, the project-specific parameters of the study (e.g., study locations, analysis scenarios, analytical assumptions, etc.) may be advised by technical staff of the Approving Agency.

When applicable the Engineer may provide recommendations or suggested modifications that, in the Engineer's opinion could improve overall traffic operations, safety, site access, circulation, etc. Such recommendations may or may not be directly related to the Project. However, implementation of any modifications is subject to approval of the respective agency that is responsible for the operation of the facilities. Also, the Engineer's suggested or recommended

modifications should not be considered mandatory and are not intended to assign or imply funding responsibility.

A TIA is not a detailed site plan review nor a substitute for local or regional transportation planning.

Project Description

The Project will consist of multiple land uses and below-grade parking within a single, multi-level building. Buildout of the Project is estimated to occur 2021. A summary of the proposed development program, by phase, is provided in **Table 1.**

Table 1. Development Program Summary

USE	FUTURE AMOUNT
Multifamily	34 Dwelling Units
Office	10,000 SF
Commercial	8,175 SF

NOTE: The development program provided above is based upon the most current and complete information available at the time of this study publication.

The site will have two points of vehicular access—one driveway will be located on Buena Vista Street and a right-in-/right-out-only driveway will be located on N Fitzhugh Avenue. The property will also have direct access to the Katy Trail.

The 0.626-acre subject site is currently zoned PD 193 (GR). Prior uses on the site include a commercial building of approximately 4,588 square feet (vacant at the time of traffic data collection).

Study Parameters

The study parameters used in this TIA are based upon industry standard practices and requirements of the City of Dallas. Project-specific study parameters were reviewed with the city staff at the outset of the study.

This TIA analyzed the day-to-day traffic operations on the public roadway system at time periods that have the greatest combined volume of the background traffic and site-related traffic. Due to the predominant influence of background traffic, the weekday AM and PM peak hours of adjacent street traffic are typically analyzed.

The analysis scenarios addressed in this study include the following:

- at existing conditions ("Existing" scenario)
- at site buildout year without site-generated traffic ("Background" scenario)
- at site buildout year with site-generated traffic ("Buildout" scenario)
- at five years after site buildout ("Horizon" scenario)

  NOTE: Analyses of all future conditions scenarios utilize projected traffic volumes derived by Pacheco Koch using reasonable and customary assumptions that are based upon existing conditions where possible. ITE appropriately points out that, due to natural changes in traffic

patterns that occur over time, the margin of error for projected traffic volumes increases as the length of time of the projection increases; and, any projection of hourly turning movement volumes beyond five years inherently contain significant assumptions.

Study Area

The study area for a TIA is typically defined to allow an assessment of the most relevant traffic impacts to the local area. The extent of the study area is discretionary but is generally commensurate with the scale of the proposed development. Special localized factors may also be considered. The specific locations included in the study area of this TIA are listed below and depicted in **Exhibit *1***.

Traffic-Signal-Controlled Intersections:

(a) Travis Street and N Fitzhugh Avenue

STOP-Sign-Controlled Intersections:

(b) N Fitzhugh Avenue at Abbott Avenue
(c) N Fitzhugh Avenue at Buena Vista Street
(d) Buena Vista Street and Lee Street

Roadway Links:

(A) Fitzhugh Avenue, adjacent to site
- Existing operation and cross-section: *six lanes, two-way operation, median-divided*
- City of Dallas Thoroughfare Plan Designation: *Minor Arterial, M-6-D(B)*
- Current Daily Traffic Volume: *31,747 (Thursday, March 29, 2018)*
- Posted Speed Limit: *30 mph*

(B) Buena Vista Street, adjacent to site
- Existing operation and cross-section: *two lanes, two-way operation, undivided*
- City of Dallas Thoroughfare Plan Designation: *none (i.e., local street)*
- Current Daily Traffic Volume: *1,455 (Thursday, March 29, 2018)*
- Posted Speed Limit: *30 mph*

TRAFFIC IMPACT ANALYSIS

The following is a description of the analyses performed as part of this Traffic Impact Analysis.

Approach

The TIA presented in this report analyzed the operational conditions for the peak hours and study area as defined above using standardized analytical methodologies where applicable. Current (or recent) traffic volume data were collected on a typical day throughout the study area to represent existing traffic conditions. Where applicable, growth factors were applied to the existing volumes to project future background traffic at the site buildout year conditions. Then, traffic generated by the proposed development was projected using the standard four-step approach: Trip Generation, Mode Split, Trip Distribution, and Traffic Assignment. By adding the site-generated traffic to the background traffic, the resulting site-plus-background traffic impact to operational conditions may be assessed from which approach mitigation measures may be recommended, if needed.

Background Traffic Volume Data

Existing Volumes

Current traffic volumes were collected during the analysis periods at the study area intersections on March 29, 2018. Traffic volumes are graphically summarized in **Appendix A**; detailed data sheets are provided in **Appendix B**.

Projected Background Traffic Volumes

Background traffic growth is defined as the normal growth of traffic that is not directly related to the subject development of this study. A review of historical traffic volume data can provide an indication of the local traffic growth patterns. **Table 2** provides a comparison of recent traffic volumes with prior traffic volumes in the vicinity of the subject site, from which PK calculated an annual growth rate.

Table 2. Historical Daily Traffic Volume Data

ROADWAY SEGMENT	HISTORICAL DAILY VOLUME (DATE)	ANNUAL GROWTH RATE
N Fitzhugh Avenue, west of Buena Vista St.	21,062 ('09)[A] 19,520 ('04)[A] 22,474 ('99)[A]	1.53% -2.78%

Data Source: A = TxDOT

According to these data, traffic volumes in the vicinity of the subject site appear to generally appear to be generally stable over time with slight fluctuations. Although no consistent positive growth is evident, Pacheco Koch assumed a growth rate of one percent (1.0%) per year to estimate future background traffic volumes.

By applying the assumed growth rate(s) described previously, future background traffic volumes at the Project buildout year were calculated for the study area intersections. These volumes are graphically summarized in **Appendix A.**

Site-Related Traffic

Trip Generation and Mode Split

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 this Project was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation* manual (10th 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 base trip generation data from ITE generally reflect average conditions for a standalone use on a typical day. However, in some cases, the Engineer may judge that other factors may be of sufficient significance to warrant adjusting the base ITE calculations in order to more accurately reflect Project-specific conditions. For this analysis "internal trip capture" was considered to be of sufficient significance to justify adjustment of the base ITE data.

"Internal trip capture" refers to the phenomenon that some portion of the trips generated by a given use originates from within the same site and, therefore, do not impact the external roadway network. The methodology used to calculate internal trip capture is recognized by ITE. The most current research and data collection is presented in the Transportation Research Board's *NCHRP Report 684* (2011).

"Mode split" is the consideration of trips being conducted by all modes of transportation, including public transit, bicycle, walking, etc. The default trip generation data from ITE are assumed to incorporate "typical" mode split characteristics. Additional adjustments to account for mode split are only applied in special cases when mode split is expected to be especially high. For this analysis a five percent (5%) reduction was applied to the base ITE data to account for bicycle/walking mode split due to the close proximity of and convenient access to the Katy Trail from the subject site.

Table 3 provides a summary of the calculated net total trip ends generated by the project. Supplemental information used in the trip generation calculations is provided in **Appendix C.**

Table 3. Projected Trip Generation Summary (Net)

SCENARIO	DAILY TRIP ENDS (WEEKDAY)	AM PEAK HOUR TRIP ENDS (ADJACENT STREET PEAK)	PM PEAK HOUR TRIP ENDS (ADJACENT STREET PEAK)
		Total (In/Out)	**Total** (In/Out)
Proposed Uses	1,399	**79** (51/28)	**66** (36/30)

NOTE: Trip generation from prior uses were not deducted from the projected trip generation volumes shown above.

Trip Distribution and Assignment

The distribution and assignment of site-generated trip ends to the surrounding roadway system is determined by proportionally estimating the orientation of travel via various travel routes. This is a subjective exercise based upon professional judgment considering such factors as directional characteristics of existing local traffic, trip attributes (e.g., trip purpose, trip length, travel time, etc.), roadway features (e.g., capacity, operational conditions, character of environment), regional demographics, etc.

Traffic for the proposed redevelopment was distributed and assigned to the study area roadway network based upon consideration of the factors listed above. Detailed trip distribution and traffic assignment calculations and results are summarized in **Appendix C**.

Site-Generated Traffic Volumes

Site-generated traffic is calculated by multiplying the trip generation value (from **Table 3**) by the corresponding traffic assignments (from **Appendix C**). The resulting cumulative (for all uses) peak period site-generated traffic volumes at buildout of the Project are graphically summarized in **Appendix A**.

Traffic Operational Analysis — Roadway Links

Description

A roadway link is a segment of roadway between two intersections. Roadway link 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 (i.e., number of lanes, lane widths, type of center divider, etc.). 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.

A specific industry standard for roadway link capacity does not exist, but the typical concept is derived from a base saturation flow rate (i.e., the maximum theoretical rate of continuous flow under ideal, unobstructed conditions -- in the traffic engineering industry, this value is generally considered to range between 1,900-2,100 vehicles per lane per hour). A series of adjustment factors are then applied to the saturation flow rate to reflect the characteristics of a given location.

The North Central Texas Council of Governments (NCTCOG) – the metropolitan planning agency for the Dallas-Fort Worth region – has derived internal "hourly service volume" guidelines used for transportation modelling purposes. The NCTCOG values were based upon the principals presented in the *Highway Capacity Manual* with "regional calibration" factors applied. Though these per-lane capacities, or "Service Volumes" (summarized in the table below), are intended for modelling purposes, they do provide a reasonable gage of theoretical capacity.

Area Type	Hourly Service Volumes By Roadway Function					
	Principal Arterial		Minor Arterial & Frontage Road		Collector & Local Street	
	Median-Divided or One-Way	Undivided Two-Way	Median-Divided or One-Way	Undivided Two-Way	Median-Divided or One-Way	Undivided Two-Way
CBD	725	650	725	650	475	425
Urban/ Commercial	850	775	**825**	750	525	**475**
Residential	925	875	900	825	575	525
Rural	1,025	925	975	875	600	550

To determine the utilization of a roadway, the volume:capacty ratio can be calculated – a v/c ratio of less than 1.0 indicates that the roadway is operating under capacity. NCTCOG's Level of Service denominations are as follows:

Volume:Capacity Ratio $\leq$ 25% is LOS *A*,
Volume:Capacity Ratio > 25% and $\leq$ 45% is LOS *B*,
Volume:Capacity Ratio > 45% and $\leq$ 65% is LOS *C*,
Volume:Capacity Ratio > 65% and $\leq$ 80% is LOS *D*,
Volume:Capacity Ratio > 80% and $\leq$ 100% is LOS *E*,
Volume:Capacity Ratio $\geq$ 100% is LOS *F*

Summary of Results

For roadways adjacent to or in the vicinity of the subject site, the volume/capacity ratio was calculated for existing and site buildout conditions. A summary of the link capacity analysis is provided in **Table 4**. See specific recommendations in the *Recommendations* section of this report.

Table 4. Roadway Link Capacity Analysis Results Summary

ROADWAY/ SCENARIO	DAILY VOLUME	THEORETICAL DAILY CAPACITY	V:C RATIO/ LEVEL OF SERVICE
N Fitzhugh Avenue			
Existing Conditions	31,747	49,500	0.64 – *C*
Buildout Year-Background Conditions	32,709	49,500	0.66 – *D*
Buildout Year-Buildout Conditions	33,408	49,500	0.67 – *D*
Buena Vista Street			
Existing Conditions	1,455	9,500	0.15 – *A*
Buildout Year-Background Conditions	1,499	9,500	0.16 – *A*
Buildout Year-Buildout Conditions	1,919	9,500	0.20 – *A*

Traffic Operational Analysis —Roadway Intersections

Description

The level of performance of civil infrastructure can often be measured through an analysis of volume and capacity that considers various physical and operational characteristics of the system. For vehicular traffic an operational analysis of roadway intersection capacity over a 60-minute period is the most detailed type of analysis. 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, although LOS D is considered to be acceptable in urban conditions; LOS E indicates a facility or maneuver is approaching capacity, while LOS F is theoretically an over-capacity condition. On highly-utilized transportation facilities, brief periods of LOS E or F conditions are not uncommon for during peak periods. In some cases measures to increase capacity, either through operational changes and/or physical improvements, can be identified to improve efficiency and sometimes raise Level of Service.

For traffic-signal-controlled ("signalized") intersections and STOP-controlled ("unsignalized") intersections, 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.

NOTE: The HCM unsignalized intersection analysis methodology was developed and calibrated for low-to-moderate volume intersections. When applied to intersections with one or more high-volume or high-capacity approaches, the analyses often reflect poor results (i.e., low Level of Service). However, the actual delay/operational conditions are typical of similar locations and do not necessarily represent unique conditions. Low-performing, high-volume, unsignalized intersections cannot be analytically mitigated unless a traffic signal is installed. (Traffic signal installation is subject to a detailed analysis of established criteria AND approval of the responsible agency. Neither Level of Service nor vehicle delay is a warrant for traffic signal installation.)

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 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. **Appendix A** provides exhibits summarizing the following:

- Existing traffic volumes during study peak hours
- Projected Background traffic volumes at the Site Buildout Year during study peak hours
- Projected Site-Generated traffic volumes during study peak hours
- Projected Background-plus-Site-Generated traffic volumes at the Site Buildout Year during study peak hours
- Projected 2026 traffic volumes, including Site-Generated traffic during study peak hours

A summary of the existing intersection/roadway geometry and traffic control devices is also graphically summarized in **Appendix A**.

Summary of Results

Intersection capacity analyses presented in this study were performed using the *Synchro* software package. **Table 5** and **Table 6** 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 5. Peak Hour Intersection Capacity Analysis Results Summary
(Signalized Intersections)

INTERSECTION	EXISTING CONDITIONS		BACKGROUND CONDITIONS		BUILDOUT CONDITIONS		HORIZON CONDITIONS	
	AM	PM	AM	PM	AM	PM	AM	PM
Travis Street @ N Fitzhugh Avenue	A *(5.5)*	A *(8.8)*	A *(5.6)*	A *(9.0)*	A *(6.1)*	A *(9.6)*	A *(6.7)*	B *(10.0)*

NOTE: Traffic signal operational parameters used in this analysis were based upon actual traffic signal operational characteristics observed in the field at the time of data collection.

Table 6. Peak Hour Intersection Capacity Analysis Results Summary
(Unsignalized Intersections)

INTERSECTION	TRAFFIC MANEUVER	EXISTING CONDITIONS		BACKGROUND CONDITIONS		BUILDOUT CONDITIONS	
		AM	PM	AM	PM	AM	PM
Abbott Avenue @ N Fitzhugh Avenue	EBL	C *(23.0)*	C *(23.7)*	C *(24.1)*	D *(25.7)*	C *(24.6)*	D *(26.6)*
	SB	D *(27.4)*	B *(14.9)*	D *(29.4)*	C *(15.2)*	E *(37.8)*	C *(22.4)*
Buena Vista Street @ N Fitzhugh Avenue	NB	E *(35.4)*	F *(>100)*	E *(39.8)*	F *(>100)*	E *(48.9)*	F *(>100)*
	EBL	C *(23.0)*	C *(23.7)*	C *(24.1)*	D *(25.7)*	D *(27.4)*	D *(28.5)*
	WBL	B *(13.1)*	E *(47.5)*	B *(13.3)*	F *(52.6)*	B *(13.4)*	F *(52.6)*
	SB	D *(33.1)*	F *(>100)*	E *(35.5)*	F *(>100)*	E *(49.1)*	F *(>100)*
Buena Vista Street @ Lee Street	WB	A *(8.8)*	A *(9.8)*	A *(8.8)*	A *(9.9)*	A *(9.0)*	B *(10.0)*
	SBL	A *(7.3)*	A *(7.8)*	A *(7.3)*	A *(7.8)*	A *(7.3)*	A *(7.8)*
Buena Vista Street @ Site Driveway 1	NBL	-	-	-	-	A *(7.3)*	A *(7.3)*
	EB	-	-	-	-	A *(9.2)*	A *(9.9)*
Site Driveway 2 @ N Fitzhugh Avenue	SB	-	-	-	-	C *(17.7)*	B *(13.2)*

KEY:

A, B, C, D, E, F = Level-of-Service
NB-, SB-, EB-, WB- = intersection approach
AM = AM Peak Hour of Adjacent Street
(##.#) = Average Seconds of Delay Per Vehicle
-L, -T, -R = Left, Through, Right turning movement
PM = PM Peak Hour of Adjacent Street

SUMMARY OF FINDINGS AND RECOMMENDATIONS

NOTE: Recommendations presented in this report reflect the opinion of Pacheco Koch based solely upon technical analysis and professional judgment but are not intended to infer mandates or funding responsibility. Any proposed improvements in the public right-of-way are subject to approval of the responsible agency(-ies). Should the approving agency determine that any off-site improvements are required for approval of the Project, legal precedents apply with regard to jurisdiction and funding allocation.

The following findings are based upon buildout of the subject property in accordance with the hypothetical development scenario outlined in the Project Description section of this report. Recommendations are provided where applicable.

FINDING: N Fitzhugh Avenue is a major thoroughfare that carries high traffic volumes during peak hour periods. Currently, the roadway utilizes approximately 64% of the theoretical daily roadway capacity. Buena Vista Street is a low-volume local street that utilizes less than 20% of the theoretical daily roadway capacity.

FINDING: This study analyzed existing traffic operations during peak traffic periods at several intersections in the vicinity of the subject site. Study area intersections include the traffic-signal-controlled intersection of N Fitzhugh Avenue at Travis Street and the unsignalized intersections of N Fitzhugh Avenue at Buena Vista Street, N Fitzhugh Avenue at Abbott Avenue, and Buena Vista Street at Lee Street. The signalized intersection of Fitzhugh at Travis operates very efficiently with a very good Level of Service. The all-way stop-controlled intersection of Buena Vista at Lee also operates efficiently at a very good Level of Service. For the minor-street-STOP-controlled intersections of Fitzhugh at Buena Vista and Fitzhugh at Abbott, the minor street approaches and the left-turns from Fitzhugh experience moderate to heavy delays during peak traffic periods. Such conditions are common for unsignalized intersections on major roadways and cannot be operationally mitigated without installation of a traffic signal. However, neither intersection meets the warrant criteria required to install a traffic signal.

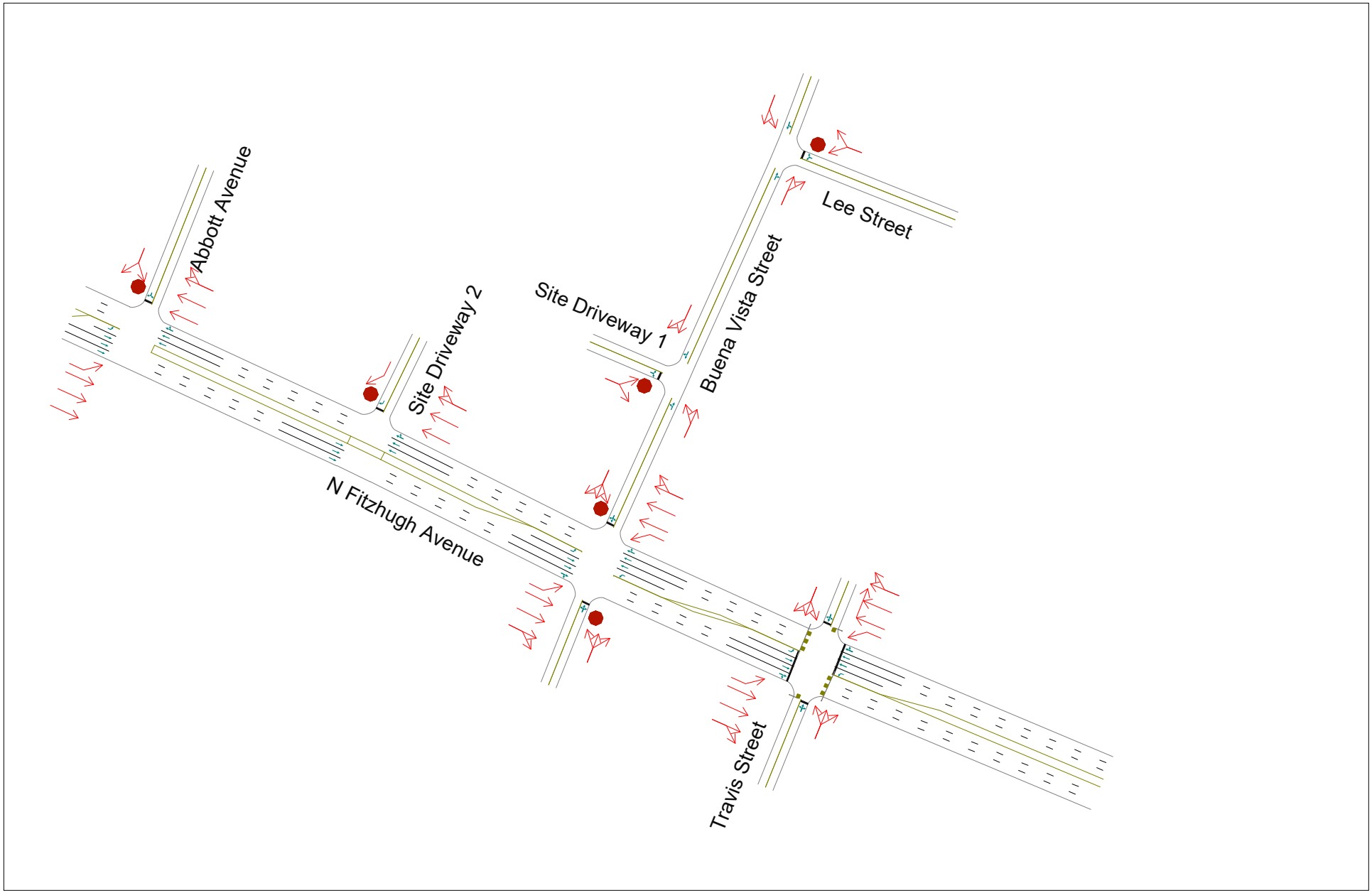
FINDING: After the addition of estimated background traffic growth and projected traffic generated by the proposed development, the traffic operations within the study area were reanalyzed. Each of the study area intersections will experience slight increases in average delay. However, the increases attributable to the project do not appreciably change the traffic operational conditions that are otherwise expected to occur. Therefore, no required roadway or operational improvements are required to mitigate the impact of the proposed development.

END OF MEMO

Appendix A. Traffic Volume Exhibits

Appendix A1 - Roadway Geometry

North ▲
Not to Scale

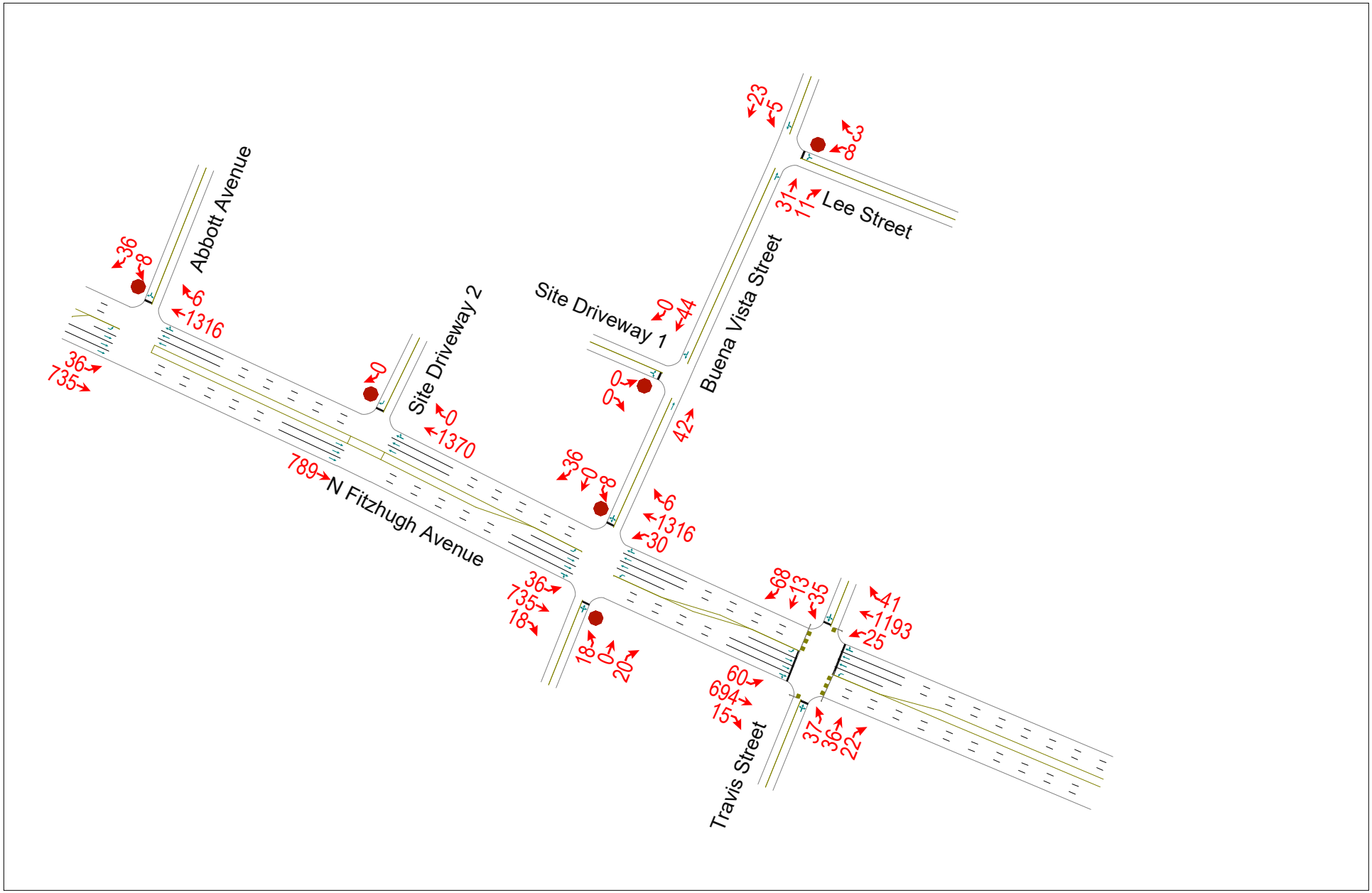


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A2 - Existing AM Peak Hour Traffic Volumes

North ▲
Not to Scale

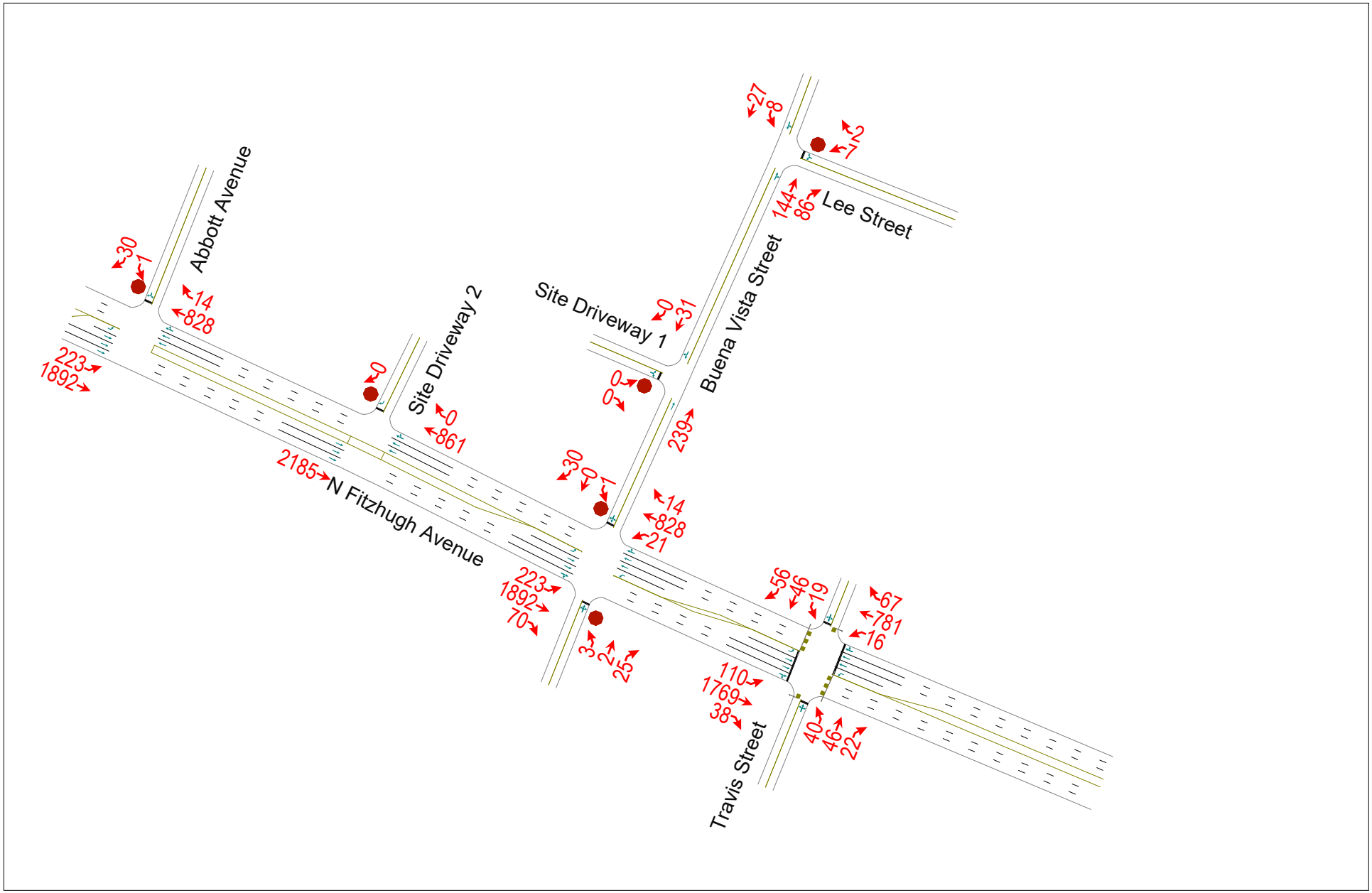


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A3 - Existing PM Peak Hour Traffic Volumes

North ▲
Not to Scale

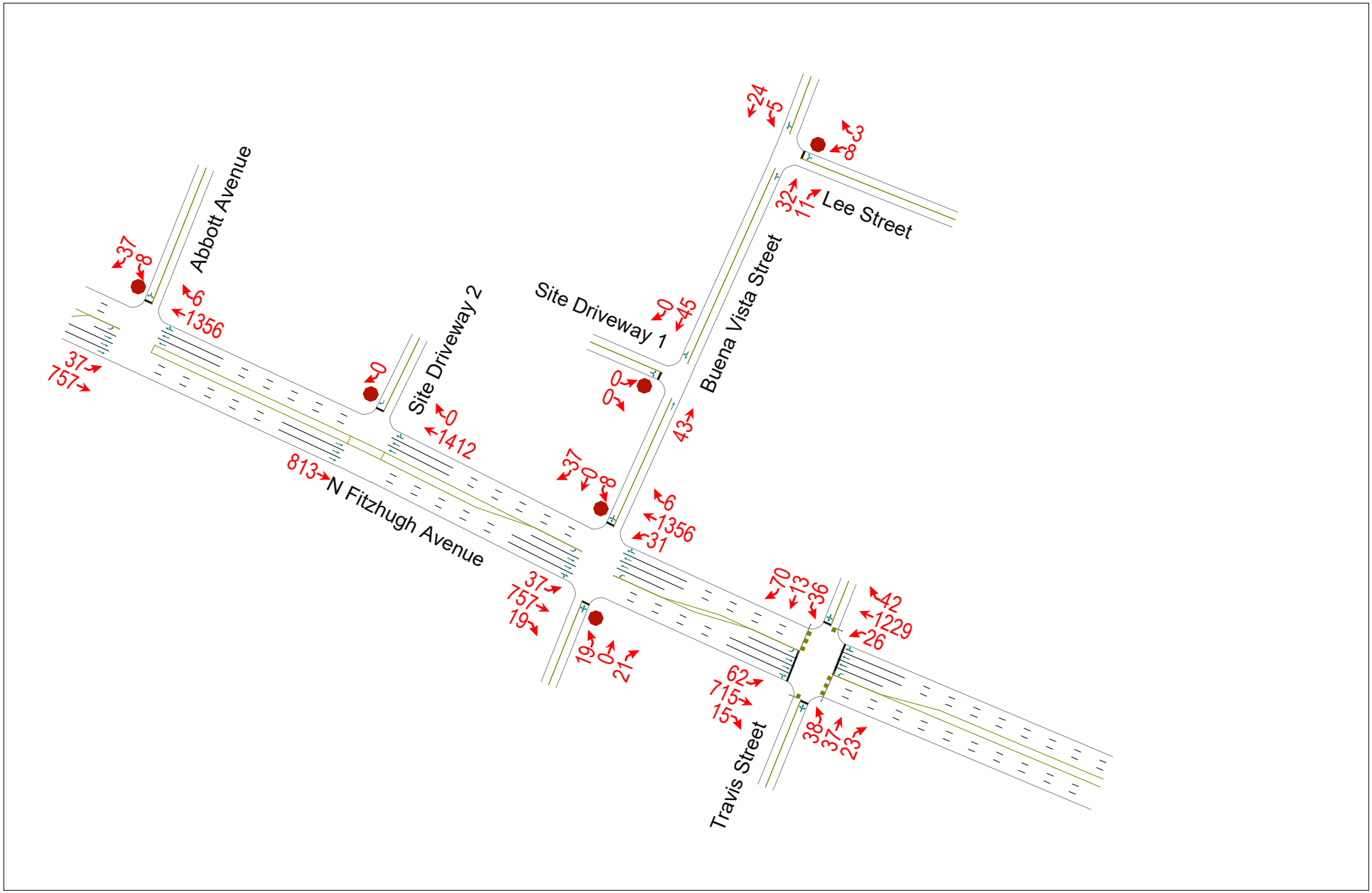


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A4 - Background AM Peak Hour Traffic Volumes

North ▲
Not to Scale

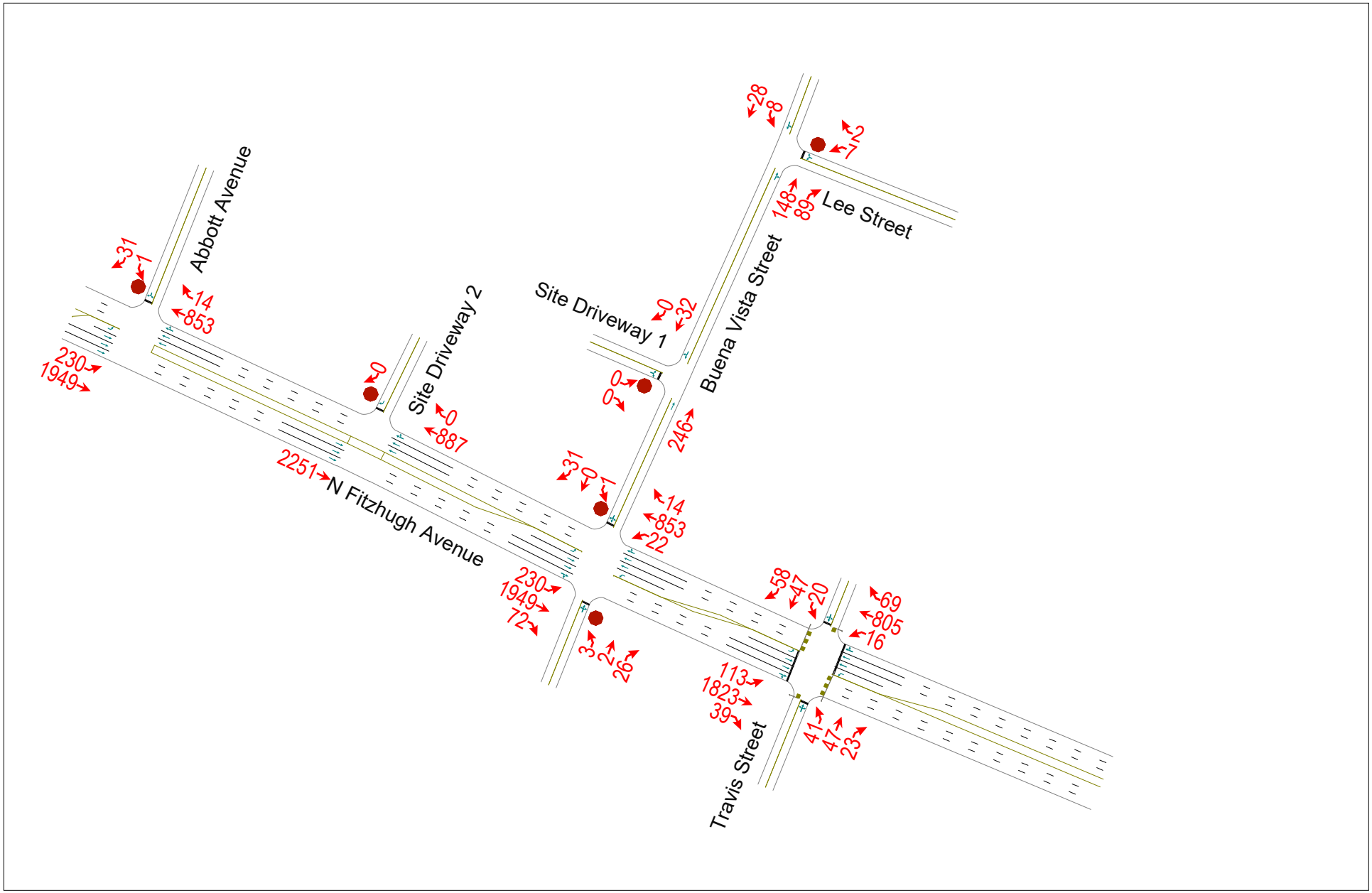


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A5 - Background PM Peak Hour Traffic Volumes

North ▲
Not to Scale

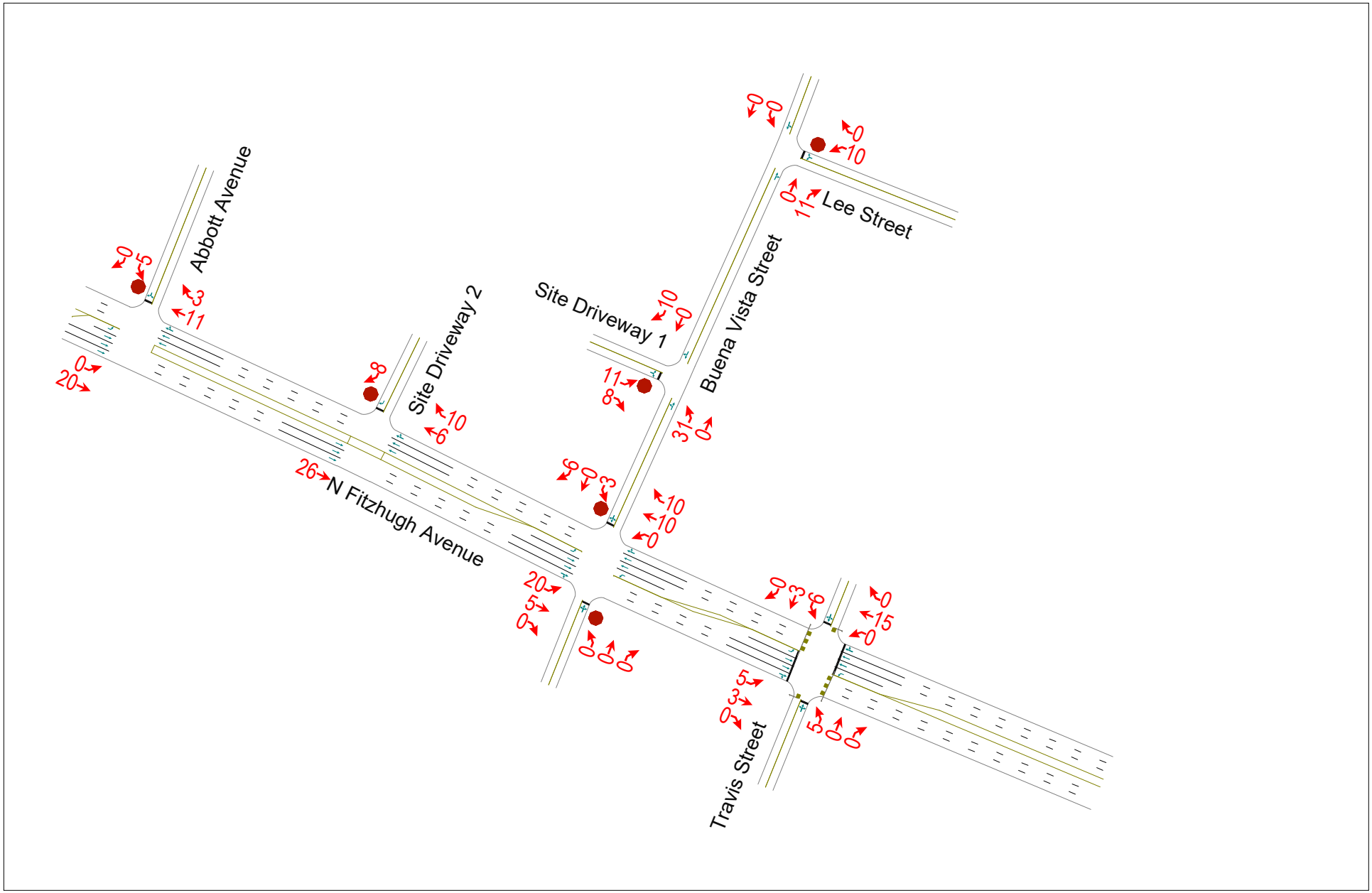


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A6 - Site Generated AM Peak Hour Traffic Volumes

North ▲
Not to Scale

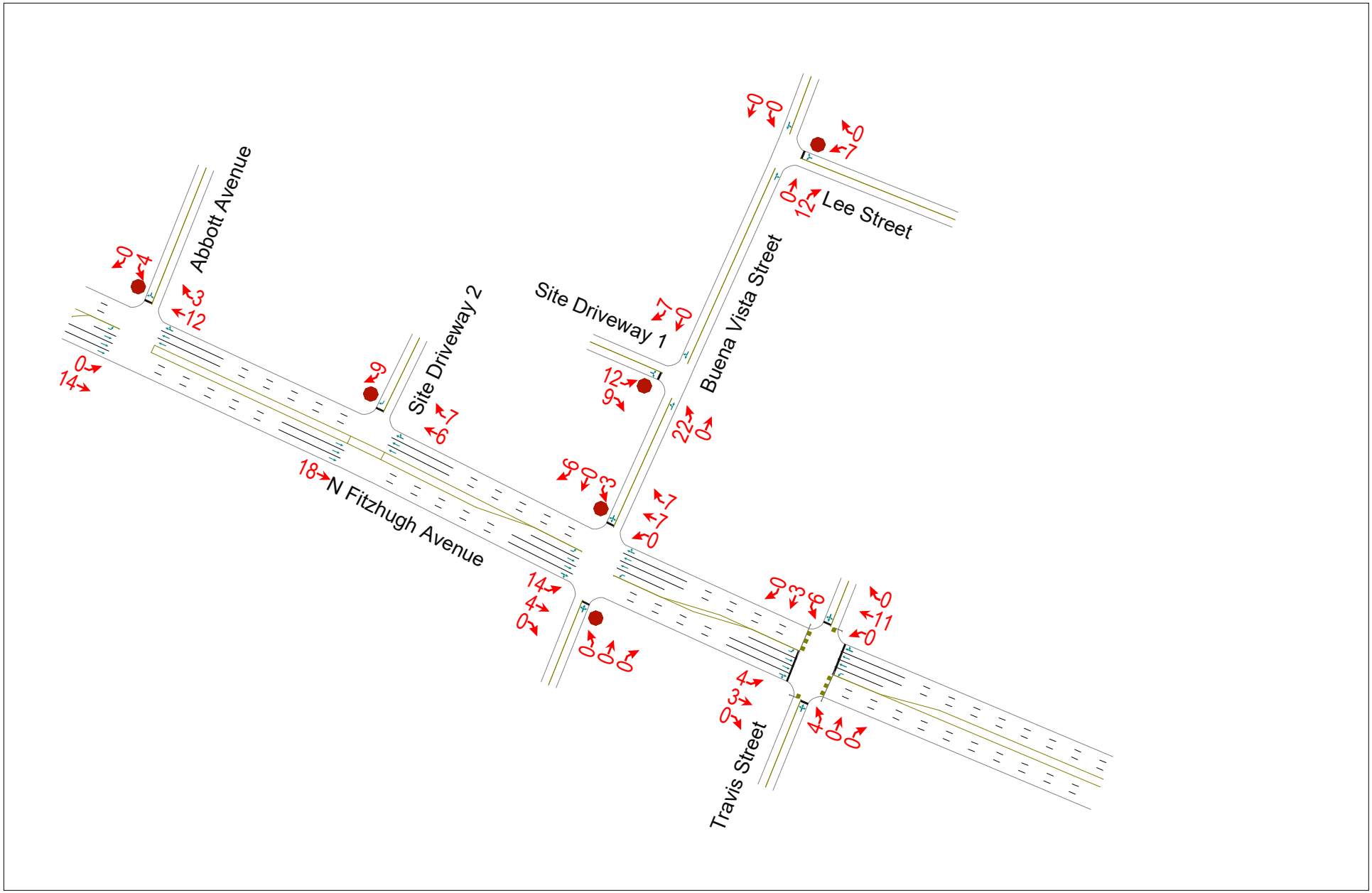


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A7 - Site Generated PM Peak Hour Traffic Volumes

North ▲
Not to Scale

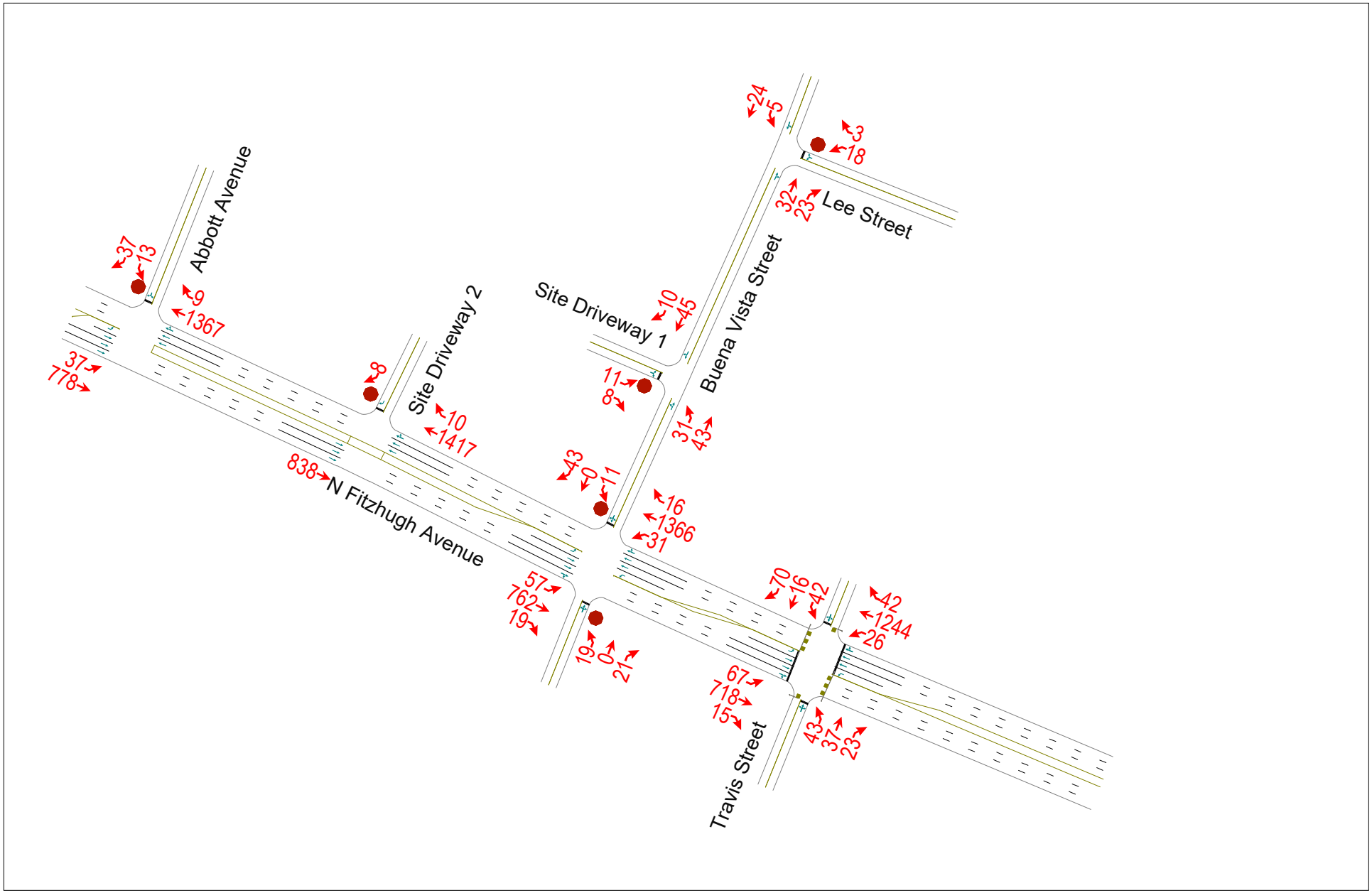


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A8 - Buildout AM Peak Hour Traffic Volumes

North ▲
Not to Scale

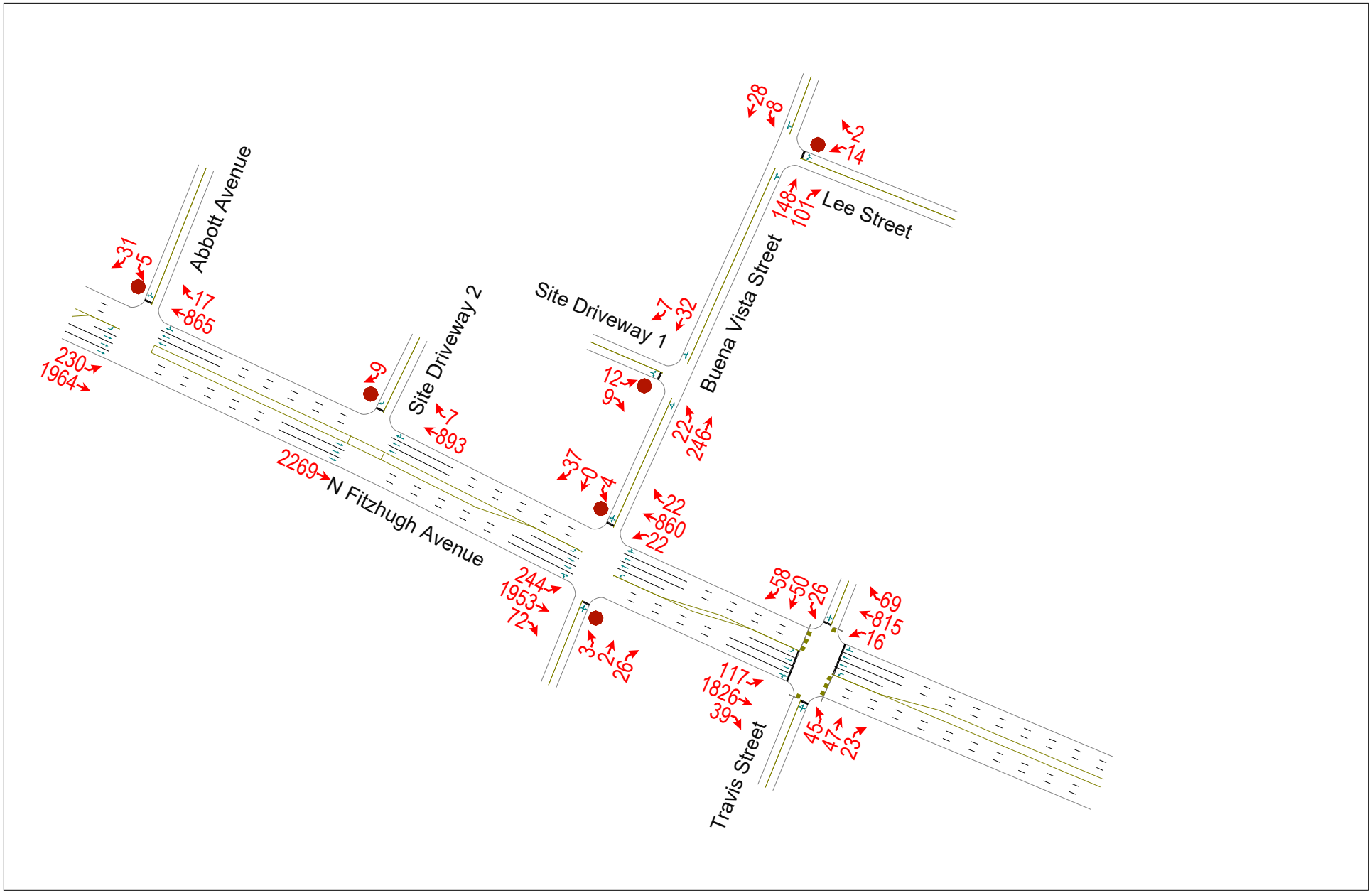


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A9 - Buildout PM Peak Hour Traffic Volumes

North ▲
Not to Scale

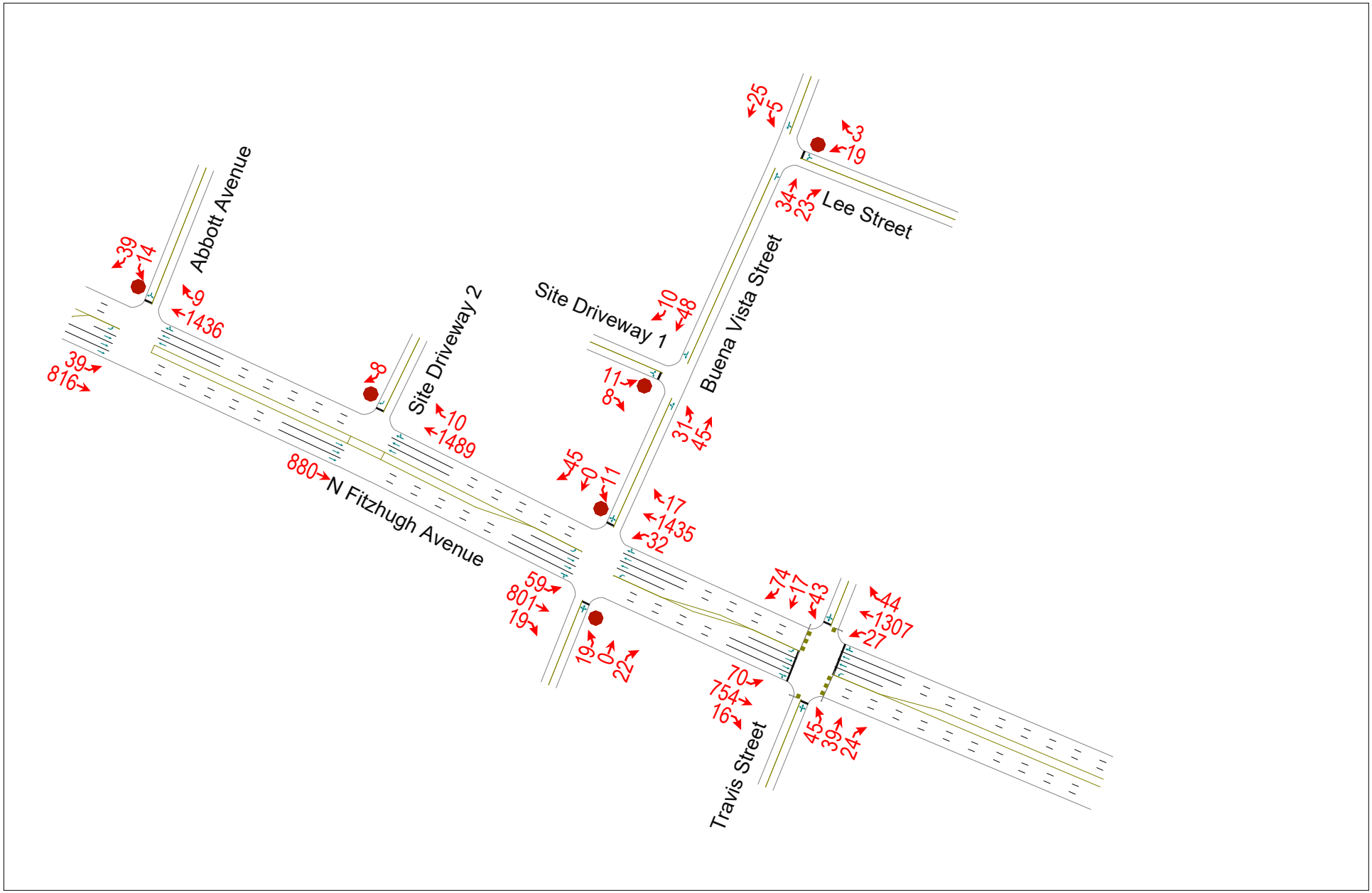


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A10 - Horizon AM Peak Hour Traffic Volumes

North ▲
Not to Scale

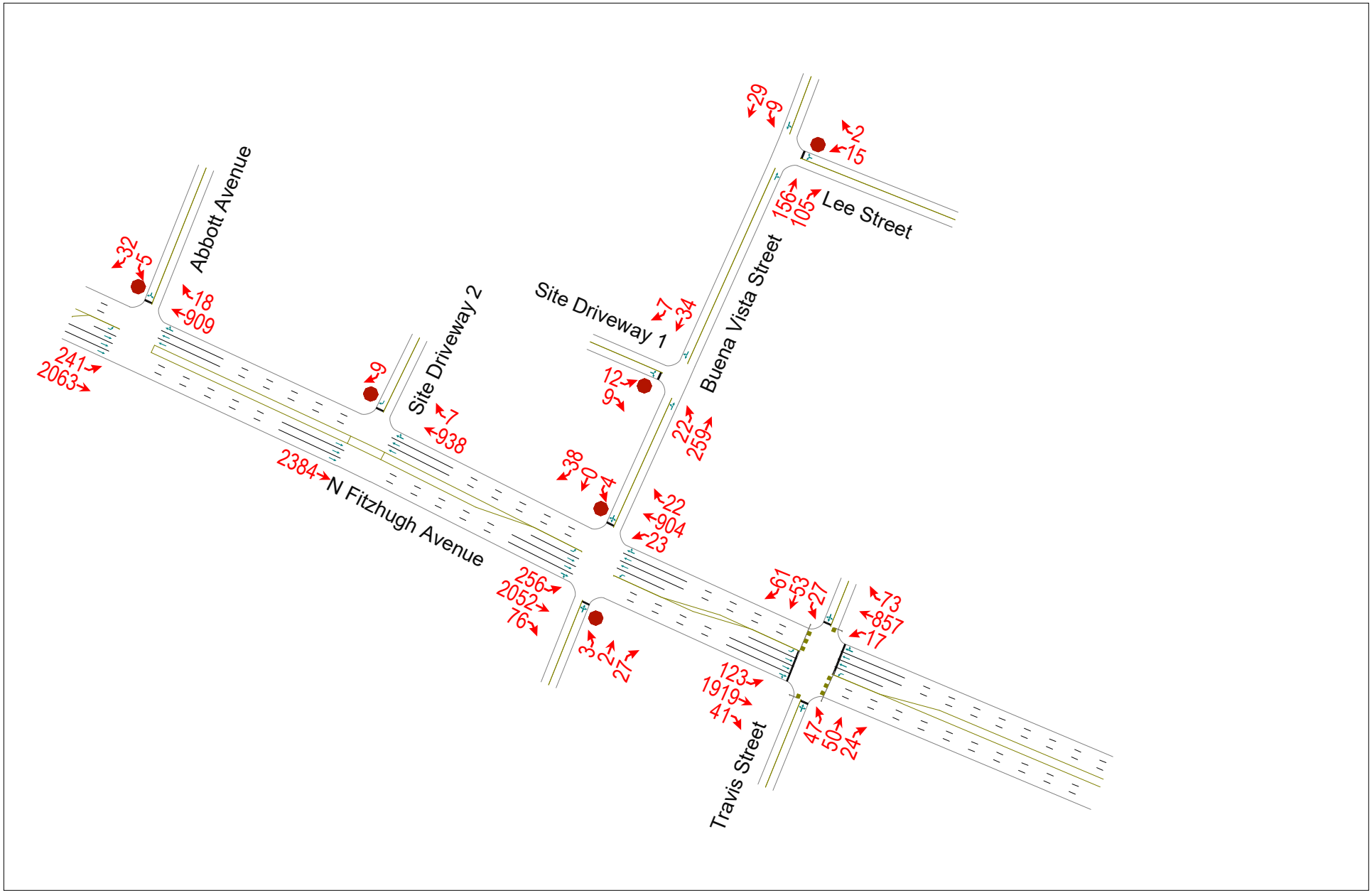


3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix A11 - Horizon PM Peak Hour Traffic Volumes

North ▲
Not to Scale



3205-17.452
AJV

10/05/2018
Pacheco Koch

Appendix B. Detailed Traffic Volume Data

Intersection Turning Movement Counts

City:	***Dallas***
State:	***Texas***
Day:	***Thursday***
Date:	***29-Mar***
Year:	***2018***
Data Collector:	***Camera***
Data Source:	***CJ Hensch & Associates, Inc***
Traffic Control:	***Traffic Signal***
Observations:	

		NORTH LEG						EAST LEG						SOUTH LEG						WEST LEG					
		Southbound Approach on Travis Street						Westbound Approach on N Fitzhugh Avenue						Northbound Approach on Travis Street						Eastbound Approach on N Fitzhugh Avenue					
		Vehicles				Peds		Vehicles				Peds		Vehicles				Peds		Vehicles				Peds	
START	END	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW
7:00 AM	7:15 AM		5	0	22				1	200	3				5	5	2				5	106	1		
7:15 AM	7:30 AM		2	0	23				3	230	4				6	6	1				4	144	2		
7:30 AM	7:45 AM		6	1	12				2	258	5				10	4	3				2	178	1		
7:45 AM	8:00 AM		8	1	22				2	265	4				13	11	6				17	178	2		
8:00 AM	***8:15 AM***		***8***	***4***	***18***				***3***	***277***	***8***				***7***	***11***	***6***				***14***	***175***	***3***		
8:15 AM	***8:30 AM***		***11***	***1***	***19***				***10***	***310***	***14***				***13***	***12***	***5***				***18***	***160***	***5***		
8:30 AM	***8:45 AM***		***8***	***6***	***16***				***10***	***323***	***13***				***11***	***6***	***7***				***13***	***176***	***4***		
8:45 AM	***9:00 AM***		***8***	***2***	***15***				***2***	***283***	***6***				***6***	***7***	***4***				***15***	***183***	***3***		
4:30 PM	4:45 PM		5	7	20				1	183	4				6	3	7				29	415	7		
4:45 PM	5:00 PM		8	6	10				4	193	5				3	5	7				21	434	8		
5:00 PM	***5:15 PM***		***3***	***5***	***14***				***1***	***205***	***15***				***12***	***9***	***9***				***32***	***424***	***12***		
5:15 PM	***5:30 PM***		***3***	***12***	***13***				***4***	***198***	***17***				***3***	***10***	***5***				***12***	***455***	***6***		
5:30 PM	***5:45 PM***		***6***	***16***	***14***				***7***	***191***	***14***				***10***	***17***	***5***				***26***	***429***	***11***		
5:45 PM	***6:00 PM***		***7***	***13***	***15***				***4***	***187***	***21***				***15***	***10***	***3***				***40***	***461***	***9***		
6:00 PM	6:15 PM		7	8	10				2	197	15				6	8	7				37	409	9		
6:15 PM	6:30 PM		7	7	11				4	219	9				8	7	8				38	422	15		

AM Peak Hour	*Intersection PHF:*	*0.94*	*Intersection PHV:*	*0*	*35*	*13*	*68*		*0*	*25*	*1,193*	*41*		*0*	*37*	*36*	*22*		*0*	*60*	*694*	*15*		
	Peak Hour	*8:00 AM - 9:00 AM*	*PHF:*		*0.80*	*0.54*	*0.89*			*0.63*	*0.92*	*0.73*			*0.71*	*0.75*	*0.79*			*0.83*	*0.95*	*0.75*		
	Study Area PHF:	**0.94**	**Study Area PHV:**	**0**	**35**	**13**	**68**		**0**	**25**	**1,193**	**41**		**0**	**37**	**36**	**22**		**0**	**60**	**694**	**15**		
	Peak Hour:	**8:00 AM - 9:00 AM**	**PHF:**		**0.80**	**0.54**	**0.89**			**0.63**	**0.92**	**0.73**			**0.71**	**0.75**	**0.79**			**0.83**	**0.95**	**0.75**		
PM Peak Hour	*Intersection PHF:*	*0.96*	*Intersection PHV:*	*0*	*19*	*46*	*56*		*0*	*16*	*781*	*67*		*0*	*40*	*46*	*22*		*0*	*110*	*1,769*	*38*		
	Peak Hour	*5:00 PM - 6:00 PM*	*PHF:*		*0.68*	*0.72*	*0.93*			*0.57*	*0.95*	*0.80*			*0.67*	*0.68*	*0.61*			*0.69*	*0.96*	*0.79*		
	Study Area PHF:	**0.96**	**Study Area PHV:**	**0**	**19**	**46**	**56**		**0**	**16**	**781**	**67**		**0**	**40**	**46**	**22**		**0**	**110**	**1,769**	**38**		
	Peak Hour:	**5:00 PM - 6:00 PM**	**PHF:**		**0.68**	**0.72**	**0.93**			**0.57**	**0.95**	**0.80**			**0.67**	**0.68**	**0.61**			**0.69**	**0.96**	**0.79**		

PK# 3205-17.452

Travis Street at N Fitzhugh Avenue

Intersection Turning Movement Counts

City:	***Dallas***
State:	***Texas***
Day:	***Thursday***
Date:	***29-Mar***
Year:	***2018***
Data Collector:	***Camera***
Data Source:	***CJ Hensch & Associates, Inc***
Traffic Control:	***Minor Approach Stop***
Observations:	

		NORTH LEG						EAST LEG						SOUTH LEG						WEST LEG					
		Southbound Approach on Buena Vista Street						Westbound Approach on N Fitzhugh Avenue						Northbound Approach on Buena Vista Street						Eastbound Approach on N Fitzhugh Avenue					
		Vehicles				Peds		Vehicles				Peds		Vehicles				Peds		Vehicles				Peds	
START	END	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW
7:00 AM	7:15 AM		0	0	4				4	226	1				4	0	2				8	112	0		
7:15 AM	7:30 AM		1	1	11				3	258	2				3	0	1				10	148	2		
7:30 AM	7:45 AM		1	0	15				6	265	1				3	0	4				11	181	5		
7:45 AM	8:00 AM		1	0	8				9	298	0				2	0	2				14	179	5		
8:00 AM	***8:15 AM***		***3***	***0***	***7***				***6***	***296***	***3***				***3***	***0***	***4***				***15***	***189***	***5***		
8:15 AM	***8:30 AM***		***1***	***0***	***12***				***7***	***359***	***0***				***4***	***0***	***4***				***9***	***177***	***5***		
8:30 AM	***8:45 AM***		***2***	***0***	***4***				***8***	***354***	***1***				***2***	***0***	***6***				***5***	***182***	***7***		
8:45 AM	***9:00 AM***		***2***	***0***	***13***				***9***	***307***	***2***				***9***	***0***	***6***				***7***	***187***	***1***		
4:30 PM	4:45 PM		1	0	8				0	203	3				1	0	3				33	461	6		
4:45 PM	5:00 PM		1	0	6				3	206	6				1	0	10				28	450	9		
5:00 PM	***5:15 PM***		***0***	***0***	***5***				***1***	***216***	***5***				***0***	***0***	***8***				***42***	***493***	***7***		
5:15 PM	***5:30 PM***		***0***	***0***	***10***				***3***	***212***	***4***				***1***	***2***	***6***				***61***	***463***	***22***		
5:30 PM	***5:45 PM***		***1***	***0***	***8***				***10***	***206***	***1***				***1***	***0***	***4***				***64***	***460***	***23***		
5:45 PM	***6:00 PM***		***0***	***0***	***7***				***7***	***194***	***4***				***1***	***0***	***7***				***56***	***476***	***18***		
6:00 PM	6:15 PM		0	1	9				4	211	2				0	0	9				43	460	11		
6:15 PM	6:30 PM		3	0	6				4	242	5				2	0	6				28	447	7		

AM Peak Hour	*Intersection PHF:*	*0.96*	*Intersection PHV:*	*0*	*8*	*0*	*36*			*0*	*30*	*1,316*	*6*			*0*	*18*	*0*	*20*			*0*	*36*	*735*	*18*		
	Peak Hour	*8:00 AM - 9:00 AM*	*PHF:*		*0.67*	*0.00*	*0.69*				*0.83*	*0.92*	*0.50*				*0.50*	*0.00*	*0.83*				*0.60*	*0.97*	*0.64*		
	Study Area PHF:	**0.96**	**Study Area PHV:**	**0**	**8**	**0**	**36**			**0**	**30**	**1,316**	**6**			**0**	**18**	**0**	**20**			**0**	**36**	**735**	**18**		
	Peak Hour:	**8:00 AM - 9:00 AM**	**PHF:**		**0.67**	**0.00**	**0.69**				**0.83**	**0.92**	**0.50**				**0.50**	**0.00**	**0.83**				**0.60**	**0.97**	**0.64**		
PM Peak Hour	*Intersection PHF:*	*0.99*	*Intersection PHV:*	*0*	*1*	*0*	*30*			*0*	*21*	*828*	*14*			*0*	*3*	*2*	*25*			*0*	*223*	*1,892*	*70*		
	Peak Hour	*5:00 PM - 6:00 PM*	*PHF:*		*0.25*	*0.00*	*0.75*				*0.53*	*0.96*	*0.70*				*0.75*	*0.25*	*0.78*				*0.87*	*0.96*	*0.76*		
	Study Area PHF:	**0.99**	**Study Area PHV:**	**0**	**1**	**0**	**30**			**0**	**21**	**828**	**14**			**0**	**3**	**2**	**25**			**0**	**223**	**1,892**	**70**		
	Peak Hour:	**5:00 PM - 6:00 PM**	**PHF:**		**0.25**	**0.00**	**0.75**				**0.53**	**0.96**	**0.70**				**0.75**	**0.25**	**0.78**				**0.87**	**0.96**	**0.76**		

Buena Vista Street at N Fitzhugh Avenue

Intersection Turning Movement Counts

				NORTH LEG						EAST LEG						SOUTH LEG											
				Southbound Approach on Buena Vista Street						Westbound Approach on Lee Street						Northbound Approach on Buena Vista Street											
				Vehicles				Peds		Vehicles				Peds		Vehicles				Peds							
		START	END	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW						
City:	*Dallas*	7:00 AM	7:15 AM		3	3	0				1	-	1				-	7	2								
State:	*Texas*	7:15 AM	7:30 AM		2	8	0				4	-	1				-	9	4								
Day:	*Thursday*	7:30 AM	7:45 AM		1	11	0				0	-	0				-	10	3								
Date:	*29-Mar*	7:45 AM	8:00 AM		3	8	0				0	-	1				-	14	2								
Year:	***2018***	***8:00 AM***	***8:15 AM***		***3***	***3***	***0***				***3***	***-***	***0***				***-***	***11***	***4***								
Data Collector:	***Camera***	**8:15 AM**	**8:30 AM**		**1**	**6**	**0**				**1**	**-**	**2**				**-**	**9**	**3**								
Data Source:	***CJ Hensch & Associates, Inc***	**8:30 AM**	**8:45 AM**		**1**	**4**	**0**				**1**	**-**	**0**				**-**	**5**	**3**								
Traffic Control:	***Minor Approach Stop***	**8:45 AM**	**9:00 AM**		**0**	**10**	**0**				**3**	**-**	**1**				**-**	**6**	**1**								
Observations:																											
		4:30 PM	4:45 PM		0	5	0				2	-	0				-	25	11								
		4:45 PM	5:00 PM		2	5	0				1	-	2				-	24	7								
		5:00 PM	**5:15 PM**		**0**	**6**	**0**				**1**	**-**	**1**				**-**	**27**	**13**								
		5:15 PM	***5:30 PM***		***1***	***9***	***0***				***1***	***-***	***1***				***-***	***38***	***24***								
		5:30 PM	***5:45 PM***		***1***	***4***	***0***				***4***	***-***	***0***				***-***	***43***	***27***								
		5:45 PM	***6:00 PM***		***6***	***8***	***0***				***1***	***-***	***0***				***-***	***36***	***22***								
		6:00 PM	*6:15 PM*		*0*	*7*	*0*				*3*	-	*1*				-	*25*	*13*								
		6:15 PM	6:30 PM		1	7	0				1	-	2				-	26	8								

AM Peak Hour	*Intersection PHF:*	*0.94*	*Intersection PHV:*	*0*	*9*	*30*	*0*			*0*	*7*	*0*	*2*			*0*	*0*	*44*	*13*			*0*	*0*	*0*	*0*		
	Peak Hour	*7:15 AM - 8:15 AM*	*PHF:*		*0.75*	*0.68*	*0.00*				*0.44*	*0.00*	*0.50*				*0.00*	*0.79*	*0.81*				*0.00*	*0.00*	*0.00*		
	Study Area PHF:	**0.84**	**Study Area PHV:**	**0**	**5**	**23**	**0**			**0**	**8**	**0**	**3**			**0**	**0**	**31**	**11**			**0**	**0**	**0**	**0**		
	Peak Hour:	**8:00 AM - 9:00 AM**	**PHF:**		**0.42**	**0.58**	**0.00**				**0.67**	**0.00**	**0.38**				**0.00**	**0.70**	**0.69**				**0.00**	**0.00**	**0.00**		
PM Peak Hour	*Intersection PHF:*	*0.87*	*Intersection PHV:*	*0*	*8*	*28*	*0*			*0*	*9*	*0*	*2*			*0*	*0*	*142*	*86*			*0*	*0*	*0*	*0*		
	Peak Hour	*5:15 PM - 6:15 PM*	*PHF:*		*0.33*	*0.78*	*0.00*				*0.56*	*0.00*	*0.50*				*0.00*	*0.83*	*0.80*				*0.00*	*0.00*	*0.00*		
	Study Area PHF:	**0.87**	**Study Area PHV:**	**0**	**8**	**27**	**0**			**0**	**7**	**0**	**2**			**0**	**0**	**144**	**86**			**0**	**0**	**0**	**0**		
	Peak Hour:	**5:00 PM - 6:00 PM**	**PHF:**		**0.33**	**0.75**	**0.00**				**0.44**	**0.00**	**0.50**				**0.00**	**0.84**	**0.80**				**0.00**	**0.00**	**0.00**		

Buena Vista Street at Lee Street

Intersection Turning Movement Counts

				NORTH LEG						EAST LEG												WEST LEG					
				Southbound Approach on Abbott Avenue						Westbound Approach on N Fitzhugh Avenue												Eastbound Approach on N Fitzhugh Avenue					
				Vehicles				Peds		Vehicles				Peds								Vehicles				Peds	
		START	END	U	L	T	R	CCW	CW	U	L	T	R	CCW	CW							U	L	T	R	CCW	CW
City:	*Dallas*	7:00 AM	7:15 AM		4	-	7				-	252	8										15	134	-		
State:	*Texas*	7:15 AM	7:30 AM		1	-	2				-	342	8										13	143	-		
Day:	*Thursday*	7:30 AM	7:45 AM		5	-	4				-	359	11										28	193	-		
Date:	*18-Sep*	7:45 AM	8:00 AM		0	-	7				-	367	24										24	205	-		
Year:	*2018*	***8:00 AM***	***8:15 AM***		***5***	***-***	***6***				***-***	***345***	***35***										***34***	***210***	***-***		
Data Collector:	*Camera*	***8:15 AM***	***8:30 AM***		***2***	***-***	***8***				***-***	***331***	***32***										***39***	***230***	***-***		
Data Source:	*CJ Hensch & Associates, Inc*	***8:30 AM***	***8:45 AM***		***8***	***-***	***13***				***-***	***271***	***35***										***33***	***255***	***-***		
Traffic Control:	*Minor Approach Stop*	***8:45 AM***	***9:00 AM***		***6***	***-***	***13***				***-***	***310***	***22***										***26***	***230***	***-***		
Observations:																											
		4:30 PM	4:45 PM		12	-	10				-	182	9										22	498	-		
		4:45 PM	5:00 PM		4	-	14				-	220	8										12	438	-		
		5:00 PM	***5:15 PM***		***4***	***-***	***17***				***-***	***221***	***4***										***22***	***532***	***-***		
		5:15 PM	***5:30 PM***		***13***	***-***	***16***				***-***	***261***	***13***										***34***	***476***	***-***		
		5:30 PM	***5:45 PM***		***4***	***-***	***17***				***-***	***242***	***12***										***26***	***520***	***-***		
		5:45 PM	***6:00 PM***		***17***	***-***	***15***				***-***	***219***	***15***										***29***	***446***	***-***		
		6:00 PM	6:15 PM		6	-	19				-	246	18										32	478	-		
		6:15 PM	6:30 PM		9	-	10				-	213	8										22	443	-		
AM Peak Hour	*Intersection PHF:*	*0.98*	*Intersection PHV:*	*0*	*15*	*0*	*34*			*0*	*0*	*1,314*	*126*									*0*	*130*	*900*	*0*		
	Peak Hour	*7:45 AM - 8:45 AM*	*PHF:*		*0.47*	*0.00*	*0.65*				*0.00*	*0.90*	*0.90*										*0.83*	*0.88*	*0.00*		
	Study Area PHF:	**0.96**	**Study Area PHV:**	**0**	**8**	**0**	**36**			**0**	**30**	**1,316**	**6**									**0**	**36**	**735**	**18**		
	Peak Hour:	**8:00 AM - 9:00 AM**	**PHF:**		**0.67**	**0.00**	**0.69**				**0.83**	**0.92**	**0.50**										**0.60**	**0.97**	**0.64**		
PM Peak Hour	*Intersection PHF:*	*0.97*	*Intersection PHV:*	*0*	*38*	*0*	*65*			*0*	*0*	*943*	*44*									*0*	*111*	*1,974*	*0*		
	Peak Hour	*5:00 PM - 6:00 PM*	*PHF:*		*0.56*	*0.00*	*0.96*				*0.00*	*0.90*	*0.73*										*0.82*	*0.93*	*0.00*		
	Study Area PHF:	**0.99**	**Study Area PHV:**	**0**	**1**	**0**	**30**			**0**	**21**	**828**	**14**									**0**	**223**	**1,892**	**70**		
	Peak Hour:	**5:00 PM - 6:00 PM**	**PHF:**		**0.25**	**0.00**	**0.75**				**0.53**	**0.96**	**0.70**										**0.87**	**0.96**	**0.76**		

PK# 3205-17.452

Abbott Avenue at N Fitzhugh Avenue

ROADWAY: Buena Vista Street
LOCATION: Adjacent to site
DAY: Thursday
DATE: March 29th
YEAR: 2018
SOURCE: CJ Hensch & Associates, Inc

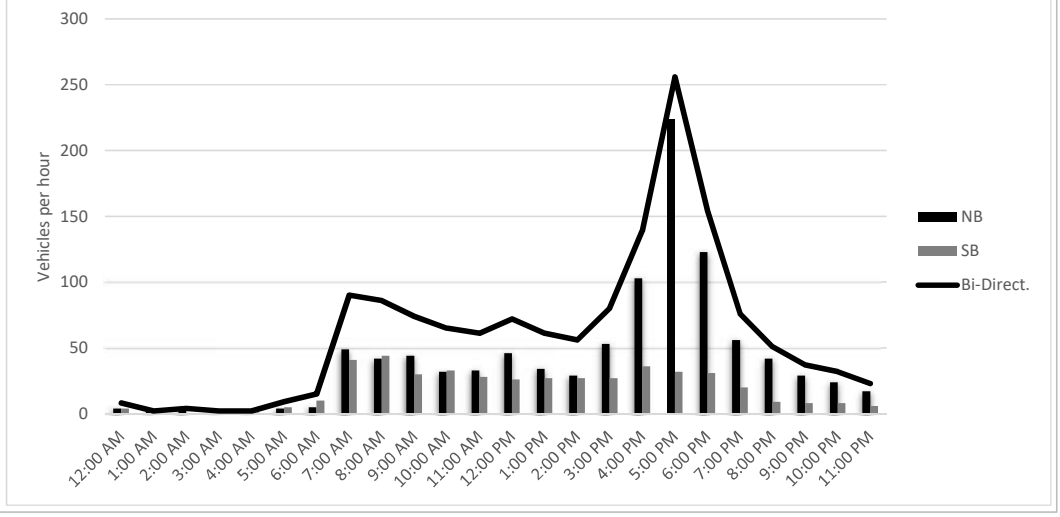
24-HOUR, BI-DIRECTIONAL VOLUME
1,455
(WEEKDAY)

Buena Vista Street

	Northbound				Southbound				Totals		
START TIME	0:00	0:15	0:30	0:45	0:00	0:15	0:30	0:45	NB	SB	Bi-Direct.
12:00 AM	0	2	2	0	1	0	2	1	4	4	8
1:00 AM	0	0	1	1	0	0	0	0	2	0	2
2:00 AM	0	2	2	0	0	0	0	0	4	0	4
3:00 AM	0	1	0	0	1	0	0	0	1	1	2
4:00 AM	0	0	1	0	0	0	1	0	1	1	2
5:00 AM	0	2	0	2	1	2	0	2	4	5	9
6:00 AM	0	4	0	1	1	4	1	4	5	10	15
7:00 AM	9	12	14	14	4	13	16	8	49	41	90
8:00 AM	18	9	6	9	11	12	6	15	42	44	86
9:00 AM	10	12	11	11	7	9	9	5	44	30	74
10:00 AM	6	9	11	6	10	6	9	8	32	33	65
11:00 AM	7	7	9	10	9	6	8	5	33	28	61
12:00 PM	12	8	11	15	6	8	5	7	46	26	72
1:00 PM	15	7	6	6	8	7	7	5	34	27	61
2:00 PM	10	4	10	5	7	6	7	7	29	27	56
3:00 PM	10	13	13	17	9	2	7	9	53	27	80
4:00 PM	18	21	32	32	9	11	9	7	103	36	139
5:00 PM	44	64	61	55	6	10	10	6	224	32	256
6:00 PM	43	34	25	21	10	10	7	4	123	31	154
7:00 PM	18	15	16	7	7	6	5	2	56	20	76
8:00 PM	12	9	7	14	3	2	2	2	42	9	51
9:00 PM	6	12	6	5	2	5	1	0	29	8	37
10:00 PM	7	10	4	3	2	2	2	2	24	8	32
11:00 PM	2	7	5	3	2	4	0	0	17	6	23

			NB	SB	Bi-Direct.
		24-Hour Total:	1,001	454	1,455
7:15 AM	8:15 AM	(Bi-Direct.) AM Peak Hour Total:	58	48	106
5:15 PM	6:15 PM	(Bi-Direct.) PM Peak Hour Total:	223	36	259
5:00 PM	6:00 PM	Highest By Direction (NB):	224		
7:15 AM	8:15 AM	Highest By Direction (SB):		48	

Graph



PK# 3205-17.452

Pacheco Koch

ROADWAY: N Fitzhugh Avenue
LOCATION: Adjacent to site
DAY: Thursday
DATE: March 29th
YEAR: 2018
SOURCE: CJ Hensch & Associates, Inc

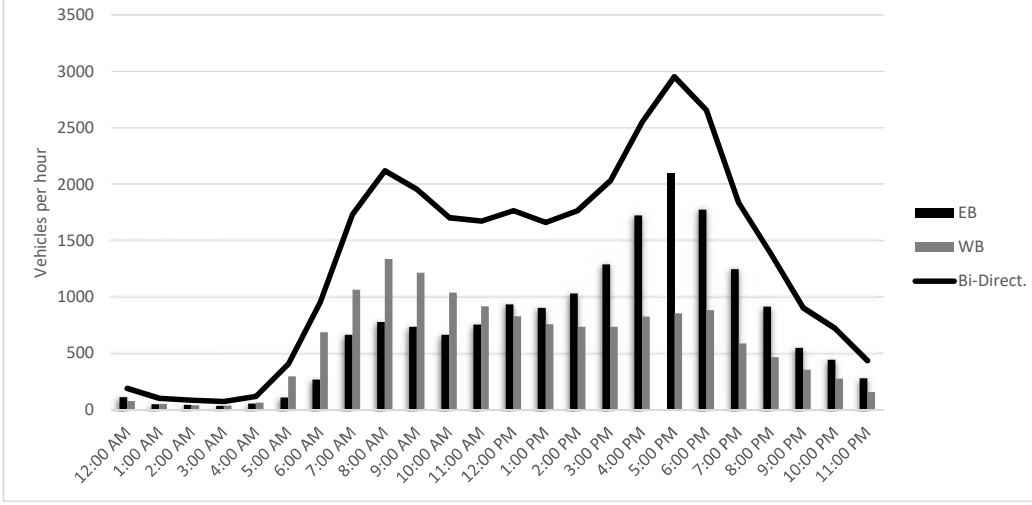
24-HOUR, BI-DIRECTIONAL VOLUME
31,747
(WEEKDAY)

N Fitzhugh Avenue

	Eastbound				Westbound				Totals		
START TIME	0:00	0:15	0:30	0:45	0:00	0:15	0:30	0:45	EB	WB	Bi-Direct.
12:00 AM	29	34	26	22	18	22	26	12	111	78	189
1:00 AM	16	14	11	8	13	17	10	12	49	52	101
2:00 AM	9	7	15	12	10	9	10	11	43	40	83
3:00 AM	10	6	6	12	11	8	7	12	34	38	72
4:00 AM	6	10	16	22	12	12	15	25	54	64	118
5:00 AM	13	25	30	40	48	62	84	101	108	295	403
6:00 AM	39	69	72	88	132	162	184	209	268	687	955
7:00 AM	118	158	199	191	229	259	275	302	666	1065	1731
8:00 AM	202	194	191	192	305	355	360	318	779	1338	2117
9:00 AM	221	182	154	180	322	303	291	299	737	1215	1952
10:00 AM	152	180	185	148	279	261	245	253	665	1038	1703
11:00 AM	160	182	198	216	248	233	221	214	756	916	1672
12:00 PM	236	235	234	230	208	200	212	210	935	830	1765
1:00 PM	207	219	246	230	189	193	185	191	902	758	1660
2:00 PM	226	280	268	258	172	189	190	184	1032	735	1767
3:00 PM	328	320	320	322	172	189	186	190	1290	737	2027
4:00 PM	366	384	494	480	194	203	214	216	1724	827	2551
5:00 PM	526	518	524	529	218	219	216	203	2097	856	2953
6:00 PM	514	485	415	361	214	239	214	216	1775	883	2658
7:00 PM	366	312	298	270	169	149	135	136	1246	589	1835
8:00 PM	224	244	192	253	139	126	116	85	913	466	1379
9:00 PM	145	137	137	128	100	87	90	79	547	356	903
10:00 PM	124	120	96	104	82	78	56	59	444	275	719
11:00 PM	75	69	72	62	38	43	37	38	278	156	434

			EB	WB	Bi-Direct.
		24-Hour Total:	17,453	14,294	31,747
8:15 AM	9:15 AM	(Bi-Direct.) AM Peak Hour Total:	798	1,355	2,153
5:00 PM	6:00 PM	(Bi-Direct.) PM Peak Hour Total:	2,097	856	2,953
5:00 PM	6:00 PM	Highest By Direction (EB):	2,097		
8:15 AM	9:15 AM	Highest By Direction (WB):		1,355	

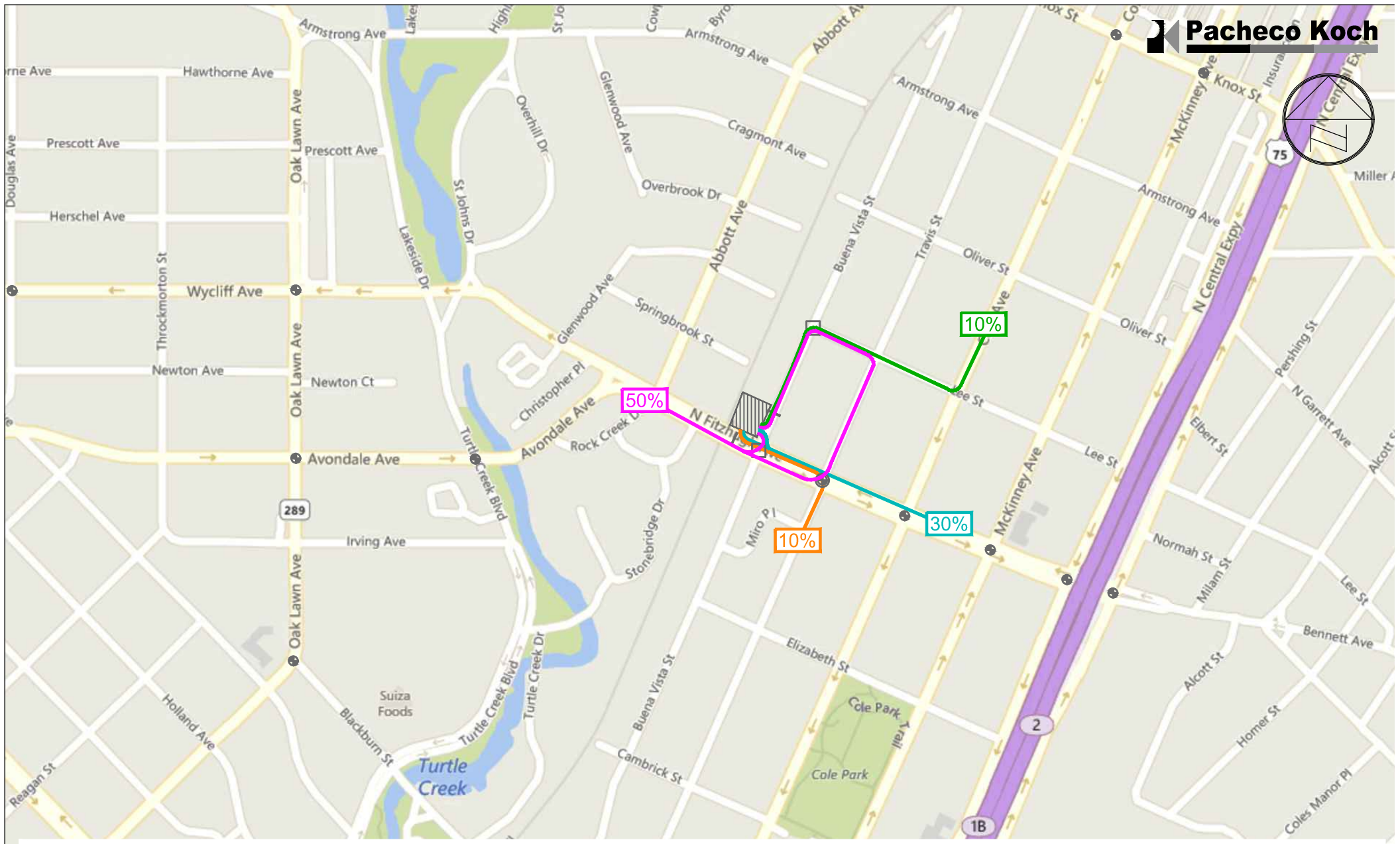
Graph



PK# 3205-17.452

Pacheco Koch

Appendix C. Site-Generated Traffic Supplement

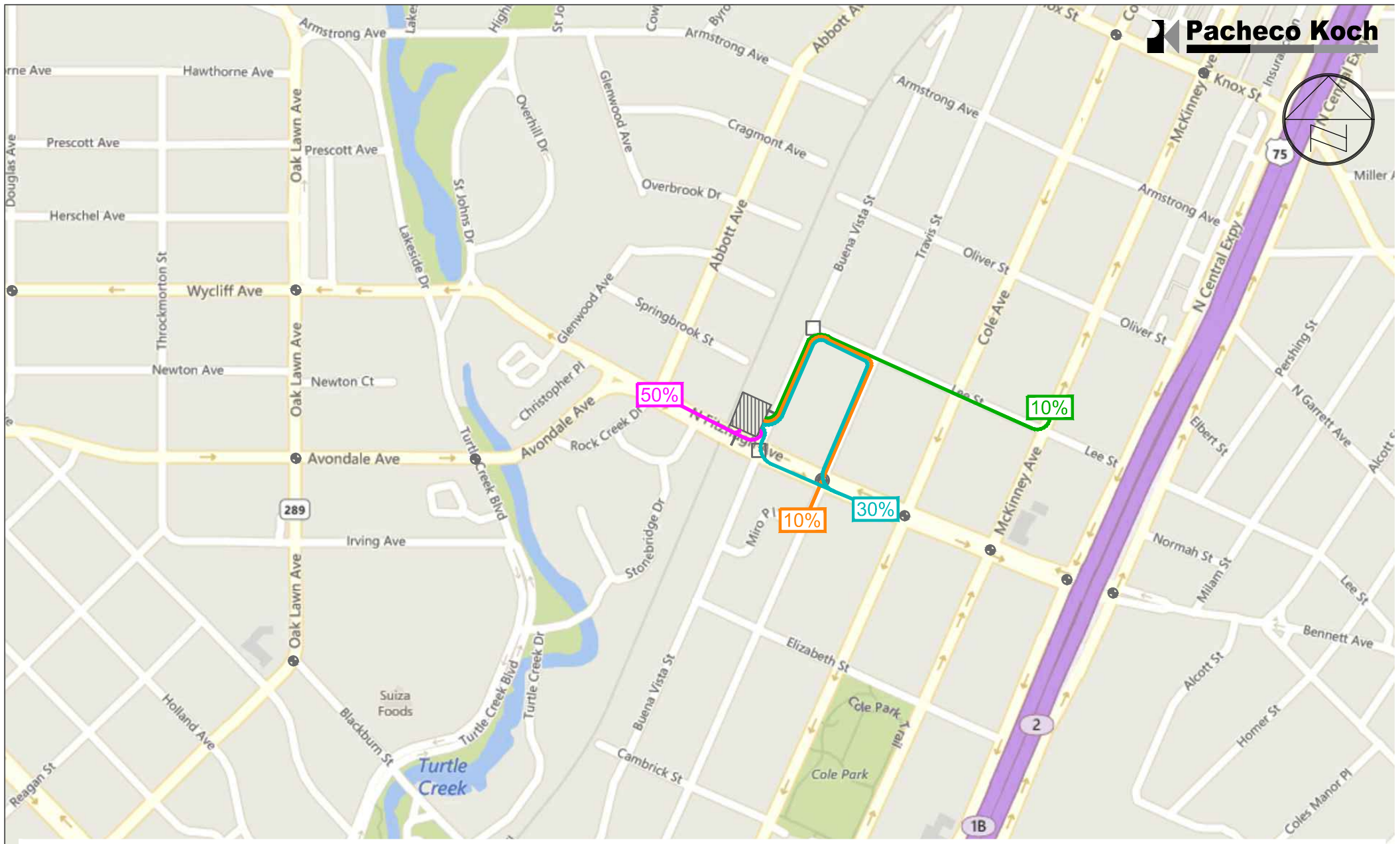


Site Generated Trip Distribution - Inbound

4205 Buena Vista, Dallas, Texas

PK #3205-17.452 (HWL: 10/05/18)

APPENDIX C1



- Project Location
- Traffic Signal
- Study Area Intersection (Signalized)
- Study Area Intersection (Unsignalized)
- Road-Tube Counts

Site Generated Trip Distribution - Outbound

4205 Buena Vista, Dallas, Texas

PK #3205-17.452 (HWL: 10/05/18)

APPENDIX **C2**

	Development Program			Weekday Trip Ends						
				Weekday	AM Peak - Adjacent Street			PM Peak - Adjacent Street		
	Land Use	Quantity	Units	Daily	In	Out	**Total**	In	Out	**Total**
Use "A"	Shopping Center	3,175	SF	120	2	1	**3**	6	6	**12**
Use "B"	High-Turnover Restaurant	5,050	SF	567	28	22	**50**	30	19	**49**
Use "C"	Office	10,000	SF	114	31	5	**36**	2	11	**13**
Use "D"	Apartment	34	DU	216	4	13	**17**	14	9	**23**
Subtotal (no adjustments)				1017	65	41	106	52	45	97
Ped/Trans Reductions				51	3	2	5	3	2	5
Internal Capture					11	11	22	13	13	26
Subtotal				966	51	28	79	36	30	66

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Buena Vista	**Organization:**	Pacheco Koch
Project Location:	Dallas, TX	**Performed By:**	AJV
Scenario Description:	Mixed Use Development	**Date:**	7/25/2018
Analysis Year:	2018	**Checked By:**	SES
Analysis Period:	**AM Street Peak Hour**	**Date:**	10/4/2018

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office		10,000	SF	36	31	5
Retail		3,175	SF	3	2	1
Restaurant		5,050	SF	50	28	22
Cinema/Entertainment				0		
Residential		34	DU	17	4	13
Hotel				0		
All Other Land Uses[2]				0		
				106	65	41

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00		5%	1.00		5%
Retail	1.00		5%	1.00		5%
Restaurant	1.00		5%	1.00		5%
Cinema/Entertainment	1.00		5%	1.00		5%
Residential	1.00		5%	1.00		5%
Hotel	1.00		5%	1.00		5%
All Other Land Uses[2]	1.00		5%	1.00		5%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	3	0	0	0
Retail	0		0	0	0	0
Restaurant	4	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	3	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	106	65	41
Internal Capture Percentage	21%	17%	27%
External Vehicle-Trips[5]	80	52	28
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	4	2	2

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	13%	80%
Retail	50%	0%
Restaurant	21%	18%
Cinema/Entertainment	N/A	N/A
Residential	0%	23%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Buena Vista
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	31	31	1.00	5	5
Retail	1.00	2	2	1.00	1	1
Restaurant	1.00	28	28	1.00	22	22
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	4	4	1.00	13	13
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	3	0	0	0
Retail	0		0	0	0	0
Restaurant	7	3		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	3	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	6	0	0	0
Retail	1		14	0	0	0
Restaurant	4	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	6	0		0
Hotel	1	0	2	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	4	27	31	26	0	1
Retail	1	1	2	1	0	0
Restaurant	6	22	28	21	0	1
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	4	4	4	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	4	1	5	1	0	0
Retail	0	1	1	1	0	0
Restaurant	4	18	22	17	0	1
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	10	13	9	0	1
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Buena Vista	**Organization:**	Pacheco Koch
Project Location:	Dallas,TX	**Performed By:**	AJV
Scenario Description:	Mixed Use Development	**Date:**	7/25/2018
Analysis Year:	2018	**Checked By:**	SES
Analysis Period:	**PM Street Peak Hour**	**Date:**	10/4/2018

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office		10,000	SF	13	2	11
Retail		3,175	SF	12	6	6
Restaurant		5,050	SF	49	30	19
Cinema/Entertainment				0		
Residential		34	DU	23	14	9
Hotel				0		
All Other Land Uses[2]				0		
				97	52	45

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00		5%	1.00		5%
Retail	1.00		5%	1.00		5%
Restaurant	1.00		5%	1.00		5%
Cinema/Entertainment	1.00		5%	1.00		5%
Residential	1.00		5%	1.00		5%
Hotel	1.00		5%	1.00		5%
All Other Land Uses[2]	1.00		5%	1.00		5%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	2	0
Restaurant	1	3		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	2	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	97	52	45
Internal Capture Percentage	27%	25%	29%
External Vehicle-Trips[5]	67	37	30
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	4	2	2

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	50%	0%
Retail	67%	67%
Restaurant	13%	32%
Cinema/Entertainment	N/A	N/A
Residential	29%	33%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Buena Vista
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	2	2	1.00	11	11
Retail	1.00	6	6	1.00	6	6
Restaurant	1.00	30	30	1.00	19	19
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	14	14	1.00	9	9
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	0		2	0	2	0
Restaurant	1	8		2	3	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	2	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	1	0
Retail	1		9	0	6	0
Restaurant	1	3		0	2	0
Cinema/Entertainment	0	0	1		1	0
Residential	1	1	4	0		0
Hotel	0	0	2	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	1	1	2	1	0	0
Retail	4	2	6	2	0	0
Restaurant	4	26	30	25	0	1
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	10	14	9	0	1
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	11	11	10	0	1
Retail	4	2	6	2	0	0
Restaurant	6	13	19	12	0	1
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	6	9	6	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix D. Detailed Intersection Capacity Analysis Results

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	694	15	25	1193	41	37	36	22	35	13	68
Future Volume (vph)	60	694	15	25	1193	41	37	36	22	35	13	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	754	16	27	1297	45	40	39	24	38	14	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	770	0	27	1342	0	0	103	0	0	126	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	55.0	55.0		55.0	55.0		20.0	20.0		20.0	20.0	
Total Split (%)	73.3%	73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	59.4	59.4		59.4	59.4			9.5			9.5	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.13			0.13	
v/c Ratio	0.24	0.19		0.05	0.33			0.53			0.50	
Control Delay	6.2	2.8		3.4	3.3			34.9			20.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.2	2.8		3.4	3.3			34.9			20.9	
LOS	A	A		A	A			C			C	
Approach Delay		3.1			3.3			34.9			20.9	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	7	28		2	56			37			22	
Queue Length 95th (ft)	28	50		10	96			79			67	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	273	4020		513	4013			305			367	
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	0.24	0.19		0.05	0.33			0.34			0.34	

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53

Intersection Signal Delay: 5.5 — Intersection LOS: A
Intersection Capacity Utilization 47.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	735	18	30	1316	6	18	0	20	8	0	36
Future Vol, veh/h	36	735	18	30	1316	6	18	0	20	8	0	36
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	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	799	20	33	1430	7	20	0	22	9	0	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1437	0	0	819	0	0	1525	2390	410	1898	2397	719
Stage 1	-	-	-	-	-	-	887	887	-	1500	1500	-
Stage 2	-	-	-	-	-	-	638	1503	-	398	897	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	239	-	-	478	-	-	124	33	505	73	33	318
Stage 1	-	-	-	-	-	-	238	360	-	88	184	-
Stage 2	-	-	-	-	-	-	393	183	-	548	357	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	239	-	-	478	-	-	90	26	505	58	26	318
Mov Cap-2 Maneuver	-	-	-	-	-	-	90	26	-	58	26	-
Stage 1	-	-	-	-	-	-	199	301	-	74	171	-
Stage 2	-	-	-	-	-	-	321	170	-	439	299	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.3	35.4	33.1
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	159	239	-	-	478	-	-	175
HCM Lane V/C Ratio	0.26	0.164	-	-	0.068	-	-	0.273
HCM Control Delay (s)	35.4	23	-	-	13.1	-	-	33.1
HCM Lane LOS	E	C	-	-	B	-	-	D
HCM 95th %tile Q(veh)	1	0.6	-	-	0.2	-	-	1.1

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	3	31	11	5	23
Future Vol, veh/h	8	3	31	11	5	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	34	12	5	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	75	40	0	0	46	0
Stage 1	40	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	928	1031	-	-	1562	-
Stage 1	982	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	925	1031	-	-	1562	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	987	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	952	1562	-
HCM Lane V/C Ratio	-	-	0.013	0.003	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	735	1316	6	8	36
Future Vol, veh/h	36	735	1316	6	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	799	1430	7	9	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1437	0	-	0	1832	719
Stage 1	-	-	-	-	1434	-
Stage 2	-	-	-	-	398	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	239	-	-	-	115	318
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	593	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	239	-	-	-	96	318
Mov Cap-2 Maneuver	-	-	-	-	96	-
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	593	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	25.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	239	-	-	-	224
HCM Lane V/C Ratio	0.164	-	-	-	0.214
HCM Control Delay (s)	23	-	-	-	25.4
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	1769	38	16	781	67	40	46	22	19	46	56
Future Volume (vph)	110	1769	38	16	781	67	40	46	22	19	46	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	1923	41	17	849	73	43	50	24	21	50	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	1964	0	17	922	0	0	117	0	0	132	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	90.0	90.0		90.0	90.0		30.0	30.0		30.0	30.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	97.3	97.3		97.3	97.3			13.7			13.7	
Actuated g/C Ratio	0.81	0.81		0.81	0.81			0.11			0.11	
v/c Ratio	0.27	0.48		0.13	0.23			0.83			0.63	
Control Delay	5.1	4.2		5.7	2.9			88.0			50.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.1	4.2		5.7	2.9			88.0			50.2	
LOS	A	A		A	A			F			D	
Approach Delay		4.3			3.0			88.0			50.2	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)	18	136		2	46			82			74	
Queue Length 95th (ft)	48	209		11	75			144			134	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	446	4114		133	4080			254			365	
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	0.27	0.48		0.13	0.23			0.46			0.36	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83

Intersection Signal Delay: 8.8 — Intersection LOS: A
Intersection Capacity Utilization 62.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	223	1892	70	21	828	14	3	2	25	1	0	30
Future Vol, veh/h	223	1892	70	21	828	14	3	2	25	1	0	30
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	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	242	2057	76	23	900	15	3	2	27	1	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	915	0	0	2133	0	0	2985	3540	1067	2262	3571	458
Stage 1	-	-	-	-	-	-	2579	2579	-	954	954	-
Stage 2	-	-	-	-	-	-	406	961	-	1308	2617	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	430	-	-	107	-	-	15	6	187	43	6	470
Stage 1	-	-	-	-	-	-	14	52	-	214	335	-
Stage 2	-	-	-	-	-	-	542	333	-	151	49	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	430	-	-	107	-	-	7	~ 2	187	-	2	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	7	~ 2	-	-	2	-
Stage 1	-	-	-	-	-	-	6	23	-	94	263	-
Stage 2	-	-	-	-	-	-	396	261	-	51	21	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	1.2	$ 770.7	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	19	430	-	-	107	-	-	-
HCM Lane V/C Ratio	1.716	0.564	-	-	0.213	-	-	-
HCM Control Delay (s)	$ 770.7	23.7	-	-	47.5	-	-	-
HCM Lane LOS	F	C	-	-	E	-	-	-
HCM 95th %tile Q(veh)	4.4	3.4	-	-	0.8	-	-	-

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

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	2	144	86	8	27
Future Vol, veh/h	7	2	144	86	8	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	157	93	9	29

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	251	204	0	0	250	0
Stage 1	204	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	738	837	-	-	1316	-
Stage 1	830	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	733	837	-	-	1316	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	754	1316	-
HCM Lane V/C Ratio	-	-	0.013	0.007	-
HCM Control Delay (s)	-	-	9.8	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	223	1892	828	14	1	30
Future Vol, veh/h	223	1892	828	14	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	242	2057	900	15	1	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	915	0	-	0	2215	458
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	1307	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	430	-	-	-	72	470
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	194	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	430	-	-	-	31	470
Mov Cap-2 Maneuver	-	-	-	-	31	-
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	194	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	430	-	-	-	323
HCM Lane V/C Ratio	0.564	-	-	-	0.104
HCM Control Delay (s)	23.7	-	-	-	17.4
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	3.4	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	715	15	26	1229	42	38	37	23	36	13	70
Future Volume (vph)	62	715	15	26	1229	42	38	37	23	36	13	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	777	16	28	1336	46	41	40	25	39	14	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	793	0	28	1382	0	0	106	0	0	129	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	55.0	55.0		55.0	55.0		20.0	20.0		20.0	20.0	
Total Split (%)	73.3%	73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	59.4	59.4		59.4	59.4			9.5			9.5	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.13			0.13	
v/c Ratio	0.26	0.20		0.06	0.34			0.55			0.51	
Control Delay	6.8	2.9		3.5	3.4			35.3			21.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.8	2.9		3.5	3.4			35.3			21.0	
LOS	A	A		A	A			D			C	
Approach Delay		3.2			3.4			35.3			21.0	
Approach LOS		A			A			D			C	
Queue Length 50th (ft)	7	29		3	59			38			23	
Queue Length 95th (ft)	30	52		11	100			81			67	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	259	4014		501	4008			303			366	
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	0.26	0.20		0.06	0.34			0.35			0.35	

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55

Intersection Signal Delay: 5.6 — Intersection LOS: A
Intersection Capacity Utilization 48.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	757	19	31	1356	6	19	0	21	8	0	37
Future Vol, veh/h	37	757	19	31	1356	6	19	0	21	8	0	37
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	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	823	21	34	1474	7	21	0	23	9	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1481	0	0	844	0	0	1572	2463	422	1955	2470	741
Stage 1	-	-	-	-	-	-	914	914	-	1546	1546	-
Stage 2	-	-	-	-	-	-	658	1549	-	409	924	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	228	-	-	465	-	-	116	30	496	68	30	308
Stage 1	-	-	-	-	-	-	228	350	-	82	174	-
Stage 2	-	-	-	-	-	-	382	174	-	540	346	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	228	-	-	465	-	-	82	23	496	53	23	308
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	23	-	53	23	-
Stage 1	-	-	-	-	-	-	188	289	-	68	161	-
Stage 2	-	-	-	-	-	-	308	161	-	425	285	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.3	39.8	35.5
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	146	228	-	-	465	-	-	166
HCM Lane V/C Ratio	0.298	0.176	-	-	0.072	-	-	0.295
HCM Control Delay (s)	39.8	24.1	-	-	13.3	-	-	35.5
HCM Lane LOS	E	C	-	-	B	-	-	E
HCM 95th %tile Q(veh)	1.2	0.6	-	-	0.2	-	-	1.2

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	3	32	11	5	24
Future Vol, veh/h	8	3	32	11	5	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	35	12	5	26

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	77	41	0	0	47	0
Stage 1	41	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	926	1030	-	-	1560	-
Stage 1	981	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	923	1030	-	-	1560	-
Mov Cap-2 Maneuver	923	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	986	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	950	1560	-
HCM Lane V/C Ratio	-	-	0.013	0.003	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	757	1356	6	8	37
Future Vol, veh/h	37	757	1356	6	8	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	823	1474	7	9	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1481	0	-	0	1887	741
Stage 1	-	-	-	-	1478	-
Stage 2	-	-	-	-	409	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	228	-	-	-	108	308
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	228	-	-	-	89	308
Mov Cap-2 Maneuver	-	-	-	-	89	-
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	26.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	228	-	-	-	214
HCM Lane V/C Ratio	0.176	-	-	-	0.229
HCM Control Delay (s)	24.1	-	-	-	26.7
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	-	0.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	1823	39	16	805	69	41	47	23	20	47	58
Future Volume (vph)	113	1823	39	16	805	69	41	47	23	20	47	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	123	1982	42	17	875	75	45	51	25	22	51	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	2024	0	17	950	0	0	121	0	0	136	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	90.0	90.0		90.0	90.0		30.0	30.0		30.0	30.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	96.9	96.9		96.9	96.9			14.1			14.1	
Actuated g/C Ratio	0.81	0.81		0.81	0.81			0.12			0.12	
v/c Ratio	0.29	0.49		0.14	0.23			0.85			0.63	
Control Delay	5.5	4.5		6.4	3.1			89.4			50.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.5	4.5		6.4	3.1			89.4			50.3	
LOS	A	A		A	A			F			D	
Approach Delay		4.6			3.1			89.4			50.3	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)	19	146		2	49			86			77	
Queue Length 95th (ft)	52	224		12	80			148			137	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	430	4095		121	4062			252			363	
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	0.29	0.49		0.14	0.23			0.48			0.37	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85

Intersection Signal Delay: 9.0 — Intersection LOS: A
Intersection Capacity Utilization 63.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	230	1949	72	22	853	14	3	2	26	1	0	31
Future Vol, veh/h	230	1949	72	22	853	14	3	2	26	1	0	31
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	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	250	2118	78	24	927	15	3	2	28	1	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	942	0	0	2196	0	0	3076	3647	1098	2331	3679	471
Stage 1	-	-	-	-	-	-	2657	2657	-	983	983	-
Stage 2	-	-	-	-	-	-	419	990	-	1348	2696	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	417	-	-	99	-	-	13	5	178	39	5	461
Stage 1	-	-	-	-	-	-	13	47	-	205	325	-
Stage 2	-	-	-	-	-	-	533	323	-	142	45	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	417	-	-	99	-	-	5	~ 2	178	-	2	461
Mov Cap-2 Maneuver	-	-	-	-	-	-	5	~ 2	-	-	2	-
Stage 1	-	-	-	-	-	-	5	19	-	82	246	-
Stage 2	-	-	-	-	-	-	374	245	-	42	18	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	1.3	$ 856.1	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	18	417	-	-	99	-	-	-
HCM Lane V/C Ratio	1.872	0.6	-	-	0.242	-	-	-
HCM Control Delay (s)	$ 856.1	25.7	-	-	52.6	-	-	-
HCM Lane LOS	F	D	-	-	F	-	-	-
HCM 95th %tile Q(veh)	4.7	3.8	-	-	0.9	-	-	-

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

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	2	148	89	8	28
Future Vol, veh/h	7	2	148	89	8	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	161	97	9	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	258	210	0	0	258	0
Stage 1	210	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	731	830	-	-	1307	-
Stage 1	825	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	726	830	-	-	1307	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	747	1307	-
HCM Lane V/C Ratio	-	-	0.013	0.007	-
HCM Control Delay (s)	-	-	9.9	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	230	1949	853	14	1	31
Future Vol, veh/h	230	1949	853	14	1	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	250	2118	927	15	1	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	942	0	-	0	2282	471
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	1347	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	417	-	-	-	66	461
Stage 1	-	-	-	-	265	-
Stage 2	-	-	-	-	185	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	417	-	-	-	26	461
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	185	-

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	18.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	417	-	-	-	303
HCM Lane V/C Ratio	0.6	-	-	-	0.115
HCM Control Delay (s)	25.7	-	-	-	18.4
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	3.8	-	-	-	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	718	15	26	1244	42	43	37	23	42	16	70
Future Volume (vph)	67	718	15	26	1244	42	43	37	23	42	16	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	780	16	28	1352	46	47	40	25	46	17	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	796	0	28	1398	0	0	112	0	0	139	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	55.0	55.0		55.0	55.0		20.0	20.0		20.0	20.0	
Total Split (%)	73.3%	73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	58.9	58.9		58.9	58.9			10.0			10.0	
Actuated g/C Ratio	0.79	0.79		0.79	0.79			0.13			0.13	
v/c Ratio	0.29	0.20		0.06	0.35			0.58			0.54	
Control Delay	7.8	3.0		3.7	3.6			36.8			23.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	7.8	3.0		3.7	3.6			36.8			23.1	
LOS	A	A		A	A			D			C	
Approach Delay		3.4			3.6			36.8			23.1	
Approach LOS		A			A			D			C	
Queue Length 50th (ft)	9	30		3	63			42			28	
Queue Length 95th (ft)	35	54		11	106			86			75	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	251	3984		496	3978			293			360	
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	0.29	0.20		0.06	0.35			0.38			0.39	

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58

Intersection Signal Delay: 6.1 — Intersection LOS: A
Intersection Capacity Utilization 49.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	762	19	31	1366	16	19	0	21	11	0	43
Future Vol, veh/h	57	762	19	31	1366	16	19	0	21	11	0	43
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	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	828	21	34	1485	17	21	0	23	12	0	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1502	0	0	849	0	0	1625	2533	425	2017	2535	751
Stage 1	-	-	-	-	-	-	963	963	-	1562	1562	-
Stage 2	-	-	-	-	-	-	662	1570	-	455	973	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	222	-	-	463	-	-	108	27	494	62	27	303
Stage 1	-	-	-	-	-	-	211	332	-	80	171	-
Stage 2	-	-	-	-	-	-	380	170	-	507	329	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	222	-	-	463	-	-	68	18	494	44	18	303
Mov Cap-2 Maneuver	-	-	-	-	-	-	68	18	-	44	18	-
Stage 1	-	-	-	-	-	-	152	239	-	58	159	-
Stage 2	-	-	-	-	-	-	298	158	-	349	237	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.3	48.9	49.1
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	124	222	-	-	463	-	-	138
HCM Lane V/C Ratio	0.351	0.279	-	-	0.073	-	-	0.425
HCM Control Delay (s)	48.9	27.4	-	-	13.4	-	-	49.1
HCM Lane LOS	E	D	-	-	B	-	-	E
HCM 95th %tile Q(veh)	1.4	1.1	-	-	0.2	-	-	1.9

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	3	32	23	5	24
Future Vol, veh/h	18	3	32	23	5	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	3	35	25	5	26

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	84	48	0	0	60	0
Stage 1	48	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	918	1021	-	-	1544	-
Stage 1	974	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	915	1021	-	-	1544	-
Mov Cap-2 Maneuver	915	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	986	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	929	1544	-
HCM Lane V/C Ratio	-	-	0.025	0.004	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	8	31	43	45	10
Future Vol, veh/h	11	8	31	43	45	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	9	34	47	49	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	170	55	60	0	-	0
Stage 1	55	-	-	-	-	-
Stage 2	115	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	820	1012	1544	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	801	1012	1544	-	-	-
Mov Cap-2 Maneuver	801	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	3.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1544	-	878	-	-
HCM Lane V/C Ratio	0.022	-	0.024	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	838	1417	10	0	8
Future Vol, veh/h	0	838	1417	10	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	911	1540	11	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	776
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	292
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	292
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	292
HCM Lane V/C Ratio	-	-	-	0.03
HCM Control Delay (s)	-	-	-	17.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	778	1367	9	13	37
Future Vol, veh/h	37	778	1367	9	13	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	846	1486	10	14	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1496	0	-	0	1909	748
Stage 1	-	-	-	-	1491	-
Stage 2	-	-	-	-	418	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	224	-	-	-	105	305
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	224	-	-	-	86	305
Mov Cap-2 Maneuver	-	-	-	-	86	-
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	32.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	224	-	-	-	184
HCM Lane V/C Ratio	0.18	-	-	-	0.295
HCM Control Delay (s)	24.6	-	-	-	32.6
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	-	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	1826	39	16	815	69	45	47	23	26	50	58
Future Volume (vph)	117	1826	39	16	815	69	45	47	23	26	50	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	127	1985	42	17	886	75	49	51	25	28	54	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	2027	0	17	961	0	0	125	0	0	145	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	90.0	90.0		90.0	90.0		30.0	30.0		30.0	30.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	96.3	96.3		96.3	96.3			14.7			14.7	
Actuated g/C Ratio	0.80	0.80		0.80	0.80			0.12			0.12	
v/c Ratio	0.30	0.50		0.14	0.24			0.86			0.67	
Control Delay	5.9	4.8		6.8	3.2			91.3			54.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.9	4.8		6.8	3.2			91.3			54.8	
LOS	A	A		A	A			F			D	
Approach Delay		4.8			3.3			91.3			54.8	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)	21	152		2	51			89			87	
Queue Length 95th (ft)	57	235		12	84			152			149	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	421	4069		119	4037			245			352	
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	0.30	0.50		0.14	0.24			0.51			0.41	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86

Intersection Signal Delay: 9.7 — Intersection LOS: A
Intersection Capacity Utilization 63.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Intersection	
Int Delay, s/veh	17.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	244	1953	72	22	860	22	3	2	26	4	0	37
Future Vol, veh/h	244	1953	72	22	860	22	3	2	26	4	0	37
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	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	265	2123	78	24	935	24	3	2	28	4	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	959	0	0	2201	0	0	3114	3699	1101	2375	3726	480
Stage 1	-	-	-	-	-	-	2692	2692	-	995	995	-
Stage 2	-	-	-	-	-	-	422	1007	-	1380	2731	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	410	-	-	99	-	-	12	5	178	37	4	455
Stage 1	-	-	-	-	-	-	12	45	-	201	321	-
Stage 2	-	-	-	-	-	-	531	317	-	136	43	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	410	-	-	99	-	-	4	~ 1	178	-	1	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	4	~ 1	-	-	1	-
Stage 1	-	-	-	-	-	-	4	16	-	71	243	-
Stage 2	-	-	-	-	-	-	367	240	-	35	15	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	1.3	$ 1613	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	11	410	-	-	99	-	-	-
HCM Lane V/C Ratio	3.063	0.647	-	-	0.242	-	-	-
HCM Control Delay (s)	$ 1613	28.5	-	-	52.6	-	-	-
HCM Lane LOS	F	D	-	-	F	-	-	-
HCM 95th %tile Q(veh)	5.2	4.4	-	-	0.9	-	-	-

Notes

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

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	2	148	101	8	28
Future Vol, veh/h	14	2	148	101	8	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	2	161	110	9	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	264	216	0	0	271	0
Stage 1	216	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	725	824	-	-	1292	-
Stage 1	820	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	720	824	-	-	1292	-
Mov Cap-2 Maneuver	720	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	732	1292	-
HCM Lane V/C Ratio	-	-	0.024	0.007	-
HCM Control Delay (s)	-	-	10	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	9	22	246	32	7
Future Vol, veh/h	12	9	22	246	32	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	10	24	267	35	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	354	39	43	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	644	1033	1566	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	632	1033	1566	-	-	-
Mov Cap-2 Maneuver	632	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	740	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1566	-	758	-	-
HCM Lane V/C Ratio	0.015	-	0.03	-	-
HCM Control Delay (s)	7.3	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2269	893	7	0	9
Future Vol, veh/h	0	2269	893	7	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2466	971	8	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	490
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	448
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	448
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	448
HCM Lane V/C Ratio	-	-	-	0.022
HCM Control Delay (s)	-	-	-	13.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	230	1964	865	17	5	31
Future Vol, veh/h	230	1964	865	17	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	250	2135	940	18	5	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	958	0	-	0	2303	479
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	1354	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	410	-	-	-	64	456
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	183	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	410	-	-	-	25	456
Mov Cap-2 Maneuver	-	-	-	-	25	-
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	183	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	42.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	410	-	-	-	134
HCM Lane V/C Ratio	0.61	-	-	-	0.292
HCM Control Delay (s)	26.6	-	-	-	42.6
HCM Lane LOS	D	-	-	-	E
HCM 95th %tile Q(veh)	3.9	-	-	-	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	754	16	27	1307	44	45	39	24	43	17	74
Future Volume (vph)	70	754	16	27	1307	44	45	39	24	43	17	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	820	17	29	1421	48	49	42	26	47	18	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	837	0	29	1469	0	0	117	0	0	145	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	55.0	55.0		55.0	55.0		20.0	20.0		20.0	20.0	
Total Split (%)	73.3%	73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	55.8	55.8		55.8	55.8			10.2			10.2	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.14			0.14	
v/c Ratio	0.35	0.22		0.06	0.39			0.59			0.57	
Control Delay	9.9	3.4		3.8	4.1			37.2			25.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	9.9	3.4		3.8	4.1			37.2			25.8	
LOS	A	A		A	A			D			C	
Approach Delay		3.9			4.1			37.2			25.8	
Approach LOS		A			A			D			C	
Queue Length 50th (ft)	10	33		3	69			44			35	
Queue Length 95th (ft)	43	59		12	116			88			83	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	216	3771		449	3765			293			353	
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	0.35	0.22		0.06	0.39			0.40			0.41	

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59

Intersection Signal Delay: 6.7 — Intersection LOS: A
Intersection Capacity Utilization 50.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	1919	41	17	857	73	47	50	24	27	53	61
Future Volume (vph)	123	1919	41	17	857	73	47	50	24	27	53	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	2086	45	18	932	79	51	54	26	29	58	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	2131	0	18	1011	0	0	131	0	0	153	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	90.0	90.0		90.0	90.0		30.0	30.0		30.0	30.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
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												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	95.5	95.5		95.5	95.5			15.5			15.5	
Actuated g/C Ratio	0.80	0.80		0.80	0.80			0.13			0.13	
v/c Ratio	0.34	0.53		0.17	0.25			0.87			0.68	
Control Delay	6.9	5.3		8.5	3.5			91.4			54.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.9	5.3		8.5	3.5			91.4			54.6	
LOS	A	A		A	A			F			D	
Approach Delay		5.4			3.6			91.4			54.6	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)	24	172		3	57			94			93	
Queue Length 95th (ft)	66	265		14	93			159			156	
Internal Link Dist (ft)		273			375			116			49	
Turn Bay Length (ft)	75			75								
Base Capacity (vph)	394	4037		103	4004			244			353	
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	0.34	0.53		0.17	0.25			0.54			0.43	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87

Intersection Signal Delay: 10.1 — Intersection LOS: B
Intersection Capacity Utilization 65.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Travis Street & N Fitzhugh Avenue