(Revised) **March 1, 2019**
PK# 4216-19.025
Z190202/CP190202

TRAFFIC IMPACT ANALYSIS

Project:
Prairie Modern
In Grand Prairie, Texas

Prepared for:
City of Grand Prairie

On behalf of:
Woodhaven Development, LLC

Prepared by:

Steve E. Stoner

Steve E. Stoner, P.E., PTOE

Pacheco Koch

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TX.REG: ENGINEERING FIRM F-469
TX. REG. SURVEYING FIRM LS-100080-00

EXECUTIVE SUMMARY

The services of **Pacheco Koch** were retained by **Woodhaven Development, LLC** to prepare a Traffic Impact Analysis (TIA) for the proposed multifamily and self-storage development known as *Prairie Modern* (the "Project") located at the northeast quadrant of the intersection of SH 161 and Dickey Road in Grand Prairie, Texas. The Project will include approximately 272 multifamily units and 83,850 SF of self-storage use on an undeveloped, 6.18-acre site. Buildout of the Project is estimated to occur in 2020. A TIA is required by the City of Grand Prairie for review as part of the Owner's request for a zoning change of 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 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.

FINDING: Due to heavy volumes on the SH 161 frontage roads during peak hour periods, the intersections of the frontage roads and Dickey Road operate at moderate delays, which equates to marginal Level of Service conditions.

FINDING: The addition of projected background growth and site-related traffic do cause slight increases in the calculated average delays during peak hour periods; however, the increases are not enough to change the Levels of Service.

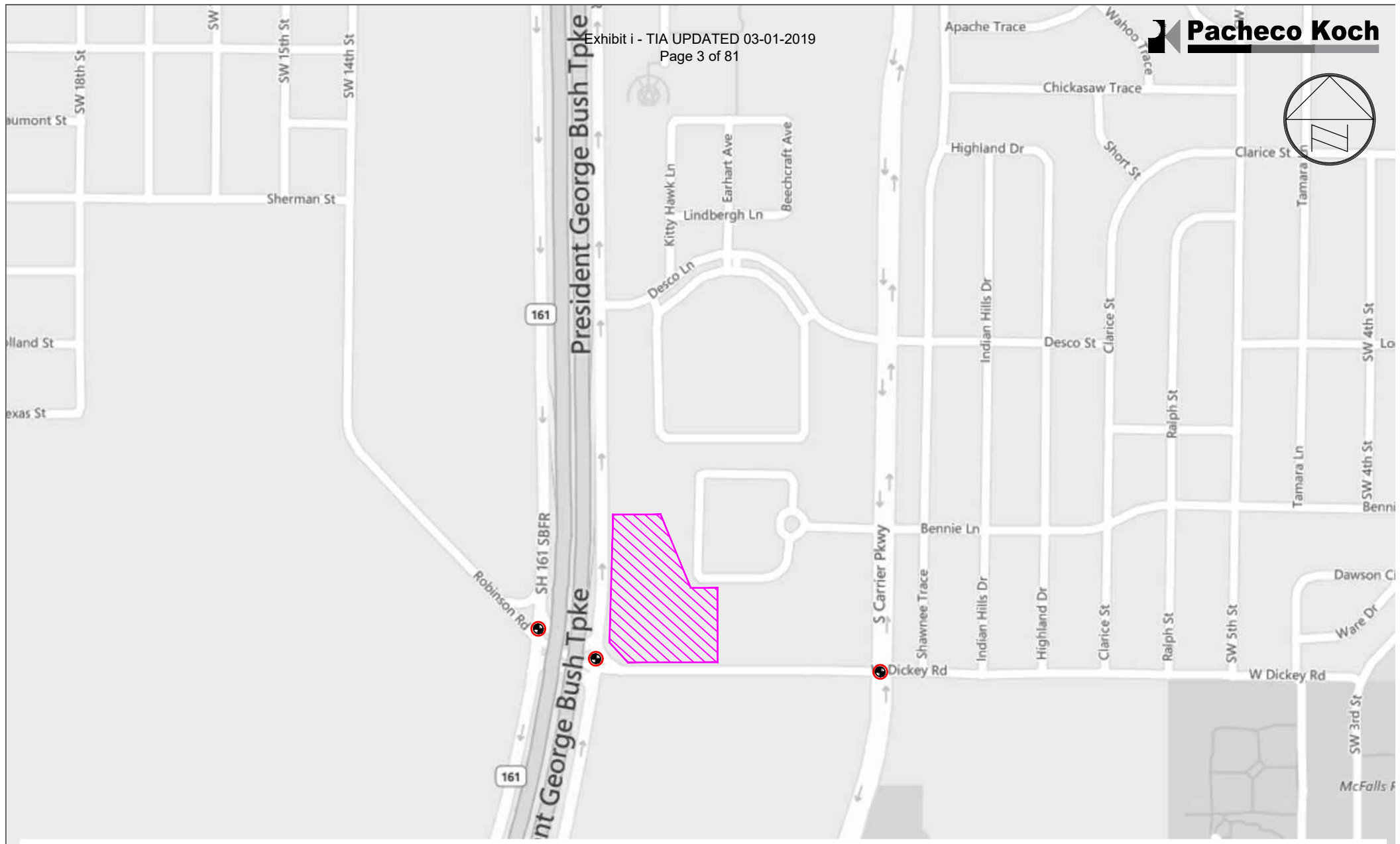
NOTE: The Developer is working with the Texas Department of Transportation to install a right-turn deceleration lane at the proposed driveway on the SH 161 northbound frontage road.

- RECOMMENDATION: Currently, some of the pavement on Dickey Road between the SH 161 frontage roads is "hatched" (i.e., not used). However, by removing the hatching, one additional lane can be created in each direction. It is recommended that these lanes be created through restriping. In the westbound direction, the additional lane is recommended to be used as a dual left-turn; in the eastbound direction, the additional lane is recommended to be used as a second through lane.

- RECOMMENDATION: In order to improve Level of Service at the diamond interchange, it is recommended that the traffic signal be re-programmed to operate as a "3-phase" condition.

END

Pacheco Koch



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

Site Location Map

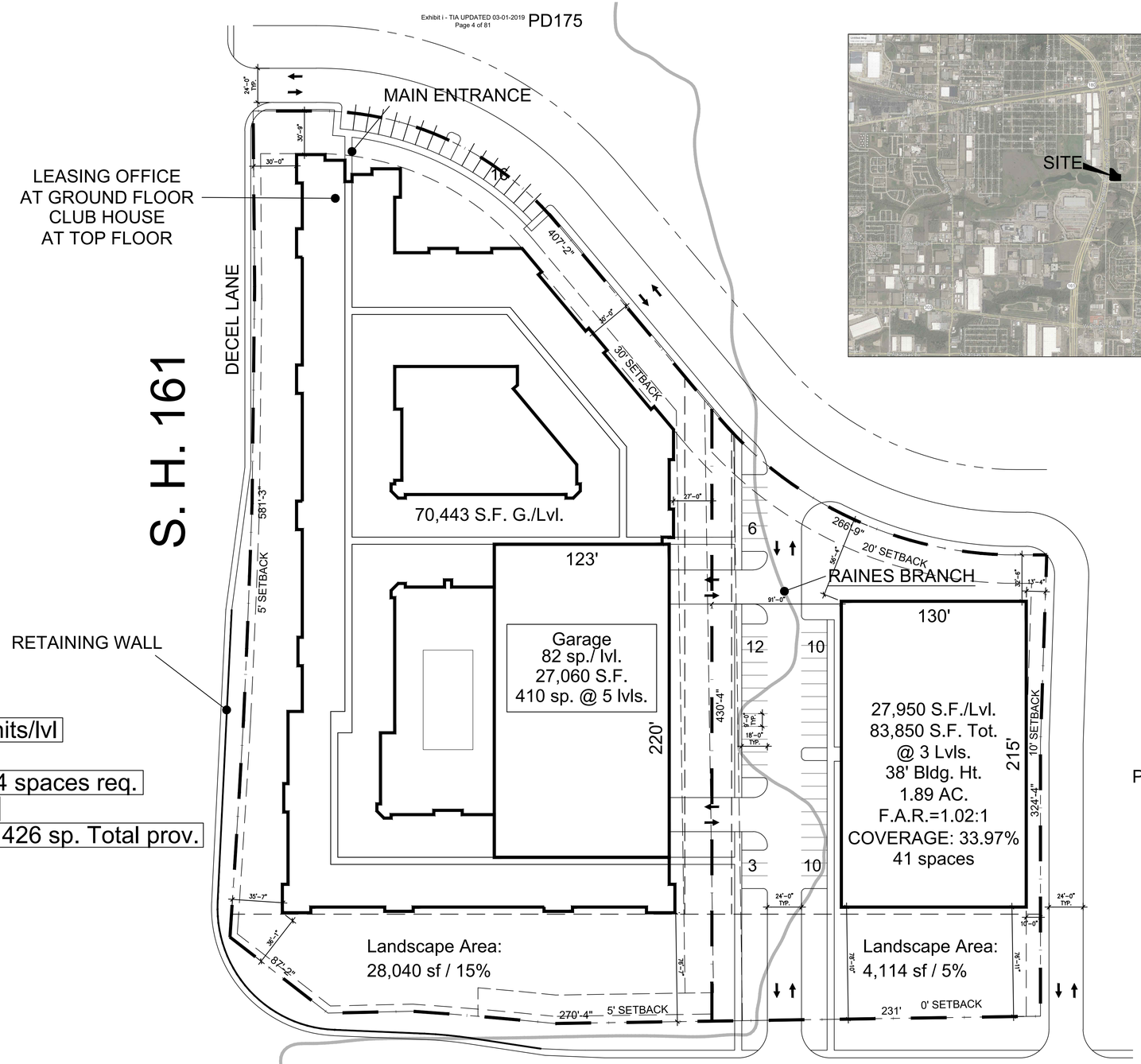
SH 161 and Dickey Road, Grand Prairie, Texas

PK #4269-19.025 (HWL: 01/25/19)

EXHIBIT **1**

PD175

AERIAL - N.T.S.



Total Building Area: 281,772 SF
@ 850 SF avg. unit size
70,443 SF/lvl x0.82=57,763 SF/850= 68 units/lvl
@ 4 levels = 272 units Total
136 units x 1.5 sp. & 136 units x 1.25 = 374 spaces req.
Total Parking Structure Area: 135,300 SF
410 spaces prov. @ 5 levels+16 surf. sp.= 426 sp. Total prov.
Site Area: 4.29 Ac.
Site Coverage: 37.68%
63 units/ Ac.

NORTH

10' 30' 80'
0' 20' 40' 120'

O'BRIEN ARCHITECTS

SP-06

Date: 01.15.2019 Scale: 1" = 40'

S. H. 161 & Dickey Rd.

Grand Prairie, Texas

Case # Z190202/CP190202

Developer:
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Woodhaven Development

TRAFFIC IMPACT ANALYSIS
Prairie Modern
Grand Prairie, Texas

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INTRODUCTION

The services of **Pacheco Koch** (PK) were retained by **Woodhaven Development, LLC** to prepare a Traffic Impact Analysis for a proposed multifamily and self-storage development located at the northeast quadrant of the intersection of SH 161 and Dickey Road in Grand Prairie, Texas. The Project is referred to herein as "Prairie Modern". A preliminary site plan for the Project, prepared by O'Brien Architects, 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, Woodhaven Development, LLC (the "Applicant") has made a request to the City of Grand Prairie (the "Approving Agency") for a zoning change of the subject property. As part of application process for this request, submittal of a TIA commissioned by the Applicant must be submitted to the Approving Agency for review.

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 Texas, that provides professional engineering and related services.

Purpose

A Traffic Impact Analysis (TIA) is an 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. Using standardized analysis methodologies, the findings of the TIA are used to gage the direct impacts on the transportation system that are attributable to the Project. Under certain circumstances and within legal parameters, the Approving Agency may require the Applicant to fund the improvement(s) needed to mitigate the impacts.

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 established by local ordinances or technical staff of the Approving Agency.

Based upon the findings of the analysis, the Engineer may suggest or recommend modifications to the transportation system that, in the Engineer's opinion, could improve overall traffic operations, safety, site access, circulation, etc. Such proposals may or may not be directly related to the traffic impacts of the Project. Implementation of any modifications to the transportation system are subject to the discretion and approval of the respective agency that is responsible for the

operation of the facilities. Also, the Engineer's proposals 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 two new buildings on either side of a private, internal roadway. Both uses are expected to open in 2020. A detailed summary of the proposed development program is provided in **Table 1.**

Table 1. Development Program Summary

USE	FUTURE AMOUNT
Multifamily	272 dwelling units
Self-Storage	83,850 SF

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

Vehicular site access will be provided on Dickey Road and the SH 161 Northbound Frontage Road as shown on the site plan. The 6.18-acre subject site is currently zoned Planned Development District No. 12.

Study Parameters

The study parameters used in this TIA are based upon industry standard practices and requirements of the City of Grand Prairie. 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 were 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 a 5-year horizon period after Project 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.

The following technical assumptions were also made in this analysis.

- Based upon direction from City staff on other studies, background traffic was assumed to increase at a rate of 3.0 percent per year.

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) SH 161 Northbound (NB) Frontage Road (FR) and Dickey Road
(b) SH 161 Southbound (SB) Frontage Road (FR) and Dickey Road
(c) Dickey Road and S. Carrier Parkway

STOP-Sign-Controlled Intersections:

(d) Proposed site driveway on SH 161 NBFR
(e) Proposed site driveway on Dickey Road

Roadway Links:

(A) Dickey Road, adjacent to site
- Existing operation and cross-section: *4 lanes, two-way operation, no median*
- City of Dallas Thoroughfare Plan Designation: *Minor Arterial, 4-lane, undivided (east of SH 161)*
- Current Daily Traffic Volume: *4,589 (Thursday, January 17, 2019)*

(B) SH 161 Northbound Frontage Road, adjacent to site
- Existing operation and cross-section: *3 lanes, one-way operation*
- City of Dallas Thoroughfare Plan Designation: *Principal Arterial, 3-lane, undivided (north of Dickey Road)*
- Current Daily Traffic Volume: *12,589 (Thursday, January 17, 2019)*

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 Thursday, January 17, 2019. Traffic volumes are graphically summarized in **Appendix A**; detailed data sheets are provided in **Appendix B**.

Background Volumes

By applying the assumed growth rate(s)described previously, future background traffic volumes at the Project buildout year and horizon 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 no adjustments to the base ITE data were applied.

"Mode split" refers to the consideration of all modes of transportation. Typically, the majority of trips occur by passenger vehicles such as personal autos and ridesharing services. But, some alternative modes—such as travel by public transit, bicycle, and walking—do not generate additional vehicle trips. The default trip generation data from ITE is summarized in vehicular trip ends and incorporate "typical" mode split characteristics. However, when travel by alternative mode has the potential to be greater than normal, a reduction in the number of vehicular trip volume may be warranted. For this analysis no additional mode split adjustments to the base ITE data were applied.

Table 2 provides a summary of the calculated number of trip ends generated by the project. Supplemental information used in the trip generation calculations is provided in **Appendix C.**

Table 2. Projected Trip Generation Summary

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	1,608	**99** (29/70)	**130** (78/52)

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 2**) 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 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 Horizon 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 3** and **Table 4** 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 3. Peak Hour Intersection Capacity Analysis Results Summary
(Signalized Intersections)

INTERSECTION	EXISTING CONDITIONS		BACKGROUND CONDITIONS		BUILDOUT CONDITIONS	
	AM	PM	AM	PM	AM	PM
SH 161 SBFR @ Dickey Road	D (35.6)	C (29.0)	D (35.9)	C (29.5)	C (34.7)	C (29.4)
w/ Improvement[1]	B (13.5)	B (13.2)	B (13.8)	B (13.4)	B (13.4)	B (13.8)
SH 161 NBFR @ Dickey Road	D (38.9)	D (53.1)	D (41.2)	D (54.4)	D (42.9)	E (57.6)
w/ Improvement[1]	C (22.4)	C (21.3)	C (22.8)	C (21.3)	C (24.6)	C (22.4)
S Carrier Parkway @ Dickey Road	B (18.1)	B (18.2)	B (18.4)	B (19.8)	B (18.6)	B (19.9)

NOTE: Traffic signal operational parameters used in this analysis were based upon actual traffic signal operational characteristics provided by City staff.

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

INTERSECTION	TRAFFIC MANEUVER	EXISTING CONDITIONS		BACKGROUND CONDITIONS		BUILDOUT CONDITIONS	
		AM	PM	AM	PM	AM	PM
SH 161 NBFR @ Site Driveway 1	WB	-	-	-	-	D (31.2)	B (13.0)
Site Driveway 2 @ Dickey Road	SB	-	-	-	-	A (9.5)	B (10.0)
	EBL	-	-	-	-	A (7.7)	A (7.8)

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

IMPROVEMENTS (PROPOSED):

1 - Restripe lanes on Dickey Road between Frontage roads to add one lane in each direction, and modify signal operation to 3-phase condition.

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 and, if applicable, recommendations were based upon an analysis of the anticipated traffic impact generated by the proposed development scenario outlined in the Project Description section of this report.

FINDING: Due to heavy volumes on the SH 161 frontage roads during peak hour periods, the intersections of the frontage roads and Dickey Road operate at moderate delays, which equates to marginal Level of Service conditions.

FINDING: The addition of projected background growth and site-related traffic do cause slight increases in the calculated average delays during peak hour periods; however, the increases are not enough to change the Levels of Service.

NOTE: The Developer is working with the Texas Department of Transportation to install a right-turn deceleration lane at the proposed driveway on the SH 161 northbound frontage road.

- RECOMMENDATION: Currently, some of the pavement on Dickey Road between the SH 161 frontage roads is "hatched" (i.e., not used). However, by removing the hatching, one additional lane can be created in each direction. It is recommended that these lanes be created through restriping. In the westbound direction, the additional lane is recommended to be used as a dual left-turn; in the eastbound direction, the additional lane is recommended to be used as a second through lane.

- RECOMMENDATION: In order to improve Level of Service at the diamond interchange, it is recommended that the traffic signal be re-programmed to operate as a "3-phase" condition.

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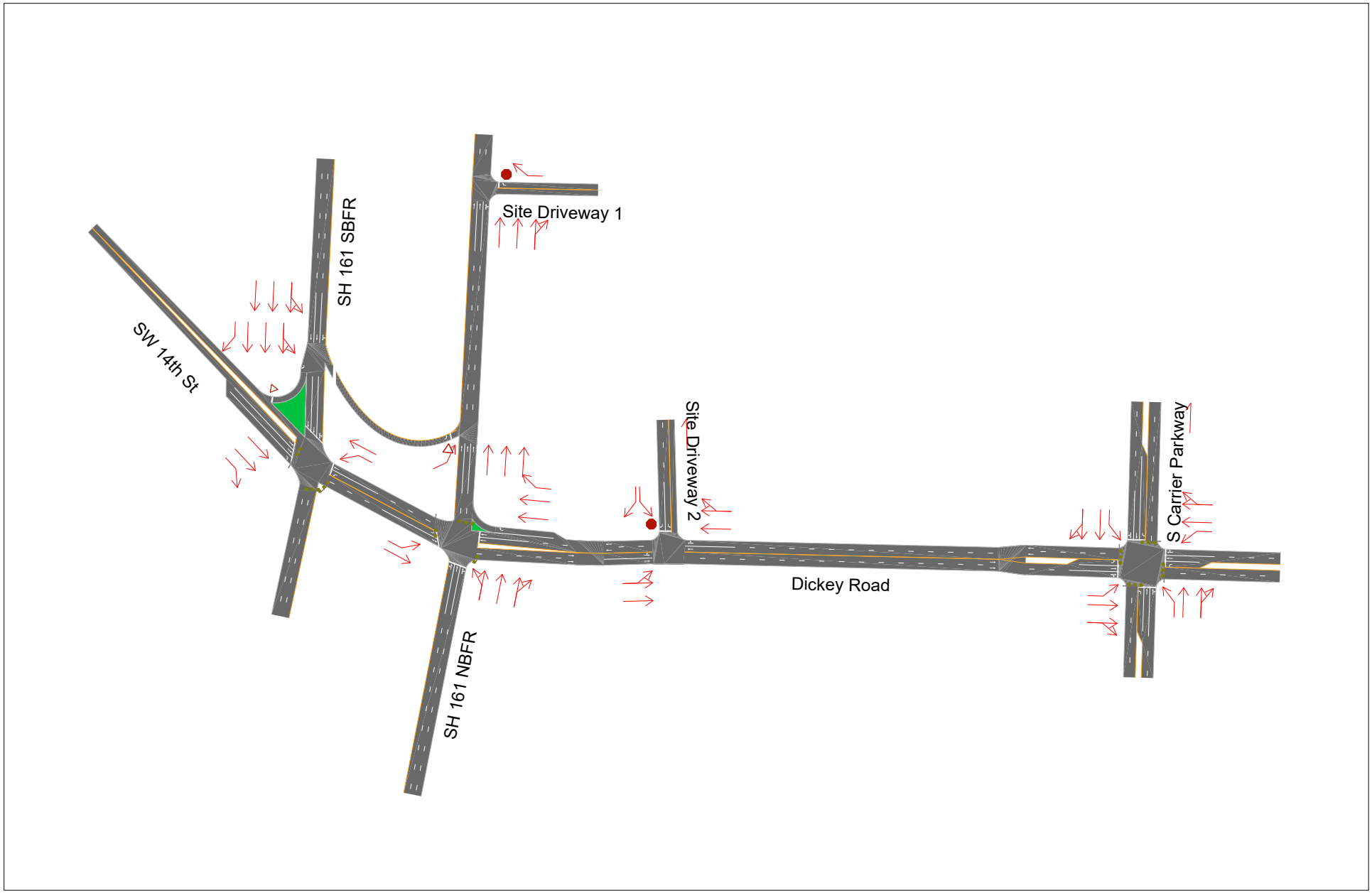
Appendix A. Traffic Volume Exhibits

Appendix A1 - Roadway Geometry

North ▲
Not to Scale



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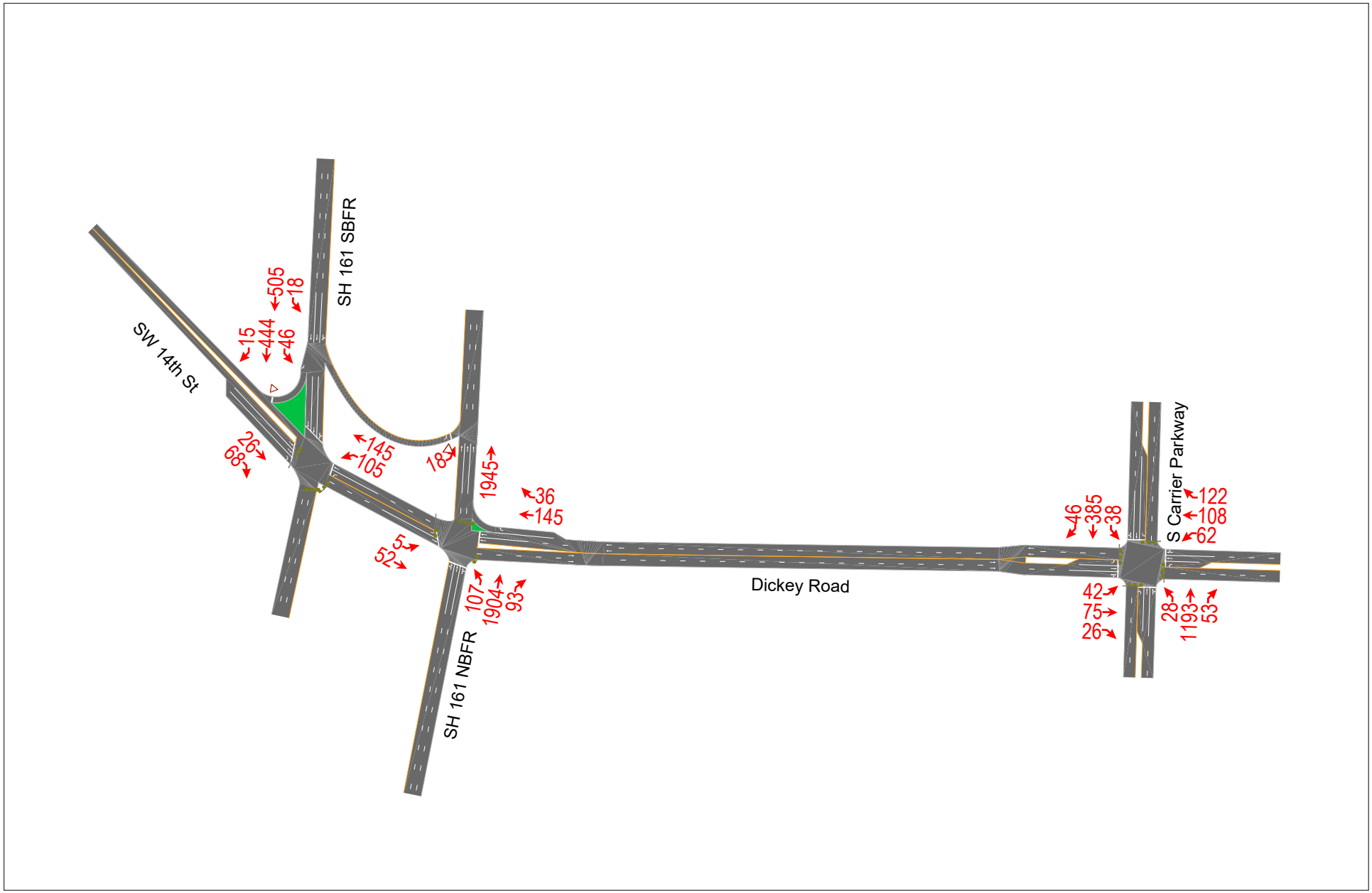
Appendix A2 - Existing AM

North ▲
Not to Scale



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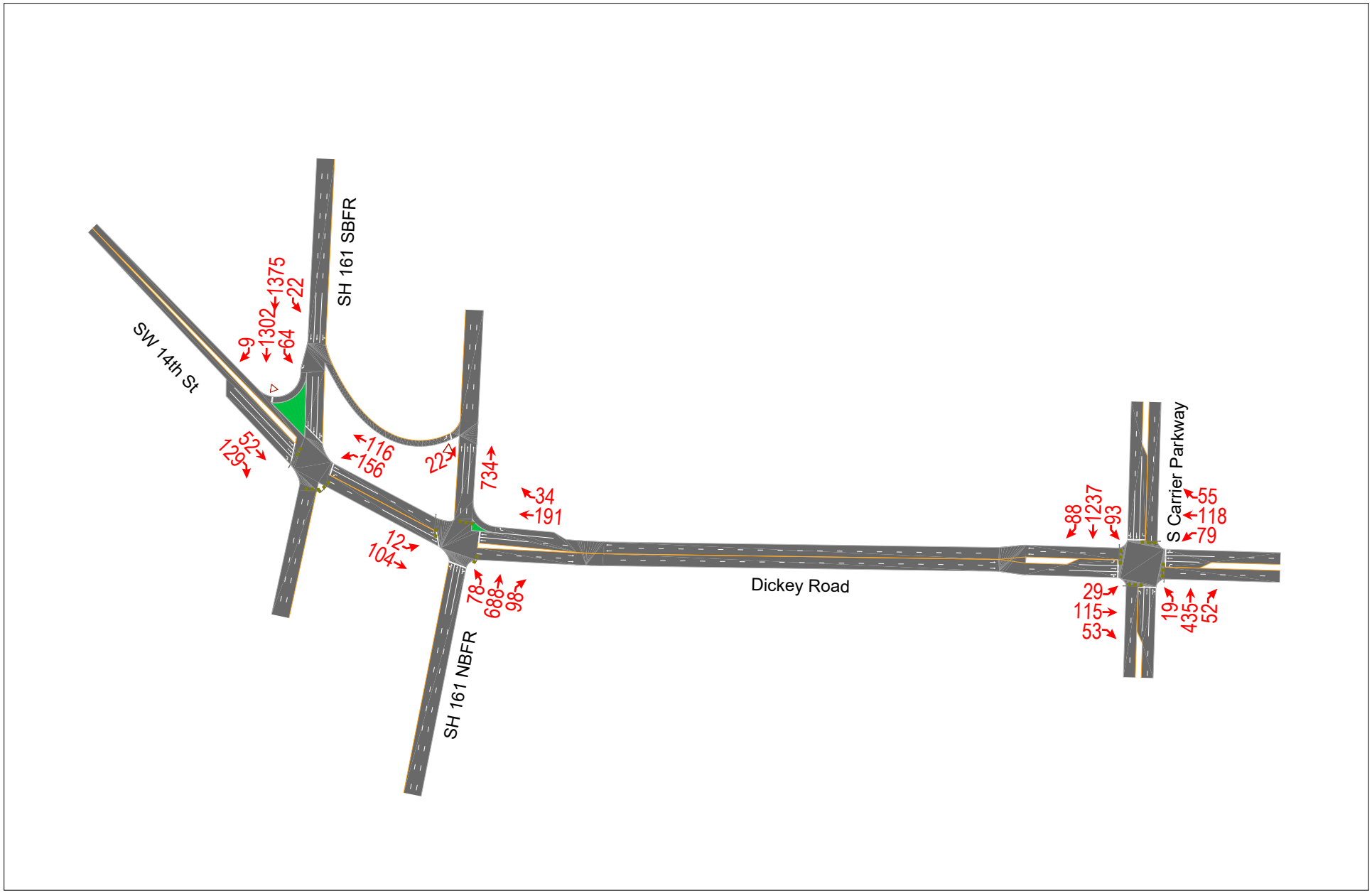
Appendix A3 - Existing PM

North ▲
Not to Scale



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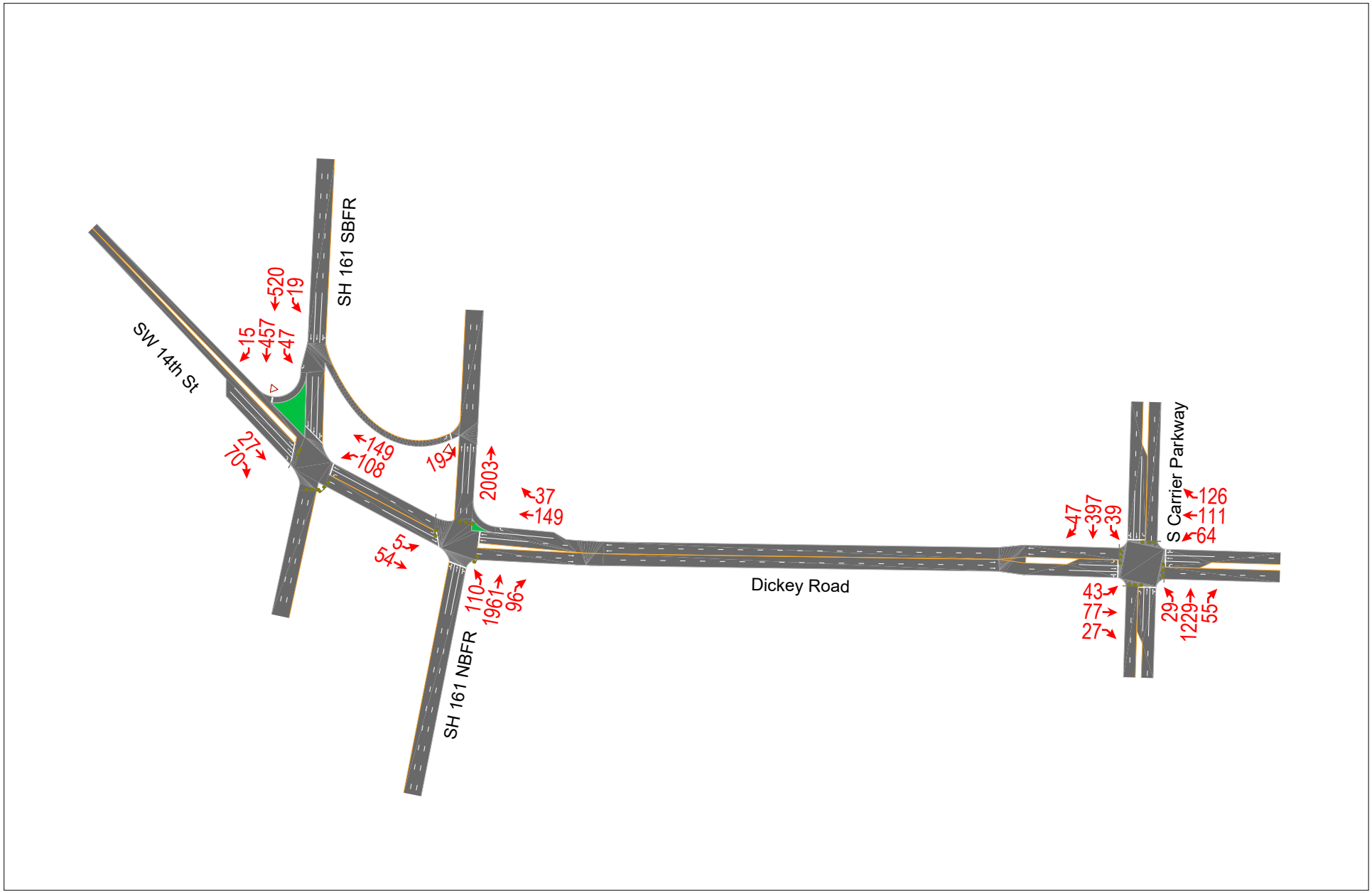
Appendix A4 - Background AM

North ▲
Not to Scale



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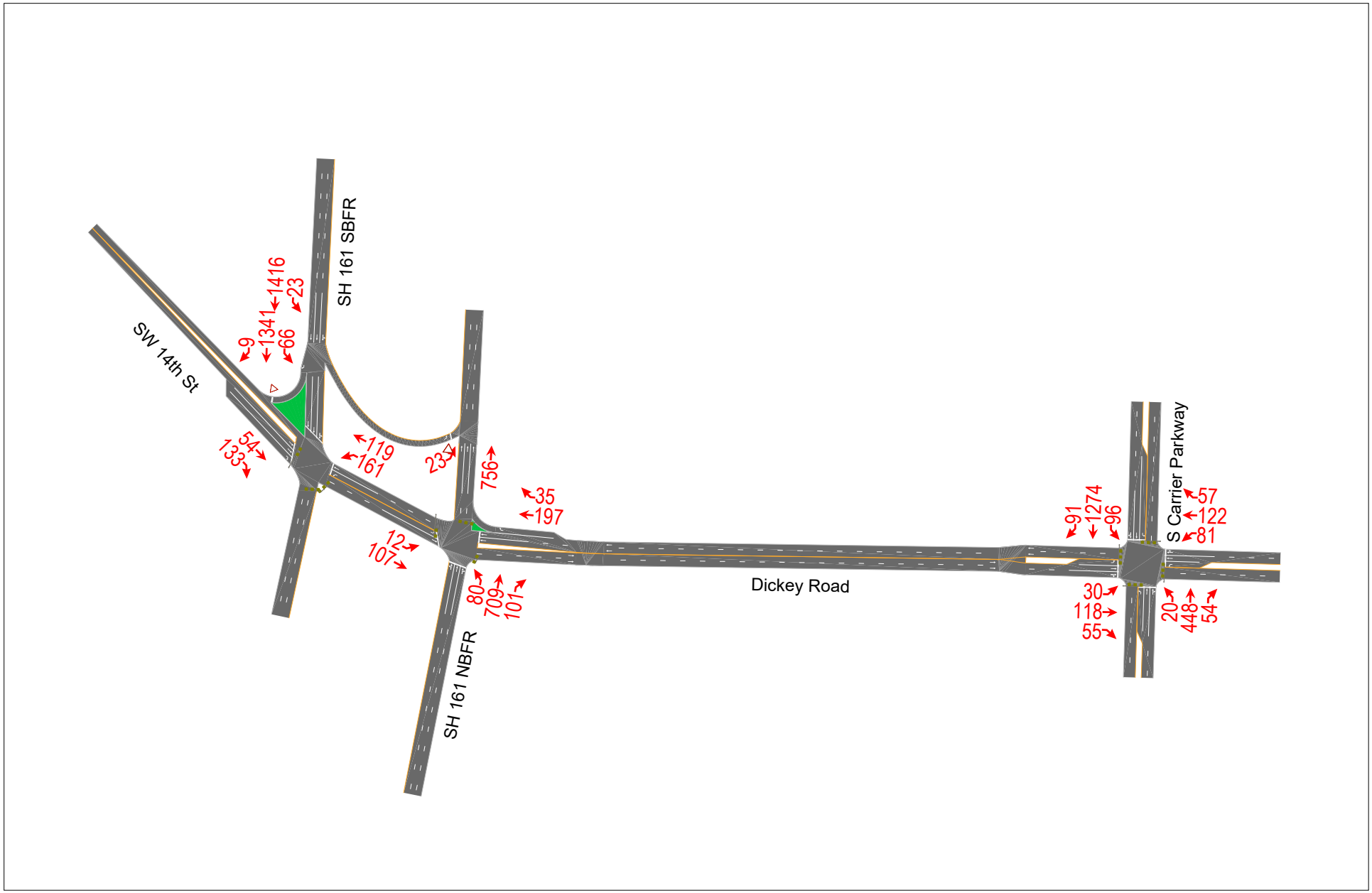
Appendix A5 - Background PM

North ▲
Not to Scale



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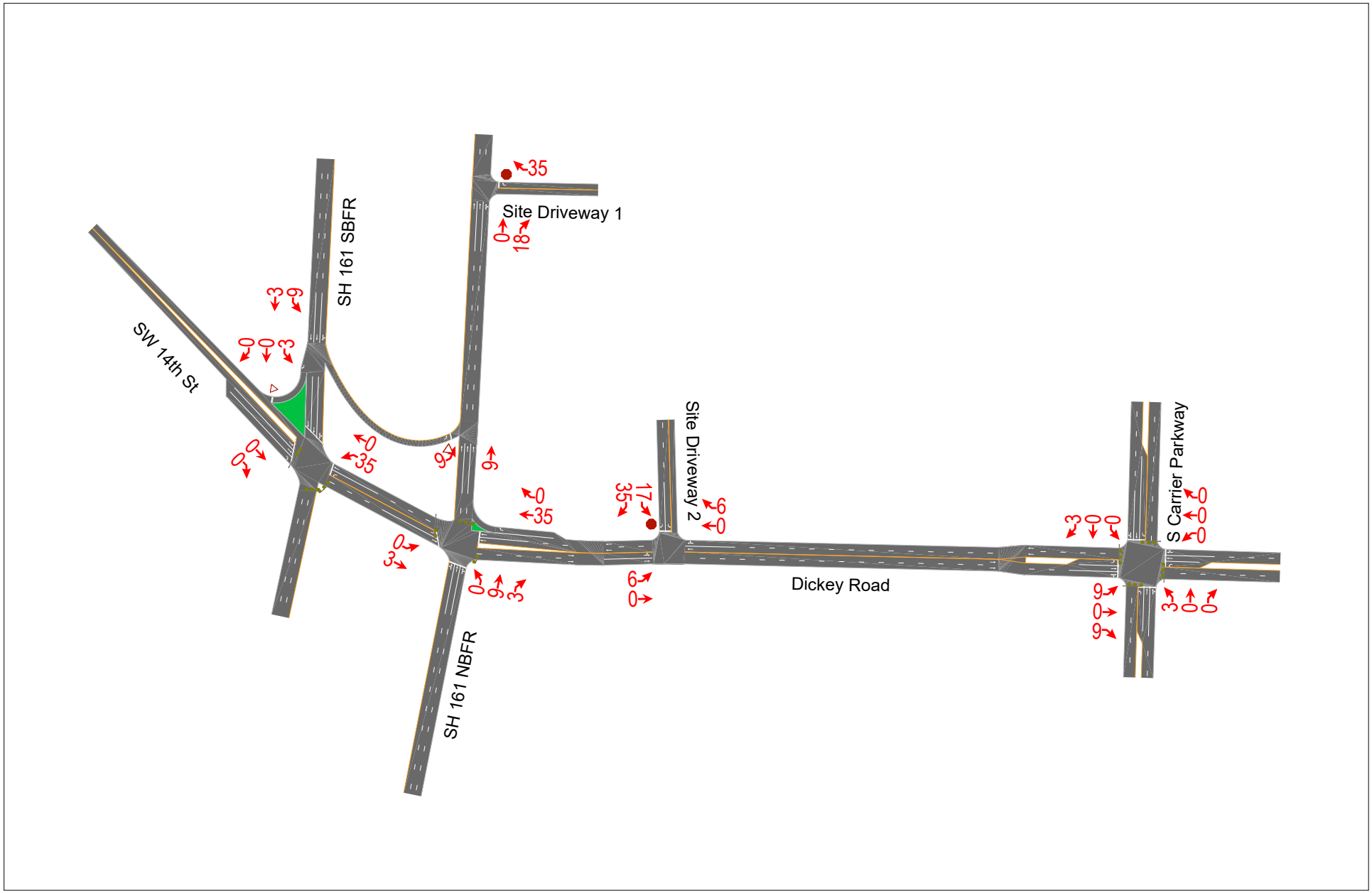
Appendix A6 - Site Generated AM

North ▲
Not to Scale



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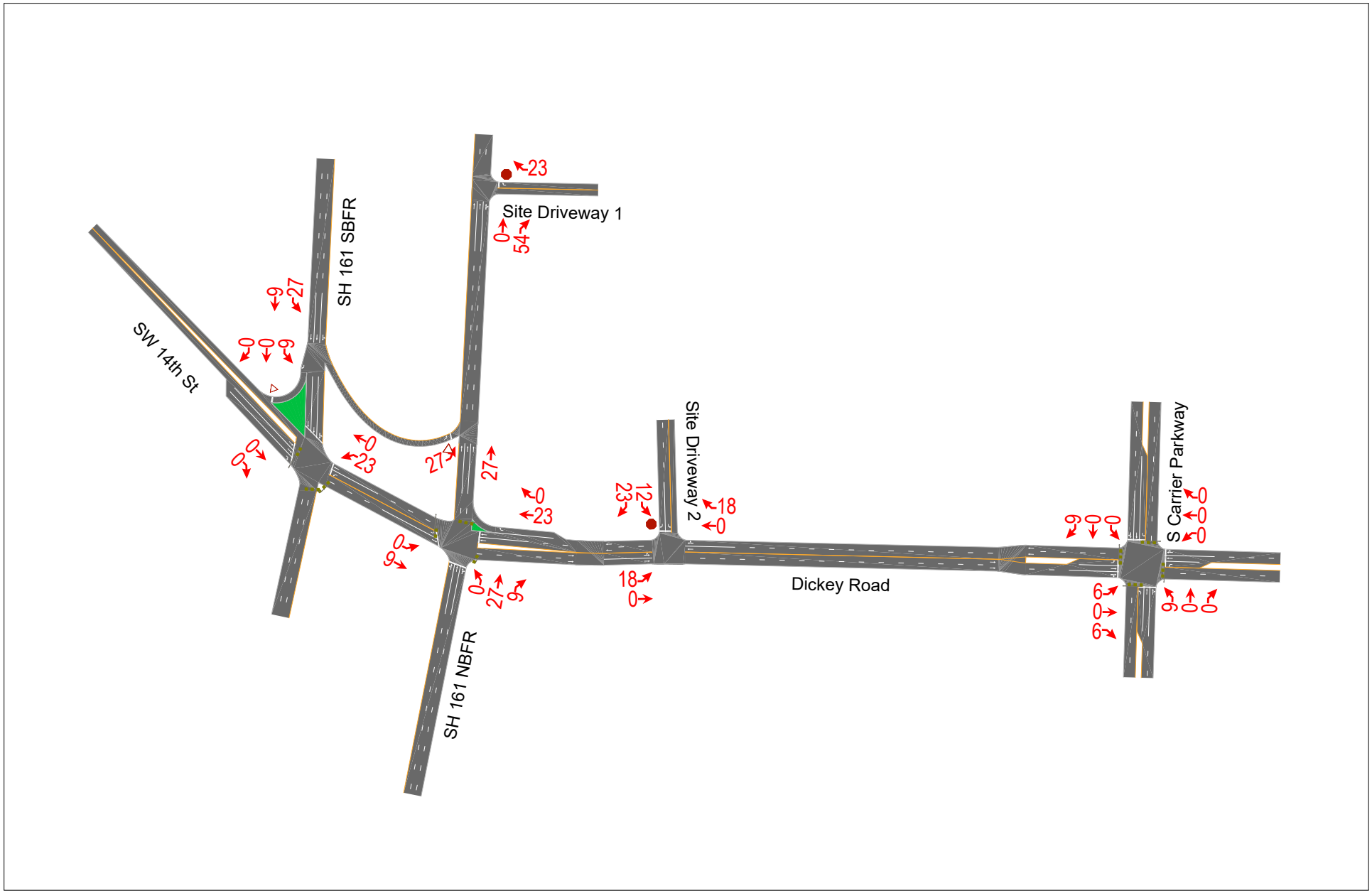
Appendix A7 - Site Generated PM

North ▲
Not to Scale



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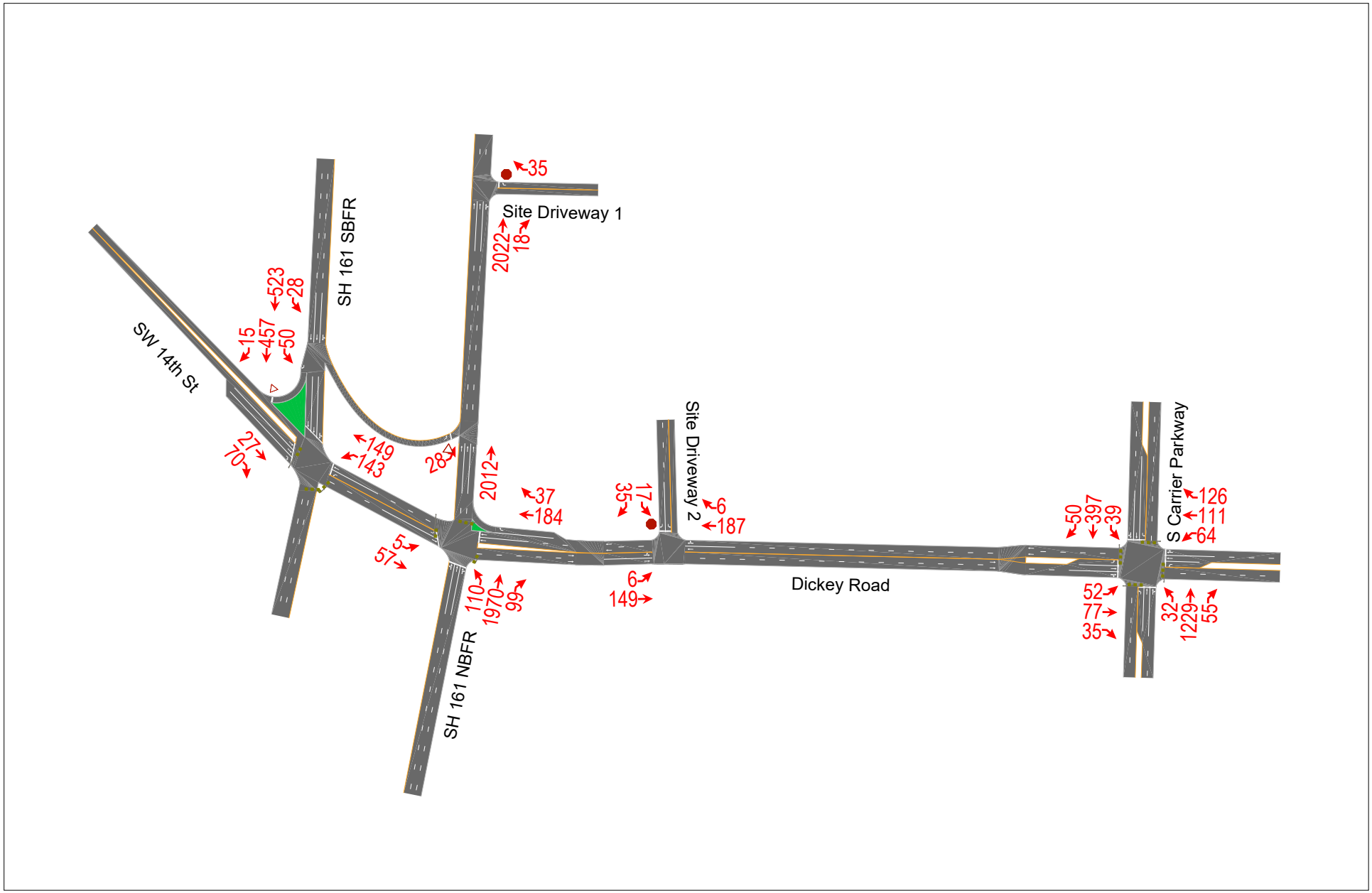
Appendix A8 - Buildout AM

North ▲
Not to Scale



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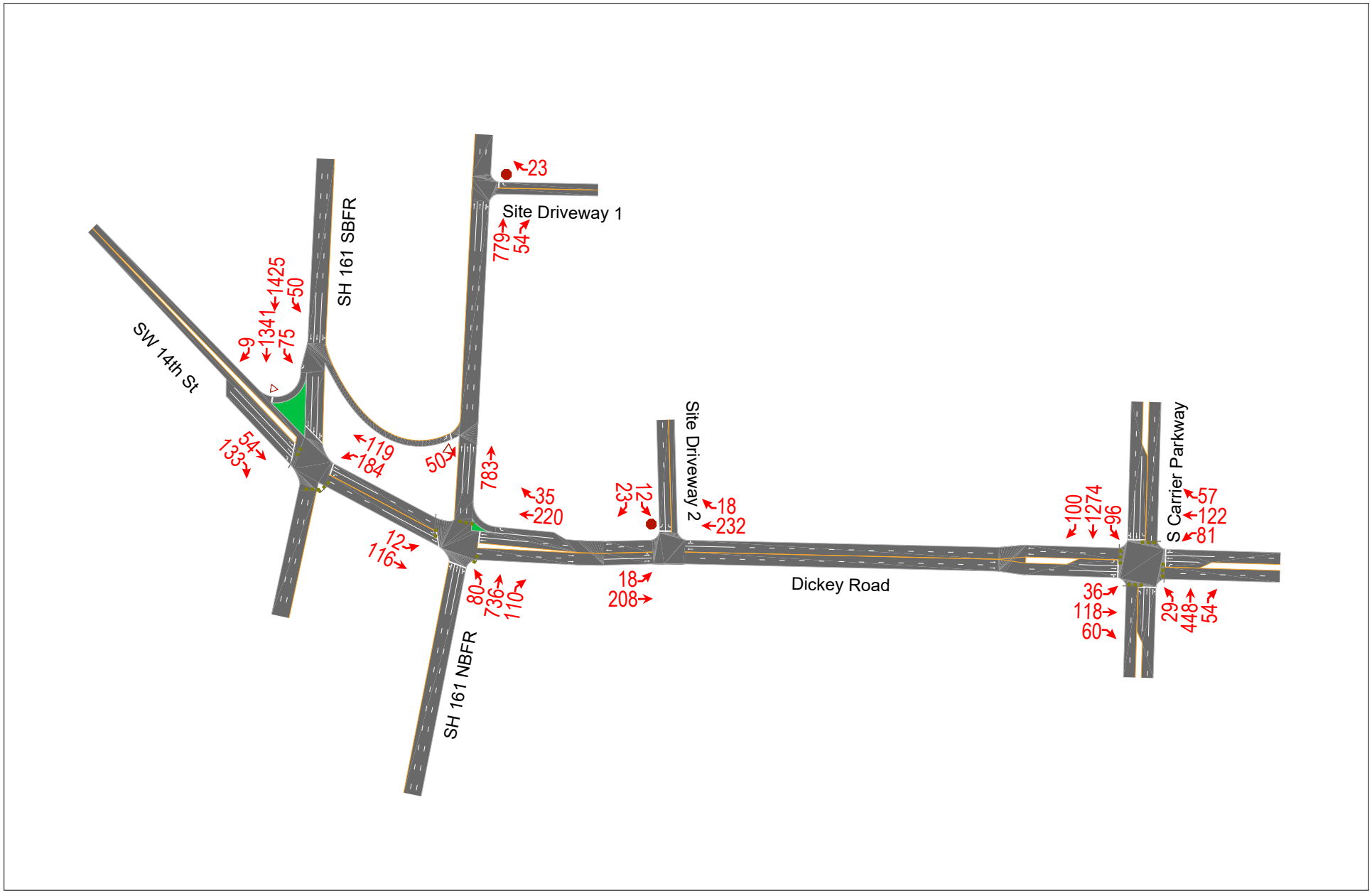
Appendix A9 - Buildout PM

North ▲
Not to Scale



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AJV

01/25/2019
Pacheco Koch

Appendix B. Detailed Traffic Volume Data

Intersection Turning Movement Counts

				NORTH LEG						EAST LEG												WEST LEG					
				Southbound Approach on SH 161 SBFR						Westbound Approach on Dickey Road												Eastbound Approach on Dickey Road					
				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:	*Grand Prairie*	6:30 AM	6:45 AM	3	3	69	0				23	14	0										0	1	7		
State:	*Texas*	6:45 AM	7:00 AM	3	2	78	1				17	25	0										0	5	13		
Day:	*Thursday*	**7:00 AM**	**7:15 AM**	**6**	**4**	**83**	**1**				**13**	**23**	**0**										**0**	**2**	**10**		
Date:	*17-Jan*	**7:15 AM**	**7:30 AM**	**3**	**8**	**92**	**5**				**20**	**32**	**0**										**0**	**9**	**16**		
Year:	*2019*	***7:30 AM***	***7:45 AM***	***5***	***23***	***129***	***4***				***35***	***45***	***0***										***0***	***7***	***23***		
Data Collector:	*Camera*	***7:45 AM***	***8:00 AM***	***4***	***11***	***140***	***5***				***37***	***45***	***0***										***0***	***8***	***19***		
Data Source:	*CJ Hensch & Associates, Inc.*	*8:00 AM*	*8:15 AM*	*6*	*3*	*102*	*2*				*27*	*37*	*0*										*0*	*3*	*12*		
Traffic Control:	*Traffic Signal*	*8:15 AM*	*8:30 AM*	*9*	*5*	*100*	*1*				*28*	*24*	*0*										*0*	*3*	*19*		
Observations:																											
		4:30 PM	*4:45 PM*	*7*	*10*	*285*	*6*				*23*	*34*	*0*										*0*	*10*	*42*		
		4:45 PM	***5:00 PM***	***6***	***17***	***351***	***1***				***33***	***31***	***0***										***0***	***16***	***24***		
		5:00 PM	***5:15 PM***	***3***	***16***	***400***	***5***				***35***	***28***	***0***										***0***	***13***	***43***		
		5:15 PM	***5:30 PM***	***6***	***22***	***303***	***3***				***47***	***34***	***0***										***0***	***8***	***31***		
		5:30 PM	**5:45 PM**	**7**	**9**	**248**	**0**				**41**	**23**	**0**										**0**	**15**	**31**		
		5:45 PM	6:00 PM	7	17	349	2				27	26	0										0	21	27		
		6:00 PM	6:15 PM	7	13	319	2				29	22	0										0	6	18		
		6:15 PM	6:30 PM	9	17	310	1				28	29	0										0	8	17		
AM Peak Hour	*Intersection PHF:*	*0.85*	*Intersection PHV:*	*24*	*42*	*471*	*12*			*0*	*127*	*151*	*0*									*0*	*0*	*21*	*73*		
	Peak Hour	*7:30 AM - 8:30 AM*	*PHF:*		*0.46*	*0.84*	*0.60*				*0.86*	*0.84*	*0.00*										*0.00*	*0.66*	*0.79*		
	Study Area PHF:	**0.80**	**Study Area PHV:**	**18**	**46**	**444**	**15**			**0**	**105**	**145**	**0**									**0**	**0**	**26**	**68**		
	Peak Hour:	**7:00 AM - 8:00 AM**	**PHF:**		**0.50**	**0.79**	**0.75**				**0.71**	**0.81**	**0.00**										**0.00**	**0.72**	**0.74**		
PM Peak Hour	*Intersection PHF:*	*0.87*	*Intersection PHV:*	*22*	*65*	*1,339*	*15*			*0*	*138*	*127*	*0*									*0*	*0*	*47*	*140*		
	Peak Hour	*4:30 PM - 5:30 PM*	*PHF:*		*0.74*	*0.84*	*0.63*				*0.73*	*0.93*	*0.00*										*0.00*	*0.73*	*0.81*		
	Study Area PHF:	**0.85**	**Study Area PHV:**	**22**	**64**	**1,302**	**9**			**0**	**156**	**116**	**0**									**0**	**0**	**52**	**129**		
	Peak Hour:	**4:45 PM - 5:45 PM**	**PHF:**		**0.73**	**0.81**	**0.45**				**0.83**	**0.85**	**0.00**										**0.00**	**0.81**	**0.75**		

Intersection Turning Movement Counts

City: *Grand Prairie*
State: *Texas*
Day: *Thursday*
Date: *17-Jan*
Year: *2019*
Data Collector: *Camera*
Data Source: *CJ Hensch & Associates, Inc.*
Traffic Control: *Traffic Signal*
Observations:

		EAST LEG						SOUTH LEG						WEST LEG					
		Westbound Approach on Dickey Road						Northbound Approach on SH 161 NBFR						Eastbound Approach on Dickey Road					
		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
6:30 AM	6:45 AM		0	29	8			0	10	443	8				1	3	0		
6:45 AM	7:00 AM		0	20	7			0	17	446	16				0	7	0		
7:00 AM	7:15 AM		0	20	9			1	16	501	22				0	5	0		
7:15 AM	7:30 AM		0	25	12			1	27	459	15				4	13	0		
7:30 AM	7:45 AM		0	56	7			0	30	469	31				1	17	0		
7:45 AM	8:00 AM		0	44	8			0	34	475	25				0	17	0		
8:00 AM	8:15 AM		0	32	9			1	32	472	21				0	6	0		
8:15 AM	8:30 AM		0	32	8			1	19	378	24				1	7	0		
4:30 PM	4:45 PM		0	32	8			0	26	144	22				2	19	0		
4:45 PM	***5:00 PM***		***0***	***40***	***10***			***0***	***21***	***174***	***33***				***5***	***27***	***0***		
5:00 PM	***5:15 PM***		***0***	***44***	***9***			***1***	***19***	***146***	***23***				***3***	***27***	***0***		
5:15 PM	***5:30 PM***		***0***	***62***	***7***			***1***	***23***	***170***	***20***				***1***	***29***	***0***		
5:30 PM	***5:45 PM***		***0***	***45***	***8***			***0***	***15***	***198***	***22***				***3***	***21***	***0***		
5:45 PM	6:00 PM		0	33	7			1	19	157	15				6	32	0		
6:00 PM	6:15 PM		0	32	4			0	17	165	17				2	18	0		
6:15 PM	6:30 PM		0	44	6			0	16	134	22				1	24	0		

				East U	East L	East T	East R	East CCW	East CW	South U	South L	South T	South R	South CCW	South CW	West U	West L	West T	West R	West CCW	West CW
AM Peak Hour	*Intersection PHF:*	*0.96*	*Intersection PHV:*	*0*	*0*	*145*	*36*			*2*	*107*	*1,904*	*93*			*0*	*5*	*52*	*0*		
	Peak Hour	*7:00 AM - 8:00 AM*	*PHF:*		*0.00*	*0.65*	*0.75*				*0.79*	*0.95*	*0.75*				*0.31*	*0.76*	*0.00*		
	Study Area PHF:	**0.96**	**Study Area PHV:**	**0**	**0**	**145**	**36**			**2**	**107**	**1,904**	**93**			**0**	**5**	**52**	**0**		
	Peak Hour:	**7:00 AM - 8:00 AM**	**PHF:**		**0.00**	**0.65**	**0.75**				**0.79**	**0.95**	**0.75**				**0.31**	**0.76**	**0.00**		
PM Peak Hour	*Intersection PHF:*	*0.96*	*Intersection PHV:*	*0*	*0*	*191*	*34*			*2*	*78*	*688*	*98*			*0*	*12*	*104*	*0*		
	Peak Hour	*4:45 PM - 5:45 PM*	*PHF:*		*0.00*	*0.77*	*0.85*				*0.85*	*0.87*	*0.74*				*0.60*	*0.90*	*0.00*		
	Study Area PHF:	**0.96**	**Study Area PHV:**	**0**	**0**	**191**	**34**			**2**	**78**	**688**	**98**			**0**	**12**	**104**	**0**		
	Peak Hour:	**4:45 PM - 5:45 PM**	**PHF:**		**0.00**	**0.77**	**0.85**				**0.85**	**0.87**	**0.74**				**0.60**	**0.90**	**0.00**		

SH 161 NBFR at Dickey Road

Intersection Turning Movement Counts

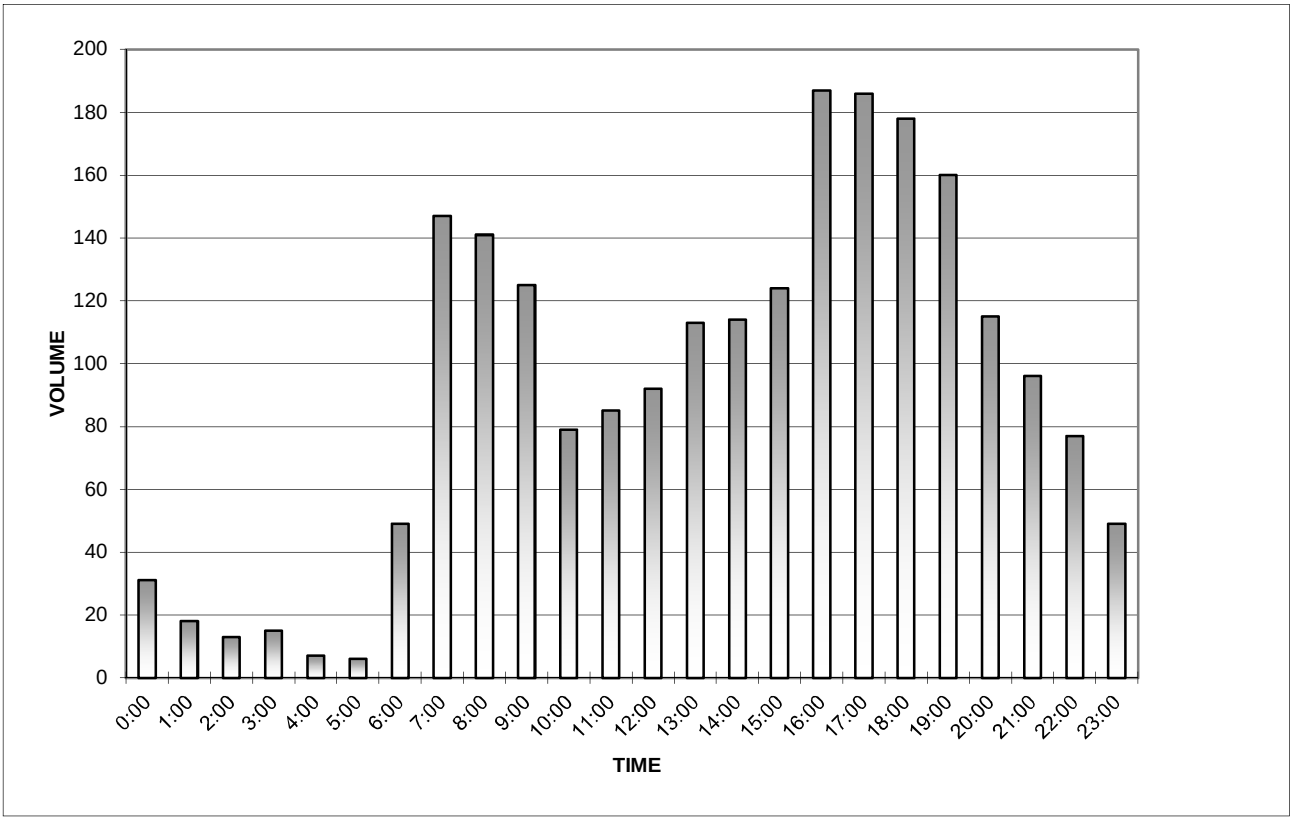
				NORTH LEG						EAST LEG						SOUTH LEG						WEST LEG					
				Southbound Approach on Carrier Parkway						Westbound Approach on Dickey Road						Northbound Approach on Carrier Parkway						Eastbound Approach on Dickey Road					
				Vehicles				Peds		Vehicles				Peds		Vehicles				Peds		Vehicles				Peds	
		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
City:	**Grand Prairie**	6:30 AM	6:45 AM		4	36	7				5	24	29				4	177	6				1	7	1		
State:	**Texas**	6:45 AM	7:00 AM		8	34	8				6	15	31				3	232	6				8	12	5		
Day:	**Thursday**	7:00 AM	7:15 AM		4	50	4				12	23	27				6	321	7				8	14	3		
Date:	**17-Jan**	7:15 AM	7:30 AM		7	78	7				13	24	26				8	288	16				12	9	6		
Year:	**2019**	7:30 AM	7:45 AM		9	139	18				14	37	32				6	302	16				13	25	10		
Data Collector:	**Camera**	7:45 AM	8:00 AM		18	118	17				23	24	37				8	282	14				9	27	7		
Data Source:	**CJ Hensch & Associates, Inc.**	8:00 AM	8:15 AM		3	94	12				11	27	34				5	211	5				10	14	4		
Traffic Control:	**Traffic Signal**	8:15 AM	8:30 AM		9	90	11				8	26	21				2	203	8				13	13	0		
Observations:																											
		4:30 PM	4:45 PM		20	257	14				22	24	15				5	130	15				6	28	14		
		4:45 PM	**5:00 PM**		**22**	**291**	**21**				**17**	**26**	**9**				**6**	**115**	**13**				**9**	**31**	**13**		
		5:00 PM	***5:15 PM***		***29***	***329***	***23***				***19***	***25***	***4***				***5***	***96***	***11***				***8***	***30***	***16***		
		5:15 PM	***5:30 PM***		***28***	***321***	***24***				***19***	***35***	***22***				***3***	***107***	***16***				***4***	***26***	***11***		
		5:30 PM	***5:45 PM***		***14***	***296***	***20***				***24***	***32***	***20***				***5***	***117***	***12***				***8***	***28***	***13***		
		5:45 PM	*6:00 PM*		*25*	*298*	*19*				*16*	*17*	*24*				*4*	*129*	*12*				*4*	*21*	*12*		
		6:00 PM	6:15 PM		20	292	26				18	18	14				4	99	19				7	27	10		
		6:15 PM	6:30 PM		19	250	9				10	30	17				4	93	15				6	23	11		
AM Peak Hour	*Intersection PHF:*	*0.88*	*Intersection PHV:*	*0*	*38*	*385*	*46*			*0*	*62*	*108*	*122*			*0*	*28*	*1,193*	*53*			*0*	*42*	*75*	*26*		
	Peak Hour	*7:00 AM - 8:00 AM*	*PHF:*		*0.53*	*0.69*	*0.64*				*0.67*	*0.73*	*0.82*				*0.88*	*0.93*	*0.83*				*0.81*	*0.69*	*0.65*		
	Study Area PHF:	**0.88**	**Study Area PHV:**	**0**	**38**	**385**	**46**			**0**	**62**	**108**	**122**			**0**	**28**	**1,193**	**53**			**0**	**42**	**75**	**26**		
	Peak Hour:	**7:00 AM - 8:00 AM**	**PHF:**		**0.53**	**0.69**	**0.64**				**0.67**	**0.73**	**0.82**				**0.88**	**0.93**	**0.83**				**0.81**	**0.69**	**0.65**		
PM Peak Hour	*Intersection PHF:*	*0.97*	*Intersection PHV:*	*0*	*96*	*1,244*	*86*			*0*	*78*	*109*	*70*			*0*	*17*	*449*	*51*			*0*	*24*	*105*	*52*		
	Peak Hour	*5:00 PM - 6:00 PM*	*PHF:*		*0.83*	*0.95*	*0.90*				*0.81*	*0.78*	*0.73*				*0.85*	*0.87*	*0.80*				*0.75*	*0.88*	*0.81*		
	Study Area PHF:	**0.96**	**Study Area PHV:**	**0**	**93**	**1,237**	**88**			**0**	**79**	**118**	**55**			**0**	**19**	**435**	**52**			**0**	**29**	**115**	**53**		
	Peak Hour:	**4:45 PM - 5:45 PM**	**PHF:**		**0.80**	**0.94**	**0.92**				**0.82**	**0.84**	**0.63**				**0.79**	**0.93**	**0.81**				**0.81**	**0.93**	**0.83**		

EB Dickey Road East of SH 161 NBFR

Date Began:
1/17/2019

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	10	9	4	8	31
1:00	6	3	4	5	18
2:00	9	1	2	1	13
3:00	3	4	5	3	15
4:00	1	3	0	3	7
5:00	2	2	2	0	6
6:00	6	7	10	26	49
7:00	27	26	50	44	147
8:00	27	29	41	44	141
9:00	28	31	34	32	125
10:00	16	16	20	27	79
11:00	26	21	16	22	85
12:00	14	29	26	23	92
13:00	34	26	32	21	113
14:00	25	28	30	31	114
15:00	27	37	29	31	124
16:00	37	42	48	60	187
17:00	46	48	42	50	186
18:00	44	45	42	47	178
19:00	36	47	30	47	160
20:00	35	31	26	23	115
21:00	17	28	23	28	96
22:00	21	19	17	20	77
23:00	16	15	10	8	49
				TOTAL:	2207

The A.M. peak hour from 7:30 to 8:30 is 150
The P.M. peak hour from 16:30 to 17:30 is 202

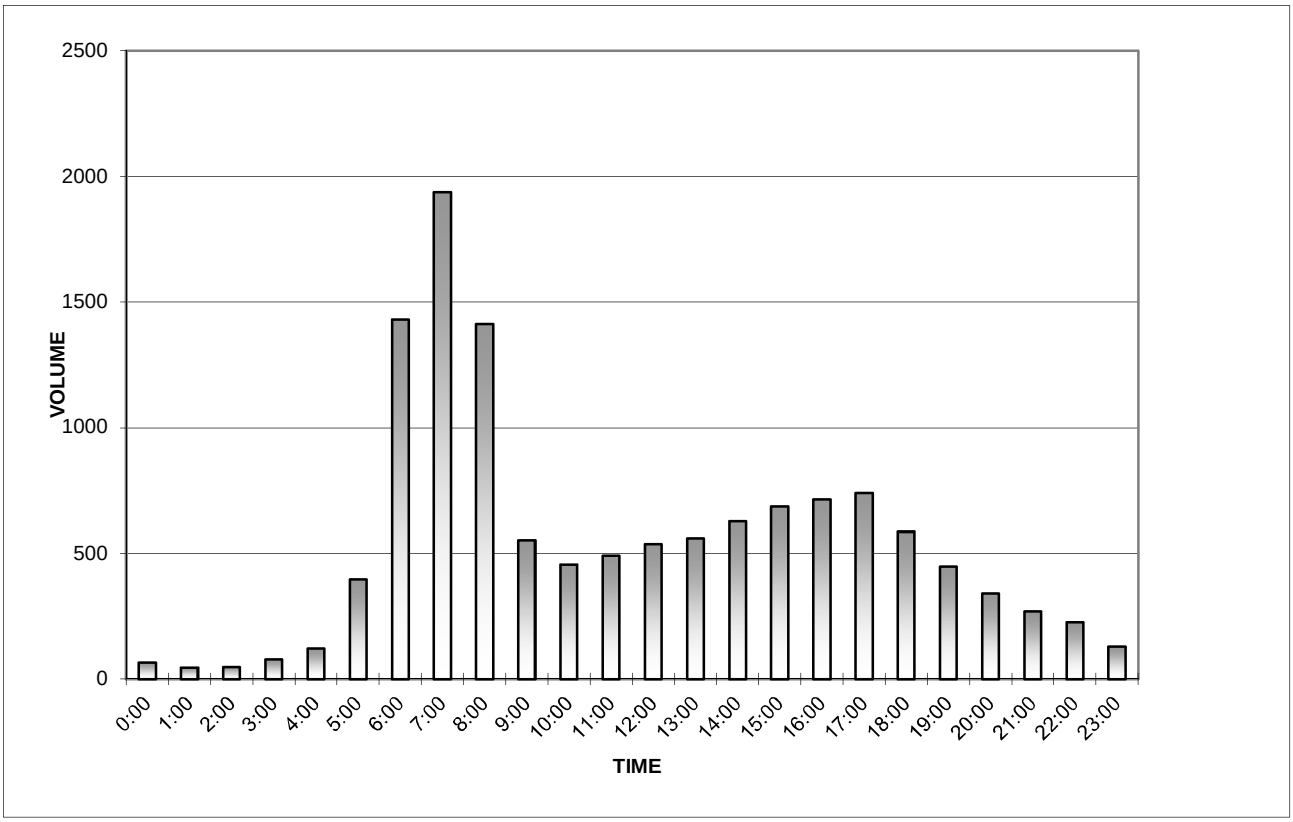


NB SH 161 Frontage Road North of Dickey Road

Date Began:
1/17/2019

TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	24	12	12	18	66
1:00	12	10	12	12	46
2:00	10	14	13	10	47
3:00	12	12	26	28	78
4:00	22	18	40	40	120
5:00	60	75	116	146	397
6:00	206	309	466	450	1431
7:00	478	468	508	482	1936
8:00	478	386	332	216	1412
9:00	142	139	134	136	551
10:00	111	114	116	115	456
11:00	136	116	108	130	490
12:00	124	122	126	165	537
13:00	136	146	136	142	560
14:00	160	142	133	192	627
15:00	138	174	184	191	687
16:00	196	168	162	189	715
17:00	168	191	202	180	741
18:00	186	152	141	107	586
19:00	156	106	94	92	448
20:00	86	104	62	88	340
21:00	71	72	61	64	268
22:00	63	64	54	44	225
23:00	32	34	33	29	128
				TOTAL:	12892

The A.M. peak hour from 7:15 to 8:15 is 1936
The P.M. peak hour from 17:15 to 18:15 is 759

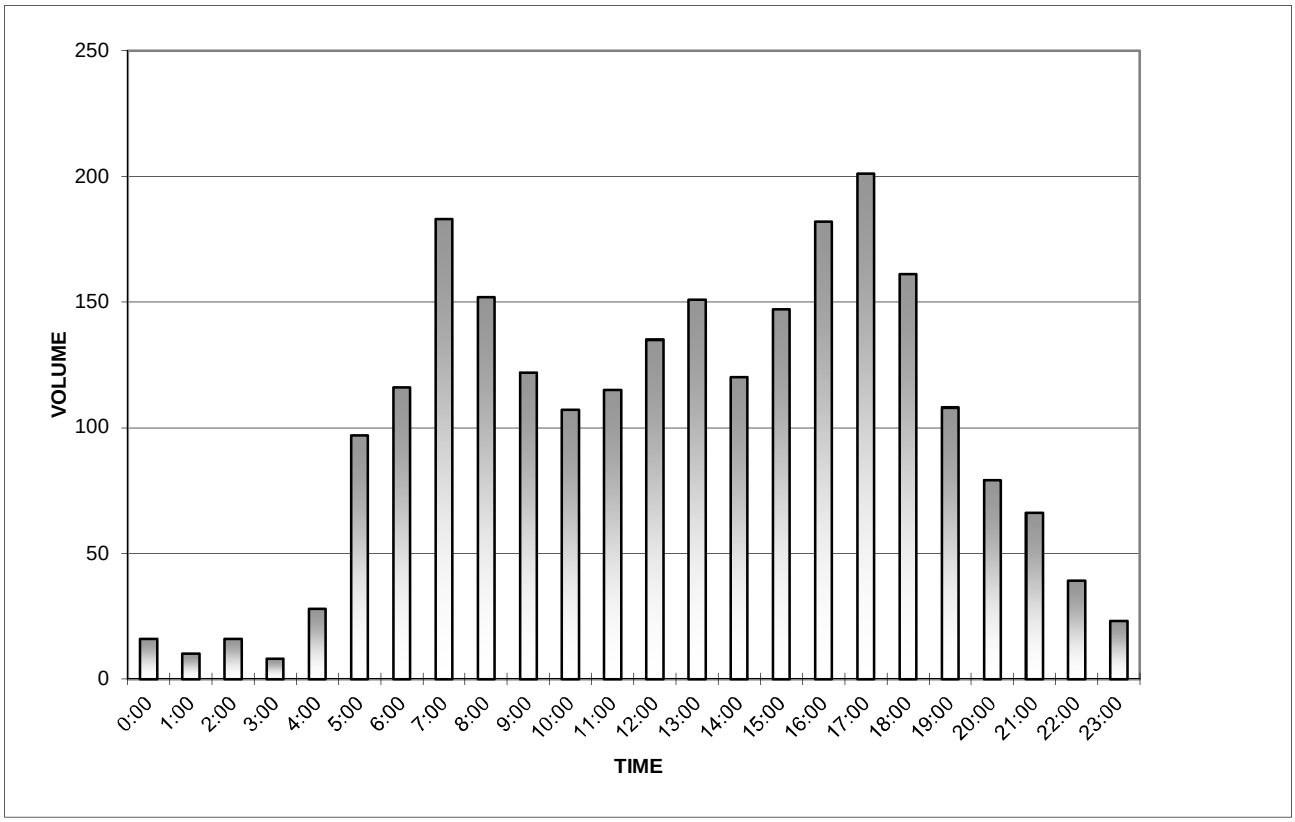


WB Dickey Road East of SH 161 NBFR

Date Began:
1/17/2019

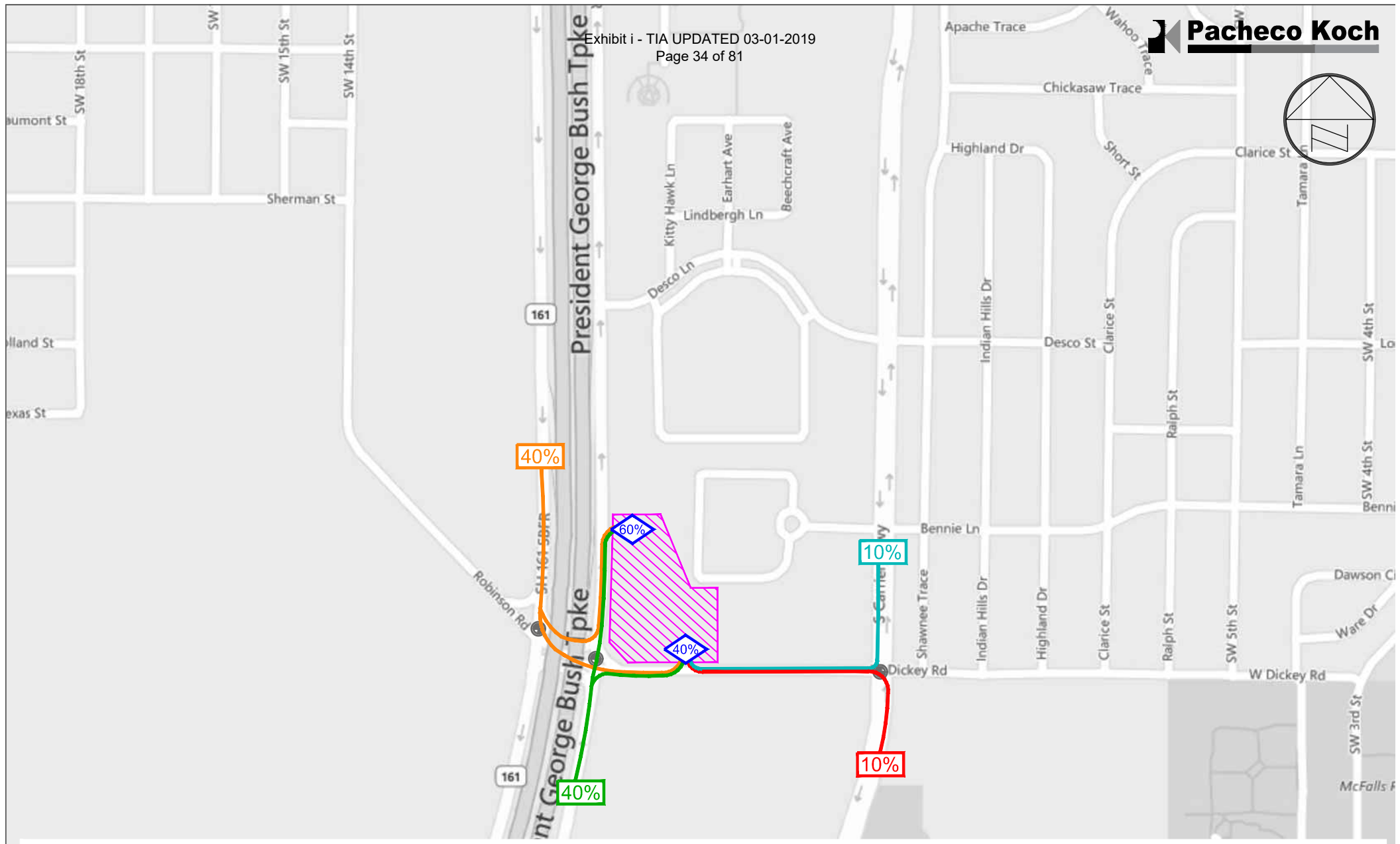
TIME	0:00	0:15	0:30	0:45	TOTAL
0:00	5	5	3	3	16
1:00	3	2	4	1	10
2:00	2	5	3	6	16
3:00	0	1	3	4	8
4:00	3	4	10	11	28
5:00	18	22	27	30	97
6:00	22	29	36	29	116
7:00	30	42	60	51	183
8:00	40	40	42	30	152
9:00	32	26	36	28	122
10:00	36	36	18	17	107
11:00	21	28	30	36	115
12:00	36	32	29	38	135
13:00	40	40	37	34	151
14:00	36	28	26	30	120
15:00	28	37	46	36	147
16:00	44	38	42	58	182
17:00	48	61	56	36	201
18:00	46	44	27	44	161
19:00	32	26	28	22	108
20:00	16	17	20	26	79
21:00	14	19	13	20	66
22:00	15	8	6	10	39
23:00	7	8	3	5	23
				TOTAL:	2382

The A.M. peak hour from 7:15 to 8:15 is 193
The P.M. peak hour from 16:45 to 17:45 is 223



Appendix C. Site-Generated Traffic Supplement

Pacheco Koch



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

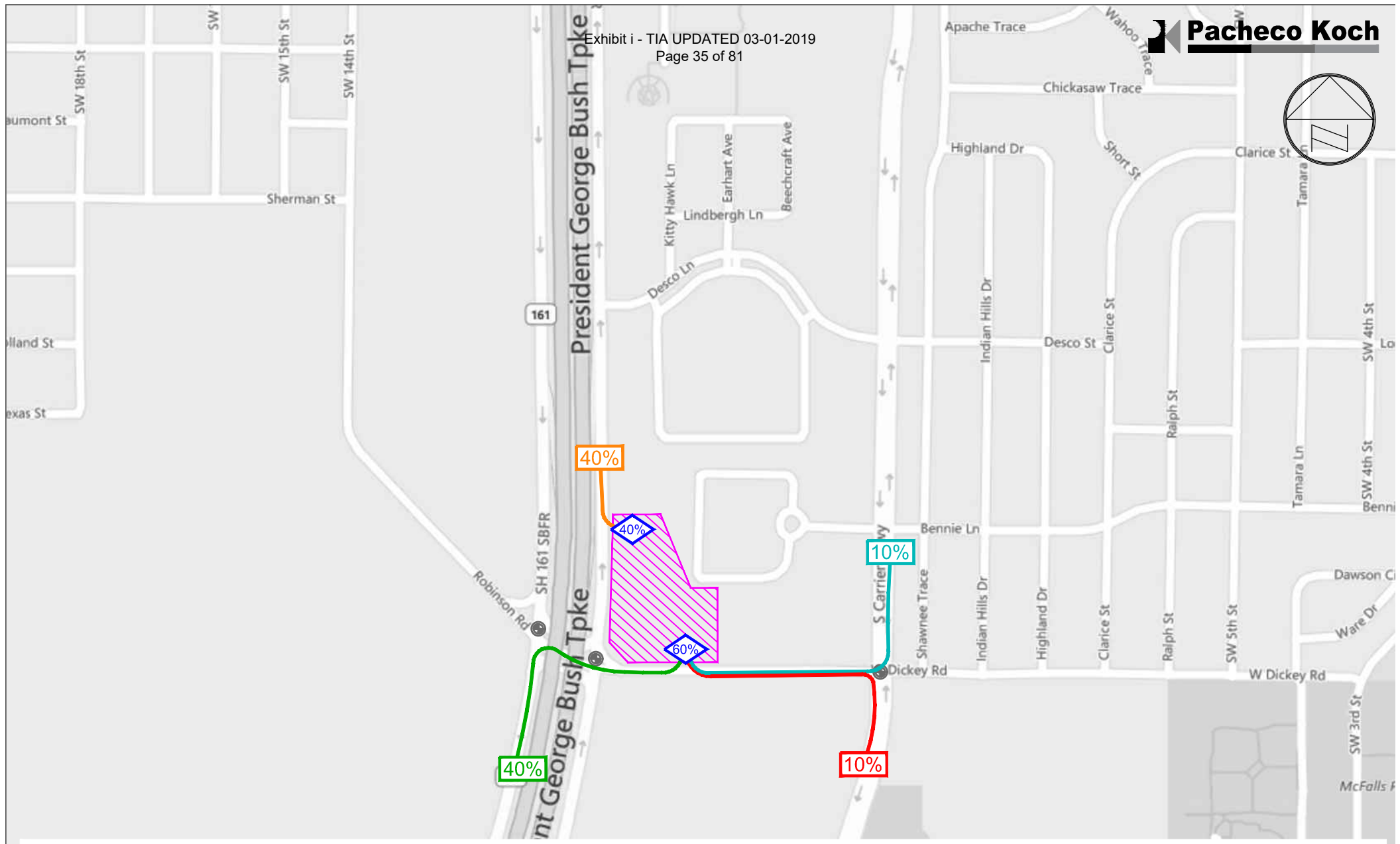
Site Generation Trip Distribution - Inbound

SH 161 and Dickey Road, Grand Prairie, Texas

PK #4269-19.025 (HWL: 01/25/19)

APPENDIX **C1**

Pacheco Koch



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

Site Generation Trip Distribution - Outbound

SH 161 and Dickey Road, Grand Prairie, Texas

PK #4269-19.025 (HWL: 01/25/19)

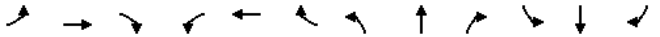
APPENDIX **C2**

	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"	221 - Multifamily Housing (Mid-Rise)	272	DU	1481	24	67	**91**	71	45	**116**
Use "B"	151 - Mini-Warehouse	83,850	ft^2	127	5	3	**8**	7	7	**14**
Subtotal (no adjustments)				1608	29	70	99	78	52	130
Ped/Trans Reductions										
Internal Capture										
Subtotal				1608	29	70	99	78	52	130
Pass-by										
Net Driveway Vols				1608	29	70	99	78	52	130

Appendix D. Detailed Intersection Capacity Analysis Results

1: Dickey Road & SH 161 SBFR
4216-19.025

Existing
Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	26	68	105	145	0	0	0	0	46	444	15
Future Volume (vph)	0	26	68	105	145	0	0	0	0	46	444	15
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)	0	28	74	114	158	0	0	0	0	50	483	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	74	114	158	0	0	0	0	0	533	16
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	1 2						4	
Permitted Phases			2	1 2						4		4
Detector Phase		2	2	1	1 2					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0						10.0	10.0	10.0
Minimum Split (s)		15.5	15.5	15.5						16.7	16.7	16.7
Total Split (s)		21.0	21.0	99.0						24.0	24.0	24.0
Total Split (%)		14.6%	14.6%	68.8%						16.7%	16.7%	16.7%
Yellow Time (s)		3.2	3.2	3.0						4.7	4.7	4.7
All-Red Time (s)		2.1	2.1	2.0						1.8	1.8	1.8
Lost Time Adjust (s)		0.0	0.0	0.0							0.0	0.0
Total Lost Time (s)		5.3	5.3	5.0							6.5	6.5
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Recall Mode		None	None	C-Max						Max	Max	Max
Act Effct Green (s)		6.7	6.7	101.0	106.0						26.5	26.5
Actuated g/C Ratio		0.05	0.05	0.70	0.74						0.18	0.18
v/c Ratio		0.17	0.40	0.09	0.12						0.57	0.04
Control Delay		68.0	9.0	0.2	0.3						56.5	0.2
Queue Delay		0.0	0.0	0.0	0.5						0.0	0.0
Total Delay		68.0	9.0	0.2	0.9						56.5	0.2
LOS		E	A	A	A						E	A
Approach Delay		25.2			0.6						54.8	
Approach LOS		C			A						D	
Queue Length 50th (ft)		13	0	0	0						168	0
Queue Length 95th (ft)		31	15	m0	m0						214	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		385	275	1221	1487						932	378
Starvation Cap Reductn		0	0	0	1012						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.07	0.27	0.09	0.33						0.57	0.04

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 0 (0%), Referenced to phase 1:WBTL and 8:, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90

1: Dickey Road & SH 161 SBFR
4216-19.025

Existing
Timing Plan: AM

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	15.0	10.0
Minimum Split (s)	11.0	26.0	22.7
Total Split (s)	45.0	22.0	77.0
Total Split (%)	31%	15%	53%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	1.8	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

1: Dickey Road & SH 161 SBFR

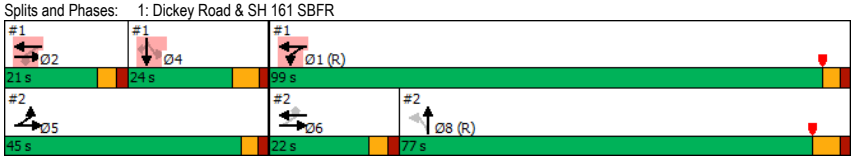
4216-19.025

Existing
Timing Plan: AM

Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road

4216-19.025

Existing
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	52	0	0	145	36	107	1904	93	0	0	0
Future Volume (vph)	5	52	0	0	145	36	107	1904	93	0	0	0
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)	5	57	0	0	158	39	116	2070	101	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	57	0	0	158	39	0	2287	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 6			6			8				
Permitted Phases	5 6					6	8					
Detector Phase	5	5 6			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0	10.0	10.0				
Minimum Split (s)	11.0				26.0	26.0	22.7	22.7				
Total Split (s)	45.0				22.0	22.0	77.0	77.0				
Total Split (%)	31.3%				15.3%	15.3%	53.5%	53.5%				
Yellow Time (s)	3.0				3.2	3.2	4.7	4.7				
All-Red Time (s)	2.0				1.8	1.8	2.0	2.0				
Lost Time Adjust (s)	0.0				0.0	0.0		0.0				
Total Lost Time (s)	5.0				5.0	5.0		6.7				
Lead/Lag					Lead	Lead	Lag	Lag				
Lead-Lag Optimize?					Yes	Yes	Yes	Yes				
Recall Mode	None				None	None	C-Max	C-Max				
Act Effct Green (s)	48.2	52.2			15.0	15.0		72.3				
Actuated g/C Ratio	0.33	0.36			0.10	0.10		0.50				
v/c Ratio	0.01	0.08			0.43	0.14		0.90				
Control Delay	0.0	1.1			64.5	1.1		38.8				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	0.0	1.1			64.5	1.1		38.8				
LOS	A	A			E	A		D				
Approach Delay		1.0			51.9			38.8				
Approach LOS		A			D			D				
Queue Length 50th (ft)	0	0			74	0		697				
Queue Length 95th (ft)	m0	m0			113	0		772				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	607	802			417	290		2531				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.07			0.38	0.13		0.90				

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 0 (0%), Referenced to phase 1:WBTL and 8:, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90

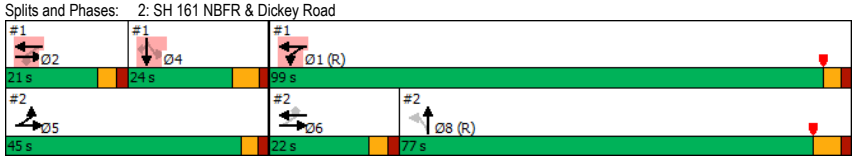
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	10.0
Minimum Split (s)	15.5	15.5	16.7
Total Split (s)	99.0	21.0	24.0
Total Split (%)	69%	15%	17%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	2.1	1.8
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	None	Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 38.9	Intersection LOS: D
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



3: Dickey Road & S Carrier Parkway
4216-19.025

Existing
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	75	26	62	108	122	28	1193	53	38	385	46
Future Volume (vph)	42	75	26	62	108	122	28	1193	53	38	385	46
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)	46	82	28	67	117	133	30	1297	58	41	418	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	110	0	67	250	0	30	1355	0	41	468	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	14.5	15.5		14.5	15.5		14.5	15.5		14.5	15.5	
Total Split (s)	15.0	18.0		15.0	18.0		15.0	72.0		15.0	72.0	
Total Split (%)	12.5%	15.0%		12.5%	15.0%		12.5%	60.0%		12.5%	60.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	15.8	9.0		16.9	9.6		83.7	78.7		85.2	81.1	
Actuated g/C Ratio	0.13	0.08		0.14	0.08		0.70	0.66		0.71	0.68	
v/c Ratio	0.27	0.39		0.32	0.65		0.04	0.59		0.16	0.20	
Control Delay	42.7	42.5		43.9	32.9		6.1	15.0		7.2	9.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	42.7	42.5		43.9	32.9		6.1	15.0		7.2	9.0	
LOS	D	D		D	C		A	B		A	A	
Approach Delay		42.6			35.2			14.8			8.9	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	30	32		44	46		6	321		8	75	
Queue Length 95th (ft)	61	60		82	88		17	441		21	114	
Internal Link Dist (ft)		182			199			150			246	
Turn Bay Length (ft)	80			70			90			170		
Base Capacity (vph)	194	379		224	458		715	2308		305	2360	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.29		0.30	0.55		0.04	0.59		0.13	0.20	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65

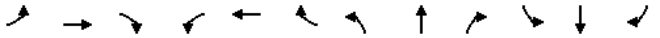
3: Dickey Road & S Carrier Parkway
4216-19.025

Existing
Timing Plan: AM

Intersection Signal Delay: 18.1 — Intersection LOS: B
Intersection Capacity Utilization 59.5% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Dickey Road & S Carrier Parkway

1: Dickey Road & SH 161 SBFR — Existing
4216-19.025 — Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	52	129	156	116	0	0	0	0	64	1302	9
Future Volume (vph)	0	52	129	156	116	0	0	0	0	64	1302	9
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)	0	57	140	170	126	0	0	0	0	70	1415	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	140	170	126	0	0	0	0	0	1485	10
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	1 2						4	
Permitted Phases			2	1 2						4		4
Detector Phase		2	2	1	1 2					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0						10.0	10.0	10.0
Minimum Split (s)		10.3	10.3	10.0						16.5	16.5	16.5
Total Split (s)		24.0	24.0	60.0						60.0	60.0	60.0
Total Split (%)		16.7%	16.7%	41.7%						41.7%	41.7%	41.7%
Yellow Time (s)		3.2	3.2	3.0						4.7	4.7	4.7
All-Red Time (s)		2.1	2.1	2.0						1.8	1.8	1.8
Lost Time Adjust (s)		0.0	0.0	0.0							0.0	0.0
Total Lost Time (s)		5.3	5.3	5.0							6.5	6.5
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Recall Mode		None	None	None						C-Max	C-Max	C-Max
Act Effct Green (s)		8.5	8.5	63.8	68.8						63.7	63.7
Actuated g/C Ratio		0.06	0.06	0.44	0.48						0.44	0.44
v/c Ratio		0.27	0.62	0.22	0.14						0.66	0.01
Control Delay		66.9	21.8	1.4	0.6						33.8	0.0
Queue Delay		0.0	0.0	0.7	0.0						0.0	0.0
Total Delay		66.9	21.8	2.1	0.6						33.8	0.0
LOS		E	C	A	A						C	A
Approach Delay		34.9			1.5						33.6	
Approach LOS		C			A						C	
Queue Length 50th (ft)		27	0	5	1						392	0
Queue Length 95th (ft)		50	66	m9	m1						482	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		459	327	757	1022						2243	759
Starvation Cap Reductn		0	0	340	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		0.12	0.43	0.41	0.12						0.66	0.01

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 4:SBTL and 5:, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83

1: Dickey Road & SH 161 SBFR — Existing
4216-19.025 — Timing Plan: PM

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	15.0	10.0
Minimum Split (s)	11.0	26.0	22.7
Total Split (s)	84.0	24.0	36.0
Total Split (%)	58%	17%	25%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	1.8	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	None	Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

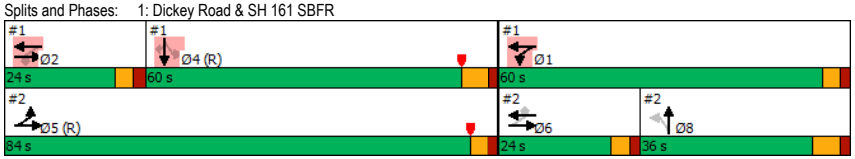
1: Dickey Road & SH 161 SBFR

4216-19.025

Existing
Timing Plan: PM

Intersection Signal Delay: 29.0 | Intersection LOS: C
Intersection Capacity Utilization 57.1% | ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road

4216-19.025

Existing
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	104	0	0	191	34	78	688	98	0	0	0
Future Volume (vph)	12	104	0	0	191	34	78	688	98	0	0	0
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)	13	113	0	0	208	37	85	748	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	113	0	0	208	37	0	940	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 6			6			8				
Permitted Phases	5 6					6	8					
Detector Phase	5	5 6			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0	10.0	10.0				
Minimum Split (s)	11.0				26.0	26.0	22.7	22.7				
Total Split (s)	84.0				24.0	24.0	36.0	36.0				
Total Split (%)	58.3%				16.7%	16.7%	25.0%	25.0%				
Yellow Time (s)	3.0				3.2	3.2	4.7	4.7				
All-Red Time (s)	2.0				1.8	1.8	2.0	2.0				
Lost Time Adjust (s)	0.0				0.0	0.0		0.0				
Total Lost Time (s)	5.0				5.0	5.0		6.7				
Lead/Lag					Lead	Lead	Lag	Lag				
Lead-Lag Optimize?					Yes	Yes	Yes	Yes				
Recall Mode	C-Max				None	None	Max	Max				
Act Effct Green (s)	94.7	99.7			15.7	15.7		32.6				
Actuated g/C Ratio	0.66	0.69			0.11	0.11		0.23				
v/c Ratio	0.01	0.09			0.54	0.13		0.83				
Control Delay	0.1	0.5			66.1	1.0		59.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	0.1	0.5			66.1	1.0		59.4				
LOS	A	A			E	A		E				
Approach Delay		0.4			56.3			59.4				
Approach LOS		A			E			E				
Queue Length 50th (ft)	0	0			99	0		304				
Queue Length 95th (ft)	m1	m0			140	0		#387				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	1071	1332			466	310		1136				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.08			0.45	0.12		0.83				

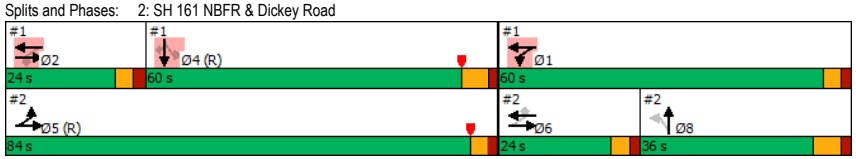
Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 4:SBTL and 5:, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	10.0
Minimum Split (s)	10.0	10.3	16.5
Total Split (s)	60.0	24.0	60.0
Total Split (%)	42%	17%	42%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	2.1	1.8
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 53.1 — Intersection LOS: D
Intersection Capacity Utilization 57.1% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



3: Dickey Road & S Carrier Parkway
4216-19.025

Existing
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	115	53	79	118	55	19	435	52	93	1237	88
Future Volume (vph)	29	115	53	79	118	55	19	435	52	93	1237	88
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)	32	125	58	86	128	60	21	473	57	101	1345	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	183	0	86	188	0	21	530	0	101	1441	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	14.5	15.5		14.5	15.5		14.5	15.5		14.5	15.5	
Total Split (s)	15.0	18.0		15.0	18.0		20.0	67.0		20.0	67.0	
Total Split (%)	12.5%	15.0%		12.5%	15.0%		16.7%	55.8%		16.7%	55.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	16.1	9.9		19.3	13.6		80.0	74.0		86.0	82.4	
Actuated g/C Ratio	0.13	0.08		0.16	0.11		0.67	0.62		0.72	0.69	
v/c Ratio	0.16	0.56		0.41	0.44		0.09	0.25		0.17	0.60	
Control Delay	39.7	44.5		46.0	39.2		7.0	11.5		6.5	13.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.7	44.5		46.0	39.2		7.0	11.5		6.5	13.4	
LOS	D	D		D	D		A	B		A	B	
Approach Delay		43.8			41.3			11.3			13.0	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)	20	52		56	52		4	95		22	267	
Queue Length 95th (ft)	47	89		101	91		13	138		43	480	
Internal Link Dist (ft)		182			199			150			246	
Turn Bay Length (ft)	80			70			90			170		
Base Capacity (vph)	224	396		217	458		361	2155		670	2410	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.46		0.40	0.41		0.06	0.25		0.15	0.60	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60

3: Dickey Road & S Carrier Parkway
4216-19.025

Existing
Timing Plan: PM

Intersection Signal Delay: 18.2 — Intersection LOS: B
Intersection Capacity Utilization 68.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Dickey Road & S Carrier Parkway

1: Dickey Road & SH 161 SBFR
4216-19.025

Background
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	70	108	149	0	0	0	0	47	457	15
Future Volume (vph)	0	27	70	108	149	0	0	0	0	47	457	15
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)	0	29	76	117	162	0	0	0	0	51	497	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	76	117	162	0	0	0	0	0	548	16
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	1 2						4	
Permitted Phases			2	1 2						4		4
Detector Phase		2	2	1	1 2					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0						10.0	10.0	10.0
Minimum Split (s)		15.5	15.5	15.5						16.7	16.7	16.7
Total Split (s)		21.0	21.0	99.0						24.0	24.0	24.0
Total Split (%)		14.6%	14.6%	68.8%						16.7%	16.7%	16.7%
Yellow Time (s)		3.2	3.2	3.0						4.7	4.7	4.7
All-Red Time (s)		2.1	2.1	2.0						1.8	1.8	1.8
Lost Time Adjust (s)		0.0	0.0	0.0							0.0	0.0
Total Lost Time (s)		5.3	5.3	5.0							6.5	6.5
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Recall Mode		None	None	C-Max						Max	Max	Max
Act Effct Green (s)		6.7	6.7	101.0	106.0						26.5	26.5
Actuated g/C Ratio		0.05	0.05	0.70	0.74						0.18	0.18
v/c Ratio		0.18	0.42	0.10	0.12						0.59	0.04
Control Delay		68.1	9.7	0.2	0.3						56.9	0.2
Queue Delay		0.0	0.0	0.0	0.5						0.0	0.0
Total Delay		68.1	9.7	0.2	0.9						56.9	0.2
LOS		E	A	A	A						E	A
Approach Delay		25.8			0.6						55.3	
Approach LOS		C			A						E	
Queue Length 50th (ft)		14	0	0	0						174	0
Queue Length 95th (ft)		32	16	m0	m0						220	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		385	275	1222	1487						931	377
Starvation Cap Reductn		0	0	0	1011						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.08	0.28	0.10	0.34						0.59	0.04

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 1:WBTL and 8:, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93

1: Dickey Road & SH 161 SBFR
4216-19.025

Background
Timing Plan: AM

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	15.0	10.0
Minimum Split (s)	11.0	26.0	22.7
Total Split (s)	45.0	22.0	77.0
Total Split (%)	31%	15%	53%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	1.8	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

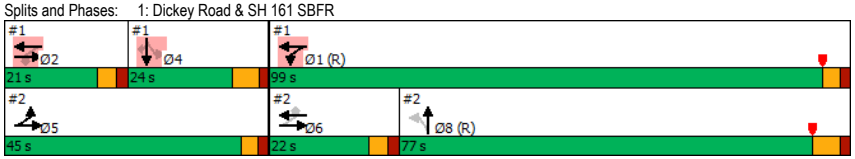
1: Dickey Road & SH 161 SBFR

Background
Timing Plan: AM

4216-19.025

Intersection Signal Delay: 35.9 | Intersection LOS: D
Intersection Capacity Utilization 72.8% | ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road

Background
Timing Plan: AM

4216-19.025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	54	0	0	149	37	110	1961	96	0	0	0
Future Volume (vph)	5	54	0	0	149	37	110	1961	96	0	0	0
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)	5	59	0	0	162	40	120	2132	104	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	59	0	0	162	40	0	2356	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 6			6			8				
Permitted Phases	5 6					6	8					
Detector Phase	5	5 6			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0	10.0	10.0				
Minimum Split (s)	11.0				26.0	26.0	22.7	22.7				
Total Split (s)	45.0				22.0	22.0	77.0	77.0				
Total Split (%)	31.3%				15.3%	15.3%	53.5%	53.5%				
Yellow Time (s)	3.0				3.2	3.2	4.7	4.7				
All-Red Time (s)	2.0				1.8	1.8	2.0	2.0				
Lost Time Adjust (s)	0.0				0.0	0.0		0.0				
Total Lost Time (s)	5.0				5.0	5.0		6.7				
Lead/Lag					Lead	Lead	Lag	Lag				
Lead-Lag Optimize?					Yes	Yes	Yes	Yes				
Recall Mode	None				None	None	C-Max	C-Max				
Act Effct Green (s)	48.2	52.2			15.0	15.0		72.3				
Actuated g/C Ratio	0.33	0.36			0.10	0.10		0.50				
v/c Ratio	0.01	0.09			0.44	0.15		0.93				
Control Delay	0.0	1.2			64.6	1.2		41.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	0.0	1.2			64.6	1.2		41.4				
LOS	A	A			E	A		D				
Approach Delay		1.1			52.0			41.4				
Approach LOS		A			D			D				
Queue Length 50th (ft)	0	0			76	0		738				
Queue Length 95th (ft)	m0	m0			115	0		816				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	605	802			417	290		2530				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.07			0.39	0.14		0.93				

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 1:WBTL and 8:, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93

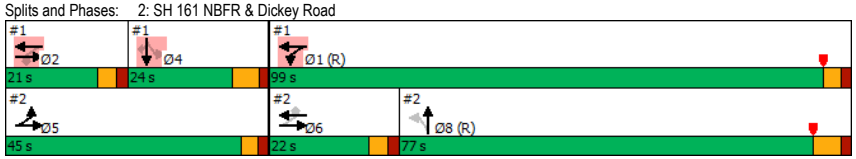
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	10.0
Minimum Split (s)	15.5	15.5	16.7
Total Split (s)	99.0	21.0	24.0
Total Split (%)	69%	15%	17%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	2.1	1.8
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	None	Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 41.2	Intersection LOS: D
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



3: Dickey Road & S Carrier Parkway
4216-19.025

Background
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	77	27	64	111	126	29	1229	55	39	397	47
Future Volume (vph)	43	77	27	64	111	126	29	1229	55	39	397	47
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)	47	84	29	70	121	137	32	1336	60	42	432	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	113	0	70	258	0	32	1396	0	42	483	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	14.5	15.5		14.5	15.5		14.5	15.5		14.5	15.5	
Total Split (s)	15.0	18.0		15.0	18.0		15.0	72.0		15.0	72.0	
Total Split (%)	12.5%	15.0%		12.5%	15.0%		12.5%	60.0%		12.5%	60.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	15.9	9.1		17.1	9.7		83.5	78.5		85.0	80.9	
Actuated g/C Ratio	0.13	0.08		0.14	0.08		0.70	0.65		0.71	0.67	
v/c Ratio	0.28	0.40		0.33	0.66		0.05	0.61		0.17	0.21	
Control Delay	42.8	42.4		44.1	33.2		6.1	15.5		7.4	9.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	42.8	42.4		44.1	33.2		6.1	15.5		7.4	9.2	
LOS	D	D		D	C		A	B		A	A	
Approach Delay		42.5			35.5			15.3			9.0	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	30	33		46	47		6	340		9	78	
Queue Length 95th (ft)	62	62		85	91		18	464		21	118	
Internal Link Dist (ft)		182			199			150			246	
Turn Bay Length (ft)	80			70			90			170		
Base Capacity (vph)	194	380		225	461		706	2302		293	2354	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.30		0.31	0.56		0.05	0.61		0.14	0.21	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66

3: Dickey Road & S Carrier Parkway
4216-19.025

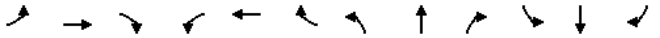
Background
Timing Plan: AM

Intersection Signal Delay: 18.4 — Intersection LOS: B
Intersection Capacity Utilization 60.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Dickey Road & S Carrier Parkway

1: Dickey Road & SH 161 SBFR
4216-19.025

Background
Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	54	133	161	119	0	0	0	0	66	1341	9
Future Volume (vph)	0	54	133	161	119	0	0	0	0	66	1341	9
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)	0	59	145	175	129	0	0	0	0	72	1458	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	145	175	129	0	0	0	0	0	1530	10
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	1 2						4	
Permitted Phases			2	1 2						4		4
Detector Phase		2	2	1	1 2					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0						10.0	10.0	10.0
Minimum Split (s)		10.3	10.3	10.0						16.5	16.5	16.5
Total Split (s)		24.0	24.0	60.0						60.0	60.0	60.0
Total Split (%)		16.7%	16.7%	41.7%						41.7%	41.7%	41.7%
Yellow Time (s)		3.2	3.2	3.0						4.7	4.7	4.7
All-Red Time (s)		2.1	2.1	2.0						1.8	1.8	1.8
Lost Time Adjust (s)		0.0	0.0	0.0							0.0	0.0
Total Lost Time (s)		5.3	5.3	5.0							6.5	6.5
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Recall Mode		None	None	None						C-Max	C-Max	C-Max
Act Effct Green (s)		8.6	8.6	63.9	68.9						63.6	63.6
Actuated g/C Ratio		0.06	0.06	0.44	0.48						0.44	0.44
v/c Ratio		0.28	0.63	0.23	0.14						0.68	0.01
Control Delay		66.9	21.8	1.5	0.6						34.5	0.0
Queue Delay		0.0	0.0	0.7	0.4						0.0	0.0
Total Delay		66.9	21.8	2.2	1.0						34.5	0.0
LOS		E	C	A	A						C	A
Approach Delay		34.8			1.7						34.3	
Approach LOS		C			A						C	
Queue Length 50th (ft)		28	0	5	1						409	0
Queue Length 95th (ft)		51	68	m10	m1						504	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		459	331	758	1022						2240	757
Starvation Cap Reductn		0	0	339	574						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.13	0.44	0.42	0.29						0.68	0.01

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 4:SBTL and 5:, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85

1: Dickey Road & SH 161 SBFR
4216-19.025

Background
Timing Plan: PM

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	15.0	10.0
Minimum Split (s)	11.0	26.0	22.7
Total Split (s)	84.0	24.0	36.0
Total Split (%)	58%	17%	25%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	1.8	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	None	Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

1: Dickey Road & SH 161 SBFR

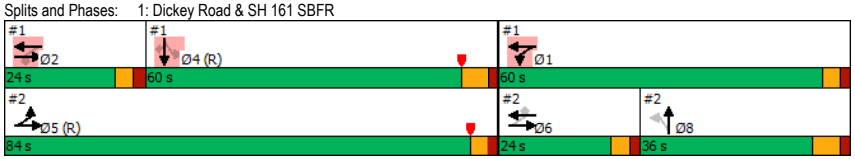
Background
Timing Plan: PM

4216-19.025

Intersection Signal Delay: 29.5	Intersection LOS: C
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road

Background
Timing Plan: PM

4216-19.025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	107	0	0	197	35	80	709	101	0	0	0
Future Volume (vph)	12	107	0	0	197	35	80	709	101	0	0	0
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)	13	116	0	0	214	38	87	771	110	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	116	0	0	214	38	0	968	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 6			6			8				
Permitted Phases	5 6					6	8					
Detector Phase	5	5 6			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0	10.0	10.0				
Minimum Split (s)	11.0				26.0	26.0	22.7	22.7				
Total Split (s)	84.0				24.0	24.0	36.0	36.0				
Total Split (%)	58.3%				16.7%	16.7%	25.0%	25.0%				
Yellow Time (s)	3.0				3.2	3.2	4.7	4.7				
All-Red Time (s)	2.0				1.8	1.8	2.0	2.0				
Lost Time Adjust (s)	0.0				0.0	0.0		0.0				
Total Lost Time (s)	5.0				5.0	5.0		6.7				
Lead/Lag					Lead	Lead	Lag	Lag				
Lead-Lag Optimize?					Yes	Yes	Yes	Yes				
Recall Mode	C-Max				None	None	Max	Max				
Act Effct Green (s)	94.8	99.8			15.8	15.8		32.5				
Actuated g/C Ratio	0.66	0.69			0.11	0.11		0.23				
v/c Ratio	0.01	0.09			0.55	0.14		0.85				
Control Delay	0.1	0.5			66.3	1.0		61.0				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	0.1	0.5			66.3	1.0		61.0				
LOS	A	A			E	A		E				
Approach Delay		0.5			56.4			61.0				
Approach LOS		A			E			E				
Queue Length 50th (ft)	0	0			102	0		315				
Queue Length 95th (ft)	m1	m0			143	0		#412				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	1068	1332			466	310		1134				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.09			0.46	0.12		0.85				

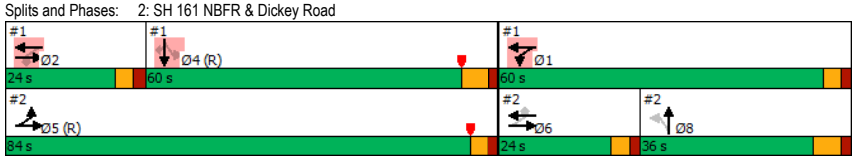
Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 4:SBTL and 5:, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	10.0
Minimum Split (s)	10.0	10.3	16.5
Total Split (s)	60.0	24.0	60.0
Total Split (%)	42%	17%	42%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	2.1	1.8
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 54.4 — Intersection LOS: D
Intersection Capacity Utilization 58.4% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



3: Dickey Road & S Carrier Parkway
4216-19.025

Background
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	118	55	81	122	57	20	448	54	96	1274	91
Future Volume (vph)	30	118	55	81	122	57	20	448	54	96	1274	91
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)	33	128	60	88	133	62	22	487	59	104	1385	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	188	0	88	195	0	22	546	0	104	1484	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	14.5	15.5		14.5	15.5		14.5	15.5		14.5	15.5	
Total Split (s)	15.0	18.0		15.0	18.0		20.0	67.0		20.0	67.0	
Total Split (%)	12.5%	15.0%		12.5%	15.0%		16.7%	55.8%		16.7%	55.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	17.4	10.0		21.8	16.1		77.3	71.3		82.7	77.5	
Actuated g/C Ratio	0.14	0.08		0.18	0.13		0.64	0.59		0.69	0.65	
v/c Ratio	0.16	0.57		0.40	0.39		0.11	0.26		0.18	0.65	
Control Delay	39.5	44.7		44.8	38.5		7.3	12.3		6.8	16.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.5	44.7		44.8	38.5		7.3	12.3		6.8	16.2	
LOS	D	D		D	D		A	B		A	B	
Approach Delay		44.0			40.4			12.1			15.5	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)	21	53		57	55		5	99		23	390	
Queue Length 95th (ft)	48	91		103	95		14	143		44	505	
Internal Link Dist (ft)		182			199			150			246	
Turn Bay Length (ft)	80			70			90			170		
Base Capacity (vph)	238	397		226	497		332	2076		646	2267	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.47		0.39	0.39		0.07	0.26		0.16	0.65	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65

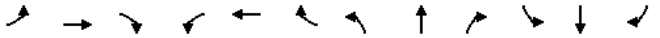
3: Dickey Road & S Carrier Parkway
4216-19.025

Background
Timing Plan: PM

Intersection Signal Delay: 19.8 — Intersection LOS: B
Intersection Capacity Utilization 70.1% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Dickey Road & S Carrier Parkway

1: Dickey Road & SH 161 SBFR — Buildout
4216-19.025 — Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	70	143	149	0	0	0	0	50	457	15
Future Volume (vph)	0	27	70	143	149	0	0	0	0	50	457	15
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)	0	29	76	155	162	0	0	0	0	54	497	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	76	155	162	0	0	0	0	0	551	16
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	1 2						4	
Permitted Phases			2	1 2						4		4
Detector Phase		2	2	1	1 2					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0						10.0	10.0	10.0
Minimum Split (s)		15.5	15.5	15.5						16.7	16.7	16.7
Total Split (s)		21.0	21.0	99.0						24.0	24.0	24.0
Total Split (%)		14.6%	14.6%	68.8%						16.7%	16.7%	16.7%
Yellow Time (s)		3.2	3.2	3.0						4.7	4.7	4.7
All-Red Time (s)		2.1	2.1	2.0						1.8	1.8	1.8
Lost Time Adjust (s)		0.0	0.0	0.0							0.0	0.0
Total Lost Time (s)		5.3	5.3	5.0							6.5	6.5
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Recall Mode		None	None	C-Max						Max	Max	Max
Act Effct Green (s)		6.7	6.7	101.0	106.0						26.5	26.5
Actuated g/C Ratio		0.05	0.05	0.70	0.74						0.18	0.18
v/c Ratio		0.18	0.42	0.13	0.12						0.59	0.04
Control Delay		68.1	9.7	0.2	0.1						57.0	0.2
Queue Delay		0.0	0.0	0.7	0.6						0.0	0.0
Total Delay		68.1	9.7	1.0	0.7						57.0	0.2
LOS		E	A	A	A						E	A
Approach Delay		25.8			0.8						55.4	
Approach LOS		C			A						E	
Queue Length 50th (ft)		14	0	0	0						175	0
Queue Length 95th (ft)		32	16	m0	m0						221	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		385	275	1222	1487						931	377
Starvation Cap Reductn		0	0	815	1014						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.08	0.28	0.38	0.34						0.59	0.04

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 1:WBTL and 8:, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94

1: Dickey Road & SH 161 SBFR — Buildout
4216-19.025 — Timing Plan: AM

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	15.0	10.0
Minimum Split (s)	11.0	26.0	22.7
Total Split (s)	45.0	22.0	77.0
Total Split (%)	31%	15%	53%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	1.8	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

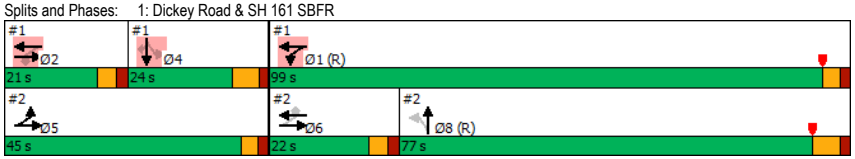
1: Dickey Road & SH 161 SBFR

Buildout
4216-19.025
Timing Plan: AM

Intersection Signal Delay: 34.7	Intersection LOS: C
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road

Buildout
4216-19.025
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	57	0	0	184	37	110	1970	99	0	0	0
Future Volume (vph)	5	57	0	0	184	37	110	1970	99	0	0	0
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)	5	62	0	0	200	40	120	2141	108	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	62	0	0	200	40	0	2369	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 6			6			8				
Permitted Phases	5 6					6	8					
Detector Phase	5	5 6			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0	10.0	10.0				
Minimum Split (s)	11.0				26.0	26.0	22.7	22.7				
Total Split (s)	45.0				22.0	22.0	77.0	77.0				
Total Split (%)	31.3%				15.3%	15.3%	53.5%	53.5%				
Yellow Time (s)	3.0				3.2	3.2	4.7	4.7				
All-Red Time (s)	2.0				1.8	1.8	2.0	2.0				
Lost Time Adjust (s)	0.0				0.0	0.0		0.0				
Total Lost Time (s)	5.0				5.0	5.0		6.7				
Lead/Lag					Lead	Lead	Lag	Lag				
Lead-Lag Optimize?					Yes	Yes	Yes	Yes				
Recall Mode	None				None	None	C-Max	C-Max				
Act Effct Green (s)	48.6	52.6			15.4	15.4		71.9				
Actuated g/C Ratio	0.34	0.37			0.11	0.11		0.50				
v/c Ratio	0.01	0.09			0.53	0.15		0.94				
Control Delay	0.0	1.2			66.3	1.1		42.8				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	0.0	1.2			66.3	1.1		42.8				
LOS	A	A			E	A		D				
Approach Delay		1.2			55.4			42.8				
Approach LOS		A			E			D				
Queue Length 50th (ft)	0	0			95	0		745				
Queue Length 95th (ft)	m0	m0			136	0		#869				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	592	802			417	290		2517				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.08			0.48	0.14		0.94				

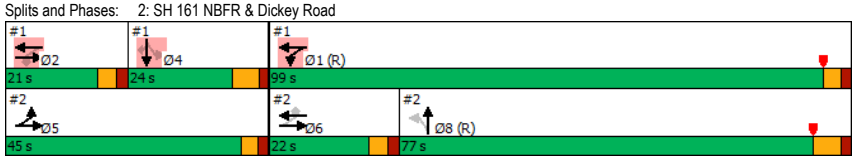
Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 1:WBTL and 8:, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	10.0
Minimum Split (s)	15.5	15.5	16.7
Total Split (s)	99.0	21.0	24.0
Total Split (%)	69%	15%	17%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	2.1	1.8
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	None	Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 42.9 Intersection LOS: D
Intersection Capacity Utilization 73.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



3: Dickey Road & S Carrier Parkway — Buildout
4216-19.025 — Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	77	35	64	111	126	32	1229	55	39	397	50
Future Volume (vph)	52	77	35	64	111	126	32	1229	55	39	397	50
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)	57	84	38	70	121	137	35	1336	60	42	432	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	122	0	70	258	0	35	1396	0	42	486	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	14.5	15.5		14.5	15.5		14.5	15.5		14.5	15.5	
Total Split (s)	15.0	18.0		15.0	18.0		15.0	72.0		15.0	72.0	
Total Split (%)	12.5%	15.0%		12.5%	15.0%		12.5%	60.0%		12.5%	60.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	16.4	9.4		17.0	9.7		83.4	78.2		84.7	80.6	
Actuated g/C Ratio	0.14	0.08		0.14	0.08		0.70	0.65		0.71	0.67	
v/c Ratio	0.33	0.41		0.33	0.67		0.05	0.61		0.17	0.21	
Control Delay	44.0	39.5		43.9	33.2		6.2	15.6		7.5	9.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.0	39.5		43.9	33.2		6.2	15.6		7.5	9.3	
LOS	D	D		D	C		A	B		A	A	
Approach Delay		40.9			35.5			15.4			9.2	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	37	33		45	47		7	345		9	81	
Queue Length 95th (ft)	73	63		85	91		19	464		21	120	
Internal Link Dist (ft)		182			199			150			246	
Turn Bay Length (ft)	80			70			90			170		
Base Capacity (vph)	194	385		226	461		700	2295		291	2343	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.29	0.32		0.31	0.56		0.05	0.61		0.14	0.21	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67

3: Dickey Road & S Carrier Parkway — Buildout
4216-19.025 — Timing Plan: AM

Intersection Signal Delay: 18.6 — Intersection LOS: B
Intersection Capacity Utilization 60.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Dickey Road & S Carrier Parkway

4: SH 161 NBFR & Site Driveway 1 — Buildout
4216-19.025 — Timing Plan: AM

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	2022	18	0	0
Future Vol, veh/h	0	35	2022	18	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	2198	20	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	1109	0	0
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	175	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	175	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	31.2	0
HCM LOS	D	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	175
HCM Lane V/C Ratio	-	-	0.217
HCM Control Delay (s)	-	-	31.2
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	0.8

5: Dickey Road & Site Driveway 2 — Buildout
4216-19.025 — Timing Plan: AM

Intersection	
Int Delay, s/veh	1.4

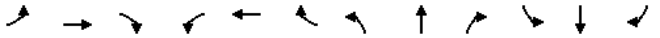
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	149	187	6	17	35
Future Vol, veh/h	6	149	187	6	17	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	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	7	162	203	7	18	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	210	0	-	0	302	105
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	95	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1358	-	-	-	665	929
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1358	-	-	-	661	929
Mov Cap-2 Maneuver	-	-	-	-	661	-
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1358	-	-	-	661	929
HCM Lane V/C Ratio	0.005	-	-	-	0.028	0.041
HCM Control Delay (s)	7.7	0	-	-	10.6	9
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

1: Dickey Road & SH 161 SBFR — Buildout
4216-19.025 — Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	54	133	184	119	0	0	0	0	75	1341	9
Future Volume (vph)	0	54	133	184	119	0	0	0	0	75	1341	9
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)	0	59	145	200	129	0	0	0	0	82	1458	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	145	200	129	0	0	0	0	0	1540	10
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	1 2						4	
Permitted Phases			2	1 2						4		4
Detector Phase		2	2	1	1 2					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0						10.0	10.0	10.0
Minimum Split (s)		10.3	10.3	10.0						16.5	16.5	16.5
Total Split (s)		24.0	24.0	60.0						60.0	60.0	60.0
Total Split (%)		16.7%	16.7%	41.7%						41.7%	41.7%	41.7%
Yellow Time (s)		3.2	3.2	3.0						4.7	4.7	4.7
All-Red Time (s)		2.1	2.1	2.0						1.8	1.8	1.8
Lost Time Adjust (s)		0.0	0.0	0.0							0.0	0.0
Total Lost Time (s)		5.3	5.3	5.0							6.5	6.5
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Recall Mode		None	None	None						C-Max	C-Max	C-Max
Act Effct Green (s)		8.6	8.6	63.9	68.9						63.6	63.6
Actuated g/C Ratio		0.06	0.06	0.44	0.48						0.44	0.44
v/c Ratio		0.28	0.63	0.26	0.14						0.69	0.01
Control Delay		66.9	21.8	1.9	0.5						34.7	0.0
Queue Delay		0.0	0.0	0.9	0.4						0.0	0.0
Total Delay		66.9	21.8	2.8	1.0						34.7	0.0
LOS		E	C	A	A						C	A
Approach Delay		34.8			2.1						34.4	
Approach LOS		C			A						C	
Queue Length 50th (ft)		28	0	12	1						414	0
Queue Length 95th (ft)		51	68	m17	m1						508	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		459	331	758	1022						2237	757
Starvation Cap Reductn		0	0	338	581						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.13	0.44	0.48	0.29						0.69	0.01

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 4:SBTL and 5:, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90

1: Dickey Road & SH 161 SBFR — Buildout
4216-19.025 — Timing Plan: PM

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	15.0	10.0
Minimum Split (s)	11.0	26.0	22.7
Total Split (s)	84.0	24.0	36.0
Total Split (%)	58%	17%	25%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	1.8	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	None	Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

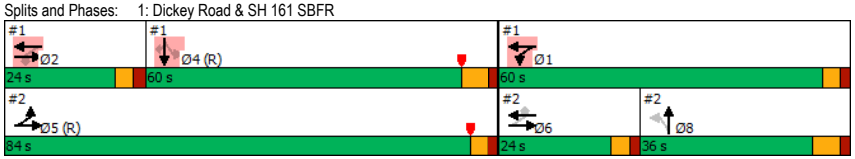
Intersection Summary

1: Dickey Road & SH 161 SBFR

Buildout
4216-19.025
Timing Plan: PM

Intersection Signal Delay: 29.4 — Intersection LOS: C
Intersection Capacity Utilization 59.9% — ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road

Buildout
4216-19.025
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	116	0	0	220	35	80	736	110	0	0	0
Future Volume (vph)	12	116	0	0	220	35	80	736	110	0	0	0
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)	13	126	0	0	239	38	87	800	120	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	126	0	0	239	38	0	1007	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 6			6			8				
Permitted Phases	5 6					6	8					
Detector Phase	5	5 6			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0	10.0	10.0				
Minimum Split (s)	11.0				26.0	26.0	22.7	22.7				
Total Split (s)	84.0				24.0	24.0	36.0	36.0				
Total Split (%)	58.3%				16.7%	16.7%	25.0%	25.0%				
Yellow Time (s)	3.0				3.2	3.2	4.7	4.7				
All-Red Time (s)	2.0				1.8	1.8	2.0	2.0				
Lost Time Adjust (s)	0.0				0.0	0.0		0.0				
Total Lost Time (s)	5.0				5.0	5.0		6.7				
Lead/Lag					Lead	Lead	Lag	Lag				
Lead-Lag Optimize?					Yes	Yes	Yes	Yes				
Recall Mode	C-Max				None	None	Max	Max				
Act Effct Green (s)	95.3	100.3			16.3	16.3		32.0				
Actuated g/C Ratio	0.66	0.70			0.11	0.11		0.22				
v/c Ratio	0.01	0.10			0.60	0.13		0.90				
Control Delay	0.1	0.5			67.1	1.0		65.3				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	0.1	0.5			67.1	1.0		65.3				
LOS	A	A			E	A		E				
Approach Delay		0.5			58.0			65.3				
Approach LOS		A			E			E				
Queue Length 50th (ft)	0	0			115	0		331				
Queue Length 95th (ft)	m1	m0			157	0		#445				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	1062	1332			466	310		1116				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.09			0.51	0.12		0.90				

Intersection Summary

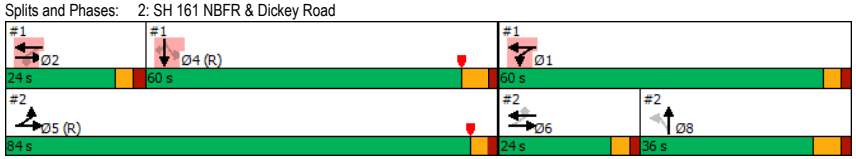
Cycle Length: 144
Actuated Cycle Length: 144
Offset: 38 (26%), Referenced to phase 4:SBTL and 5:, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	10.0
Minimum Split (s)	10.0	10.3	16.5
Total Split (s)	60.0	24.0	60.0
Total Split (%)	42%	17%	42%
Yellow Time (s)	3.0	3.2	4.7
All-Red Time (s)	2.0	2.1	1.8
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 57.6 — Intersection LOS: E
Intersection Capacity Utilization 59.9% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



3: Dickey Road & S Carrier Parkway — Buildout
4216-19.025 — Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	118	60	81	122	57	29	448	54	96	1274	100
Future Volume (vph)	36	118	60	81	122	57	29	448	54	96	1274	100
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)	39	128	65	88	133	62	32	487	59	104	1385	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	193	0	88	195	0	32	546	0	104	1494	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	14.5	15.5		14.5	15.5		14.5	15.5		14.5	15.5	
Total Split (s)	15.0	18.0		15.0	18.0		20.0	67.0		20.0	67.0	
Total Split (%)	12.5%	15.0%		12.5%	15.0%		16.7%	55.8%		16.7%	55.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	17.5	10.0		21.6	15.9		77.6	71.4		82.6	77.4	
Actuated g/C Ratio	0.15	0.08		0.18	0.13		0.65	0.60		0.69	0.64	
v/c Ratio	0.19	0.58		0.41	0.40		0.15	0.26		0.18	0.66	
Control Delay	40.0	43.4		45.0	38.7		7.9	12.2		6.8	16.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.0	43.4		45.0	38.7		7.9	12.2		6.8	16.4	
LOS	D	D		D	D		A	B		A	B	
Approach Delay		42.8			40.7			12.0			15.8	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)	25	53		57	55		7	99		23	394	
Queue Length 95th (ft)	54	90		103	95		18	143		44	515	
Internal Link Dist (ft)		182			199			150			246	
Turn Bay Length (ft)	80			70			90			170		
Base Capacity (vph)	237	402		222	492		328	2078		648	2262	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.16	0.48		0.40	0.40		0.10	0.26		0.16	0.66	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66

3: Dickey Road & S Carrier Parkway — Buildout
4216-19.025 — Timing Plan: PM

Intersection Signal Delay: 19.9 — Intersection LOS: B
Intersection Capacity Utilization 70.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Dickey Road & S Carrier Parkway

4: SH 161 NBFR & Site Driveway 1 — Buildout
4216-19.025 — Timing Plan: PM

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	779	54	0	0
Future Vol, veh/h	0	23	779	54	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	25	847	59	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	453	0	0
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	474	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	474	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	13	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	474
HCM Lane V/C Ratio	-	-	0.053
HCM Control Delay (s)	-	-	13
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

5: Dickey Road & Site Driveway 2 — Buildout
4216-19.025 — Timing Plan: PM

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	208	232	18	12	23
Future Vol, veh/h	18	208	232	18	12	23
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	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	226	252	20	13	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	272	0	-	0	415	136
Stage 1	-	-	-	-	262	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1288	-	-	-	566	888
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1288	-	-	-	556	888
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1288	-	-	-	556	888
HCM Lane V/C Ratio	0.015	-	-	-	0.023	0.028
HCM Control Delay (s)	7.8	-	-	-	11.6	9.2
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

1: Dickey Road & SH 161 SBFR
4216-19.025

Existing - Improvements
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	26	68	105	145	0	0	0	0	46	444	15
Future Volume (vph)	0	26	68	105	145	0	0	0	0	46	444	15
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)	0	28	74	114	158	0	0	0	0	50	483	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	74	114	158	0	0	0	0	0	533	16
Turn Type		NA	custom	pm+pt	NA					Perm	NA	Perm
Protected Phases		3		1	1 3						2 4	
Permitted Phases			2	1 3						2 4		2 4
Detector Phase		3	2	1	1 3					2 4	2 4	2 4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0								
Minimum Split (s)		15.5	15.5	15.5								
Total Split (s)		20.0	67.0	19.0								
Total Split (%)		16.7%	55.8%	15.8%								
Yellow Time (s)		3.2	3.2	3.0								
All-Red Time (s)		2.1	2.1	2.0								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		5.3	5.3	5.0								
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None								
Act Effct Green (s)		14.7	68.9	20.9	25.9						83.8	83.8
Actuated g/C Ratio		0.12	0.57	0.17	0.22						0.70	0.70
v/c Ratio		0.06	0.08	0.23	0.39						0.15	0.01
Control Delay		47.1	0.1	27.2	29.6						6.2	0.0
Queue Delay		0.0	0.0	0.0	0.2						0.0	0.0
Total Delay		47.1	0.1	27.2	29.8						6.2	0.0
LOS		D	A	C	C						A	A
Approach Delay		13.0			28.7						6.1	
Approach LOS		B			C						A	
Queue Length 50th (ft)		10	0	21	57						45	0
Queue Length 95th (ft)		25	0	m34	m88						59	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		433	967	733	527						3533	1129
Starvation Cap Reductn		0	0	0	65						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.06	0.08	0.16	0.34						0.15	0.01

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 8:EBWB, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78

1: Dickey Road & SH 161 SBFR
4216-19.025

Existing - Improvements
Timing Plan: AM

Lane Group	Ø4	Ø5	Ø6	Ø7	Ø8
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Peak Hour Factor					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	4	5	6	7	8
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	10.0	5.0	15.0	10.0	10.0
Minimum Split (s)	16.7	11.0	26.0	22.7	22.7
Total Split (s)	14.0	15.0	71.0	18.0	16.0
Total Split (%)	12%	13%	59%	15%	13%
Yellow Time (s)	4.7	3.0	3.2	4.7	4.7
All-Red Time (s)	1.8	2.0	1.8	2.0	2.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	None	None	None	C-Max
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS					
Queue Length 50th (ft)					
Queue Length 95th (ft)					
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)					
Starvation Cap Reductn					
Spillback Cap Reductn					
Storage Cap Reductn					
Reduced v/c Ratio					

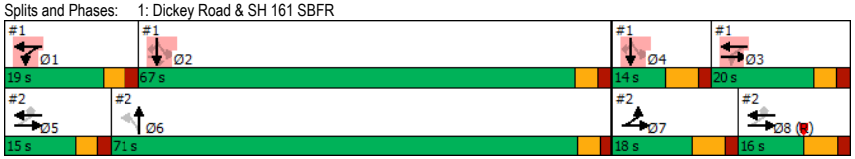
Intersection Summary

1: Dickey Road & SH 161 SBFR
4216-19.025

Existing - Improvements
Timing Plan: AM

Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road
4216-19.025

Existing - Improvements
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	52	0	0	145	36	107	1904	93	0	0	0
Future Volume (vph)	5	52	0	0	145	36	107	1904	93	0	0	0
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)	5	57	0	0	158	39	116	2070	101	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	57	0	0	158	39	0	2287	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	7	5 7 8			5 8			6				
Permitted Phases	5 7 8					5 8	6					
Detector Phase	7	5 7 8			5 8	5 8	6	6				
Switch Phase												
Minimum Initial (s)	10.0						15.0	15.0				
Minimum Split (s)	22.7						26.0	26.0				
Total Split (s)	18.0						71.0	71.0				
Total Split (%)	15.0%						59.2%	59.2%				
Yellow Time (s)	4.7						3.2	3.2				
All-Red Time (s)	2.0						1.8	1.8				
Lost Time Adjust (s)	0.0							0.0				
Total Lost Time (s)	6.7							5.0				
Lead/Lag	Lead						Lag	Lag				
Lead-Lag Optimize?	Yes						Yes	Yes				
Recall Mode	None						None	None				
Act Effct Green (s)	33.5	40.6			27.2	27.2		69.4				
Actuated g/C Ratio	0.28	0.34			0.23	0.23		0.58				
v/c Ratio	0.01	0.05			0.20	0.09		0.78				
Control Delay	27.2	25.8			35.5	1.4		21.7				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	27.2	25.8			35.5	1.4		21.7				
LOS	C	C			D	A		C				
Approach Delay		25.9			28.8			21.7				
Approach LOS		C			C			C				
Queue Length 50th (ft)	2	13			45	1		463				
Queue Length 95th (ft)	10	26			62	m2		528				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	402	1236			929	474		2917				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.05			0.17	0.08		0.78				

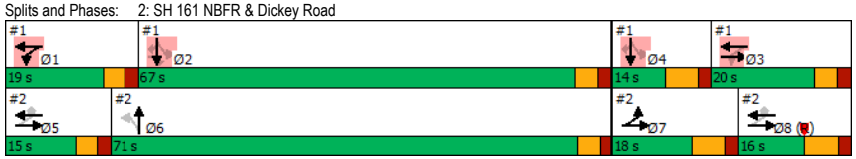
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 8:EBWB, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	1	2	3	4	5	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	15.5	15.5	15.5	16.7	11.0	22.7
Total Split (s)	19.0	67.0	20.0	14.0	15.0	16.0
Total Split (%)	16%	56%	17%	12%	13%	13%
Yellow Time (s)	3.0	3.2	3.2	4.7	3.0	4.7
All-Red Time (s)	2.0	2.1	2.1	1.8	2.0	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	Max	None	C-Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

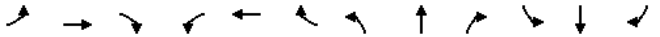
Intersection Signal Delay: 22.4 — Intersection LOS: C
Intersection Capacity Utilization 64.4% — ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



1: Dickey Road & SH 161 SBFR
4216-19.025

Existing - Improvements
Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	52	129	156	116	0	0	0	0	64	1302	9
Future Volume (vph)	0	52	129	156	116	0	0	0	0	64	1302	9
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)	0	57	140	170	126	0	0	0	0	70	1415	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	140	170	126	0	0	0	0	0	1485	10
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		4	1 4						2 3	
Permitted Phases			1	1 4						2 3		2 3
Detector Phase		1	1	4	1 4					2 3	2 3	2 3
Switch Phase												
Minimum Initial (s)		5.0	5.0	10.0								
Minimum Split (s)		10.0	10.0	16.5								
Total Split (s)		25.0	25.0	30.0								
Total Split (%)		20.8%	20.8%	25.0%								
Yellow Time (s)		3.0	3.0	4.7								
All-Red Time (s)		2.0	2.0	1.8								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		5.0	5.0	6.5								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None								
Act Effct Green (s)		7.7	7.7	24.6	32.6						77.1	77.1
Actuated g/C Ratio		0.06	0.06	0.20	0.27						0.64	0.64
v/c Ratio		0.25	0.54	0.26	0.25						0.46	0.01
Control Delay		55.2	12.9	14.2	13.9						11.6	0.0
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		55.2	12.9	14.2	13.9						11.6	0.0
LOS		E	B	B	B						B	A
Approach Delay		25.1			14.1						11.5	
Approach LOS		C			B						B	
Queue Length 50th (ft)		22	0	19	28						190	0
Queue Length 95th (ft)		43	41	29	46						255	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		589	402	807	689						3260	1061
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		0.10	0.35	0.21	0.18						0.46	0.01

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54

1: Dickey Road & SH 161 SBFR
4216-19.025

Existing - Improvements
Timing Plan: PM

Lane Group	Ø2	Ø3	Ø5	Ø6	Ø7	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	2	3	5	6	7	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	15.0	15.0	10.0
Minimum Split (s)	10.3	14.5	11.0	26.0	26.0	22.7
Total Split (s)	50.0	15.0	16.0	59.0	26.0	19.0
Total Split (%)	42%	13%	13%	49%	22%	16%
Yellow Time (s)	3.2	3.5	3.0	3.2	3.2	4.7
All-Red Time (s)	2.1	6.0	2.0	1.8	1.8	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	None	None	Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

1: Dickey Road & SH 161 SBFR

4216-19.025

Existing - Improvements
Timing Plan: PM

Intersection Signal Delay: 13.2 | Intersection LOS: B
Intersection Capacity Utilization 56.8% | ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Dickey Road & SH 161 SBFR

2: SH 161 NBFR & Dickey Road

4216-19.025

Existing - Improvements
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	104	0	0	191	34	78	688	98	0	0	0
Future Volume (vph)	12	104	0	0	191	34	78	688	98	0	0	0
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)	13	113	0	0	208	37	85	748	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	113	0	0	208	37	0	940	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 7			7			6 8				
Permitted Phases	5 7					7	6 8					
Detector Phase	5	5 7			7	7	6 8	6 8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0						
Minimum Split (s)	11.0				26.0	26.0						
Total Split (s)	16.0				26.0	26.0						
Total Split (%)	13.3%				21.7%	21.7%						
Yellow Time (s)	3.0				3.2	3.2						
All-Red Time (s)	2.0				1.8	1.8						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	5.0				5.0	5.0						
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	C-Max				None	None						
Act Effct Green (s)	32.0	37.0			15.3	15.3		73.0				
Actuated g/C Ratio	0.27	0.31			0.13	0.13		0.61				
v/c Ratio	0.03	0.10			0.46	0.10		0.31				
Control Delay	28.8	29.3			65.3	2.2		11.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	28.8	29.3			65.3	2.2		11.2				
LOS	C	C			E	A		B				
Approach Delay		29.2			55.8			11.2				
Approach LOS		C			E			B				
Queue Length 50th (ft)	6	26			86	0		115				
Queue Length 95th (ft)	m16	46			128	m5		141				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	376	1087			619	440		3017				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.03	0.10			0.34	0.08		0.31				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø6	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	1	2	3	4	6	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	10.0	15.0	10.0
Minimum Split (s)	10.0	10.3	14.5	16.5	26.0	22.7
Total Split (s)	25.0	50.0	15.0	30.0	59.0	19.0
Total Split (%)	21%	42%	13%	25%	49%	16%
Yellow Time (s)	3.0	3.2	3.5	4.7	3.2	4.7
All-Red Time (s)	2.0	2.1	6.0	1.8	1.8	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

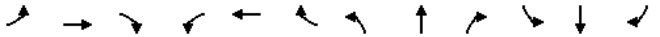
Intersection Summary

Intersection Signal Delay: 21.3 — Intersection LOS: C
Intersection Capacity Utilization 56.8% — ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road

1: Dickey Road & SH 161 SBFR
4216-19.025

Background - Improvements
Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	70	108	149	0	0	0	0	47	457	15
Future Volume (vph)	0	27	70	108	149	0	0	0	0	47	457	15
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)	0	29	76	117	162	0	0	0	0	51	497	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	76	117	162	0	0	0	0	0	548	16
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		3		1	1 3						2 4	
Permitted Phases			3	1 3						2 4		2 4
Detector Phase		3	3	1	1 3					2 4	2 4	2 4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0								
Minimum Split (s)		15.5	15.5	15.5								
Total Split (s)		20.0	20.0	19.0								
Total Split (%)		16.7%	16.7%	15.8%								
Yellow Time (s)		3.2	3.2	3.0								
All-Red Time (s)		2.1	2.1	2.0								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		5.3	5.3	5.0								
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None								
Act Effct Green (s)		14.7	14.7	20.9	25.9						83.8	83.8
Actuated g/C Ratio		0.12	0.12	0.17	0.22						0.70	0.70
v/c Ratio		0.07	0.25	0.23	0.40						0.16	0.01
Control Delay		47.1	3.4	27.2	29.6						6.3	0.0
Queue Delay		0.0	0.0	0.0	0.2						0.0	0.0
Total Delay		47.1	3.4	27.2	29.7						6.3	0.0
LOS		D	A	C	C						A	A
Approach Delay		15.5			28.7						6.1	
Approach LOS		B			C						A	
Queue Length 50th (ft)		10	0	22	59						47	0
Queue Length 95th (ft)		25	10	m35	m90						61	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		433	303	733	527						3532	1129
Starvation Cap Reductn		0	0	0	64						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.07	0.25	0.16	0.35						0.16	0.01

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 8:EBWB, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80

1: Dickey Road & SH 161 SBFR
4216-19.025

Background - Improvements
Timing Plan: AM

Lane Group	Ø2	Ø4	Ø5	Ø6	Ø7	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	2	4	5	6	7	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	10.0	5.0	15.0	10.0	10.0
Minimum Split (s)	15.5	16.7	11.0	26.0	22.7	22.7
Total Split (s)	67.0	14.0	15.0	71.0	18.0	16.0
Total Split (%)	56%	12%	13%	59%	15%	13%
Yellow Time (s)	3.2	4.7	3.0	3.2	4.7	4.7
All-Red Time (s)	2.1	1.8	2.0	1.8	2.0	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	C-Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

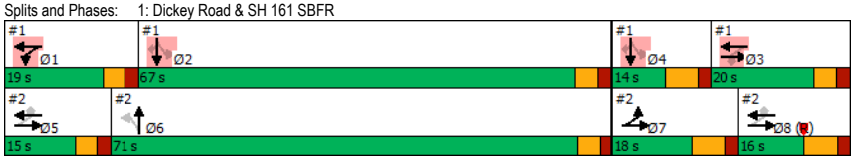
Intersection Summary

1: Dickey Road & SH 161 SBFR
4216-19.025

Background - Improvements
Timing Plan: AM

Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road
4216-19.025

Background - Improvements
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	54	0	0	149	37	110	1961	96	0	0	0
Future Volume (vph)	5	54	0	0	149	37	110	1961	96	0	0	0
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)	5	59	0	0	162	40	120	2132	104	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	59	0	0	162	40	0	2356	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	7	5 7 8			5 8			6				
Permitted Phases	5 7 8					5 8	6					
Detector Phase	7	5 7 8			5 8	5 8	6	6				
Switch Phase												
Minimum Initial (s)	10.0						15.0	15.0				
Minimum Split (s)	22.7						26.0	26.0				
Total Split (s)	18.0						71.0	71.0				
Total Split (%)	15.0%						59.2%	59.2%				
Yellow Time (s)	4.7						3.2	3.2				
All-Red Time (s)	2.0						1.8	1.8				
Lost Time Adjust (s)	0.0							0.0				
Total Lost Time (s)	6.7							5.0				
Lead/Lag	Lead						Lag	Lag				
Lead-Lag Optimize?	Yes						Yes	Yes				
Recall Mode	None						None	None				
Act Effct Green (s)	33.1	40.1			26.8	26.8		69.9				
Actuated g/C Ratio	0.28	0.33			0.22	0.22		0.58				
v/c Ratio	0.01	0.05			0.21	0.10		0.80				
Control Delay	26.4	25.6			35.8	1.4		22.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	26.4	25.6			35.8	1.4		22.2				
LOS	C	C			D	A		C				
Approach Delay		25.7			29.0			22.2				
Approach LOS		C			C			C				
Queue Length 50th (ft)	2	13			46	1		490				
Queue Length 95th (ft)	10	26			63	m3		557				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	396	1223			917	469		2935				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.05			0.18	0.09		0.80				

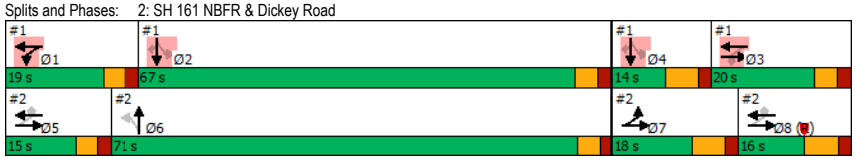
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 8:EBWB, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	1	2	3	4	5	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	15.5	15.5	15.5	16.7	11.0	22.7
Total Split (s)	19.0	67.0	20.0	14.0	15.0	16.0
Total Split (%)	16%	56%	17%	12%	13%	13%
Yellow Time (s)	3.0	3.2	3.2	4.7	3.0	4.7
All-Red Time (s)	2.0	2.1	2.1	1.8	2.0	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	Max	None	C-Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

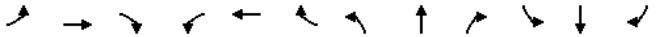
Intersection Summary

Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 66.0% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



1: Dickey Road & SH 161 SBFR — Background - Improvements
4216-19.025 — Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	54	133	161	119	0	0	0	0	66	1341	9
Future Volume (vph)	0	54	133	161	119	0	0	0	0	66	1341	9
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)	0	59	145	175	129	0	0	0	0	72	1458	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	145	175	129	0	0	0	0	0	1530	10
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		4	1 4						2 3	
Permitted Phases			1	1 4						2 3		2 3
Detector Phase		1	1	4	1 4					2 3	2 3	2 3
Switch Phase												
Minimum Initial (s)		5.0	5.0	10.0								
Minimum Split (s)		10.0	10.0	16.5								
Total Split (s)		25.0	25.0	30.0								
Total Split (%)		20.8%	20.8%	25.0%								
Yellow Time (s)		3.0	3.0	4.7								
All-Red Time (s)		2.0	2.0	1.8								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		5.0	5.0	6.5								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None								
Act Effct Green (s)		7.9	7.9	24.4	32.4						77.3	77.3
Actuated g/C Ratio		0.07	0.07	0.20	0.27						0.64	0.64
v/c Ratio		0.25	0.56	0.27	0.26						0.47	0.01
Control Delay		55.0	14.0	14.3	13.9						11.7	0.0
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		55.0	14.0	14.3	13.9						11.7	0.0
LOS		E	B	B	B						B	A
Approach Delay		25.9			14.2						11.6	
Approach LOS		C			B						B	
Queue Length 50th (ft)		23	0	20	29						198	0
Queue Length 95th (ft)		44	46	30	47						271	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		589	402	810	688						3269	1063
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		0.10	0.36	0.22	0.19						0.47	0.01

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56

1: Dickey Road & SH 161 SBFR — Background - Improvements
4216-19.025 — Timing Plan: PM

Lane Group	Ø2	Ø3	Ø5	Ø6	Ø7	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	2	3	5	6	7	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	15.0	15.0	10.0
Minimum Split (s)	10.3	14.5	11.0	26.0	26.0	22.7
Total Split (s)	50.0	15.0	16.0	59.0	26.0	19.0
Total Split (%)	42%	13%	13%	49%	22%	16%
Yellow Time (s)	3.2	3.5	3.0	3.2	3.2	4.7
All-Red Time (s)	2.1	6.0	2.0	1.8	1.8	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	None	None	Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

1: Dickey Road & SH 161 SBFR
4216-19.025

Background - Improvements
Timing Plan: PM

Intersection Signal Delay: 13.4
Intersection Capacity Utilization 57.8%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service B

Splits and Phases: 1: Dickey Road & SH 161 SBFR

2: SH 161 NBFR & Dickey Road
4216-19.025

Background - Improvements
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	107	0	0	197	35	80	709	101	0	0	0
Future Volume (vph)	12	107	0	0	197	35	80	709	101	0	0	0
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)	13	116	0	0	214	38	87	771	110	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	116	0	0	214	38	0	968	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 7			7			6 8				
Permitted Phases	5 7					7	6 8					
Detector Phase	5	5 7			7	7	6 8	6 8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0						
Minimum Split (s)	11.0				26.0	26.0						
Total Split (s)	16.0				26.0	26.0						
Total Split (%)	13.3%				21.7%	21.7%						
Yellow Time (s)	3.0				3.2	3.2						
All-Red Time (s)	2.0				1.8	1.8						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	5.0				5.0	5.0						
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	C-Max				None	None						
Act Effct Green (s)	32.0	37.0			15.4	15.4		73.0				
Actuated g/C Ratio	0.27	0.31			0.13	0.13		0.61				
v/c Ratio	0.03	0.11			0.47	0.10		0.32				
Control Delay	28.7	29.0			65.1	2.3		11.3				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	28.7	29.0			65.1	2.3		11.3				
LOS	C	C			E	A		B				
Approach Delay		29.0			55.7			11.3				
Approach LOS		C			E			B				
Queue Length 50th (ft)	6	27			88	0		120				
Queue Length 95th (ft)	m15	47			132	m5		146				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	373	1086			619	440		3007				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.03	0.11			0.35	0.09		0.32				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø6	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	1	2	3	4	6	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	10.0	15.0	10.0
Minimum Split (s)	10.0	10.3	14.5	16.5	26.0	22.7
Total Split (s)	25.0	50.0	15.0	30.0	59.0	19.0
Total Split (%)	21%	42%	13%	25%	49%	16%
Yellow Time (s)	3.0	3.2	3.5	4.7	3.2	4.7
All-Red Time (s)	2.0	2.1	6.0	1.8	1.8	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary	

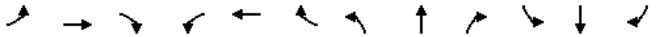
Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road

1: Dickey Road & SH 161 SBFR
4216-19.025

Buildout - Improvements
Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	70	143	149	0	0	0	0	50	457	15
Future Volume (vph)	0	27	70	143	149	0	0	0	0	50	457	15
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)	0	29	76	155	162	0	0	0	0	54	497	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	76	155	162	0	0	0	0	0	551	16
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		3		1	1 3						2 4	
Permitted Phases			3	1 3						2 4		2 4
Detector Phase		3	3	1	1 3					2 4	2 4	2 4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0								
Minimum Split (s)		15.5	15.5	15.5								
Total Split (s)		20.0	20.0	19.0								
Total Split (%)		16.7%	16.7%	15.8%								
Yellow Time (s)		3.2	3.2	3.0								
All-Red Time (s)		2.1	2.1	2.0								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		5.3	5.3	5.0								
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None								
Act Effct Green (s)		14.7	14.7	21.1	26.1						82.4	82.4
Actuated g/C Ratio		0.12	0.12	0.18	0.22						0.69	0.69
v/c Ratio		0.07	0.24	0.31	0.40						0.16	0.01
Control Delay		47.1	1.8	24.5	26.1						6.8	0.0
Queue Delay		0.0	0.0	0.0	0.2						0.0	0.0
Total Delay		47.1	1.8	24.5	26.3						6.8	0.0
LOS		D	A	C	C						A	A
Approach Delay		14.3			25.4						6.6	
Approach LOS		B			C						A	
Queue Length 50th (ft)		10	0	26	53						49	0
Queue Length 95th (ft)		25	1	m37	m77						65	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		433	315	733	527						3473	1111
Starvation Cap Reductn		0	0	0	72						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.07	0.24	0.21	0.36						0.16	0.01

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 8:EBWB, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82

1: Dickey Road & SH 161 SBFR
4216-19.025

Buildout - Improvements
Timing Plan: AM

Lane Group	Ø2	Ø4	Ø5	Ø6	Ø7	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	2	4	5	6	7	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	16.7	16.7	11.0	22.7	11.0	22.7
Total Split (s)	67.0	14.0	15.0	71.0	18.0	16.0
Total Split (%)	56%	12%	13%	59%	15%	13%
Yellow Time (s)	4.7	4.7	3.0	4.7	3.0	4.7
All-Red Time (s)	1.8	1.8	2.0	2.0	2.0	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	None	None	None	C-Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

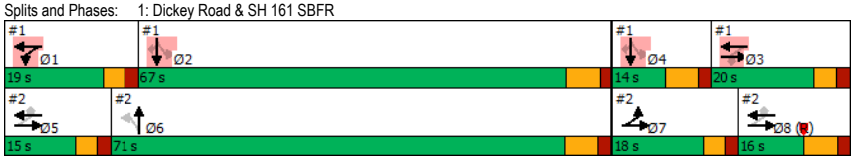
1: Dickey Road & SH 161 SBFR
4216-19.025

Buildout - Improvements
Timing Plan: AM

Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Dickey Road & SH 161 SBFR



2: SH 161 NBFR & Dickey Road
4216-19.025

Buildout - Improvements
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	57	0	0	184	37	110	1970	99	0	0	0
Future Volume (vph)	5	57	0	0	184	37	110	1970	99	0	0	0
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)	5	62	0	0	200	40	120	2141	108	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	62	0	0	200	40	0	2369	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	7	5 7 8			5 8			6				
Permitted Phases	5 7 8					5 8	6					
Detector Phase	7	5 7 8			5 8	5 8	6	6				
Switch Phase												
Minimum Initial (s)	5.0						10.0	10.0				
Minimum Split (s)	11.0						22.7	22.7				
Total Split (s)	18.0						71.0	71.0				
Total Split (%)	15.0%						59.2%	59.2%				
Yellow Time (s)	3.0						4.7	4.7				
All-Red Time (s)	2.0						2.0	2.0				
Lost Time Adjust (s)	0.0							0.0				
Total Lost Time (s)	5.0							6.7				
Lead/Lag	Lead						Lag	Lag				
Lead-Lag Optimize?	Yes						Yes	Yes				
Recall Mode	None						None	None				
Act Effct Green (s)	35.9	39.9			30.2	30.2		68.4				
Actuated g/C Ratio	0.30	0.33			0.25	0.25		0.57				
v/c Ratio	0.01	0.05			0.22	0.09		0.82				
Control Delay	27.2	26.6			34.8	0.8		24.1				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	27.2	26.6			34.8	0.8		24.1				
LOS	C	C			C	A		C				
Approach Delay		26.6			29.1			24.1				
Approach LOS		C			C			C				
Queue Length 50th (ft)	2	14			59	1		515				
Queue Length 95th (ft)	10	28			79	m2		599				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	440	1296			1009	518		2872				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.01	0.05			0.20	0.08		0.82				

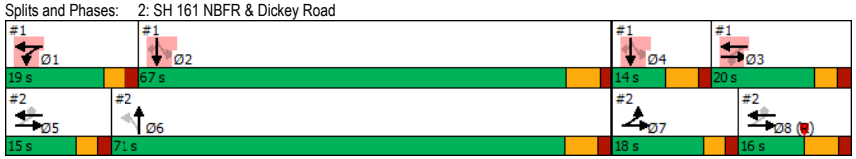
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 8:EBWB, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø5	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	1	2	3	4	5	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	15.5	16.7	15.5	16.7	11.0	22.7
Total Split (s)	19.0	67.0	20.0	14.0	15.0	16.0
Total Split (%)	16%	56%	17%	12%	13%	13%
Yellow Time (s)	3.0	4.7	3.2	4.7	3.0	4.7
All-Red Time (s)	2.0	1.8	2.1	1.8	2.0	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	C-Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

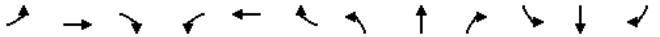
Intersection Signal Delay: 24.6 — Intersection LOS: C
Intersection Capacity Utilization 65.7% — ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road



1: Dickey Road & SH 161 SBFR
4216-19.025

Buildout - Improvements
Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	54	133	184	119	0	0	0	0	75	1341	9
Future Volume (vph)	0	54	133	184	119	0	0	0	0	75	1341	9
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)	0	59	145	200	129	0	0	0	0	82	1458	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	145	200	129	0	0	0	0	0	1540	10
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		4	1 4						2 3	
Permitted Phases			1	1 4						2 3		2 3
Detector Phase		1	1	4	1 4					2 3	2 3	2 3
Switch Phase												
Minimum Initial (s)		5.0	5.0	10.0								
Minimum Split (s)		10.0	10.0	16.5								
Total Split (s)		25.0	25.0	30.0								
Total Split (%)		20.8%	20.8%	25.0%								
Yellow Time (s)		3.0	3.0	4.7								
All-Red Time (s)		2.0	2.0	1.8								
Lost Time Adjust (s)		0.0	0.0	0.0								
Total Lost Time (s)		5.0	5.0	6.5								
Lead/Lag		Lead	Lead	Lag								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None								
Act Effct Green (s)		7.7	7.7	24.6	32.6						75.9	75.9
Actuated g/C Ratio		0.06	0.06	0.20	0.27						0.63	0.63
v/c Ratio		0.26	0.54	0.30	0.25						0.48	0.01
Control Delay		55.6	11.3	13.6	13.1						12.6	0.0
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		55.6	11.3	13.6	13.1						12.6	0.0
LOS		E	B	B	B						B	A
Approach Delay		24.1			13.4						12.5	
Approach LOS		C			B						B	
Queue Length 50th (ft)		23	0	21	27						207	0
Queue Length 95th (ft)		44	36	31	44						287	0
Internal Link Dist (ft)		588			226			231			155	
Turn Bay Length (ft)			150	65								
Base Capacity (vph)		589	413	805	688						3206	1046
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		0.10	0.35	0.25	0.19						0.48	0.01

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54

1: Dickey Road & SH 161 SBFR
4216-19.025

Buildout - Improvements
Timing Plan: PM

Lane Group	Ø2	Ø3	Ø5	Ø6	Ø7	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	2	3	5	6	7	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	5.0	5.0	10.0	15.0	10.0
Minimum Split (s)	16.5	14.5	11.0	22.7	26.0	22.7
Total Split (s)	50.0	15.0	16.0	59.0	26.0	19.0
Total Split (%)	42%	13%	13%	49%	22%	16%
Yellow Time (s)	4.7	3.5	3.0	4.7	3.2	4.7
All-Red Time (s)	1.8	6.0	2.0	2.0	1.8	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	Max	None	Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

1: Dickey Road & SH 161 SBFR
4216-19.025

Buildout - Improvements
Timing Plan: PM

Intersection Signal Delay: 13.8
Intersection LOS: B
Intersection Capacity Utilization 59.0%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Dickey Road & SH 161 SBFR

2: SH 161 NBFR & Dickey Road
4216-19.025

Buildout - Improvements
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	116	0	0	220	35	80	736	110	0	0	0
Future Volume (vph)	12	116	0	0	220	35	80	736	110	0	0	0
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)	13	126	0	0	239	38	87	800	120	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	126	0	0	239	38	0	1007	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	5 7			7			6 8				
Permitted Phases	5 7					7	6 8					
Detector Phase	5	5 7			7	7	6 8	6 8				
Switch Phase												
Minimum Initial (s)	5.0				15.0	15.0						
Minimum Split (s)	11.0				26.0	26.0						
Total Split (s)	16.0				26.0	26.0						
Total Split (%)	13.3%				21.7%	21.7%						
Yellow Time (s)	3.0				3.2	3.2						
All-Red Time (s)	2.0				1.8	1.8						
Lost Time Adjust (s)	0.0				0.0	0.0						
Total Lost Time (s)	5.0				5.0	5.0						
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	C-Max				None	None						
Act Effct Green (s)	32.0	37.0			15.9	15.9		71.3				
Actuated g/C Ratio	0.27	0.31			0.13	0.13		0.59				
v/c Ratio	0.04	0.12			0.51	0.10		0.34				
Control Delay	30.8	30.9			63.3	1.5		12.3				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	30.8	30.9			63.3	1.5		12.3				
LOS	C	C			E	A		B				
Approach Delay		30.9			54.8			12.3				
Approach LOS		C			D			B				
Queue Length 50th (ft)	6	32			99	0		131				
Queue Length 95th (ft)	m16	53			143	m4		159				
Internal Link Dist (ft)		226			198			432			145	
Turn Bay Length (ft)						150						
Base Capacity (vph)	359	1074			619	451		2969				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.04	0.12			0.39	0.08		0.34				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54

Lane Group	Ø1	Ø2	Ø3	Ø4	Ø6	Ø8
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	1	2	3	4	6	8
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	10.0	16.5	14.5	16.5	22.7	22.7
Total Split (s)	25.0	50.0	15.0	30.0	59.0	19.0
Total Split (%)	21%	42%	13%	25%	49%	16%
Yellow Time (s)	3.0	4.7	3.5	4.7	4.7	4.7
All-Red Time (s)	2.0	1.8	6.0	1.8	2.0	2.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary	

Intersection Signal Delay: 22.4	Intersection LOS: C
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SH 161 NBFR & Dickey Road