LEE ENGINEERING

Memorandum

TO: **Caroline Waggoner, P.E., CFM**
Director of Public Works
City of North Richland Hills, Texas

FROM: **Kelly D. Parma, P.E., PTOE**
Senior Project Manager
Lee Engineering, LLC

RE: **Multiway Stop Control Warrant Analysis**
College Circle and Deaver Drive, North Richland Hills, Texas

DATE: **December 7, 2018**

Lee Engineering has completed an analysis of the existing traffic control for the intersection of College Circle and Deaver Drive in North Richland Hills, Texas. This intersection currently operates under all-way stop control, with stop signs on all approaches to the intersection. In determining if all-way stop control is appropriate at this intersection, the warrants for installing multiway stop control identified in the *Texas Manual on Uniform Traffic Control Devices* were evaluated to determine if the warrants are satisfied. If the warrants are not met, then that can indicate that the existing all-way stop control is not appropriate traffic control for this intersection. This analysis was performed using 24-hour turning movement volumes collected at this intersection on Thursday, November 15, 2018.

Based on the existing traffic volumes and this multiway stop control warrant analysis, multiway stop control warrants are not satisfied for the intersection of College Circle and Deaver Drive. A summary of the results is shown in the table below:

Warrant	Warrant Met?	Notes
A – Interim measure until signal installation	NO	Traffic signal is not planned
B – Crash Warrant	N/A	Crash history does not exist as all-way stop controlled intersection
C – Minimum Traffic Volumes	NO	Traffic volumes do not exceed requirements

Although the intersection of College Circle and Deaver Drive does not meet multiway stop warrant criteria based on existing traffic volumes, analysis of existing field conditions indicated that for the eastbound approach to the left, the intersection sight distance requirements for the minor street would not be met if all-way stop control was removed and Deaver Drive traffic had to yield the right-of-way to traffic on College Circle. **Conversion of this intersection to two-way stop control is recommended if adequate sight distance to the left (north) for eastbound traffic on Deaver Drive can be obtained.**

Please see the attached study for further detail. If you have any questions regarding this study, please contact me at (972) 248-3006. We appreciate the opportunity to provide these services.

Multiway Stop Control Warrant Analysis

College Circle and Deaver Drive
City of North Richland Hills, Texas

Prepared for:
City of North Richland Hills
Public Works Department
4301 City Point Drive
North Richland Hills, Texas 76180

Prepared by:

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December 2018

Kelly D. P 12/7/18

T1160.48

INTRODUCTION

The City of North Richland Hills has requested that an analysis be conducted to determine if multiway stop control remains warranted at the intersection of College Circle and Deaver Drive. This report summarizes the results of a multiway stop control warrant analysis conducted for this intersection.

The analysis was performed using existing turning movement volumes collected over a 24-hour period on Thursday, November 15, 2018, which are summarized in **Table 1** with the raw data provided in the Appendix.

The analysis is based on the multiway stop control warrants contained in Chapter 2B, "Regulatory Signs," of the *2011 Texas Manual on Uniform Traffic Control Devices* (*Texas MUTCD*). Three warranting criteria are included in the *Texas MUTCD* for multiway stop sign installation. These warrants are:

A. Installing multiway stop control as an interim measure while arrangements are being made for a traffic signal installation;

B. A crash warrant; and

C. Minimum traffic volumes.

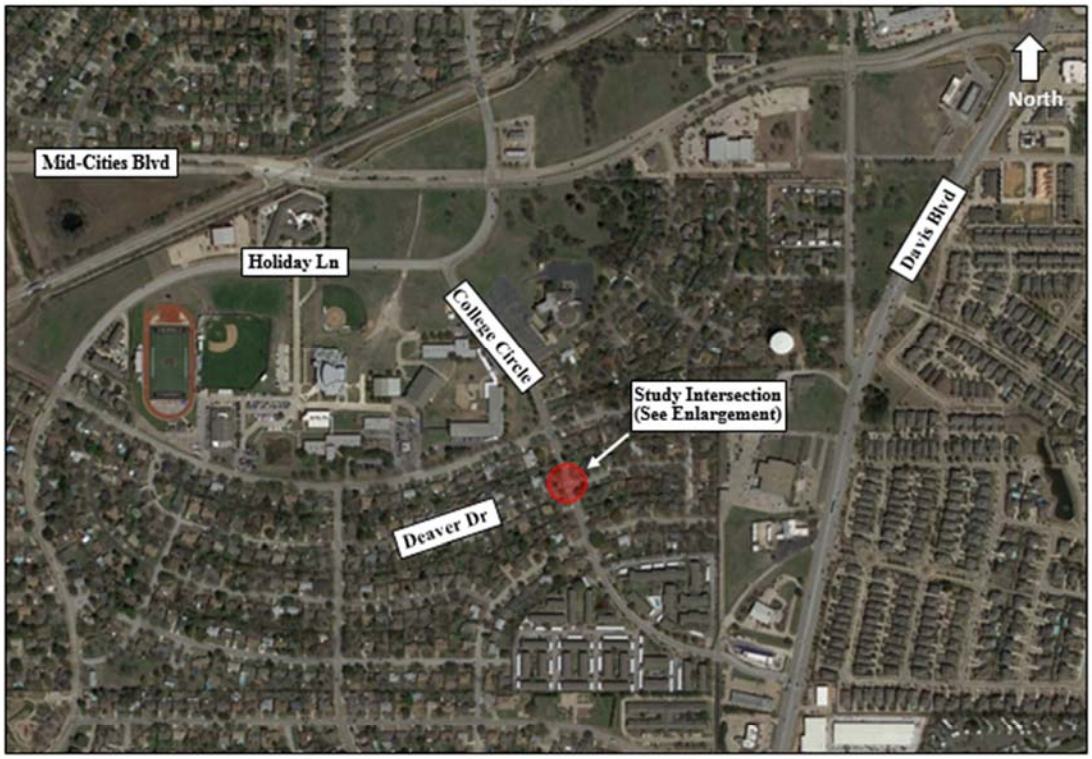
College Circle is a two-lane, north-south, undivided roadway with a posted speed limit of 30 miles per hour (mph). Deaver Drive is a two-lane, east-west, undivided roadway with an assumed speed limit of 30 mph, since a posted speed limit sign was not observed in the field. The intersection of these two streets is currently stop-controlled for all approaches. All approaches are single lane approaches, which serve left-turn, through, and right-turn movements. Based on the traffic volumes at this intersection, College Circle is considered the *Major Roadway* for this analysis with single lane approaches (one lane in each direction). Deaver Drive will be considered the *Minor Roadway* with single lane approaches. An aerial photograph of the intersection is provided in **Figure 1**.

Table 1: Volume Summary

Hour Begin	College Circle			Deaver Drive		
	NB Volume	SB Volume	Total Volume	EB Volume	WB Volume	Total Volume
0:00	5	8	13	0	0	0
1:00	4	3	7	0	1	1
2:00	6	7	13	0	0	0
3:00	3	10	13	2	1	3
4:00	6	17	23	2	0	2
5:00	11	61	72	3	3	6
6:00	52	136	188	3	4	7
7:00	130	282	412	19	8	27
8:00	71	185	256	15	3	18
9:00	54	109	163	3	4	7
10:00	55	117	172	3	7	10
11:00	72	103	175	2	2	4
12:00	80	89	169	3	2	5
13:00	90	121	211	8	4	12
14:00	123	106	229	2	2	4
15:00	171	148	319	12	4	16
16:00	219	151	370	14	7	21
17:00	243	168	411	5	5	10
18:00	188	135	323	8	3	11
19:00	104	103	207	4	6	10
20:00	61	77	138	3	1	4
21:00	51	54	105	5	1	6
22:00	44	34	78	2	2	4
23:00	22	19	41	0	2	2
TOTAL	**1,865**	**2,243**	**4,108**	**118**	**72**	**190**

*Highlighted cells indicate the highest 8 hours of major street traffic volumes entering the intersection.

Site Location



Enlargement

Figure 1: College Circle at Deaver Drive

MULTIWAY STOP CONTROL WARRANT ANALYSIS

Warrant A

The first warrant allows for multiway stop control as an interim measure to control traffic while arrangements are being made for a traffic signal installation, if the traffic signal is warranted and urgently needed. Since a traffic signal has not been warranted at the intersection and it does not appear that the current volumes would meet one of the first two signal warrants for the intersection, Warrant A is NOT met for the intersection of College Circle and Deaver Drive.

Warrant B

Warrant B is satisfied when five or more reported crashes, of the type susceptible to correction by a multiway stop control installation, have occurred within a 12-month period. Based on crash data from TxDOT's online Crash Records Information System (C.R.I.S.), no crashes have occurred at this all-way stop controlled intersection within the most recent 36-month period. Since this intersection is already an all-way stop controlled intersection, this warrant is not applicable for the intersection of College Circle and Deaver Drive.

Warrant C

Warrant C is based on minimum traffic volumes and delays. Both portions of the warrant (C.1 and C.2) must be met in order to justify an all-way stop.

> Warrant C.1. The total vehicular volume entering the intersection from the major street approaches (total of both approaches) must average at least 300 vehicles per hour (vph) for any eight (8) hours of an average day, and
>
> Warrant C.2. The combined vehicular, pedestrian, and bicycle volume from the minor street must average at least 200 units per hour for the same eight (8) hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour.

These criteria may be reduced to 70 percent of the above requirements when the 85th percentile speed exceeds 40 mph on the major street. Since the posted speed limit on the major street (College Circle) is less than 40 mph (30 mph), the reduced warranting threshold was not used for this warrant.

The eight (8) hourly periods with the highest number of vehicles entering the intersection were identified and noted in Table 1. The average major street vehicular volume entering each intersection was calculated and compared to the criteria contained in Warrant C.1. **Table 2** summarizes the peak hour and average total vehicular volume entering the intersection from the major street and compares these values to the criteria in Warrant C.1.

Table 2: Major Street (College Circle) Traffic Volumes

Intersection	Volumes (vph)			
	Peak Hour	8 Hour Average	Warrant C	
			Requirement	Met?
College Circle and Deaver Drive	412	316	300	YES

Based on the collected data, the average eight (8) hour major street vehicular volume entering this intersection (316 vph) meets the minimum volume criteria (300 vph) identified in Warrant C.1.

The average minor street entering volumes were also determined for the same eight (8) hours and compared to the criteria contained in Warrant C.2. **Table 3** summarizes the average hourly volume entering the intersection from the minor street and compares the values to the criteria in Warrant C.2.

Table 3: Minor Street (Deaver Drive) Traffic Volumes

Intersection	Volumes (vph)			
	Peak Hour	8 Hour Average	Warrant D	
			Requirement	Met?
College Circle and Deaver Drive	27	15	200	No

Based on the results shown in Table 3, the average eight (8) hour minor street volume entering the intersection (15 vph) does not satisfy the minimum volume criteria (200 vph) identified in Warrant C.2. Because Warrant C.2 did not meet the minimum volume criteria, further evaluation of average minor street delay was not performed.

Given the existing traffic volumes at the study intersection, Warrant C is NOT satisfied for the intersection of College Circle and Deaver Drive.

Optional Considerations for Multiway Stop Control Studies

In addition to the warrants above, the *Texas MUTCD* (Sec. 2B.07) allows for other criteria to be considered for the installation of a multiway stop. This includes the need to control left-turning conflicts, control vehicle and pedestrian conflicts near locations that generate high pedestrian volumes, provide safe turning movements where sight visibility is an issue, improve traffic operational characteristics of the intersection, or identify priority at "an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection."

While College Circle and Deaver Drive are both two-lane undivided roadways, the higher volume College Circle (major street) functions as and is classified as a Minor Collector (C2U) in the City of North Richland Hills Thoroughfare Plan, and provides a connection between Davis Boulevard (FM 1938) and Holiday Lane. The lower volume Deaver Drive (minor street) functions as a local residential street. With the difference in traffic volumes, function and classification, this does not appear to be an intersection of two street with similar operating characteristics.

As part of this study, sight distance on the minor street (Deaver Drive) approaches at the intersection was assessed. On these approaches, the motorist should be able to see if and when adequate gaps exist to perform their desired maneuver, if the stop restriction for the major street (College Circle) at this intersection was removed.

The intersection sight distance required for the Deaver Drive approaches at the College circle intersection was estimated using the procedures developed by the American Association of State Highway and Transportation Officials (AASHTO) and published in the 2018 edition of *A Policy on Geometric Design of Highways and Streets.* **Table 4** presents the required and available sight distance for vehicles turning onto College Circle from Deaver Drive.

Table 4: Sight Distance Evaluation

Major Roadway	College Circle	
Posted Speed Limit	30 mph	
Minor Roadway	Deaver Drive	
Approach	Eastbound	Westbound
Required Intersection Sight Distance	335 feet	
Available Sight Distance to the Left	~100 feet	>500 feet
Available Sight Distance to the Right	>500 feet	>500 feet
Sight Distance Available > Required		
To the Left	**NO**	Yes
To the Right	Yes	Yes

As shown in Table 4 and based on a comparison of the field investigation results of the available sight distance to the required sight distance, the available intersection sight distance to the left (north) for eastbound traffic on Deaver Drive is not adequate, based on conditions in the field at the time of the field visit. The primary contributing factor to the limited sight distance on the eastbound approach (looking to the left) is existing vegetation (bushes/trees) on the northwestern corner of this intersection, as shown in Figure 2. It should be noted that the sight distance would be further limited at other times of the year when there is foliage on the existing vegetation.

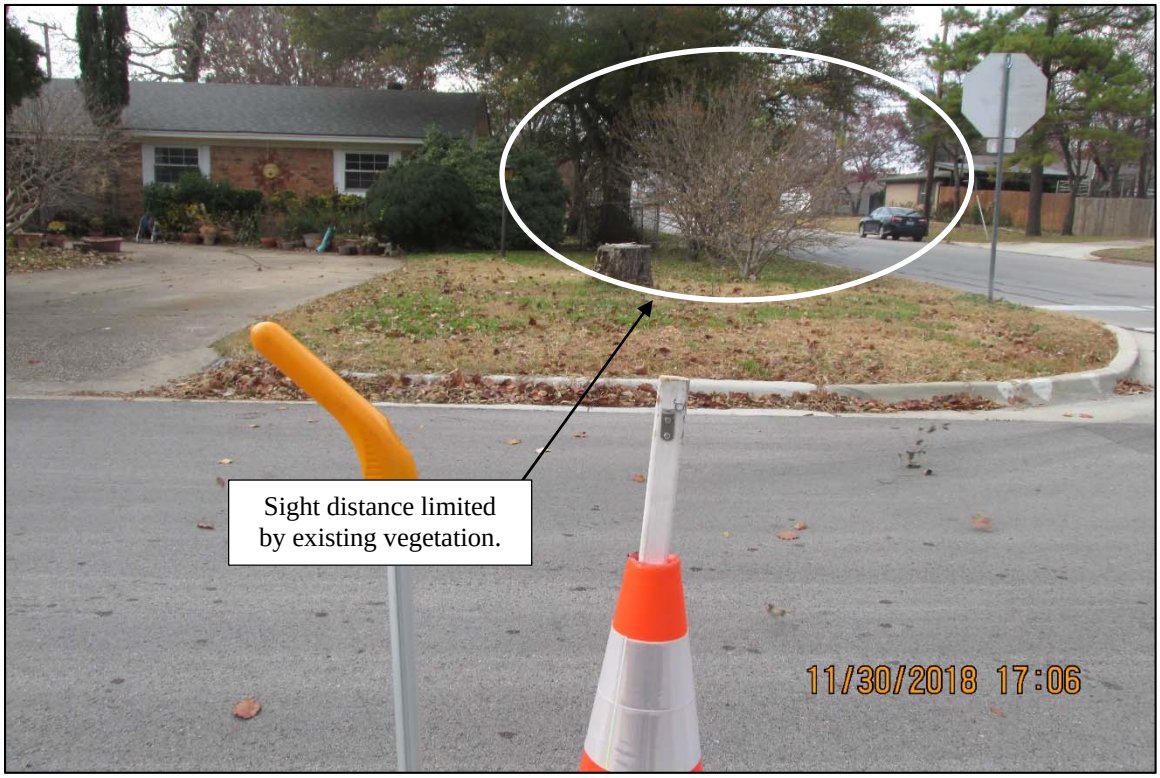


Figure 2: Eastbound Approach on Deaver Drive – Available Sight Distance to the Left (North)

CONCLUSION

Based on the existing traffic volumes and this multiway stop control warrant analysis, Warrants A, B, and C are not satisfied for the intersection of College Circle and Deaver Drive. A summary of the multiway stop-control warrants is provided in **Table 5**.

Table 5: Warrant Summary – College Circle and Deaver Drive

Warrant	Warrant Met?	Notes
A – Interim measure until signal installation	NO	Traffic signal is not planned
B – Crash Warrant	N/A	Crash history does not exist as all-way stop controlled intersection
C – Minimum Traffic Volumes	NO	Average volumes do not exceed requirements

Although the intersection of College Circle and Deaver Drive does not meet multiway stop warrant criteria based on existing traffic volumes, analysis of existing field conditions indicate that intersection sight distance requirements for eastbound Deaver Drive traffic looking to the left (north) would not be met if all-way stop control was removed and Deaver Drive traffic had to yield the right-of-way to traffic on College Circle. **Conversion of this intersection to two-way stop control is recommended if obstructions are able to be eliminated and adequate sight distance to the left (north) for eastbound traffic on Deaver Drive can be provided.**

If obstructions are removed and this intersection is converted to 2-way stop-control, the following measures are recommended to aid in the conversion process and inform motorists of the change:

1) Place changeable message signs on all approaches to the intersection identifying the change in traffic control 1-2 weeks in advance of and after the conversion.
2) Develop a short one-page leaflet to hand out/place on doors of all houses fronting Deaver Drive informing them of the upcoming traffic control changes, including information about why traffic control at the intersection is being modified.
3) Install a "CROSS TRAFFIC DOES NOT STOP" (W4-4P) plaque below the remaining STOP signs on Deaver Drive.
4) Install red warning flags, oriented at 45 degrees, above the remaining STOP signs for at least 1-2 months after conversion.

If you have any comments or questions regarding this study, please feel free to contact us at your convenience.

APPENDIX

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: DEAVER DR @ COLLEGE CIR
Site Code:
Start Date: 11/15/2018
Page No: 1

Turning Movement Data

Start Time	COLLEGE CIR Southbound						DEAVER DR Westbound						COLLEGE CIR Northbound						DEAVER DR Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
12:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	7
12:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
12:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
12:45 AM	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	0	7	1	0	0	8	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	13
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	2
1:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
1:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4
Hourly Total	0	3	0	0	0	3	0	0	1	0	0	1	0	4	0	0	0	4	0	0	0	0	0	0	8
2:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5
2:15 AM	1	3	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	6
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Hourly Total	1	6	0	0	0	7	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	13
3:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	1	0	1	0	0	2	5
3:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 AM	0	4	0	0	0	4	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	6
Hourly Total	0	10	0	0	0	10	0	0	1	0	0	1	0	3	0	0	0	3	1	0	1	0	0	2	16
4:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	4
4:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
4:30 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	0	1	11
4:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	8
Hourly Total	0	17	0	0	0	17	0	0	0	0	0	0	0	6	0	0	0	6	0	0	2	0	0	2	25
5:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	5
5:15 AM	0	15	0	0	0	15	1	1	0	0	0	2	0	3	0	0	0	3	0	1	0	0	0	1	21
5:30 AM	0	22	0	0	0	22	1	0	0	0	0	1	0	4	1	0	0	5	0	0	1	0	0	1	29
5:45 AM	0	19	1	0	0	20	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	23
Hourly Total	0	60	1	0	0	61	2	1	0	0	0	3	0	10	1	0	0	11	0	1	2	0	0	3	78
6:00 AM	0	27	0	0	0	27	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	29
6:15 AM	0	29	0	0	0	29	1	0	1	0	0	2	0	9	0	0	0	9	0	0	0	0	0	0	40
6:30 AM	0	33	0	0	0	33	0	0	0	0	0	0	1	11	0	0	0	12	0	0	0	0	0	0	45
6:45 AM	0	46	1	0	0	47	0	2	0	0	0	2	2	27	0	0	0	29	2	0	1	0	0	3	81
Hourly Total	0	135	1	0	0	136	1	2	1	0	0	4	3	49	0	0	0	52	2	0	1	0	0	3	195
7:00 AM	0	63	1	0	0	64	0	0	1	0	0	1	0	21	0	0	0	21	2	3	0	0	0	5	91
7:15 AM	1	70	1	0	0	72	2	1	0	0	0	3	0	36	0	0	0	36	1	0	1	0	0	2	113
7:30 AM	1	57	2	0	0	60	2	1	0	0	0	3	1	39	0	0	0	40	2	0	1	0	0	3	106
7:45 AM	2	82	2	0	0	86	0	1	0	0	0	1	0	33	0	0	0	33	1	3	5	0	0	9	129
Hourly Total	4	272	6	0	0	282	4	3	1	0	0	8	1	129	0	0	0	130	6	6	7	0	0	19	439
8:00 AM	0	61	0	0	0	61	0	2	0	0	0	2	1	21	0	0	0	22	2	0	4	0	0	6	91
8:15 AM	0	59	1	0	0	60	0	0	0	0	0	0	1	18	0	0	0	19	0	2	3	0	0	5	84
8:30 AM	0	29	0	0	0	29	0	0	0	0	0	0	0	15	0	0	0	15	0	1	2	0	0	3	47
8:45 AM	0	34	1	0	0	35	1	0	0	0	0	1	1	14	0	0	0	15	0	0	1	0	0	1	52
Hourly Total	0	183	2	0	0	185	1	2	0	0	0	3	3	68	0	0	0	71	2	3	10	0	0	15	274
9:00 AM	0	24	1	0	0	25	1	0	0	0	0	1	0	8	0	0	0	8	1	0	0	0	0	1	35
9:15 AM	0	27	0	0	0	27	1	0	1	0	0	2	0	14	1	0	0	15	0	0	0	0	0	0	44
9:30 AM	0	26	1	0	0	27	0	0	0	0	0	0	0	13	0	0	0	13	0	0	2	0	0	2	42
9:45 AM	0	30	0	0	0	30	1	0	0	0	0	1	1	17	0	0	0	18	0	0	0	0	0	0	49
Hourly Total	0	107	2	0	0	109	3	0	1	0	0	4	1	52	1	0	0	54	1	0	2	0	0	3	170
10:00 AM	0	28	0	0	0	28	0	2	0	0	0	2	0	8	0	0	0	8	0	0	0	0	0	0	38
10:15 AM	0	22	0	0	0	22	0	1	0	0	0	1	0	18	1	0	0	19	0	0	1	0	0	1	43
10:30 AM	0	28	1	0	0	29	1	3	0	0	0	4	0	13	0	0	0	13	1	1	0	0	0	2	48
10:45 AM	0	37	1	0	0	38	0	0	0	0	0	0	0	15	0	0	0	15	0	0	0	0	0	0	53
Hourly Total	0	115	2	0	0	117	1	6	0	0	0	7	0	54	1	0	0	55	1	1	1	0	0	3	182
11:00 AM	0	23	0	0	0	23	1	0	0	0	0	1	0	12	0	0	0	12	0	0	0	0	0	0	36
11:15 AM	0	25	0	0	0	25	0	0	0	0	0	0	0	9	1	1	0	11	0	1	0	0	0	1	37
11:30 AM	1	29	0	0	0	30	0	0	0	0	0	0	0	24	2	0	0	26	0	0	0	0	0	0	56
11:45 AM	0	25	0	0	0	25	0	0	1	0	0	1	0	23	0	0	0	23	0	0	1	0	0	1	50
Hourly Total	1	102	0	0	0	103	1	0	1	0	0	2	0	68	3	1	0	72	0	1	1	0	0	2	179
12:00 PM	0	19	1	0	0	20	1	0	1	0	0	2	2	19	1	0	0	22	0	0	1	0	0	1	45
12:15 PM	0	21	0	0	0	21	0	0	0	0	0	0	1	14	1	0	0	16	0	0	0	0	0	0	37
12:30 PM	0	22	2	0	0	24	0	0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0	0	44

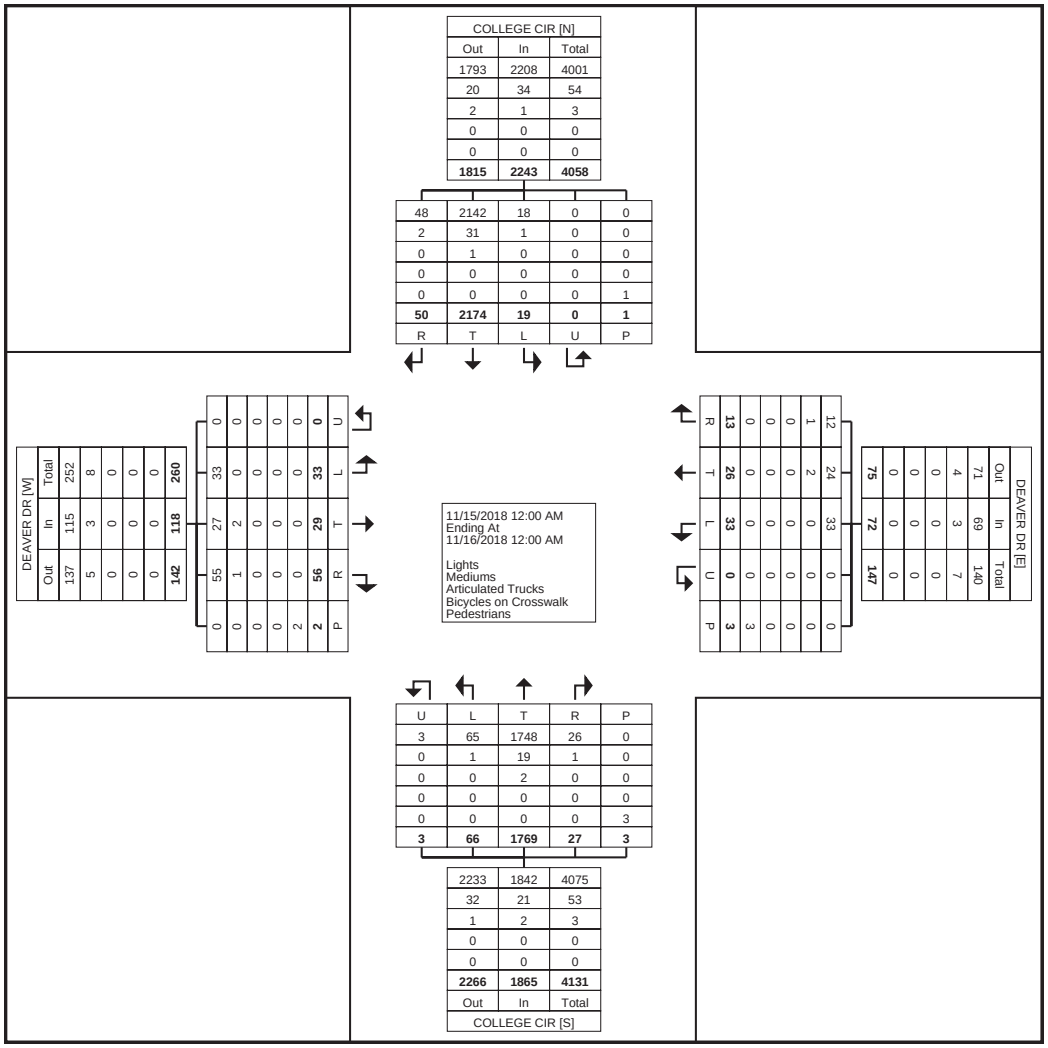
12:45 PM	0	24	0	0	0	24	0	0	0	0	0	0	0	21	1	0	0	22	1	0	1	0	0	2	48
Hourly Total	0	86	3	0	0	89	1	0	1	0	0	2	3	74	3	0	0	80	1	0	2	0	0	3	174
1:00 PM	0	29	0	0	0	29	0	0	0	0	0	0	1	25	0	0	0	26	0	0	0	0	0	0	55
1:15 PM	0	24	0	0	0	24	1	0	0	0	0	1	3	22	1	0	0	26	0	0	1	0	0	1	52
1:30 PM	0	33	0	0	0	33	1	0	0	0	0	1	1	17	0	0	0	18	1	1	3	0	0	5	57
1:45 PM	1	32	2	0	0	35	1	0	1	0	0	2	1	19	0	0	0	20	0	0	2	0	0	2	59
Hourly Total	1	118	2	0	0	121	3	0	1	0	0	4	6	83	1	0	0	90	1	1	6	0	0	8	223
2:00 PM	0	20	1	0	0	21	1	0	0	0	0	1	0	30	1	0	0	31	0	0	0	0	0	0	53
2:15 PM	1	21	0	0	0	22	1	0	0	0	0	1	0	18	1	0	0	19	1	1	0	0	0	2	44
2:30 PM	0	28	1	0	0	29	0	0	0	0	0	0	1	30	0	0	0	31	0	0	0	0	0	0	60
2:45 PM	0	34	0	0	0	34	0	0	0	0	0	0	2	39	0	1	0	42	0	0	0	0	1	0	76
Hourly Total	1	103	2	0	0	106	2	0	0	0	0	2	3	117	2	1	0	123	1	1	0	0	1	2	233
3:00 PM	0	24	1	0	0	25	0	1	1	0	0	2	1	36	0	1	0	38	0	1	2	0	0	3	68
3:15 PM	1	42	1	0	0	44	0	1	0	0	0	1	3	47	0	0	0	50	0	0	1	0	0	1	96
3:30 PM	0	41	0	0	0	41	0	1	0	0	0	1	1	41	0	0	1	42	0	2	1	0	0	3	87
3:45 PM	0	34	4	0	0	38	0	0	0	0	0	0	4	36	1	0	0	41	4	0	1	0	0	5	84
Hourly Total	1	141	6	0	0	148	0	3	1	0	0	4	9	160	1	1	1	171	4	3	5	0	0	12	335
4:00 PM	1	39	0	0	0	40	0	2	1	0	1	3	3	48	0	0	2	51	3	1	1	0	0	5	99
4:15 PM	3	35	3	0	0	41	0	1	1	0	0	2	2	58	1	0	0	61	0	1	0	0	0	1	105
4:30 PM	0	32	2	0	0	34	2	0	0	0	0	2	2	48	1	0	0	51	2	1	4	0	0	7	94
4:45 PM	1	33	2	0	0	36	0	0	0	0	0	0	0	56	0	0	0	56	0	0	1	0	0	1	93
Hourly Total	5	139	7	0	0	151	2	3	2	0	1	7	7	210	2	0	2	219	5	3	6	0	0	14	391
5:00 PM	1	42	2	0	0	45	0	0	1	0	0	1	2	59	1	0	0	62	0	0	1	0	1	1	109
5:15 PM	0	40	0	0	0	40	0	0	0	0	0	0	4	62	1	0	0	67	0	0	0	0	0	0	107
5:30 PM	0	36	1	0	0	37	1	0	1	0	0	2	2	61	1	0	0	64	2	1	0	0	0	3	106
5:45 PM	0	46	0	0	0	46	0	2	0	0	0	2	4	45	1	0	0	50	1	0	0	0	0	1	99
Hourly Total	1	164	3	0	0	168	1	2	2	0	0	5	12	227	4	0	0	243	3	1	1	0	1	5	421
6:00 PM	2	40	0	0	0	42	1	1	0	0	0	2	2	53	0	0	0	55	1	1	1	0	0	3	102
6:15 PM	0	41	2	0	0	43	0	0	0	0	1	0	2	38	0	0	0	40	0	1	1	0	0	2	85
6:30 PM	0	25	0	0	0	25	1	0	0	0	1	1	1	51	0	0	0	52	1	1	0	0	0	2	80
6:45 PM	0	23	2	0	0	25	0	0	0	0	0	0	2	39	0	0	0	41	0	0	1	0	0	1	67
Hourly Total	2	129	4	0	0	135	2	1	0	0	2	3	7	181	0	0	0	188	2	3	3	0	0	8	334
7:00 PM	1	38	2	0	0	41	1	3	0	0	0	4	0	34	0	0	0	34	1	1	1	0	0	3	82
7:15 PM	0	23	0	0	0	23	1	0	0	0	0	1	0	31	0	0	0	31	0	1	0	0	0	1	56
7:30 PM	0	24	0	0	0	24	1	0	0	0	0	1	0	23	0	0	0	23	0	0	0	0	0	0	48
7:45 PM	0	15	0	0	0	15	0	0	0	0	0	0	2	14	0	0	0	16	0	0	0	0	0	0	31
Hourly Total	1	100	2	0	0	103	3	3	0	0	0	6	2	102	0	0	0	104	1	2	1	0	0	4	217
8:00 PM	0	24	0	0	0	24	0	0	0	0	0	0	0	13	1	0	0	14	0	0	1	0	0	1	39
8:15 PM	0	11	1	0	0	12	1	0	0	0	0	1	0	9	0	0	0	9	1	0	0	0	0	1	23
8:30 PM	0	23	0	0	0	23	0	0	0	0	0	0	2	15	0	0	0	17	0	0	0	0	0	0	40
8:45 PM	1	16	1	0	0	18	0	0	0	0	0	0	0	19	2	0	0	21	0	0	1	0	0	1	40
Hourly Total	1	74	2	0	0	77	1	0	0	0	0	1	2	56	3	0	0	61	1	0	2	0	0	3	142
9:00 PM	0	12	0	0	0	12	0	0	0	0	0	0	0	13	1	0	0	14	0	1	0	0	0	1	27
9:15 PM	0	16	0	0	0	16	0	0	0	0	0	0	0	11	0	0	0	11	1	0	0	0	0	1	28
9:30 PM	0	9	1	0	0	10	1	0	0	0	0	1	2	12	0	0	0	14	0	1	1	0	0	2	27
9:45 PM	0	15	1	0	0	16	0	0	0	0	0	0	0	12	0	0	0	12	0	1	0	0	0	1	29
Hourly Total	0	52	2	0	0	54	1	0	0	0	0	1	2	48	1	0	0	51	1	3	1	0	0	5	111
10:00 PM	0	12	1	0	0	13	0	0	0	0	0	0	2	9	0	0	0	11	0	0	2	0	0	2	26
10:15 PM	0	9	1	0	0	10	1	0	0	0	0	1	1	11	0	0	0	12	0	0	0	0	0	0	23
10:30 PM	0	8	0	0	0	8	0	0	0	0	0	0	1	8	1	0	0	10	0	0	0	0	0	0	18
10:45 PM	0	3	0	0	0	3	1	0	0	0	0	1	0	9	2	0	0	11	0	0	0	0	0	0	15
Hourly Total	0	32	2	0	0	34	2	0	0	0	0	2	4	37	3	0	0	44	0	0	2	0	0	2	82
11:00 PM	0	8	0	0	1	8	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	15
11:15 PM	0	5	0	0	0	5	1	0	0	0	0	1	0	3	0	0	0	3	0	0	0	0	0	0	9
11:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	7
11:45 PM	0	3	0	0	0	3	1	0	0	0	0	1	1	6	1	0	0	8	0	0	0	0	0	0	12
Hourly Total	0	19	0	0	1	19	2	0	0	0	0	2	1	20	1	0	0	22	0	0	0	0	0	0	43
Grand Total	19	2174	50	0	1	2243	33	26	13	0	3	72	66	1769	27	3	3	1865	33	29	56	0	2	118	4298
Approach %	0.8	96.9	2.2	0.0	-	-	45.8	36.1	18.1	0.0	-	-	3.5	94.9	1.4	0.2	-	-	28.0	24.6	47.5	0.0	-	-	-
Total %	0.4	50.6	1.2	0.0	-	52.2	0.8	0.6	0.3	0.0	-	1.7	1.5	41.2	0.6	0.1	-	43.4	0.8	0.7	1.3	0.0	-	2.7	-
Lights	18	2142	48	0	-	2208	33	24	12	0	-	69	65	1748	26	3	-	1842	33	27	55	0	-	115	4234
% Lights	94.7	98.5	96.0	-	-	98.4	100.0	92.3	92.3	-	-	95.8	98.5	98.8	96.3	100.0	-	98.8	100.0	93.1	98.2	-	-	97.5	98.5
Mediums	1	31	2	0	-	34	0	2	1	0	-	3	1	19	1	0	-	21	0	2	1	0	-	3	61
% Mediums	5.3	1.4	4.0	-	-	1.5	0.0	7.7	7.7	-	-	4.2	1.5	1.1	3.7	0.0	-	1.1	0.0	6.9	1.8	-	-	2.5	1.4
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	3
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: DEAVER DR @ COLLEGE CIR
Site Code:
Start Date: 11/15/2018
Page No: 3



Turning Movement Data Plot

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: DEAVER DR @ COLLEGE CIR
Site Code:
Start Date: 11/15/2018

Turning Movement Peak Hour Data (7:00 AM)

Start Time	COLLEGE CIR Southbound						DEAVER DR Westbound						COLLEGE CIR Northbound						DEAVER DR Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	63	1	0	0	64	0	0	1	0	0	1	0	21	0	0	0	21	2	3	0	0	0	5	91
7:15 AM	1	70	1	0	0	72	2	1	0	0	0	3	0	36	0	0	0	36	1	0	1	0	0	2	113
7:30 AM	1	57	2	0	0	60	2	1	0	0	0	3	1	39	0	0	0	40	2	0	1	0	0	3	106
7:45 AM	2	82	2	0	0	86	0	1	0	0	0	1	0	33	0	0	0	33	1	3	5	0	0	9	129
Total	4	272	6	0	0	282	4	3	1	0	0	8	1	129	0	0	0	130	6	6	7	0	0	19	439
Approach %	1.4	96.5	2.1	0.0	-	-	50.0	37.5	12.5	0.0	-	-	0.8	99.2	0.0	0.0	-	-	31.6	31.6	36.8	0.0	-	-	-
Total %	0.9	62.0	1.4	0.0	-	64.2	0.9	0.7	0.2	0.0	-	1.8	0.2	29.4	0.0	0.0	-	29.6	1.4	1.4	1.6	0.0	-	4.3	-
PHF	0.500	0.829	0.750	0.000	-	0.820	0.500	0.750	0.250	0.000	-	0.667	0.250	0.827	0.000	0.000	-	0.813	0.750	0.500	0.350	0.000	-	0.528	0.851
Lights	4	272	6	0	-	282	4	3	1	0	-	8	1	123	0	0	-	124	6	5	7	0	-	18	432
% Lights	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	95.3	-	-	-	95.4	100.0	83.3	100.0	-	-	94.7	98.4
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	4	0	0	-	4	0	1	0	0	-	1	5
% Mediums	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	3.1	-	-	-	3.1	0.0	16.7	0.0	-	-	5.3	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.6	-	-	-	1.5	0.0	0.0	0.0	-	-	0.0	0.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: DEAVER DR @ COLLEGE CIR
Site Code:
Start Date: 11/15/2018
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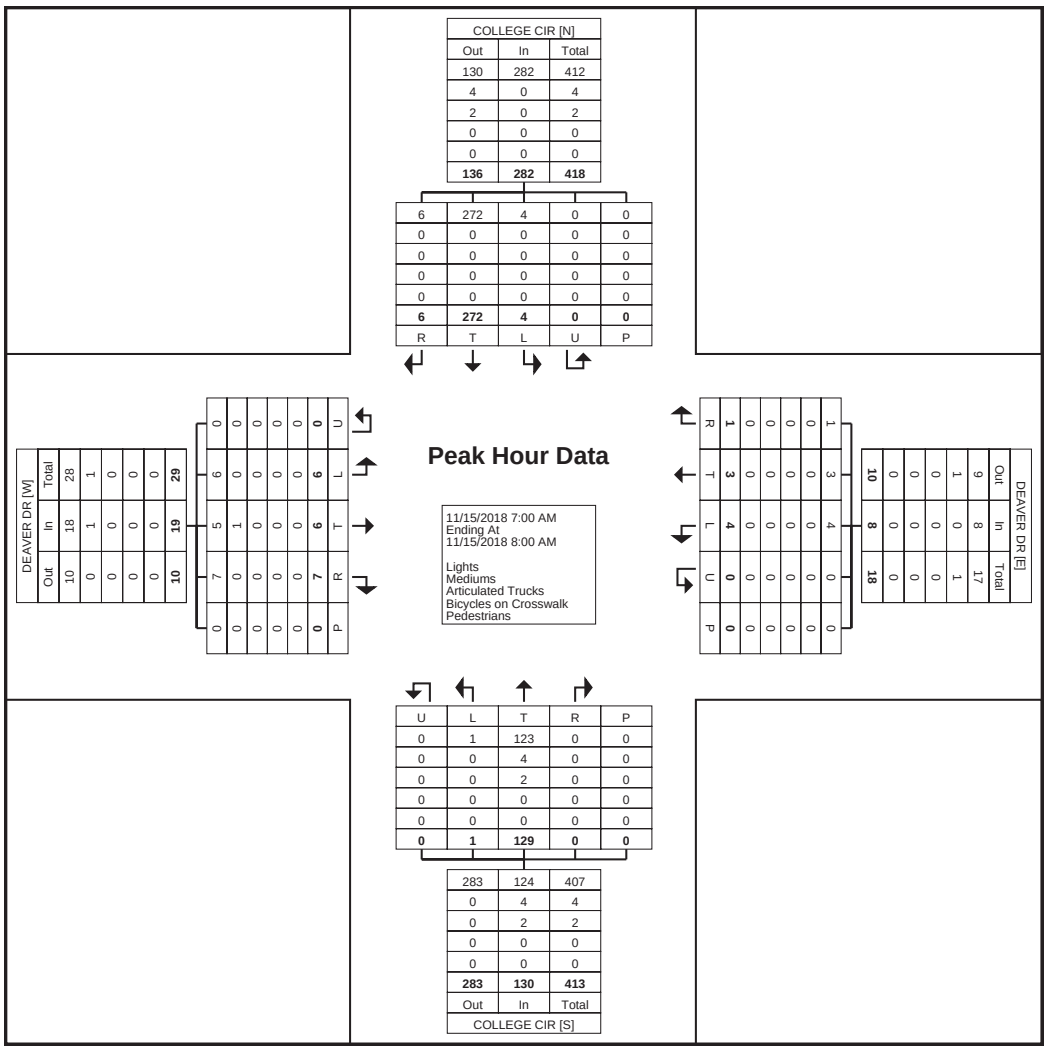


Turning Movement Peak Hour Data Plot (7:00 AM)

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: DEAVER DR @ COLLEGE CIR
Site Code:
Start Date: 11/15/2018

Turning Movement Peak Hour Data (5:00 PM)

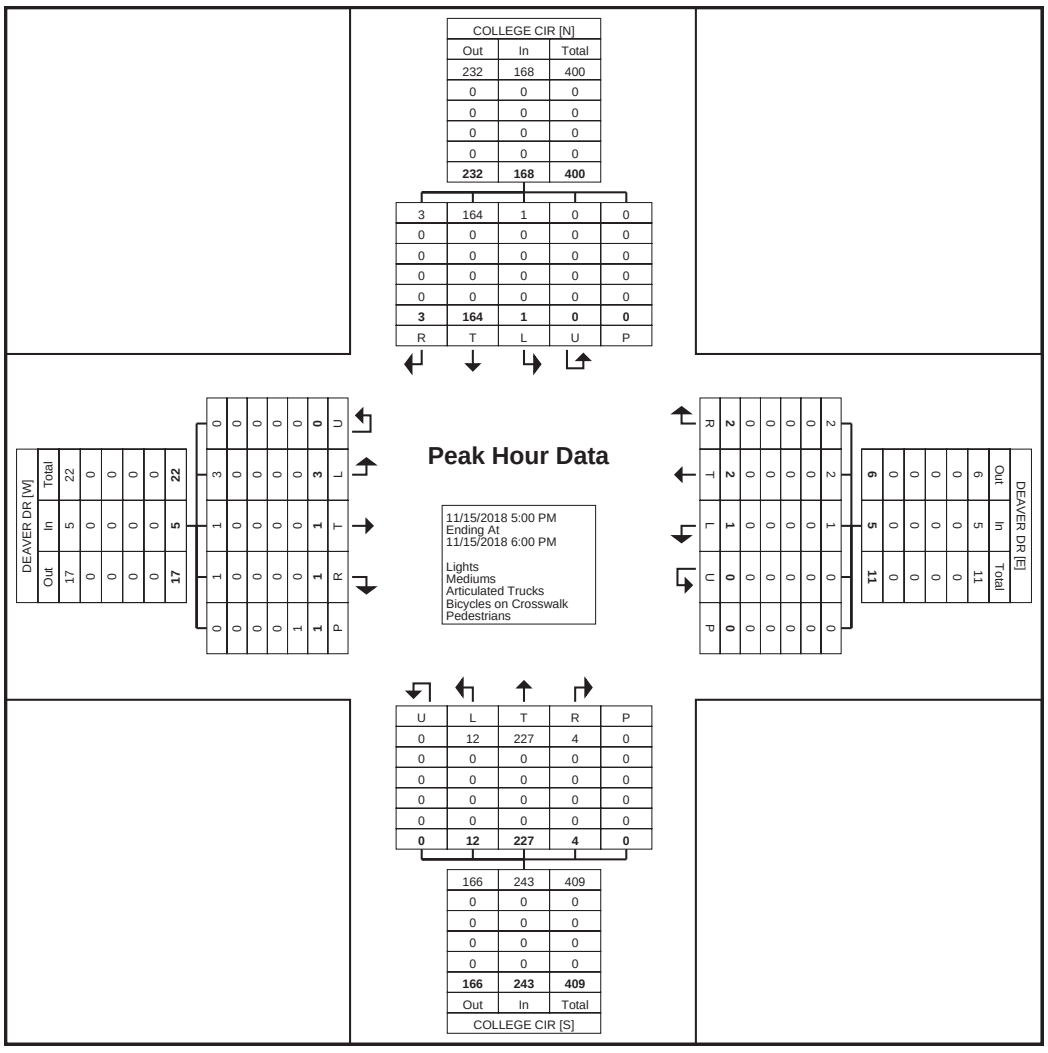
Start Time	COLLEGE CIR Southbound						DEAVER DR Westbound						COLLEGE CIR Northbound						DEAVER DR Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	1	42	2	0	0	45	0	0	1	0	0	1	2	59	1	0	0	62	0	0	1	0	1	1	109
5:15 PM	0	40	0	0	0	40	0	0	0	0	0	0	4	62	1	0	0	67	0	0	0	0	0	0	107
5:30 PM	0	36	1	0	0	37	1	0	1	0	0	2	2	61	1	0	0	64	2	1	0	0	0	3	106
5:45 PM	0	46	0	0	0	46	0	2	0	0	0	2	4	45	1	0	0	50	1	0	0	0	0	1	99
Total	1	164	3	0	0	168	1	2	2	0	0	5	12	227	4	0	0	243	3	1	1	0	1	5	421
Approach %	0.6	97.6	1.8	0.0	-	-	20.0	40.0	40.0	0.0	-	-	4.9	93.4	1.6	0.0	-	-	60.0	20.0	20.0	0.0	-	-	-
Total %	0.2	39.0	0.7	0.0	-	39.9	0.2	0.5	0.5	0.0	-	1.2	2.9	53.9	1.0	0.0	-	57.7	0.7	0.2	0.2	0.0	-	1.2	-
PHF	0.250	0.891	0.375	0.000	-	0.913	0.250	0.250	0.500	0.000	-	0.625	0.750	0.915	1.000	0.000	-	0.907	0.375	0.250	0.250	0.000	-	0.417	0.966
Lights	1	164	3	0	-	168	1	2	2	0	-	5	12	227	4	0	-	243	3	1	1	0	-	5	421
% Lights	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Mediums	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: DEAVER DR @ COLLEGE CIR
Site Code:
Start Date: 11/15/2018
Page No: 7



Turning Movement Peak Hour Data Plot (5:00 PM)

Bicycles

Study Name DEAVER DR @ COLLEGE CIR
Start Date 11/15/2018
Start Time 12:00 AM

	COLLEGE CIR Southbound		DEAVER DR Westbound		COLLEGE CIR Northbound		DEAVER DR Eastbound	
Start Time	Bikes CCW	Bikes CW	Bikes CCW	Bikes CW	Bikes CCW	Bikes CW	Bikes CCW	Bikes CW
12:00 AM	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0
TOTAL	**0**		**0**		**0**		**0**	

Pedestrians

Study Name DEAVER DR @ COLLEGE CIR
Start Date 11/15/2018
Start Time 12:00 AM

	COLLEGE CIR Southbound		DEAVER DR Westbound		COLLEGE CIR Northbound		DEAVER DR Eastbound	
Start Time	Peds CCW	Peds CW	Peds CCW	Peds CW	Peds CCW	Peds CW	Peds CCW	Peds CW
12:00 AM	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	1	0
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	1	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	1	0	2	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	1	0	0	0	0
6:30 PM	0	0	0	1	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0
11:00 PM	0	1	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0
TOTAL	**1**		**3**		**3**		**2**	