



TOWN OF TROPHY CLUB

1 Trophy Wood Drive
Trophy Club, Texas 76262

MEETING AGENDA

TOWN COUNCIL

July 22, 2024

6:00 PM

Council Chambers

CALL WORK SESSION TO ORDER AND ANNOUNCE A QUORUM

WORK SESSION ITEM

1. Presentation and discussion on traffic improvements for Bobcat Boulevard. (Brandon Wright, Town Manager)

ADJOURN WORK SESSION

CALL REGULAR MEETING TO ORDER (immediately following Work Session or 7:00 p.m., whichever is later)

INVOCATION led by Rev. Bill Eason, Fellowship United Methodist Church

PLEDGES led by Council Member

Pledge of Allegiance to the American Flag

Pledge of Allegiance to the Texas Flag

PUBLIC COMMENT(S)

This is an opportunity for citizens to address the Council on any matter pursuant to Texas Government Code 551.007. The Council is not permitted to discuss or take action on any presentations made concerning matters that are not listed on the agenda. Presentations are limited to matters over which the Council has authority. Speakers have up to three (3) minutes or the time limit determined by the Presiding Officer. Each speaker must have submitted their request to speak by completing the Speaker's Form or may email mayorandcouncil@trophyclub.org

COMMUNITY SPOTLIGHT

2. Working for You... Trophy Club
 - a) Update from Town Council Members
 - b) Update from Town Manager (Brandon Wright, Town Manager)

- c) Quick Civic Tip (Dean Roggia, Town Attorney)

CONSENT AGENDA

This part of the agenda consists of non-controversial, or "housekeeping" items required by law. Items may be removed from Consent by any council member by making such request prior to a motion and vote.

3. Consider approval of the June 24, 2024, Town Council work session and regular meeting minutes. (Tammy Dixon, Town Secretary)
4. Consider a consolidated radio communications interlocal agreement between the Denton County Sheriff's Office and the Town of Trophy Club for the use of a radio communication system for FY 2025. (Patrick Arata, Police Chief)
5. Consider an ordinance amending the FY 2024 Budget to increase construction inspection fee revenue and professional engineering services in the Community Development Department by \$68,000 for additional construction inspection services related to Trophy Club residential developments. (Matt Cox, Community Development Director)

INDIVIDUAL ITEMS

6. Presentation and discussion regarding an update from the arts commission ad hoc committee on the development of an arts commission in Trophy Club. (Tamara Smith, Assistant to the Town Manager)

ADJOURN

The Town Council may convene into executive session to discuss posted items as allowed by Texas Government Code Sections 551.071 through 551.076 and Section 551.087.

CERTIFICATION

I do hereby certify that the Notice of Meeting was posted on the bulletin board at the Town Hall for the Town of Trophy Club, Texas, in a place convenient and readily accessible to the general public at all times on the following date and time: July 17, 2024, at 5:30 p.m., and said Notice of Meeting was also posted concurrently on the Town's website in accordance with Texas Government Code Ch. 551 at least 72 hours prior to the scheduled time of said meeting.

/s/ Tammy Dixon
Tammy Dixon, Town Secretary

If you plan to attend this public meeting and have a disability that requires special needs, please contact the Town Secretary's Office at 6822372900, 48 hours in advance, and reasonable accommodations will be made to assist you.



TOWN COUNCIL COMMUNICATION

MEETING DATE: July 22, 2024

FROM: Brandon Wright, Town Manager

AGENDA ITEM: Presentation and discussion on traffic improvements for Bobcat Boulevard.
(Brandon Wright, Town Manager)

BACKGROUND/SUMMARY: In January 2024, the Town Council and Town Manager began reviewing alternative options for traffic improvements on Bobcat Boulevard between Trophy Club Drive and Marshall Creek Drive. The study area has a high volume of traffic during morning hours and late afternoon due to the presence of Byron Nelson High School, Medlin Middle School, and Beck Elementary. These three schools neighbor each other and cause higher traffic when dropping off and picking up students.

The Town Manager proposed a comprehensive review of the concerns, objectives, and solutions related to the traffic in this area. The review aimed to gather information, including resident input, to facilitate an informed decision-making process. A six-phase approach was introduced with the expectation that the decision-making process would last approximately eight months, resulting in the Town Council review of the proposed solutions. The outlined phases included:

1. Traffic watch and review
2. Identify key objectives
3. Develop solutions
4. Town Council debrief
5. Community input and surveys
6. Final presentation to the Town Council

Phase 1 and Phase 2 were completed by February 2024. During the Town Council Work Session on February 12, 2024, the Town Council and staff reviewed several objectives. These included enhancing traffic flow and pedestrian safety, improvements to left-hand movements at key intersections, minimizing pedestrian crossing delays, and improved compliance for vehicles yielding to pedestrian crosswalks. Staff has collaborated with Lee Engineering to advance Phase 3 solution development. Phase 4 will focus on the purpose of this Town Council Work Shop, where the Town Council will receive a briefing on the available solutions.

Based on the Lee Engineering report, the intersections of Marshall Creek Road at Bobcat Boulevard, Parkview Drive at Bobcat Boulevard, Bobcat Boulevard at Trophy Club Drive, and High School Driveway #4 at Bobcat Boulevard currently experience failing level of service

scores during peak AM and PM hours for left-hand turn movements. Intersections are given a "level of service" score to indicate how efficiently traffic moves through turns at the crossroads. A score of "A" is the highest level of service and "F" is the lowest. Scores of "E" or "F" are both considered to be failing scores, while scores of "A" through "D" are considered passing scores. Below is a chart outlining the current level of service scores and the projected scores with new control mechanisms implemented such as traffic guards, traffic lights, and roundabouts.

Intersection	Traffic Control Officer Control Level of Service Score	Traffic Light Control Level of Service Score	Roundabout Control Level of Service Score
Marshall Creek at Bobcat Boulevard (eastbound left turn)	AM: C PM: C	AM: D PM: D	AM: C PM: A
Parkview Drive at Bobcat Boulevard (northbound left turn)	AM: D PM: D	AM: D PM: C	AM: B PM: A
High School Driveway #4 at Bobcat Boulevard (southbound)	AM: F PM: C	AM: C PM: B	AM: B PM: A
High School Driveway #4 at Bobcat Boulevard (eastbound left turn)	AM: F PM: C	AM: D PM: B	AM: B PM: B
Bobcat Boulevard at Trophy Club Drive (eastbound left turn)	AM: D PM: D	AM: D PM: D	AM: B PM: B
Bobcat Boulevard at Trophy Club Drive (northbound left turn)	AM: E PM: D	AM: B PM: A	AM: B PM: B

The Lee Engineering report indicates that all intersections along Bobcat Boulevard are projected to receive the passing level of service scores with the implementation of various control improvements, with the exceptions of the northbound left turn from Trophy Club Drive onto Bobcat Boulevard and the southbound and eastbound left turn at High School Driveway #4 at Bobcat Boulevard. The Trophy Club Drive and Bobcat Boulevard intersection receives a passing level of service score with both a traffic light or a roundabout. The High School Driveway #4 at Bobcat Boulevard intersection also receives a passing level of service with a traffic light or a roundabout.

Based on these results, Lee Engineering structured a series of recommended improvements that allow for the implementation of various solutions to arrive at a passing level of service scores throughout the study area. As represented in Table 8 of the Lee Engineering report, all intersections have a passing level of service score with the recommended solutions. Below is a

summary of their recommended improvements:

- Marshall Creek at Bobcat: Install a roundabout. A single-lane roundabout was predicted to accommodate the existing traffic volumes, but the design could be modified as desired.
- Mid-Block between Marshall Creek and Parkview: Install a pedestrian hybrid beacon on Bobcat Boulevard midway between Marshall Creek and Parkview. Concurrent with this installation, pedestrians should be directed to utilize the mid-block crossing rather than crossing at the intersections.
- Parkview at Bobcat: Continue with existing crossing guards/traffic control officers.
- High School Driveway #4 at Bobcat: Station a crossing guard/traffic control officer at this location. Install a westbound right turn lane on Bobcat at the driveway. Reconfigure the crosswalk to be on the west side of the intersection rather than the east to better facilitate the westbound right turn and southbound left turn. Reconfigure the southbound approach to provide two southbound lanes (10' left turn and 10' right turn) with a 14' inbound lane.
- Bobcat at Trophy Club: Install traffic signal control.

The Town Council's Work Shop aims to discuss and review these proposed options for traffic improvements on Bobcat Boulevard. A key focus will be gathering feedback from residents of Trophy Club to understand their preferences and concerns regarding the proposed solutions. To facilitate this, town staff is organizing resident input sessions and utilizing survey tools to collect feedback.

Public input will be solicited beginning the week of July 29. Feedback will be collected through in-person focus groups as well as online surveys. Community input and final recommendations are anticipated to be presented to the Town Council at a Council Workshop on September 9, 2024. This process ensures that community perspectives are considered before any final decisions are made regarding the traffic improvements along Bobcat Boulevard.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

FISCAL IMPACT: The following are preliminary cost estimates for certain elements associated with traffic improvements to the study area on Bobcat Boulevard.

- Two-lane roundabout at Bobcat Boulevard and Trophy Club Drive. \$4 to \$4.25 million
- Traffic light installation at Bobcat Boulevard and Trophy Club Drive. \$500,000
- Traffic light installation at High School Entrance #4 at Bobcat Boulevard. \$500,000
- Annual traffic/crossing guard at High School Entrance #4 at Bobcat Boulevard. \$15,000
- Two-lane roundabout at Parkview Drive and Bobcat Boulevard. \$3 to \$3.5 million

- Traffic light installation at Parkview Drive and Bobcat Boulevard. \$500,000
- One-lane roundabout at Marshall Creek and Bobcat Boulevard. \$3.25 million to \$3.5 million
- Traffic light installation at Marshall Creek and Bobcat Boulevard. \$500,000
- Mid-block pedestrian hybrid beacon. \$350,000

The annual maintenance cost for traffic lights is estimated at \$6,000 to \$8,000 per intersection.

The preliminary cost estimate for the Lee Engineering recommended plan for Bobcat Boulevard is \$4.35 million in one-time infrastructure costs with \$15,000 in additional annual crossing guard personnel costs and \$8,000 in additional traffic light maintenance costs.

In 2023, the Town Council issued a bond in the amount of \$7 million to provide funding for traffic improvements on Bobcat Boulevard or other identified qualifying projects such as general road or park improvements. Denton County has previously agreed, subject to final approvals, to provide 50% funding up to \$3.3 million for improvements to Bobcat Boulevard that address traffic concerns.

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Presentation
2. Lee Engineering Report

ACTIONS/OPTIONS:

This Work Shop agenda item is being presented for discussion and feedback purposes only. Staff is seeking Council consensus on desired options to present to residents with the goal of collecting feedback before the Town Council takes action to determine future actions.



Bobcat Traffic Improvements

Town Council Workshop
July 22, 2024

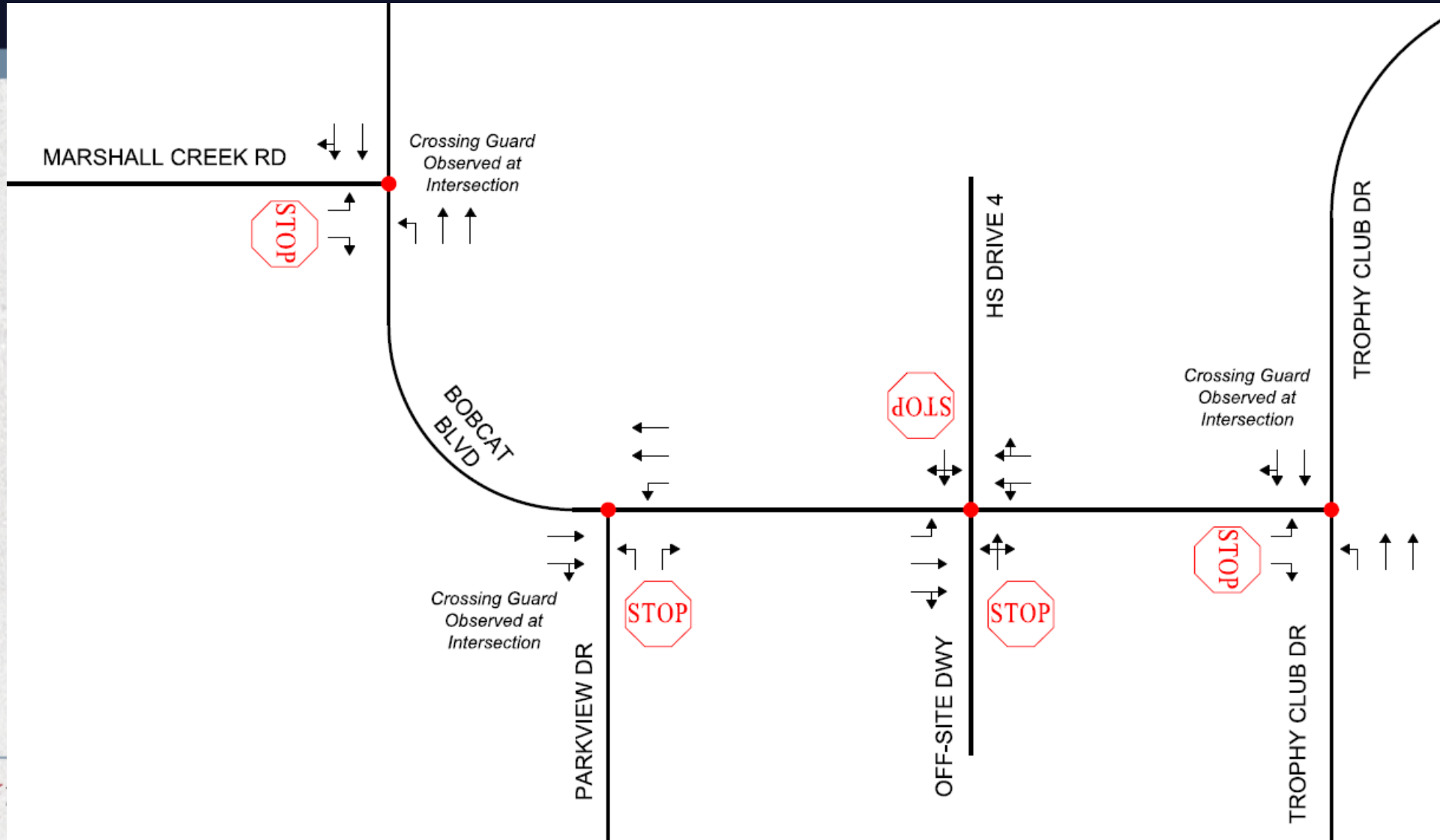
6-Phase Project



1. Traffic Watch & Review
2. Identify Key Objectives
3. Develop Solutions
4. Town Council Debrief
5. Community Input & Surveys
6. Final Presentation to Council



Study Area Map



January Observations



Key Objectives

- Identify solutions for improved traffic flow and pedestrian safety at south BNHS exit onto Bobcat
- Identify solutions for left-hand movements at Trophy Club Drive & Bobcat, Parkview & Bobcat, and Marshall Creek & Bobcat
- Identify solutions to minimize pedestrian crossing delays
- Identify solutions for improved compliance with vehicles stopping for pedestrian crosswalks
- Identify other traffic control solutions to determine if any options provide substantial improvement over traffic-guard-controlled movements
- Avoid diverting traffic onto neighborhood streets

Current Conditions

INTERSECTION	AM PEAK	PM PEAK
Marshall Creek Road at Bobcat Boulevard (eastbound left turn)	F	F
Parkview Drive at Bobcat Boulevard (northbound left turn)	F	F
High School Drive #4 at Bobcat Boulevard (southbound)	F	F
High School Drive #4 at Bobcat Boulevard (eastbound left turn)	C	A
Bobcat Boulevard at Trophy Club Drive (eastbound left turn)	F	F
Bobcat Boulevard at Trophy Club Drive (northbound left turn)	C	B

Simulated Traffic Control Officer Control

INTERSECTION	AM PEAK	PM PEAK
Marshall Creek Road at Bobcat Boulevard (eastbound left turn)	C	C
Parkview Drive at Bobcat Boulevard (northbound left turn)	D	D
High School Drive #4 at Bobcat Boulevard (southbound)	F	C
High School Drive #4 at Bobcat Boulevard (eastbound left turn)	F	C
Bobcat Boulevard at Trophy Club Drive (eastbound left turn)	D	D
Bobcat Boulevard at Trophy Club Drive (northbound left turn)	E	D

Simulated Traffic Light Control

INTERSECTION	AM PEAK	PM PEAK
Marshall Creek Road at Bobcat Boulevard (eastbound left turn)	D	D
Parkview Drive at Bobcat Boulevard (northbound left turn)	D	C
High School Drive #4 at Bobcat Boulevard (southbound)	C	B
High School Drive #4 at Bobcat Boulevard (eastbound left turn)	D	B
Bobcat Boulevard at Trophy Club Drive (eastbound left turn)	D	D
Bobcat Boulevard at Trophy Club Drive (northbound left turn)	B	A

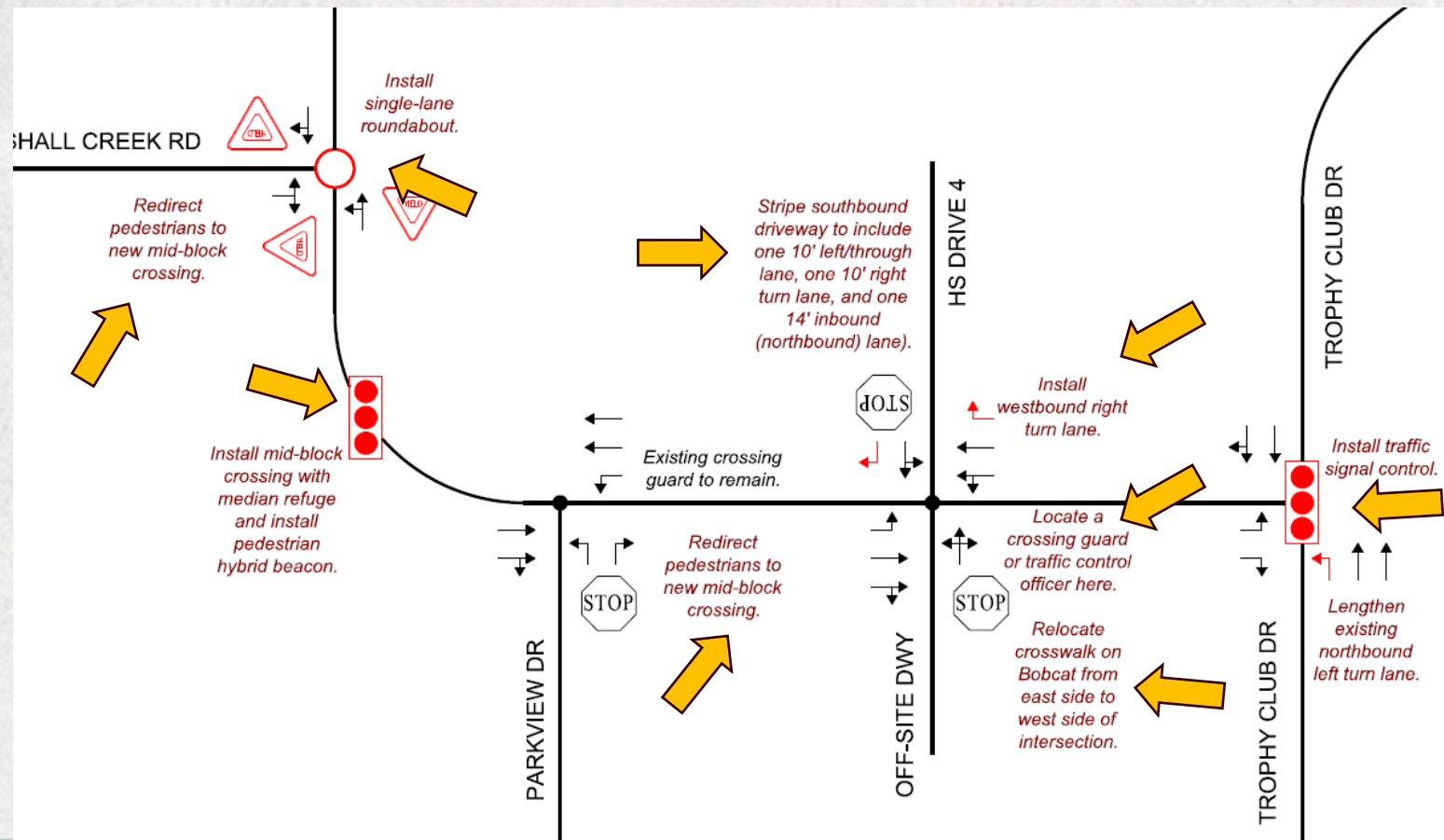
Simulated Roundabout Control

INTERSECTION	AM PEAK	PM PEAK
Marshall Creek Road at Bobcat Boulevard (eastbound left turn)	C	A
Parkview Drive at Bobcat Boulevard (northbound left turn)	B	A
High School Drive #4 at Bobcat Boulevard (southbound)	B	A
High School Drive #4 at Bobcat Boulevard (eastbound left turn)	B	B
Bobcat Boulevard at Trophy Club Drive (eastbound left turn)	B	B
Bobcat Boulevard at Trophy Club Drive (northbound left turn)	B	B

Lee Engineering Recommendation

- **Marshall Creek at Bobcat:** Install a roundabout. A single-lane roundabout was predicted to accommodate the existing traffic volumes, but the design could be modified as desired.
- **Mid-Block between Marshall Creek and Parkview:** Install a pedestrian hybrid beacon on Bobcat Boulevard midway between Marshall Creek and Parkview. Concurrent with this installation, pedestrians should be directed to utilize the mid-block crossing rather than crossing at the intersections.
- **Parkview at Bobcat:** Continue with existing crossing guards/traffic control officers.
- **High School Driveway #4 at Bobcat:** Station a crossing guard/traffic control officer at this location. Install a westbound right turn lane on Bobcat at the driveway. Reconfigure the crosswalk to be on the west side of the intersection rather than the east to better facilitate the westbound right turn and southbound left turn. Reconfigure the southbound approach to provide two southbound lanes (10' left turn and 10' right turn) with a 14' inbound lane.
- **Bobcat at Trophy Club:** Install traffic signal control.

Lee Engineering Recommendation



Lee Engineering Recommendation

INTERSECTION	AM PEAK	PM PEAK
Marshall Creek Road at Bobcat Boulevard (eastbound left turn)	C	A
Parkview Drive at Bobcat Boulevard (northbound left turn)	C	B
High School Drive #4 at Bobcat Boulevard (southbound)	C	C
High School Drive #4 at Bobcat Boulevard (eastbound left turn)	D	D
Bobcat Boulevard at Trophy Club Drive (eastbound left turn)	D	D
Bobcat Boulevard at Trophy Club Drive (northbound left turn)	C	A

Cost Estimates

Solution Options

Amount

Bobcat/Trophy Club Roundabout	\$4 million to \$4.25 million
Bobcat/Trophy Club Traffic Light	\$500,000
HS 4/Bobcat Traffic Light	\$500,000
HS 4/Bobcat Traffic Control Officer (Annual)	\$15,000
Parkview/Bobcat Roundabout	\$3 million to \$3.5 million
Parkview/Bobcat Traffic Light	\$500,000
Marshall Creek/Bobcat Roundabout	\$3.25 million to \$3.5 million
Marshall Creek/Bobcat Traffic Light	\$500,000
Mid-Block Pedestrian Hybrid Beacon	\$350,000
Traffic Light Maintenance (Annual)	\$6,000 to \$8,000

Lee Engineering Recommendation

Solution Options

Amount

Bobcat/Trophy Club Roundabout	\$4 million to \$4.25 million
Bobcat/Trophy Club Traffic Light	\$500,000
HS 4/Bobcat Traffic Light	\$500,000
HS 4/Bobcat Traffic Control Officer (Annual)	\$15,000
Parkview/Bobcat Roundabout	\$3 million to \$3.5 million
Parkview/Bobcat Traffic Light	\$500,000
Marshall Creek/Bobcat Roundabout	\$3.25 million to \$3.5 million
Marshall Creek/Bobcat Traffic Light	\$500,000
Mid-Block Pedestrian Hybrid Beacon	\$350,000
Traffic Light Maintenance (Annual)	\$6,000 to \$8,000

Total Costs

Construction: \$4.35 million
Annual Operations: \$23,000

6-Phase Project



1. Traffic Watch & Review
2. Identify Key Objectives
3. Develop Solutions
4. Town Council Debrief
5. Community Input & Surveys
6. Final Presentation to Council



Public Input

Beginning July 29

Focus Groups

July 30 & July 31

Online Survey

July 29



Final Presentation

Town Council Workshop

Anticipated September 9, 2024



Questions/Discussion



[social media](#) | [email](#) | [website](#)

July 16, 2024

Mr. Matt Cox
Director of Community Development
Town of Trophy Club
1 Trophy Wood Drive
Trophy Club, TX 76262

Re: School Area Evaluation, Trophy Club, Texas – Preliminary Findings and Recommended Improvements

Dear Mr. Cox:

Lee Engineering has completed a preliminary review of the existing conditions near Byron Nelson High School, Medlin Middle School, and Samuel Beck Elementary School in the Town of Trophy Club, Texas. This study includes the following intersections:

- Bobcat Boulevard at Byron Nelson High School Driveways 1-4
- Bobcat Boulevard at Marshall Creek Road
- Bobcat Boulevard at Parkview Drive
- Bobcat Boulevard at Trophy Club Drive

Bobcat Boulevard is a four-lane divided roadway with a posted speed limit of 30 miles per hour (mph). Between the High School Drive 4 and Trophy Club Drive, Bobcat Boulevard is undivided. Bobcat Boulevard does not continue east past Trophy Club Drive. Byron Nelson High School has four access driveways on Bobcat Boulevard.

Marshall Creek Road is a two-lane undivided roadway with a posted speed limit of 25 mph. Medlin Middle School has one access driveway on Marshall Creek Road.

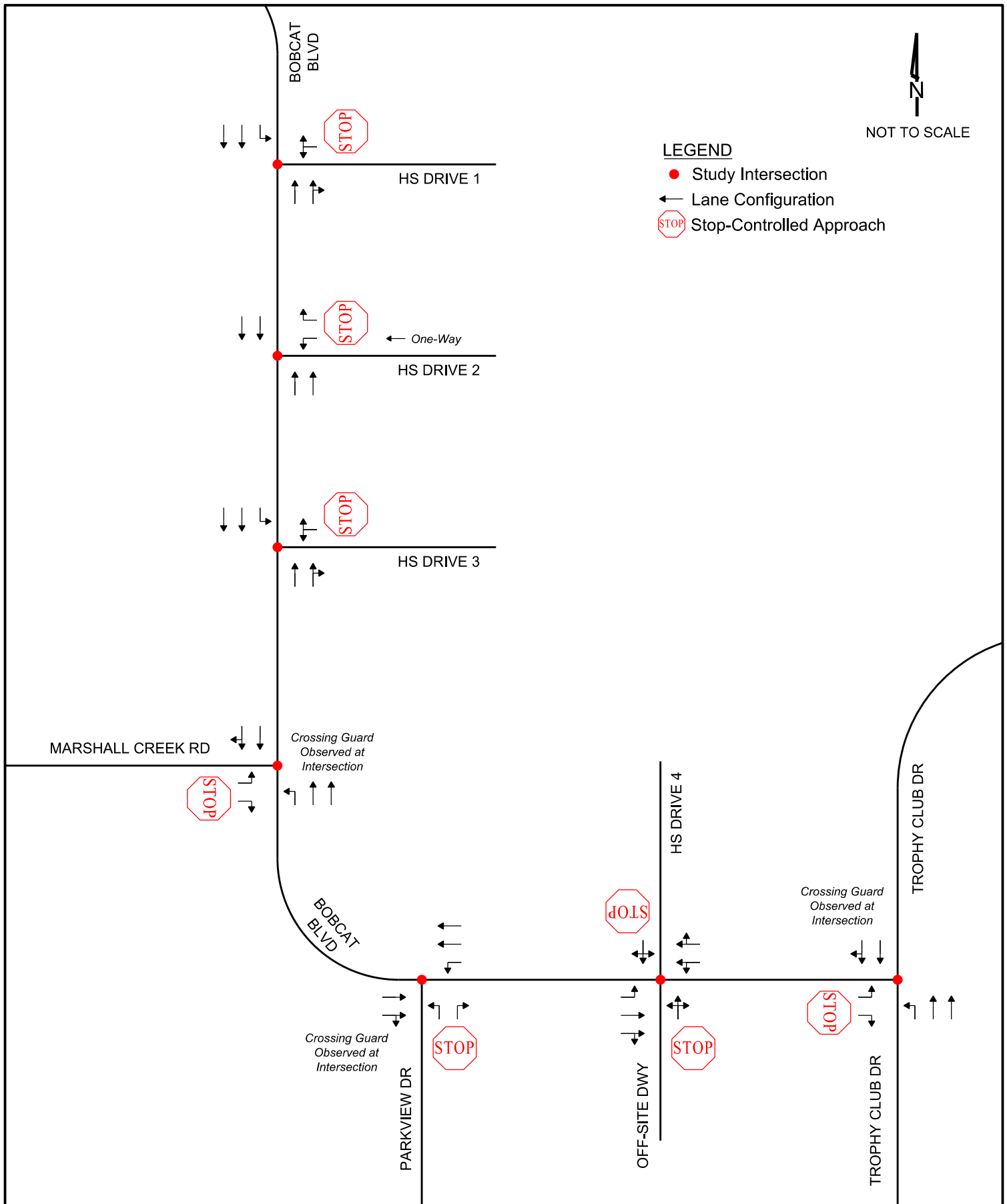
Parkview Drive is a two-lane undivided roadway with no posted speed limit. Medlin Middle School has three access driveways on Parkview Drive. Samuel Beck Elementary School has four access driveways on Parkview Drive and no access elsewhere.

Trophy Club Drive is a four-lane divided roadway with a posted speed limit of 30 mph.

A vicinity map of the study area is shown in **Figure 1** and the existing intersection lane configurations are shown in **Figure 2**. Note that all of the study intersections appear to operate with two-way stop control despite the presence of stop bars on all approaches at all intersections along the south side of the high school.

Figure 1: Vicinity Map





Field Visit Observations

Based on a field visit to the study intersection, the following observations are made:

AM Peak Hour

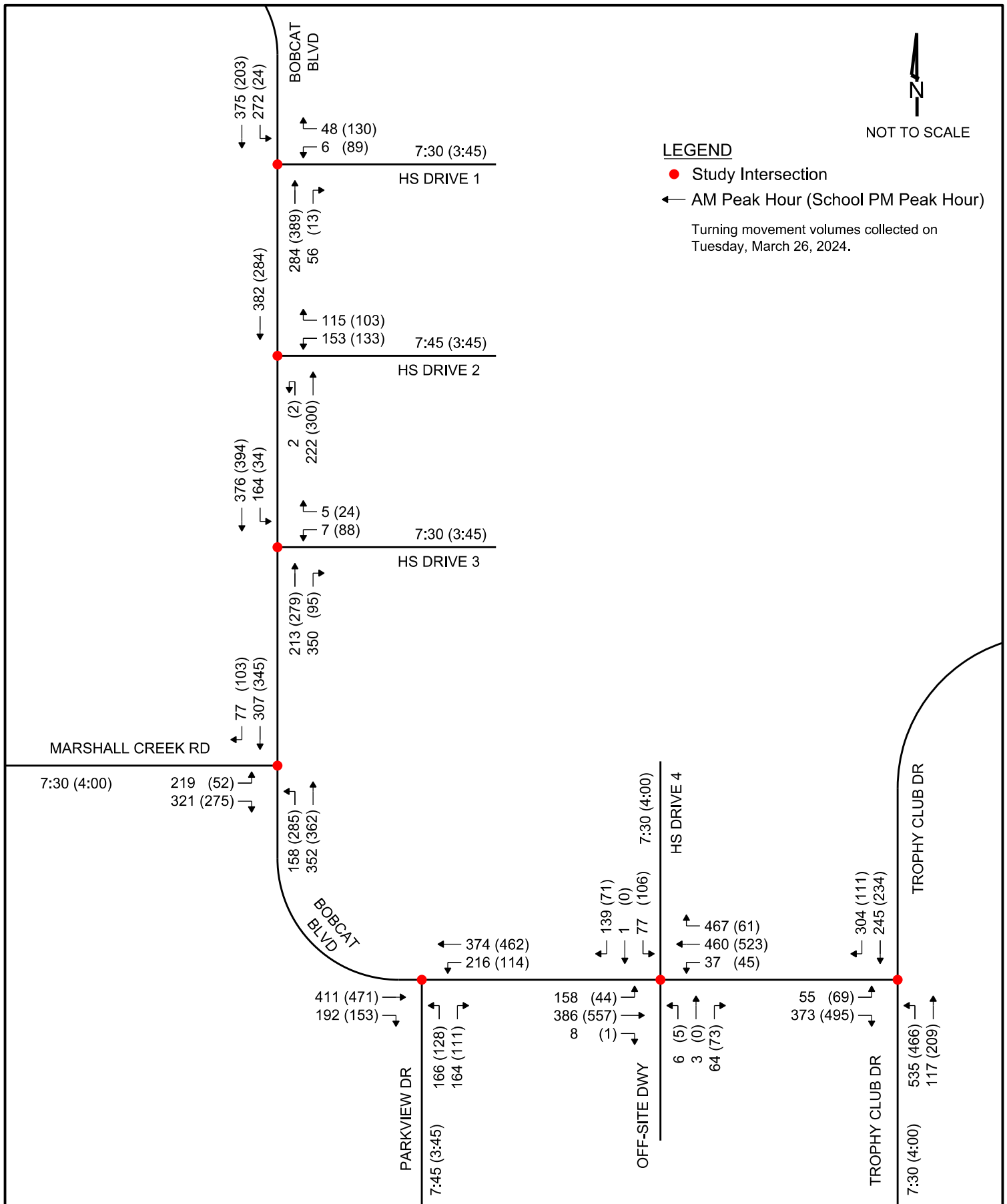
- High school arrival time occurs before arrival time for the middle school, with minimal overlap between the two arrival periods.
- The crossing guards present at the intersections of Bobcat Boulevard with Parkview Drive and with Marshall Creek Road appear to be essential to getting pedestrians across the street and allowing traffic to clear the intersections.
- The crossing guard at the intersection of Bobcat Boulevard and Trophy Club Drive is essential to keep traffic moving.
- High school students were observed crossing to the businesses on the south side of Bobcat Boulevard and then back to the high school.
- A number of heavy vehicles, specifically dirt and gravel haulers serving sites off of Trophy Park Drive, add to congestion within the study area.
- Long vehicle queues were observed on the eastbound approach of Marshall Creek Road at Bobcat Boulevard in the morning school period.

PM peak Hour

- The high school dismissal period occurs before dismissal for the middle school; however, there is some overlap between the two school dismissals.
- Exiting vehicles from the high school experience long delays from the easternmost driveway (identified as High School Driveway 4 in this study). There were also some pedestrians observed crossing at this drive, which the presence of a crossing guard would help. Note that eastbound vehicle queues from Trophy Club Drive extend to this driveway on Bobcat Boulevard.
- LEE observed high school students being picked up from vehicles parked on Roseville Drive east of the high school (approximately 300 feet east of High School Driveway 4).
- Some high school students were observed crossing to the commercial area south of Bobcat Boulevard for pickup.
- The pick-up for the middle school creates significant congestion in the area. Queues associated with the pick-up queue back up onto Bobcat Boulevard.
- Middle school students were observed to cross in large groups to Independence Park for pick-up. There is a marked school cross walk on Parkview Drive between the school exit driveway and Independence Park.
- Some middle school students also cross school driveways to be picked up from the curb on Parkview Drive south of the school rather than on campus.
- Overall, the existing crossing guards are essential for pedestrians and vehicles throughout the PM peak hour.
- Dismissal congestion was cleared by 4:35 PM.

Existing and Projected Volumes

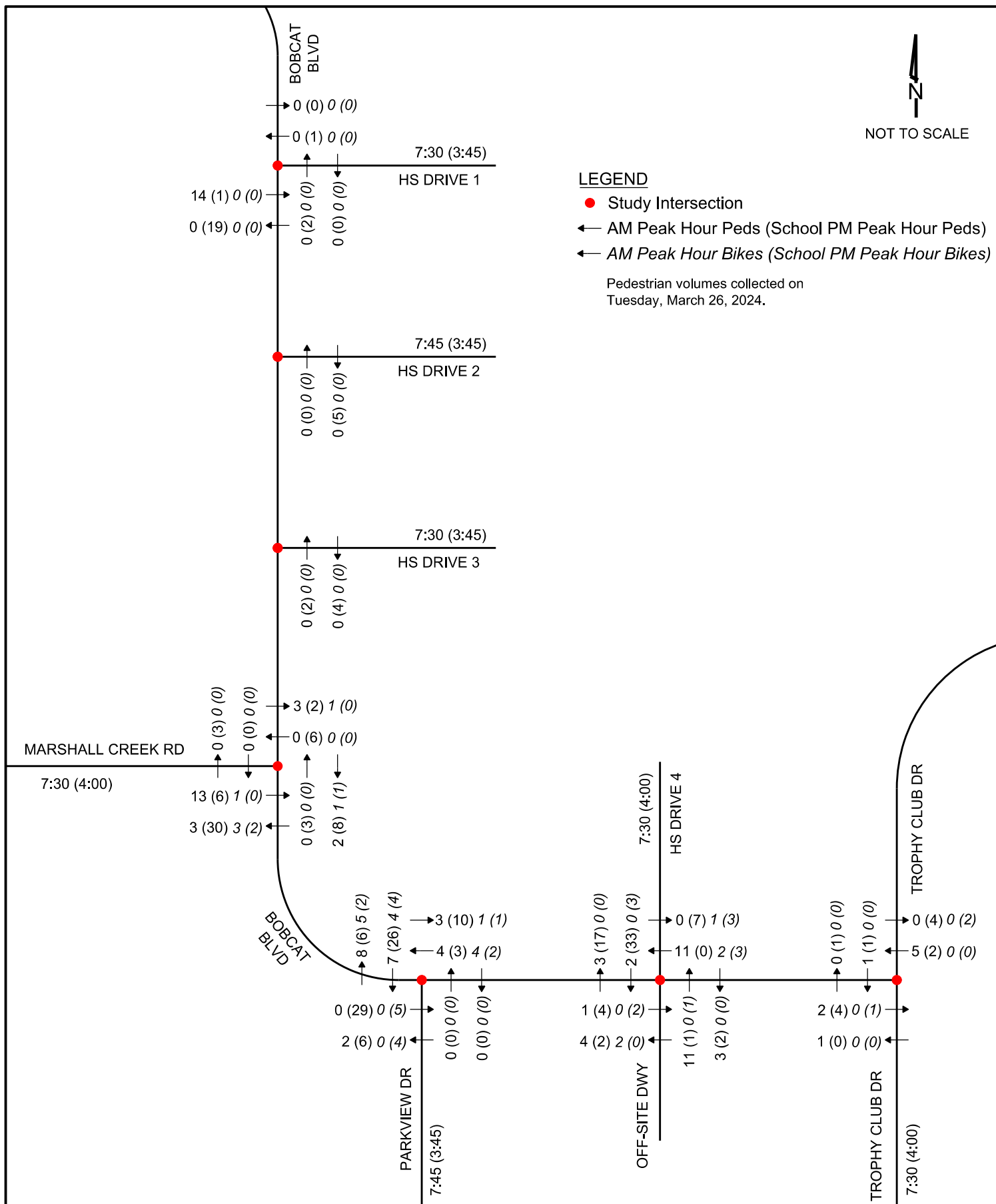
Existing turning movement volumes were collected during the AM and School PM peak hours on Tuesday, March 26, 2024 at the above study intersections. The peak hour volumes and corresponding peak time periods at each intersection are shown in **Figure 3**. Pedestrian and bicycle movements are shown in **Figure 4**.



3030 LBJ FREEWAY, SUITE 1660
DALLAS, TX 75234
PHONE: 972-248-3006
TBPE FIRM NO. F-450

Existing (2024) Peak Hour Vehicular Traffic Volumes

Figure 3



3030 LBJ FREEWAY, SUITE 1660
DALLAS, TX 75234
PHONE: 972-248-3006
TBPE FIRM NO. F-450

Existing (2024) Peak Hour Pedestrian Volumes

Figure 4

Intersection Capacity Analysis

The Level of Service (LOS) of an intersection is a qualitative measure of capacity and operating conditions and is directly related to vehicle delay. The LOS criteria for unsignalized and signalized intersections are shown in **Table 1**. LOS is given a letter designation from A to F, with LOS A representing very short delays and LOS F representing very long delays or over-capacity conditions. LOS D is typically considered the minimum acceptable condition.

Table 1: Level of Service Criteria for Intersections

Level-of-Service (LOS)	Average Delay (seconds/vehicle)	
	Unsignalized	Signalized
A	≤ 10.0	≤ 10.0
B	10.1 to 15.0	10.1 to 20.0
C	15.1 to 25.0	20.1 to 35.0
D	25.1 to 35.0	35.1 to 55.0
E	35.1 to 50.0	55.1 to 80.0
F	> 50.0 or Volume exceeds Capacity	> 80.0 or Volume exceeds Capacity

SOURCE: *Highway Capacity Manual (HCM) 6th Edition*, Transportation Research Board, 2016

Capacity analyses were conducted for the study intersection for Existing peak hour traffic conditions. The following scenarios were analyzed:

- **Table 2** - Existing traffic control
- **Table 3** – Pretimed signalization with pedestrian phase assumed at the three intersections with traffic control officers to simulate this operation. Again, these intersections include:
 - Bobcat Boulevard at Marshall Creek Road
 - Bobcat Boulevard at Parkview Drive
 - Bobcat Boulevard at Trophy Club Drive
 - For the purposes of this analysis, High School Driveway 4 was also analyzed with simulated officer control. Although there is no current crossing guard or police officer at this location, it was analyzed to determine potential improvements gained by officer control.
- **Table 4** – Installation of traffic signal control at the above three intersections with coordination along Bobcat Boulevard. Operation at the adjacent school driveways is also shown, as installation of traffic signal control results in additional gaps in traffic along Bobcat Boulevard.
- **Table 5** – Installation of traffic signal control with coordination at High School Driveway 4 along with the signalization in Table 4.
- **Table 6** – Installation of single-lane roundabouts at the above four intersections. Note that a southbound right turn by-pass lane was assumed on Trophy Club Drive in order for the roundabout to operate acceptably. Similarly, a westbound right turn by-pass lane was assumed on Bobcat Boulevard at High School Driveway 4 in order for the roundabout to operate acceptably.

The stop-control and signalized capacity analysis was performed using *Highway Capacity Manual (HCM) 6th Edition* methodologies in the *Synchro* software package. The roundabout capacity was performed using *Highway Capacity Manual (HCM) 6th Edition* methodologies in the *SIDRA* software package. Printouts of the traffic analysis results are provided as an attachment to this letter.

Table 2: Capacity Analysis Results – Existing Traffic Control

Intersection		Critical Approach/ Movement	Existing (2024) Volumes							
			AM Peak				School PM Peak			
			Delay ¹	LOS	V/C	Queue ²	Delay	LOS	V/C	Queue
1	High School Driveway 1 (WB) at Bobcat Boulevard (NB/SB)	WB	25.6	D	0.32	33	27.8	D	0.66	118
		SB LT	11.5	B	0.43	55	9.8	A	0.04	3
2	High School Driveway 2 (WB) at Bobcat Boulevard (NB/SB)	WB LT	22.9	C	0.53	78	18.5	C	0.40	48
		WB RT	10.3	B	0.20	18	10.4	B	0.17	15
3	High School Driveway 3 (WB) at Bobcat Boulevard (NB/SB)	WB	27.3	D	0.09	8	20.9	C	0.39	45
		SB LT	10.9	B	0.27	28	8.6	A	0.04	3
4	Marshall Creek Road (EB) at Bobcat Boulevard (NB/SB)	EB LT	296.3	F	1.49	423	88.5	F	0.60	70
		EB RT	16.1	C	0.55	85	16.1	C	0.49	68
		NB LT	9.2	A	0.18	18	10.3	B	0.32	35
5	Parkview Drive (NB) at Bobcat Boulevard (EB/WB)	WB LT	10.6	B	0.28	28	10.2	B	0.15	13
		NB LT	439.0	F	1.74	368	164.7	F	1.07	193
		NB RT	13.1	B	0.29	30	14.4	B	0.24	23
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB)	EB LT	15.1	C	0.36	43	9.5	A	0.06	5
		WB LT	8.7	A	0.05	3	9.4	A	0.06	5
		NB	43.2	E	0.51	63	15.0	B	0.19	18
		SB	1487.7	F	4.03	743	202.0	F	1.23	275
7	Bobcat Boulevard (EB) at Trophy Club Drive (NB/SB)	EB LT	2300.7	F	4.91	238	289.7	F	1.20	155
		EB RT	24.5	C	0.73	158	18.9	C	0.69	140
		NB LT	19.9	C	0.75	178	10.5	B	0.44	58

¹ Average Delay in Seconds per Vehicle

² 95th Percentile Queue in Feet (based on an assumed 25 ft/veh)

Table 3: Capacity Analysis Results – Simulated 'Traffic Control Officer' Control

Intersection		Critical Approach/ Movement	Existing (2024) Volumes							
			AM Peak				School PM Peak			
			Delay ¹	LOS	V/C	Queue ²	Delay	LOS	V/C	Queue
4	Marshall Creek Road (EB) at Bobcat Boulevard (NB/SB) With 'Crossing Guard'	EB LT	31.4	C	0.58	170	28.9	C	0.17	56
		EB RT	6.4	A	0.57	43	8.8	A	0.58	66
		NB LT	34.1	C	0.51	157	42.0	D	0.57	251
		NB T	32.7	C	0.57	157	36.4	D	0.36	158
		SB	32.3	C	0.66	138	39.3	D	0.79	185
5	Parkview Drive (NB) at Bobcat Boulevard (EB/WB) With 'Crossing Guard'	EB	40.3	D	0.26	210	34.7	C	0.63	226
		WB LT	43.2	D	0.22	150	44.1	D	0.33	86
		WB T	38.8	D	0.22	128	48.2	D	0.66	173
		NB LT	37.1	D	0.19	149	39.2	D	0.52	120
		NB RT	8.0	A	0.19	50	10.3	B	0.38	44
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB) With 'Crossing Guard'	EB LT	94.1	F	0.97	177	31.0	C	0.44	32
		EB T	5.0	A	0.27	40	13.9	B	0.42	216
		WB	29.3	C	0.97	130	15.1	B	0.68	78
		NB	25	C	0.56	38	14.8	B	0.37	43
		SB	100.5	F	1.07	201	28.6	C	0.60	124
7	Bobcat Boulevard (EB) at Trophy Club Drive (NB/SB) With 'Crossing Guard'	EB LT	37.0	D	0.24	57	36.9	D	0.21	67
		EB RT	18.7	B	0.73	119	20.9	C	0.72	209
		NB LT	75.1	E	1.04	467	37.3	D	0.83	397
		NB T	17.3	B	0.11	38	18.6	B	0.19	66
		SB	34.6	C	0.90	132	47.6	D	0.86	154

¹ Average Delay in Seconds per Vehicle

² 95th Percentile Queue in Feet (based on an assumed 25 ft/veh)

Table 4: Capacity Analysis Results – Installation of Traffic Signal Control

Intersection		Critical Approach/ Movement	Existing (2024) Volumes							
			AM Peak				School PM Peak			
			Delay ¹	LOS	V/C	Queue ²	Delay	LOS	V/C	Queue
1	High School Driveway 1 (WB) at Bobcat Boulevard (NB/SB)	WB	19.6	C	0.25	25	16.1	C	0.48	65
		SB LT	10.2	B	0.38	45	8.8	A	0.03	3
2	High School Driveway 2 (WB) at Bobcat Boulevard (NB/SB)	WB LT	17.8	C	0.45	58	14.0	B	0.30	33
		WB RT	9.3	A	0.17	15	9.3	A	0.14	13
3	High School Driveway 3 (WB) at Bobcat Boulevard (NB/SB)	WB	24.0	C	0.08	8	15.9	C	0.30	30
		SB LT	10.4	B	0.26	25	8.1	A	0.04	3
4	Marshall Creek Road (EB) at Bobcat Boulevard (NB/SB) With Signal	EB LT	48.4	D	0.73	201	49.3	D	0.38	73
		EB RT	16.6	B	0.65	121	19.2	C	0.66	126
		NB LT	6.6	A	0.30	81	2.3	A	0.40	24
		NB T	5.0	A	0.17	80	0.7	A	0.13	14
		SB	12.0	B	0.24	113	8.0	A	0.22	109
5	Parkview Drive (NB) at Bobcat Boulevard (EB/WB) With Signal	EB	14.7	B	0.39	92	11.5	B	0.52	127
		WB LT	7.6	A	0.48	48	5.6	A	0.27	27
		WB T	4.4	A	0.18	37	4.9	A	0.22	52
		NB LT	35.6	D	0.43	165	31.4	C	0.27	123
		NB RT	3.8	A	0.27	37	4.5	A	0.20	33
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB)	EB LT	15.1	C	0.36	43	9.5	A	0.06	5
		WB LT	8.1	A	0.04	3	8.2	A	0.04	3
		NB	32.3	D	0.42	48	11.4	B	0.13	10
		SB	1109.9	F	3.24	695	46.0	E	0.72	125
7	Bobcat Boulevard (EB) at Trophy Club Drive (NB/SB) With Signal	EB LT	48.1	D	0.43	62	45.7	D	0.45	66
		EB RT	10.6	B	0.61	38	23.3	C	0.87	229
		NB LT	17.2	B	0.79	235	5.6	A	0.56	121
		NB T	2.1	A	0.05	13	2.2	A	0.08	23
		SB	14.7	B	0.45	146	10.8	B	0.20	95

¹ Average Delay in Seconds per Vehicle

² 95th Percentile Queue in Feet (based on an assumed 25 ft/veh)

Table 5: Capacity Analysis Results – Installation of Traffic Signal Control at High School Driveway 4

Intersection		Critical Approach/ Movement	Existing (2024) Volumes							
			AM Peak				School PM Peak			
			Delay ¹	LOS	V/C	Queue ²	Delay	LOS	V/C	Queue
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB)	EB LT	38.4	D	0.73	123	12.0	B	0.13	32
		EB T	6.9	A	0.25	52	13.4	B	0.31	148
		WB	25.3	C	0.90	240	20.2	C	0.47	218
		NB	22.1	C	0.50	40	13.9	B	0.45	33
		SB	32.8	C	0.62	174	17.9	B	0.36	117

¹ Average Delay in Seconds per Vehicle

² 95th Percentile Queue in Feet (based on an assumed 25 ft/veh)

Table 6: Capacity Analysis Results – Installation of Roundabout Control

Intersection		Critical Approach/ Movement	Existing (2024) Volumes							
			AM Peak				School PM Peak			
			Delay ¹	LOS	V/C	Queue ²	Delay	LOS	V/C	Queue
4	Marshall Creek Road (EB) at Bobcat Boulevard (NB/SB) Single-Lane Roundabout	EB	17.5	C	0.73	281	8.6	A	0.40	53
		NB	12.2	B	0.62	171	9.4	A	0.57	120
		SB	7.9	A	0.43	66	10.1	B	0.51	95
5	Parkview Drive (NB) at Bobcat Boulevard (EB/WB) Single-Lane Roundabout	EB	13.4	B	0.66	226	10.0	A	0.57	114
		WB	11.3	B	0.61	122	9.3	A	0.53	99
		NB	10.3	B	0.46	74	8.5	A	0.33	39
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB)	EB	11.2	B	0.62	129	10.5	B	0.58	112
		WB	9.7	A	0.57	96	7.1	A	0.47	79
		NB	8.2	A	0.16	16	7.8	A	0.14	14
		SB	10.9	B	0.41	56	8.5	A	0.28	31
7	Bobcat Boulevard (EB) at Trophy Club Drive (NB/SB) Single-Lane Roundabout with SB RT Bypass Lane	EB	10.9	B	0.55	120	11.8	B	0.61	161
		NB	11.5	B	0.66	165	10.2	B	0.60	134
		SB T	10.4	B	0.42	56	7.6	A	0.30	33
		SB RT	12.6	B	0.52	85	5.7	A	0.14	14

¹ Average Delay in Seconds per Vehicle² 95th Percentile Queue in Feet (based on an assumed 25 ft/veh)

As shown, with only stop-control, the left turn movements on the approaches of Marshall Creek Road and Parkview Drive operate poorly during the AM and School PM peak hours. Similarly, the eastbound left turn of Bobcat Boulevard at Trophy Club Drive operates with significant delay. In addition, southbound High School Driveway 4 operates well above capacity with significant queuing.

With the simulated crossing guard/traffic control officer, those three intersections generally appear to operate at acceptable levels of service. The northbound left turn from Trophy Club Drive operates above capacity with significant queuing during the AM peak hour due to heavy traffic volumes for this movement. In addition, while a crossing guard/traffic control officer would improve operation for the southbound approach of High School Driveway 4, this would result in the eastbound left turn and the westbound approach to be approaching capacity during the AM peak hour.

With installation of traffic signal control, the three public street intersections are predicted to operate at acceptable levels of service. The stop-controlled high school driveways also experience improvement with additional gaps in traffic due to upstream signals. However, the southbound High School Driveway 4 still operates with significant delay, particularly during the AM peak hour. Operation would be improved at High School Driveway 4 with traffic signal control, as shown in Table 5.

Roundabout control generally results in better delay and level of service than traffic signal control at the above four intersections and could be considered as a viable option along Bobcat Boulevard. As noted previously, while single lane roundabouts could accommodate the existing traffic, right turn by-pass lanes would be needed at two locations:

- On southbound Trophy Club Drive at Bobcat Boulevard
- On westbound Bobcat Boulevard at High School Driveway 4

Preliminary Signal Warrant Analysis

Preliminary signal warrant analysis was conducted for the three public street intersections and for High School Driveway 4. The traffic signal warrant analysis presented in this letter is based on the traffic signal warrants contained in Chapter 4C, "Traffic Control Signal Needs Studies," of the 2011 *Texas Manual on Uniform Traffic Control Devices*. Nine warrants are included in the manual for warranting a traffic signal installation. These warrants are:

- Warrant 1 – Eight-Hour Vehicular Volume;
- Warrant 2 – Four-Hour Vehicular Volume;
- Warrant 3 – Peak Hour;
- Warrant 4 – Pedestrian Volume;
- Warrant 5 – School Crossing;
- Warrant 6 – Coordinated Signal System;
- Warrant 7 – Crash Experience;
- Warrant 8 – Roadway Network;
- Warrant 9 – Intersection Near a Grade Crossing

For the purposes of this study, Warrant 1, Warrant 2, Warrant 3, Warrant 5, and Warrant 7 were evaluated. Based on the predicted traffic volumes at these intersections, Bobcat Boulevard would be considered the *Major Roadway* and the other roadways would all be considered the *Minor Roadway*. However, at the intersection of Bobcat Boulevard and Trophy Club Drive, Bobcat Boulevard would be considered the *Minor Roadway*.

The Texas *MUTCD* recommends considering the effects of right turn volumes on the minor street approach if the movement enters the major street with minimal conflict, primarily with the presence of a right turn lane. However, for this preliminary analysis all right turn volumes were included and the minor street approaches were evaluated as two-lane approaches where applicable. High School Driveway 4 is a single-lane approach.

Finally, this analysis was performed for four (4) hours of the day at each intersection based on the collected traffic data. In order to fully evaluate traffic volume warrants, additional data should be collected. The analysis volumes are included as an attachment to this letter along with the volume warrant results for each intersection. Additionally, a description of each of the above warrants is included as an attachment for reference. A summary of the warrant results is shown in **Table 6**. Highlighted cells indicate values which exceed the threshold value.

Table 7: Preliminary Traffic Signal Warrant Results

Intersection	Vehicle Volume Warrants - Hours Met					Warrant 5			Warrant 7
	Warrant 1A	Warrant 1B	Warrant 1C	Warrant 2	Warrant 3	Max Peds/Hr	Required Gap (sec)	Adequate Gaps/Hr	Correctable Crashes/Yr
Marshall Creek at Bobcat	3	1	3	3	2	52	17	-	0
Parkview at Bobcat	3	3	4	3	1	38	17	-	1
HS Drive 4 at Bobcat	3	4	3	3	1	57	19	-	1
Bobcat at Trophy Club	4	2	4	4	2	13	18	-	4
Minimum Required to Meet:	8	8	8	4	1	20		60	5

Based on the volume warrants, all intersections are anticipated to meet traffic thresholds for Warrant 3, the Peak Hour Warrant. However, this warrant is typically applicable for "unusual cases such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time", per the Texas *MUTCD*. It is unclear whether a high school would qualify for this warrant.

The intersection of Bobcat Boulevard at Trophy Club Drive is predicted to meet Warrant 2, the Four-Hour Warrant. The other three intersections meet thresholds for Warrant 2 for three hours of the day, and it is possible that an additional hour may be met with additional traffic data collected. Similarly, it is possible that Warrant 1 could be met at one or more intersections with additional data collection.

Warrant 5 was evaluated based on the collected pedestrian volumes. This warrant requires a minimum of 20 school pedestrians crossing the major road in an hour, which is met at Marshall Creek Road, Parkview Drive, and High School Driveway 4. This warrant also requires that the number of gaps in traffic on the major road exceeds the number of minutes in the evaluated time period. However, gap data was not collected as part of this study. Additionally, this warrant recommends consideration of alternative remedial measures such as a crossing guard before considering a traffic signal.

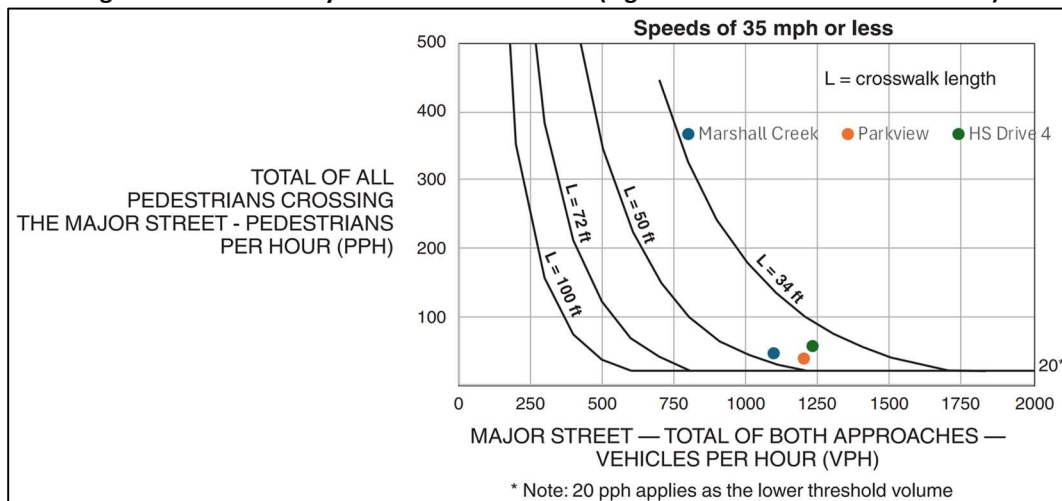
Warrant 7 was evaluated based on available crash data from TxDOT's online C.R.I.S. query tool for each intersection. Based on available data, none of the study intersections are anticipated to meet the crash warrant.

Based on these results, installation of traffic signal control should be considered at the intersection of Bobcat Boulevard and Trophy Club Drive. It is recommended to collect 24-hour turning movement data and perform a full traffic signal warrant analysis. Similarly, consider conducting a full traffic signal warrant analysis at the other intersections.

Preliminary Pedestrian Hybrid Beacon Analysis

A pedestrian hybrid beacon is used to warn and control vehicular traffic at an unsignalized location to assist pedestrians crossing the roadway at a marked crosswalk. A pedestrian hybrid beacon may be considered at marked crosswalk locations that do not meet traffic signal warrants or where a decision is made to not install a traffic signal. The need for a pedestrian hybrid beacon should be considered when the point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street, when plotted on Figure 4F-1 (or 4F-2 when applicable) of the *Texas MUTCD*, falls above the curve for the appropriate length of crosswalk. Based on the posted speed limit on Bobcat Boulevard (30 mph) the reduced warrant threshold was not used for this warrant. This warrant requires a minimum of 20 pedestrians per hour, so the intersection of Bobcat Boulevard at Trophy Club Drive would not meet this threshold based on the data in Table 6. **Figure 5** shows the results of this analysis for the other three intersections in Table 6.

Figure 5: Pedestrian Hybrid Beacon Guidelines (Figure 4F-1 from the *Texas MUTCD*)



Crossing distance on Bobcat Boulevard at High School Driveway 4 is approximately 50 feet from center of curb ramp to center of curb ramp. At Parkview Drive and at Marshall Creek Road, the full crossing distance is approximately 75 feet, although it is possible that the median could act as a pedestrian refuge on the west side of each roadway. Based on these distances and the results in Figure 5, a pedestrian hybrid beacon could be considered at all three locations.

Additionally, thresholds would also be met if pedestrians were relocated to a new mid-block crossing on Bobcat Boulevard, particularly if pedestrians from multiple intersections were relocated.

Suggested Mitigation

Based on the results of this analysis, the following mitigation measures are recommended:

- Marshall Creek at Bobcat: Install a roundabout. A single-lane roundabout was predicted to accommodate the existing traffic volumes, but the design could be modified as desired.
- Mid-Block between Marshall Creek and Parkview: Install a pedestrian hybrid beacon (HAWK signal) on Bobcat Boulevard midway between Marshall Creek and Parkview. Concurrent with this installation, pedestrians should be directed to utilize the mid-block crossing rather than crossing at the intersections.
- Parkview at Bobcat: Continue with existing crossing guards/traffic control officers.
- High School Driveway 4 at Bobcat: Station a crossing guard/traffic control officer at this location. Install a westbound right turn lane on Bobcat at the driveway. Reconfigure the crosswalk to be on the west side of the intersection rather than the east to better facilitate the westbound right turn and southbound left turn. Reconfigure the southbound approach to provide two southbound lanes (10' left turn and 10' right turn) with a 14' inbound lane.
- Bobcat at Trophy Club: Install traffic signal control.

The resulting operation is shown in **Table 8**. Note that some results may differ from previous tables due to different arrival patterns in the model. Additionally, pedestrians crossing Bobcat Boulevard were relocated from Marshall Creek and Parkview to the proposed mid-block crossing.

Table 8: Capacity Analysis Results – Recommended Mitigation

Intersection		Critical Approach/ Movement	Existing (2024) Volumes							
			AM Peak				School PM Peak			
			Delay ¹	LOS	V/C	Queue ²	Delay	LOS	V/C	Queue
4	Marshall Creek Road (EB) at Bobcat Boulevard (NB/SB) With Roundabout (Single-Lane)	EB	17.5	C	0.73	281	8.6	A	0.40	53
		NB	12.2	B	0.62	171	9.4	A	0.57	120
		SB	7.9	A	0.43	66	10.1	B	0.51	95
	Mid-Block Pedestrian Signal	EB	4.0	A	0.26	75	4.0	A	0.25	74
		WB	12.1	B	0.22	157	17.1	B	0.24	185
5	Parkview Drive (NB) at Bobcat Boulevard (EB/WB) With 'Crossing Guard'	EB	6.8	A	0.47	71	9.0	A	0.50	86
		WB LT	13.3	B	0.53	66	7.3	A	0.25	23
		WB T	9.8	A	0.46	45	9.3	A	0.50	45
		NB LT	21.9	C	0.48	95	19.8	B	0.35	74
		NB RT	6.0	A	0.38	38	6.4	A	0.29	31
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB) With 'Crossing Guard'	EB LT	46.6	D	0.62	180	43.6	D	0.21	66
		EB T	10.9	B	0.28	104	15.0	B	0.40	156
		WB	20.3	C	0.73	194	31.3	C	0.72	213
		NB	24.0	C	0.52	42	13.6	B	0.31	46
		SB	21.3	C	0.46	92	28.1	C	0.37	119
7	Bobcat Boulevard (EB) at Trophy Club Drive (NB/SB) With Traffic Signal	EB LT	39.9	D	0.43	68	50.7	D	0.45	101
		EB RT	4.8	A	0.54	45	43.2	D	0.86	221
		NB LT	20.7	C	0.74	276	5.8	A	0.58	121
		NB T	2.1	A	0.05	13	2.2	A	0.08	37
		SB	16.3	B	0.52	132	9.3	A	0.19	88

¹ Average Delay in Seconds per Vehicle

² 95th Percentile Queue in Feet (based on an assumed 25 ft/veh)

For reference, the spacing between these intersections is shown in **Table 9**.

Table 9: Spacing Between Intersections on Bobcat Boulevard

Roadway Segment	Approx. Distance
High School Driveway 3 to Marshall Creek	820'
Marshall Creek to Mid-Block Crossing	210'
Mid-Block Crossing to Parkview	215'
Parkview to High School Driveway 4	530'
High School Driveway Dwy 4 to Trophy Club	600'

Based on the results above, predicted queues are not anticipated to extend to adjacent intersections. Additionally, most of the predicted 95th percentile left turn queues are predicted to be accommodated by existing left turn lane storage lengths, where applicable. However, the northbound left turn queue on Trophy Club Drive at Bobcat Boulevard is predicted to exceed the existing storage length of approximately 160 feet during the AM peak hour. As part of the improvements at this location, it is recommended to lengthen the northbound left turn lane on Trophy Club Drive. This should be possible with the existing median width.

For reference, the delay values for the proposed mitigation are compared to the existing operation in **Table 10**. For ease of comparison, only the operation for the overall approach is shown. Existing conditions include a simulated crossing guard at the three locations where one is currently present. High School Driveway 4 existing condition is just two-way stop control.

Table 10: Capacity Analysis Results – Comparison of Existing to Recommended Mitigation

Intersection		Critical Approach/ Movement	Existing (2024) Volumes			
			AM Peak		School PM Peak	
			Existing Operation	Mitigated Operation	Existing Operation	Mitigated Operation
			Delay (LOS) ¹	Delay (LOS)	Delay (LOS)	Delay (LOS)
4	Marshall Creek Road (EB) at Bobcat Boulevard (NB/SB)	EB	16.6 (B)	17.5 (C)	12.0 (B)	8.6 (A)
		NB	33.2 (C)	12.2 (B)	38.9 (D)	9.4 (A)
		SB	32.3 (C)	7.9 (A)	39.3 (D)	10.1 (B)
5	Parkview Drive (NB) at Bobcat Boulevard (EB/WB)	EB	40.3 (D)	6.8 (A)	34.7 (C)	9.0 (A)
		WB	40.4 (D)	11.1 (B)	47.3 (D)	8.9 (A)
		NB	22.6 (C)	14.0 (B)	25.8 (C)	13.8 (B)
6	High School Driveway 4 (SB)/ Off-Site Dwy (NB) at Bobcat Boulevard (EB/WB)	EB LT / EB	15.1 (C)	21.1 (C)	9.5 (A)	17.1 (B)
		WB LT / WB	8.1 (A)	20.3 (C)	8.7 (A)	31.3 (C)
		NB	32.5 (D)	24.0 (C)	11.4 (B)	13.6 (B)
		SB	1146.4 (F)	21.3 (C)	82.8 (F)	28.1 (C)
7	Bobcat Boulevard (EB) at Trophy Club Drive (NB/SB)	EB	21.0 (C)	8.7 (A)	22.9 (C)	44.1 (D)
		NB	64.7 (E)	17.4 (B)	31.5 (C)	4.7 (A)
		SB	34.6 (C)	16.3 (B)	47.6 (D)	9.3 (A)

¹ Average Delay in Seconds per Vehicle (Level of Service)

As shown, for most approaches the recommended mitigation is predicted to improve the average delay compared to existing conditions. Some approaches experience significant improvement, including the southbound High School Driveway 4 approach and both approaches of Trophy Club Drive at Bobcat Boulevard.

The recommended lane configurations and traffic control are shown in **Figure 6** for reference.

If you have any questions, please contact me or Kristen Novak at (972) 248-3006. We appreciate the opportunity to provide these services and are available to address any additional comments or concerns.

Sincerely,

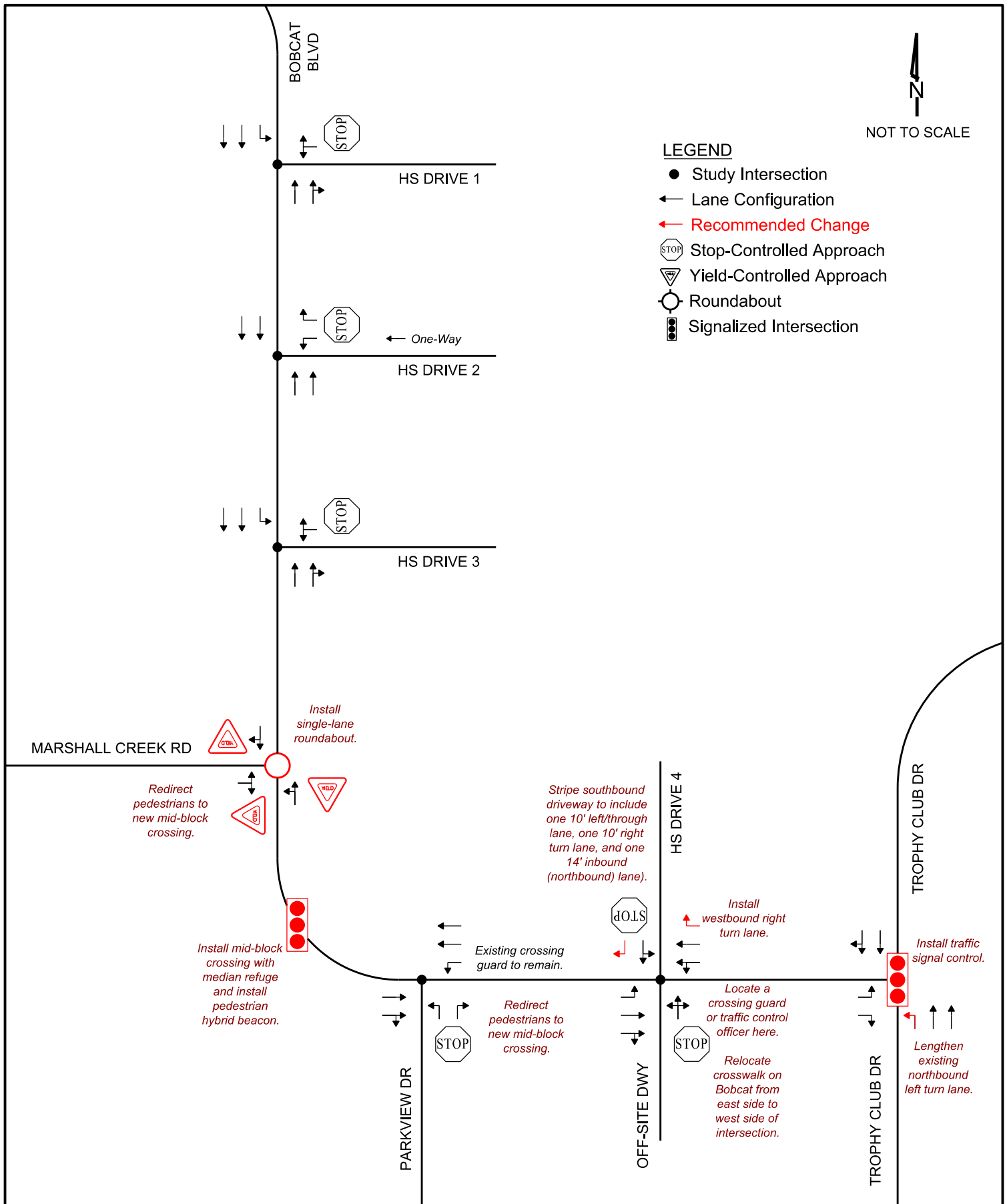


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Joseph Short, P.E., PTOE
President
Lee Engineering
TBPE Firm F-450

Attachments

Synchro Output Sheets
SIDRA Output Sheets
Signal Warrant Data and Description



Existing (2024) AM Peak Hour
1: Bobcat Blvd & HS Drive 1

04/19/2024

Intersection						
Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	48	284	56	272	375
Future Vol, veh/h	6	48	284	56	272	375
Conflicting Peds, #/hr	14	0	0	14	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	17	25	2	2	8	2
Mvmt Flow	9	74	437	86	418	577
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1633	276	0	0	537	0
Stage 1	494	-	-	-	-	-
Stage 2	1139	-	-	-	-	-
Critical Hdwy	7.14	7.4	-	-	4.26	-
Critical Hdwy Stg 1	6.14	-	-	-	-	-
Critical Hdwy Stg 2	6.14	-	-	-	-	-
Follow-up Hdwy	3.67	3.55	-	-	2.28	-
Pot Cap-1 Maneuver	79	657	-	-	987	-
Stage 1	538	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	44	648	-	-	974	-
Mov Cap-2 Maneuver	44	-	-	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	134	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	25.6	0		4.8		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 257		974	-	
HCM Lane V/C Ratio	-	- 0.323		0.43	-	
HCM Control Delay (s)	-	- 25.6		11.5	-	
HCM Lane LOS	-	- D		B	-	
HCM 95th %tile Q(veh)	-	- 1.3		2.2	-	

Existing (2024) AM Peak Hour
2: Bobcat Blvd & HS Drive 2

04/19/2024

Intersection							
Int Delay, s/veh	5.4						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	153	115	2	222	0	0	382
Future Vol, veh/h	153	115	2	222	0	0	382
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	225	169	3	326	0	0	562

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	613	163	562
Stage 1	332	-	-
Stage 2	281	-	-
Critical Hdwy	6.84	6.94	6.44
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.52
Pot Cap-1 Maneuver	424	853	632
Stage 1	699	-	-
Stage 2	741	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	421	853	632
Mov Cap-2 Maneuver	421	-	-
Stage 1	695	-	-
Stage 2	741	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 421 853	-
HCM Lane V/C Ratio	- 0.534 0.198	-
HCM Control Delay (s)	- 22.9 10.3	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 3.1 0.7	-

Existing (2024) AM Peak Hour
3: Bobcat Blvd & HS Drive 3

04/19/2024

Intersection							
Int Delay, s/veh	1.9						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	7	5	1	213	350	164	376
Future Vol, veh/h	7	5	1	213	350	164	376
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	150	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	10	7	1	296	486	228	522

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1258	391	522	0	0	782
Stage 1	541	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22
Pot Cap-1 Maneuver	163	608	670	-	-	832
Stage 1	548	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	118	608	670	-	-	832
Mov Cap-2 Maneuver	118	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	323	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.3	0	3.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	178	832
HCM Lane V/C Ratio	-	-	0.094	0.274
HCM Control Delay (s)	-	-	27.3	10.9
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	0.3	1.1

Existing (2024) AM Peak Hour
4: Bobcat Blvd & Marshall Creek Rd

04/19/2024

Intersection						
Int Delay, s/veh	49.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	219	321	158	352	307	77
Future Vol, veh/h	219	321	158	352	307	77
Conflicting Peds, #/hr	3	16	16	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	175	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	267	391	193	429	374	94

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1041	266	484	0	-	0
Stage 1	437	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 226	732	1075	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 179	710	1059	-	-	-
Mov Cap-2 Maneuver	~ 179	-	-	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	129.7	2.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1059	-	179	710	-	-
HCM Lane V/C Ratio	0.182	-	1.492	0.551	-	-
HCM Control Delay (s)	9.2	-	296.3	16.1	-	-
HCM Lane LOS	A	-	F	C	-	-
HCM 95th %tile Q(veh)	0.7	-	16.9	3.4	-	-

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

Existing (2024) AM Peak Hour
5: Parkview Dr & Bobcat Blvd

04/19/2024

Intersection						
Int Delay, s/veh	50.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	411	192	216	374	166	164
Future Vol, veh/h	411	192	216	374	166	164
Conflicting Peds, #/hr	0	17	2	0	17	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	462	216	243	420	187	184

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	695
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	897
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	882
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	227.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	107	626	-	-	882	-
HCM Lane V/C Ratio	1.743	0.294	-	-	0.275	-
HCM Control Delay (s)	\$ 439	13.1	-	-	10.6	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	14.7	1.2	-	-	1.1	-

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

Existing (2024) AM Peak Hour
6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

04/19/2024

Intersection												
Int Delay, s/veh	182.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			↰	↱		↰			↰	↱
Traffic Vol, veh/h	158	386	8	37	460	467	6	3	64	77	1	139
Future Vol, veh/h	158	386	8	37	460	467	6	3	64	77	1	139
Conflicting Peds, #/hr	16	0	10	19	0	25	10	0	19	25	0	16
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	203	495	10	47	590	599	8	4	82	99	1	178

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1214	0	0	524	0	0	1331	2233	297	1690	1939	636
Stage 1	-	-	-	-	-	-	925	925	-	1009	1009	-
Stage 2	-	-	-	-	-	-	406	1308	-	681	930	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	570	-	-	1039	-	-	113	42	699	~ 61	65	421
Stage 1	-	-	-	-	-	-	290	346	-	257	316	-
Stage 2	-	-	-	-	-	-	593	228	-	407	344	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	556	-	-	1020	-	-	38	21	670	~ 28	33	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	38	21	-	~ 28	33	-
Stage 1	-	-	-	-	-	-	181	216	-	159	256	-
Stage 2	-	-	-	-	-	-	270	185	-	217	215	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.3	0.6	43.2	\$ 1487.7
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	184	556	-	-	1020	-	-	69
HCM Lane V/C Ratio	0.509	0.364	-	-	0.047	-	-	4.032
HCM Control Delay (s)	43.2	15.1	-	-	8.7	0.6		\$ 1487.7
HCM Lane LOS	E	C	-	-	A	A	-	F
HCM 95th %tile Q(veh)	2.5	1.7	-	-	0.1	-	-	29.7

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

Existing (2024) AM Peak Hour
7: Trophy Club Dr & Bobcat Blvd

04/19/2024

Intersection						
Int Delay, s/veh	89.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	373	535	117	245	304
Future Vol, veh/h	55	373	535	117	245	304
Conflicting Peds, #/hr	6	4	4	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	4	2	2	3	2	2
Mvmt Flow	69	466	669	146	306	380
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1919	353	692	0	-	0
Stage 1	502	-	-	-	-	-
Stage 2	1417	-	-	-	-	-
Critical Hdwy	6.88	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 58	643	899	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 14	637	894	-	-	-
Mov Cap-2 Maneuver	~ 14	-	-	-	-	-
Stage 1	142	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	\$ 317	16.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	894	-	14	637	-	-
HCM Lane V/C Ratio	0.748	-	4.911	0.732	-	-
HCM Control Delay (s)	19.9	\$ 2300.7	24.5	-	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	7.1	-	9.5	6.3	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Existing (2024) PM Peak Hour
1: Bobcat Blvd & HS Drive 1

04/19/2024

Intersection							
Int Delay, s/veh	7.5						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	89	130	389	13	1	24	203
Future Vol, veh/h	89	130	389	13	1	24	203
Conflicting Peds, #/hr	22	3	0	22	1	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	75	75	75	75	75	75	75
Heavy Vehicles, %	7	12	2	23	2	33	2
Mvmt Flow	119	173	519	17	1	32	271

Major/Minor	Minor1	Major1	Major2				
Conflicting Flow All	774	293	0	0	536	558	0
Stage 1	550	-	-	-	-	-	-
Stage 2	224	-	-	-	-	-	-
Critical Hdwy	6.94	7.14	-	-	6.44	4.76	-
Critical Hdwy Stg 1	5.94	-	-	-	-	-	-
Critical Hdwy Stg 2	5.94	-	-	-	-	-	-
Follow-up Hdwy	3.57	3.42	-	-	2.52	2.53	-
Pot Cap-1 Maneuver	325	674	-	-	657	822	-
Stage 1	528	-	-	-	-	-	-
Stage 2	777	-	-	-	-	-	-
Platoon blocked, %			-	-			-
Mov Cap-1 Maneuver	298	658	-	-	788	788	-
Mov Cap-2 Maneuver	298	-	-	-	-	-	-
Stage 1	517	-	-	-	-	-	-
Stage 2	729	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	441	788
HCM Lane V/C Ratio	-	-	0.662	0.042
HCM Control Delay (s)	-	-	27.8	9.8
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	4.7	0.1

Existing (2024) PM Peak Hour
2: Bobcat Blvd & HS Drive 2

04/19/2024

Intersection							
Int Delay, s/veh	4.3						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	133	103	2	300	0	0	284
Future Vol, veh/h	133	103	2	300	0	0	284
Conflicting Peds, #/hr	5	5	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	3
Mvmt Flow	173	134	3	390	0	0	369

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	586	200	369
Stage 1	396	-	-
Stage 2	190	-	-
Critical Hdwy	6.84	6.94	6.44
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.52
Pot Cap-1 Maneuver	441	808	838
Stage 1	649	-	-
Stage 2	823	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	437	804	838
Mov Cap-2 Maneuver	437	-	-
Stage 1	646	-	-
Stage 2	819	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 437 804	-
HCM Lane V/C Ratio	- 0.395 0.166	-
HCM Control Delay (s)	- 18.5 10.4	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 1.9 0.6	-

Existing (2024) PM Peak Hour
3: Bobcat Blvd & HS Drive 3

04/19/2024

Intersection							
Int Delay, s/veh	2.9						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	88	24	279	95	1	34	394
Future Vol, veh/h	88	24	279	95	1	34	394
Conflicting Peds, #/hr	6	6	0	6	0	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	111	30	353	120	1	43	499

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	763	249	0	0	473	479
Stage 1	419	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	6.44	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.52	2.22
Pot Cap-1 Maneuver	341	751	-	-	720	1080
Stage 1	632	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	323	742	-	-	1058	1058
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	367	1058
HCM Lane V/C Ratio	-	-	0.386	0.042
HCM Control Delay (s)	-	-	20.9	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.8	0.1

Existing (2024) PM Peak Hour
4: Bobcat Blvd & Marshall Creek Rd

04/19/2024

Intersection						
Int Delay, s/veh	8.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	275	285	362	345	103
Future Vol, veh/h	52	275	285	362	345	103
Conflicting Peds, #/hr	11	39	39	0	0	11
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	175	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	302	313	398	379	113

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1311	324	531	0	-	0
Stage 1	475	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	150	672	1033	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	386	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	623	995	-	-	-
Mov Cap-2 Maneuver	95	-	-	-	-	-
Stage 1	391	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.6	4.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	995	-	95	623	-	-
HCM Lane V/C Ratio	0.315	-	0.602	0.485	-	-
HCM Control Delay (s)	10.3	-	88.5	16.1	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	1.4	-	2.8	2.7	-	-

Existing (2024) PM Peak Hour
5: Parkview Dr & Bobcat Blvd

04/19/2024

Intersection						
Int Delay, s/veh	16.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↱	↑↑	↱	↱
Traffic Vol, veh/h	471	153	114	462	128	111
Future Vol, veh/h	471	153	114	462	128	111
Conflicting Peds, #/hr	0	67	44	0	67	44
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	506	165	123	497	138	119
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	738	0	1218	447
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	562	-
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	-	-	864	-	173	559
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	809	- ~ 129	501	
Mov Cap-2 Maneuver	-	-	-	- ~ 129	-	
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	424	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2		94.9	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	129	501	-	-	809	-
HCM Lane V/C Ratio	1.067	0.238	-	-	0.152	-
HCM Control Delay (s)	164.7	14.4	-	-	10.2	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	7.7	0.9	-	-	0.5	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Existing (2024) PM Peak Hour
6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

04/19/2024

Intersection												
Int Delay, s/veh	25.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱			↰↱			↰↱			↰↱	
Traffic Vol, veh/h	44	557	1	45	523	61	5	0	73	106	0	71
Future Vol, veh/h	44	557	1	45	523	61	5	0	73	106	0	71
Conflicting Peds, #/hr	57	0	56	9	0	10	56	0	9	10	0	57
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	2	2
Mvmt Flow	48	605	1	49	568	66	5	0	79	115	0	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	691	0	0	662	0	0	1197	1547	369	1165	1514	431
Stage 1	-	-	-	-	-	-	758	758	-	756	756	-
Stage 2	-	-	-	-	-	-	439	789	-	409	758	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.56	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.53	4.02	3.32
Pot Cap-1 Maneuver	900	-	-	922	-	-	141	113	628	148	119	573
Stage 1	-	-	-	-	-	-	365	413	-	364	414	-
Stage 2	-	-	-	-	-	-	567	400	-	588	413	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	851	-	-	873	-	-	96	87	589	~ 107	92	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	87	-	~ 107	92	-
Stage 1	-	-	-	-	-	-	326	369	-	325	357	-
Stage 2	-	-	-	-	-	-	415	345	-	476	369	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1	15	202
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	851	-	-	873	-	-	157
HCM Lane V/C Ratio	0.191	0.056	-	-	0.056	-	-	1.225
HCM Control Delay (s)	15	9.5	-	-	9.4	0.4	-	202
HCM Lane LOS	C	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0.2	-	-	11

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

Existing (2024) PM Peak Hour
7: Trophy Club Dr & Bobcat Blvd

04/19/2024

Intersection						
Int Delay, s/veh	21.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	495	466	209	234	111
Future Vol, veh/h	69	495	466	209	234	111
Conflicting Peds, #/hr	8	6	6	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	4	2	2	2	3	2
Mvmt Flow	76	544	512	230	257	122
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1473	204	387	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	1147	-	-	-	-	-
Critical Hdwy	6.88	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	115	803	1168	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 63	792	1159	-	-	-
Mov Cap-2 Maneuver	~ 63	-	-	-	-	-
Stage 1	387	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	52	7.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1159	-	63	792	-	-
HCM Lane V/C Ratio	0.442	-	1.204	0.687	-	-
HCM Control Delay (s)	10.5	-	289.7	18.9	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	2.3	-	6.2	5.6	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Existing (2024) AM Peak Hour with Traffic Control Officer
1: Bobcat Blvd & HS Drive 1

05/07/2024

Intersection						
Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	48	284	56	272	375
Future Vol, veh/h	6	48	284	56	272	375
Conflicting Peds, #/hr	14	0	0	14	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	17	25	2	2	8	2
Mvmt Flow	9	74	437	86	418	577
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1633	276	0	0	537	0
Stage 1	494	-	-	-	-	-
Stage 2	1139	-	-	-	-	-
Critical Hdwy	7.14	7.4	-	-	4.26	-
Critical Hdwy Stg 1	6.14	-	-	-	-	-
Critical Hdwy Stg 2	6.14	-	-	-	-	-
Follow-up Hdwy	3.67	3.55	-	-	2.28	-
Pot Cap-1 Maneuver	79	657	-	-	987	-
Stage 1	538	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	44	648	-	-	974	-
Mov Cap-2 Maneuver	44	-	-	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	134	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	25.6	0		4.8		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 257		974	-	
HCM Lane V/C Ratio	-	- 0.323		0.43	-	
HCM Control Delay (s)	-	- 25.6		11.5	-	
HCM Lane LOS	-	- D		B	-	
HCM 95th %tile Q(veh)	-	- 1.3		2.2	-	

Existing (2024) AM Peak Hour with Traffic Control Officer
2: Bobcat Blvd & HS Drive 2

05/07/2024

Intersection							
Int Delay, s/veh	5.4						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	153	115	2	222	0	0	382
Future Vol, veh/h	153	115	2	222	0	0	382
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	225	169	3	326	0	0	562

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	613	163	562
Stage 1	332	-	-
Stage 2	281	-	-
Critical Hdwy	6.84	6.94	6.44
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.52
Pot Cap-1 Maneuver	424	853	632
Stage 1	699	-	-
Stage 2	741	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	421	853	632
Mov Cap-2 Maneuver	421	-	-
Stage 1	695	-	-
Stage 2	741	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 421 853	-
HCM Lane V/C Ratio	- 0.534 0.198	-
HCM Control Delay (s)	- 22.9 10.3	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 3.1 0.7	-

Existing (2024) AM Peak Hour with Traffic Control Officer
3: Bobcat Blvd & HS Drive 3

05/07/2024

Intersection							
Int Delay, s/veh	1.9						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	7	5	1	213	350	164	376
Future Vol, veh/h	7	5	1	213	350	164	376
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	150	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	10	7	1	296	486	228	522

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1258	391	522	0	0	782
Stage 1	541	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22
Pot Cap-1 Maneuver	163	608	670	-	-	832
Stage 1	548	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	118	608	670	-	-	832
Mov Cap-2 Maneuver	118	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	323	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.3	0	3.3
HCM LOS	D		

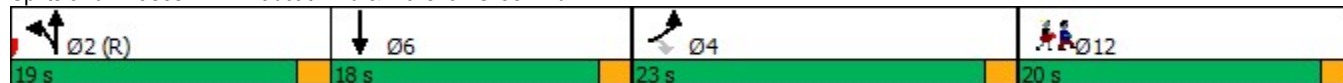
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	178	832
HCM Lane V/C Ratio	-	-	0.094	0.274
HCM Control Delay (s)	-	-	27.3	10.9
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	0.3	1.1

Existing (2024) AM Peak Hour with Traffic Control Officer
4: Bobcat Blvd & Marshall Creek Rd

05/07/2024

						
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø12
Lane Configurations						
Traffic Volume (vph)	219	321	158	352	307	
Future Volume (vph)	219	321	158	352	307	
Turn Type	Prot	Perm	Split	NA	NA	
Protected Phases	4		2	2	6	12
Permitted Phases		4				
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	23.0	23.0	19.0	19.0	18.0	20.0
Total Split (%)	28.8%	28.8%	23.8%	23.8%	22.5%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	21.0	21.0	17.0	17.0	16.0	
Actuated g/C Ratio	0.26	0.26	0.21	0.21	0.20	
v/c Ratio	0.58	0.57	0.51	0.57	0.66	
Control Delay	31.4	6.4	34.1	32.7	32.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	31.4	6.4	34.1	32.7	32.3	
LOS	C	A	C	C	C	
Approach Delay	16.6			33.2	32.3	
Approach LOS	B			C	C	
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green						
Natural Cycle: 60						
Control Type: Pretimed						
Maximum v/c Ratio: 0.66						
Intersection Signal Delay: 26.7				Intersection LOS: C		
Intersection Capacity Utilization 41.9%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 4: Bobcat Blvd & Marshall Creek Rd



Existing (2024) AM Peak Hour with Traffic Control Officer
4: Bobcat Blvd & Marshall Creek Rd

05/07/2024

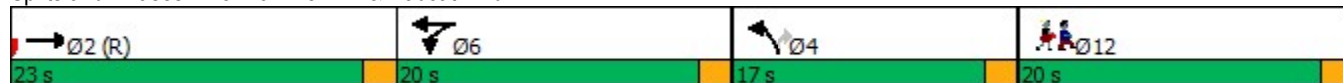
					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	267	391	193	429	468
v/c Ratio	0.58	0.57	0.51	0.57	0.66
Control Delay	31.4	6.4	34.1	32.7	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	6.4	34.1	32.7	32.3
Queue Length 50th (ft)	116	0	107	124	105
Queue Length 95th (ft)	170	43	157	157	138
Internal Link Dist (ft)	376			396	791
Turn Bay Length (ft)		175	125		
Base Capacity (vph)	464	690	376	752	710
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	0.58	0.57	0.51	0.57	0.66
Intersection Summary					

Existing (2024) AM Peak Hour with Traffic Control Officer
5: Parkview Dr & Bobcat Blvd

05/07/2024

						
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø12
Lane Configurations						
Traffic Volume (vph)	411	216	374	166	164	
Future Volume (vph)	411	216	374	166	164	
Turn Type	NA	Split	NA	Prot	Perm	
Protected Phases	2	6	6	4		12
Permitted Phases					4	
Detector Phase	2	6	6	4	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	23.0	20.0	20.0	17.0	17.0	20.0
Total Split (%)	28.8%	25.0%	25.0%	21.3%	21.3%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	21.0	18.0	18.0	15.0	15.0	
Actuated g/C Ratio	0.26	0.22	0.22	0.19	0.19	
v/c Ratio	0.73	0.61	0.53	0.56	0.42	
Control Delay	40.3	43.2	38.8	37.1	8.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.3	43.2	38.8	37.1	8.0	
LOS	D	D	D	D	A	
Approach Delay	40.3		40.4	22.6		
Approach LOS	D		D	C		
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 10 (13%), Referenced to phase 2:EBT, Start of Green						
Natural Cycle: 60						
Control Type: Pretimed						
Maximum v/c Ratio: 0.73						
Intersection Signal Delay: 36.5				Intersection LOS: D		
Intersection Capacity Utilization 49.2%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 5: Parkview Dr & Bobcat Blvd



	→	↙	←	↖	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	678	243	420	187	184
v/c Ratio	0.73	0.61	0.53	0.56	0.42
Control Delay	40.3	43.2	38.8	37.1	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	43.2	38.8	37.1	8.0
Queue Length 50th (ft)	147	124	111	86	0
Queue Length 95th (ft)	210	m150	m128	149	50
Internal Link Dist (ft)	396		523	340	
Turn Bay Length (ft)		125			
Base Capacity (vph)	935	398	796	331	441
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	0.73	0.61	0.53	0.56	0.42
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Existing (2024) AM Peak Hour with Traffic Control Officer
6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

05/07/2024

Intersection												
Int Delay, s/veh	140.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	158	386	8	37	460	467	6	3	64	77	1	139
Future Vol, veh/h	158	386	8	37	460	467	6	3	64	77	1	139
Conflicting Peds, #/hr	16	0	10	19	0	25	10	0	19	25	0	16
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	203	495	10	47	590	599	8	4	82	99	1	178
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1214	0	0	524	0	0	1331	2233	297	1690	1939	636
Stage 1	-	-	-	-	-	-	925	925	-	1009	1009	-
Stage 2	-	-	-	-	-	-	406	1308	-	681	930	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	570	-	-	1216	-	-	145	43	*954	~ 72	70	421
Stage 1	-	-	-	-	-	-	376	410	-	257	316	-
Stage 2	-	-	-	-	-	-	593	228	-	549	408	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	556	-	-	1194	-	-	49	22	*915	~ 35	36	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	22	-	~ 35	36	-
Stage 1	-	-	-	-	-	-	234	256	-	159	264	-
Stage 2	-	-	-	-	-	-	279	190	-	305	255	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			0.6			32.5			\$ 1146.4		
HCM LOS							D			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	222	556	-	-	1194	-	-	84				
HCM Lane V/C Ratio	0.422	0.364	-	-	0.04	-	-	3.312				
HCM Control Delay (s)	32.5	15.1	-	-	8.1	0.5		\$ 1146.4				
HCM Lane LOS	D	C	-	-	A	A	-	F				
HCM 95th %tile Q(veh)	1.9	1.7	-	-	0.1	-	-	28				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Existing (2024) AM Peak Hour with Traffic Control Officer
7: Trophy Club Dr & Bobcat Blvd

05/07/2024

						
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø12
Lane Configurations						
Traffic Volume (vph)	55	373	535	117	245	
Future Volume (vph)	55	373	535	117	245	
Turn Type	Prot	Perm	Split	NA	NA	
Protected Phases	2		4	4	8	12
Permitted Phases		2				
Detector Phase	2	2	4	4	8	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	15.0	15.0	31.0	31.0	14.0	20.0
Total Split (%)	18.8%	18.8%	38.8%	38.8%	17.5%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	13.0	13.0	29.0	29.0	12.0	
Actuated g/C Ratio	0.16	0.16	0.36	0.36	0.15	
v/c Ratio	0.24	0.73	1.04	0.11	0.90	
Control Delay	37.0	18.7	75.1	17.3	34.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	37.0	18.7	75.1	17.3	34.6	
LOS	D	B	E	B	C	
Approach Delay	21.0			64.7	34.6	
Approach LOS	C			E	C	
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 10 (13%), Referenced to phase 6:, Start of Green						
Natural Cycle: 90						
Control Type: Pretimed						
Maximum v/c Ratio: 1.04						
Intersection Signal Delay: 43.1				Intersection LOS: D		
Intersection Capacity Utilization 60.7%				ICU Level of Service B		
Analysis Period (min) 15						

Splits and Phases: 7: Trophy Club Dr & Bobcat Blvd

			
Ø2	Ø4	Ø8	Ø12
15 s	31 s	14 s	20 s

Existing (2024) AM Peak Hour with Traffic Control Officer
7: Trophy Club Dr & Bobcat Blvd

05/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	69	466	669	146	686
v/c Ratio	0.24	0.73	1.04	0.11	0.90
Control Delay	37.0	18.7	75.1	17.3	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	18.7	75.1	17.3	34.6
Queue Length 50th (ft)	34	82	~368	25	93
Queue Length 95th (ft)	m57	119	#467	38	#132
Internal Link Dist (ft)	603			321	332
Turn Bay Length (ft)			125		
Base Capacity (vph)	282	642	641	1270	760
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	0.24	0.73	1.04	0.11	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Existing (2024) PM Peak Hour with Traffic Control Officer
1: Bobcat Blvd & HS Drive 1

05/07/2024

Intersection							
Int Delay, s/veh	7.5						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	89	130	389	13	1	24	203
Future Vol, veh/h	89	130	389	13	1	24	203
Conflicting Peds, #/hr	22	3	0	22	1	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	75	75	75	75	75	75	75
Heavy Vehicles, %	7	12	2	23	2	33	2
Mvmt Flow	119	173	519	17	1	32	271

Major/Minor	Minor1	Major1	Major2				
Conflicting Flow All	774	293	0	0	536	558	0
Stage 1	550	-	-	-	-	-	-
Stage 2	224	-	-	-	-	-	-
Critical Hdwy	6.94	7.14	-	-	6.44	4.76	-
Critical Hdwy Stg 1	5.94	-	-	-	-	-	-
Critical Hdwy Stg 2	5.94	-	-	-	-	-	-
Follow-up Hdwy	3.57	3.42	-	-	2.52	2.53	-
Pot Cap-1 Maneuver	325	674	-	-	657	822	-
Stage 1	528	-	-	-	-	-	-
Stage 2	777	-	-	-	-	-	-
Platoon blocked, %			-	-			-
Mov Cap-1 Maneuver	298	658	-	-	788	788	-
Mov Cap-2 Maneuver	298	-	-	-	-	-	-
Stage 1	517	-	-	-	-	-	-
Stage 2	729	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	441	788
HCM Lane V/C Ratio	-	-	0.662	0.042
HCM Control Delay (s)	-	-	27.8	9.8
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	4.7	0.1

Existing (2024) PM Peak Hour with Traffic Control Officer
2: Bobcat Blvd & HS Drive 2

05/07/2024

Intersection							
Int Delay, s/veh	4.3						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	133	103	2	300	0	0	284
Future Vol, veh/h	133	103	2	300	0	0	284
Conflicting Peds, #/hr	5	5	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	3
Mvmt Flow	173	134	3	390	0	0	369

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	586	200	369
Stage 1	396	-	-
Stage 2	190	-	-
Critical Hdwy	6.84	6.94	6.44
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.52
Pot Cap-1 Maneuver	441	808	838
Stage 1	649	-	-
Stage 2	823	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	437	804	838
Mov Cap-2 Maneuver	437	-	-
Stage 1	646	-	-
Stage 2	819	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	- 437 804	-
HCM Lane V/C Ratio	- 0.395 0.166	-
HCM Control Delay (s)	- 18.5 10.4	-
HCM Lane LOS	- C B	-
HCM 95th %tile Q(veh)	- 1.9 0.6	-

Existing (2024) PM Peak Hour with Traffic Control Officer
3: Bobcat Blvd & HS Drive 3

05/07/2024

Intersection							
Int Delay, s/veh	2.9						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	88	24	279	95	1	34	394
Future Vol, veh/h	88	24	279	95	1	34	394
Conflicting Peds, #/hr	6	6	0	6	0	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	111	30	353	120	1	43	499

Major/Minor	Minor1	Major1	Major2				
Conflicting Flow All	763	249	0	0	473	479	0
Stage 1	419	-	-	-	-	-	-
Stage 2	344	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	6.44	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.52	2.22	-
Pot Cap-1 Maneuver	341	751	-	-	720	1080	-
Stage 1	632	-	-	-	-	-	-
Stage 2	689	-	-	-	-	-	-
Platoon blocked, %			-	-			-
Mov Cap-1 Maneuver	323	742	-	-	1058	1058	-
Mov Cap-2 Maneuver	323	-	-	-	-	-	-
Stage 1	628	-	-	-	-	-	-
Stage 2	657	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	0.7
HCM LOS	C		

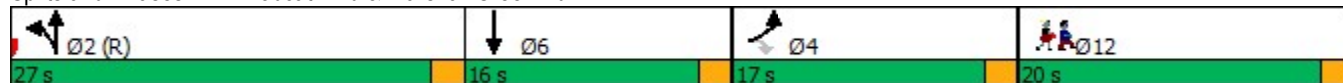
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	367	1058
HCM Lane V/C Ratio	-	-	0.386	0.042
HCM Control Delay (s)	-	-	20.9	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.8	0.1

Existing (2024) PM Peak Hour with Traffic Control Officer
4: Bobcat Blvd & Marshall Creek Rd

05/07/2024

						
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø12
Lane Configurations						
Traffic Volume (vph)	52	275	285	362	345	
Future Volume (vph)	52	275	285	362	345	
Turn Type	Prot	Perm	Split	NA	NA	
Protected Phases	4		2	2	6	12
Permitted Phases		4				
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	17.0	17.0	27.0	27.0	16.0	20.0
Total Split (%)	21.3%	21.3%	33.8%	33.8%	20.0%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	15.0	15.0	25.0	25.0	14.0	
Actuated g/C Ratio	0.19	0.19	0.31	0.31	0.18	
v/c Ratio	0.17	0.58	0.57	0.36	0.79	
Control Delay	28.9	8.8	42.0	36.4	39.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	28.9	8.8	42.0	36.4	39.3	
LOS	C	A	D	D	D	
Approach Delay	12.0			38.9	39.3	
Approach LOS	B			D	D	
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green						
Natural Cycle: 55						
Control Type: Pretimed						
Maximum v/c Ratio: 0.79						
Intersection Signal Delay: 32.9				Intersection LOS: C		
Intersection Capacity Utilization 43.0%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 4: Bobcat Blvd & Marshall Creek Rd



Existing (2024) PM Peak Hour with Traffic Control Officer
4: Bobcat Blvd & Marshall Creek Rd

05/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	57	302	313	398	492
v/c Ratio	0.17	0.58	0.57	0.36	0.79
Control Delay	28.9	8.8	42.0	36.4	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	8.8	42.0	36.4	39.3
Queue Length 50th (ft)	24	0	170	113	114
Queue Length 95th (ft)	56	66	251	158	#185
Internal Link Dist (ft)	376			396	791
Turn Bay Length (ft)		175	125		
Base Capacity (vph)	331	519	553	1105	625
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	0.17	0.58	0.57	0.36	0.79

Intersection Summary

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

Existing (2024) PM Peak Hour with Traffic Control Officer
5: Parkview Dr & Bobcat Blvd

05/07/2024

	→	↖	←	↗	↘	
Lane Group	EBT	WBL	WBT	NBL	NBR	Ø12
Lane Configurations	↑↑	↑	↑↑	↑	↑	
Traffic Volume (vph)	471	114	462	128	111	
Future Volume (vph)	471	114	462	128	111	
Turn Type	NA	Split	NA	Prot	Perm	
Protected Phases	2	6	6	4		12
Permitted Phases					4	
Detector Phase	2	6	6	4	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	27.0	19.0	19.0	14.0	14.0	20.0
Total Split (%)	33.8%	23.8%	23.8%	17.5%	17.5%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	25.0	17.0	17.0	12.0	12.0	
Actuated g/C Ratio	0.31	0.21	0.21	0.15	0.15	
v/c Ratio	0.63	0.33	0.66	0.52	0.38	
Control Delay	34.7	44.1	48.2	39.2	10.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	34.7	44.1	48.2	39.2	10.3	
LOS	C	D	D	D	B	
Approach Delay	34.7		47.3	25.8		
Approach LOS	C		D	C		

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 38.3

Intersection LOS: D

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Parkview Dr & Bobcat Blvd



Existing (2024) PM Peak Hour with Traffic Control Officer
5: Parkview Dr & Bobcat Blvd

05/07/2024

	→	↙	←	↘	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	671	123	497	138	119
v/c Ratio	0.63	0.33	0.66	0.52	0.38
Control Delay	34.7	44.1	48.2	39.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	44.1	48.2	39.2	10.3
Queue Length 50th (ft)	164	65	140	64	0
Queue Length 95th (ft)	m226	m86	m173	120	44
Internal Link Dist (ft)	396		523	340	
Turn Bay Length (ft)		125			
Base Capacity (vph)	1067	376	752	265	312
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	0.63	0.33	0.66	0.52	0.38
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Existing (2024) PM Peak Hour with Traffic Control Officer
6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

05/07/2024

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	557	1	45	523	61	5	0	73	106	0	71
Future Vol, veh/h	44	557	1	45	523	61	5	0	73	106	0	71
Conflicting Peds, #/hr	57	0	56	9	0	10	56	0	9	10	0	57
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	2	2
Mvmt Flow	48	605	1	49	568	66	5	0	79	115	0	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	691	0	0	662	0	0	1197	1547	369	1165	1514	431
Stage 1	-	-	-	-	-	-	758	758	-	756	756	-
Stage 2	-	-	-	-	-	-	439	789	-	409	758	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.56	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.53	4.02	3.32
Pot Cap-1 Maneuver	900	-	-	1195	-	-	234	148	*876	*248	156	573
Stage 1	-	-	-	-	-	-	609	577	-	*364	414	-
Stage 2	-	-	-	-	-	-	567	400	-	*824	577	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	851	-	-	1131	-	-	161	117	*822	*191	123	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	161	117	-	*191	123	-
Stage 1	-	-	-	-	-	-	544	516	-	*325	365	-
Stage 2	-	-	-	-	-	-	424	353	-	*696	516	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.8			11.4			52.4		
HCM LOS							B			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	651	851	-	-	1131	-	-	255
HCM Lane V/C Ratio	0.13	0.056	-	-	0.043	-	-	0.754
HCM Control Delay (s)	11.4	9.5	-	-	8.3	0.2	-	52.4
HCM Lane LOS	B	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-	-	5.4

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

Existing (2024) PM Peak Hour with Traffic Control Officer
7: Trophy Club Dr & Bobcat Blvd

05/07/2024

						
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø12
Lane Configurations						
Traffic Volume (vph)	69	495	466	209	234	
Future Volume (vph)	69	495	466	209	234	
Turn Type	Prot	Perm	Split	NA	NA	
Protected Phases	2		4	4	8	12
Permitted Phases		2				
Detector Phase	2	2	4	4	8	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	19.0	19.0	30.0	30.0	11.0	20.0
Total Split (%)	23.8%	23.8%	37.5%	37.5%	13.8%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	17.0	17.0	28.0	28.0	9.0	
Actuated g/C Ratio	0.21	0.21	0.35	0.35	0.11	
v/c Ratio	0.21	0.72	0.83	0.19	0.86	
Control Delay	36.9	20.9	37.3	18.6	47.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	36.9	20.9	37.3	18.6	47.6	
LOS	D	C	D	B	D	
Approach Delay	22.9			31.5	47.6	
Approach LOS	C			C	D	
Intersection Summary						
Cycle Length: 80						
Actuated Cycle Length: 80						
Offset: 0 (0%), Referenced to phase 2:EBL, Start of Green						
Natural Cycle: 70						
Control Type: Pretimed						
Maximum v/c Ratio: 0.86						
Intersection Signal Delay: 31.9				Intersection LOS: C		
Intersection Capacity Utilization 50.3%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 7: Trophy Club Dr & Bobcat Blvd





Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	76	544	512	230	379
v/c Ratio	0.21	0.72	0.83	0.19	0.86
Control Delay	36.9	20.9	37.3	18.6	47.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	20.9	37.3	18.6	47.6
Queue Length 50th (ft)	37	143	230	41	78
Queue Length 95th (ft)	m67	209	#397	66	#154
Internal Link Dist (ft)	603			321	332
Turn Bay Length (ft)			125		
Base Capacity (vph)	368	757	619	1238	443
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	0.21	0.72	0.83	0.19	0.86

Intersection Summary

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.

Timings

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) AM Peak Hour with Traffic Control Officer

							
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	Ø12
Lane Configurations							
Traffic Volume (vph)	158	386	37	460	3	1	
Future Volume (vph)	158	386	37	460	3	1	
Turn Type	Prot	NA	Perm	NA	NA	NA	
Protected Phases	7	4		8	2	6	12
Permitted Phases			8				
Detector Phase	7	4	8	8	2	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	14.0	45.0	31.0	31.0	7.0	11.0	17.0
Total Split (%)	17.5%	56.3%	38.8%	38.8%	8.8%	13.8%	21%
Yellow Time (s)	3.5	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5	2.0		2.0	2.0	2.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	9.5	43.0		29.0	5.0	9.0	
Actuated g/C Ratio	0.12	0.54		0.36	0.06	0.11	
v/c Ratio	0.97	0.27		0.97	0.56	1.07	
Control Delay (s/veh)	94.1	5.0		29.3	25.0	100.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	94.1	5.0		29.3	25.0	100.5	
LOS	F	A		C	C	F	
Approach Delay (s/veh)		30.6		29.3	25.0	100.5	
Approach LOS		C		C	C	F	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.07

Intersection Signal Delay (s/veh): 38.1

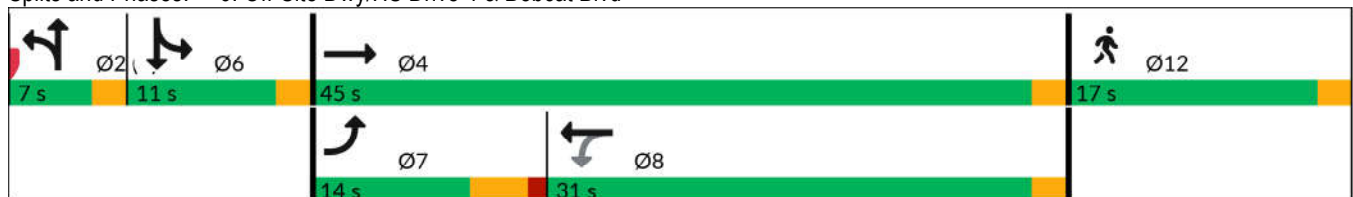
Intersection LOS: D

Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd



Queues

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) AM Peak Hour with Traffic Control Officer



Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	203	505	1236	94	278
v/c Ratio	0.97	0.27	0.97	0.56	1.07
Control Delay (s/veh)	94.1	5.0	29.3	25.0	100.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	94.1	5.0	29.3	25.0	100.5
Queue Length 50th (ft)	92	26	130	6	~112
Queue Length 95th (ft)	m#177	40	m130	38	#201
Internal Link Dist (ft)		523	603	280	279
Turn Bay Length (ft)	250				
Base Capacity (vph)	210	1897	1274	169	261
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	0.97	0.27	0.97	0.56	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Timings

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) PM Peak Hour with Traffic Control Officer

							
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	Ø12
Lane Configurations							
Traffic Volume (vph)	44	557	45	523	0	0	
Future Volume (vph)	44	557	45	523	0	0	
Turn Type	Prot	NA	Perm	NA	NA	NA	
Protected Phases	7	4		8	2	6	12
Permitted Phases			8				
Detector Phase	7	4	8	8	2	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	7.0	35.0	28.0	28.0	10.0	15.0	20.0
Total Split (%)	8.8%	43.8%	35.0%	35.0%	12.5%	18.8%	25%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0		2.0	2.0	2.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	5.0	33.0		26.0	8.0	13.0	
Actuated g/C Ratio	0.06	0.41		0.33	0.10	0.16	
v/c Ratio	0.44	0.42		0.68	0.37	0.60	
Control Delay (s/veh)	31.0	13.9		15.1	14.8	28.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	31.0	13.9		15.1	14.8	28.6	
LOS	C	B		B	B	C	
Approach Delay (s/veh)		15.1		15.1	14.8	28.6	
Approach LOS		B		B	B	C	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay (s/veh): 16.7

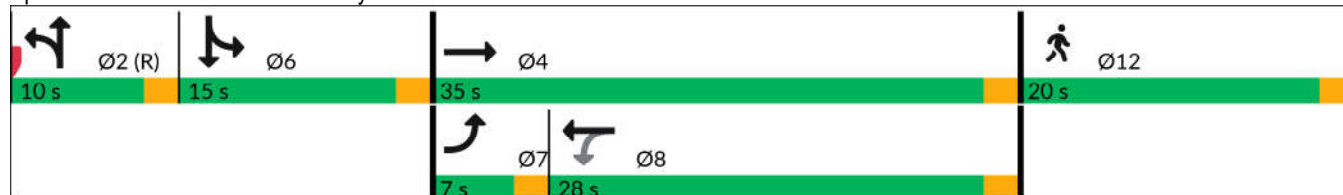
Intersection LOS: B

Intersection Capacity Utilization 61.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd



Queues

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) PM Peak Hour with Traffic Control Officer

					
Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	48	606	683	84	192
v/c Ratio	0.44	0.42	0.68	0.37	0.60
Control Delay (s/veh)	31.0	13.9	15.1	14.8	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.0	13.9	15.1	14.8	28.6
Queue Length 50th (ft)	16	154	47	2	57
Queue Length 95th (ft)	m32	216	m78	43	124
Internal Link Dist (ft)		523	603	280	279
Turn Bay Length (ft)	250				
Base Capacity (vph)	110	1459	1004	226	319
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	0.44	0.42	0.68	0.37	0.60
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Existing (2024) AM Peak Hour with Signals

1: Bobcat Blvd & HS Drive 1

05/07/2024

Intersection

Int Delay, s/veh 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	48	284	56	272	375
Future Vol, veh/h	6	48	284	56	272	375
Conflicting Peds, #/hr	14	0	0	14	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	17	25	2	2	8	2
Mvmt Flow	9	74	437	86	418	577

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1633	276	0
Stage 1	494	-	-
Stage 2	1139	-	-
Critical Hdwy	7.14	7.4	-
Critical Hdwy Stg 1	6.14	-	-
Critical Hdwy Stg 2	6.14	-	-
Follow-up Hdwy	3.67	3.55	-
Pot Cap-1 Maneuver	90	*917	-
Stage 1	672	-	-
Stage 2	238	-	-
Platoon blocked, %	1	1	-
Mov Cap-1 Maneuver	54	*905	-
Mov Cap-2 Maneuver	54	-	-
Stage 1	663	-	-
Stage 2	146	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.6	0	4.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	329	1106
HCM Lane V/C Ratio	-	-	0.253	0.378
HCM Control Delay (s)	-	-	19.6	10.2
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1	1.8

Notes

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

Existing (2024) AM Peak Hour with Signals
2: Bobcat Blvd & HS Drive 2

05/07/2024

Intersection							
Int Delay, s/veh	4.4						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	153	115	2	222	0	0	382
Future Vol, veh/h	153	115	2	222	0	0	382
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	225	169	3	326	0	0	562
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	613	163	562	0	-	-	-
Stage 1	332	-	-	-	-	-	-
Stage 2	281	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	-	-
Pot Cap-1 Maneuver	506	*1011	632	-	0	0	-
Stage 1	812	-	-	-	0	0	-
Stage 2	741	-	-	-	0	0	-
Platoon blocked, %	1	1		-			-
Mov Cap-1 Maneuver	503	*1011	632	-	-	-	-
Mov Cap-2 Maneuver	503	-	-	-	-	-	-
Stage 1	807	-	-	-	-	-	-
Stage 2	741	-	-	-	-	-	-
Approach	WB		NB		SB		
HCM Control Delay, s	14.2		0.1		0		
HCM LOS	B						
Minor Lane/Major Mvmt	NBTWBLn1WBLn2			SBT			
Capacity (veh/h)	- 503 1011			-			
HCM Lane V/C Ratio	- 0.447 0.167			-			
HCM Control Delay (s)	- 17.8 9.3			-			
HCM Lane LOS	- C A			-			
HCM 95th %tile Q(veh)	- 2.3 0.6			-			
Notes							
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon	

Existing (2024) AM Peak Hour with Signals
3: Bobcat Blvd & HS Drive 3

05/07/2024

Intersection							
Int Delay, s/veh	1.8						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	7	5	1	213	350	164	376
Future Vol, veh/h	7	5	1	213	350	164	376
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	150	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	10	7	1	296	486	228	522

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1258	391	522	0	0	782
Stage 1	541	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22
Pot Cap-1 Maneuver	183	747	670	-	-	889
Stage 1	627	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %	1	1		-	-	1
Mov Cap-1 Maneuver	136	747	670	-	-	889
Mov Cap-2 Maneuver	136	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	331	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	3.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	206	889
HCM Lane V/C Ratio	-	-	0.081	0.256
HCM Control Delay (s)	-	-	24	10.4
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.3	1

Timings

4: Bobcat Blvd & Marshall Creek Rd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	219	321	158	352	307
Future Volume (vph)	219	321	158	352	307
Turn Type	Prot	pm+ov	D.P+P	NA	NA
Protected Phases	4	5	5	2	6
Permitted Phases		4	6		
Detector Phase	4	5	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	9.5	22.5	22.5
Total Split (s)	43.0	23.0	23.0	57.0	34.0
Total Split (%)	43.0%	23.0%	23.0%	57.0%	34.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effect Green (s)	20.7	30.3	65.8	70.3	56.2
Actuated g/C Ratio	0.21	0.30	0.66	0.70	0.56
v/c Ratio	0.73	0.65	0.30	0.17	0.24
Control Delay (s/veh)	48.4	16.6	6.6	5.0	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.4	16.6	6.6	5.0	12.0
LOS	D	B	A	A	B
Approach Delay (s/veh)	29.5			5.5	12.0
Approach LOS	C			A	B

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:NBT and 6:NBSB, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay (s/veh): 16.3

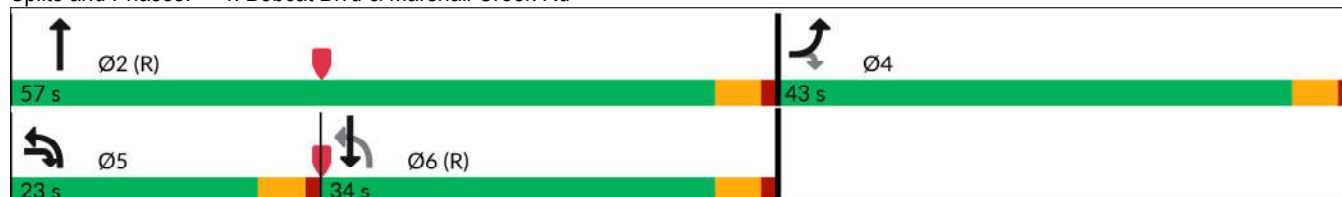
Intersection LOS: B

Intersection Capacity Utilization 48.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Bobcat Blvd & Marshall Creek Rd



Queues

4: Bobcat Blvd & Marshall Creek Rd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	267	391	193	429	468
v/c Ratio	0.73	0.65	0.30	0.17	0.24
Control Delay (s/veh)	48.4	16.6	6.6	5.0	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.4	16.6	6.6	5.0	12.0
Queue Length 50th (ft)	160	94	19	22	68
Queue Length 95th (ft)	201	121	81	80	113
Internal Link Dist (ft)	376			396	791
Turn Bay Length (ft)		175	125		
Base Capacity (vph)	681	728	764	2489	1931
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	0.39	0.54	0.25	0.17	0.24
Intersection Summary					

Timings

5: Parkview Dr & Bobcat Blvd

	→	↖	←	↙	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↖	↑↑	↙	↗
Traffic Volume (vph)	411	216	374	166	164
Future Volume (vph)	411	216	374	166	164
Turn Type	NA	D.P+P	NA	Prot	pm+ov
Protected Phases	6	5	2	4	5
Permitted Phases		6			4
Detector Phase	6	5	2	4	5
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5
Total Split (s)	43.0	28.0	71.0	29.0	28.0
Total Split (%)	43.0%	28.0%	71.0%	29.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Recall Mode	C-Max	None	C-Max	Max	None
Act Effect Green (s)	51.1	62.0	66.5	24.5	35.4
Actuated g/C Ratio	0.51	0.62	0.67	0.25	0.35
v/c Ratio	0.39	0.48	0.18	0.43	0.27
Control Delay (s/veh)	14.7	7.6	4.4	35.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.7	7.6	4.4	35.6	3.8
LOS	B	A	A	D	A
Approach Delay (s/veh)	14.7		5.6	19.8	
Approach LOS	B		A	B	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 87 (87%), Referenced to phase 2:WBT and 6:EBWB, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay (s/veh): 12.3

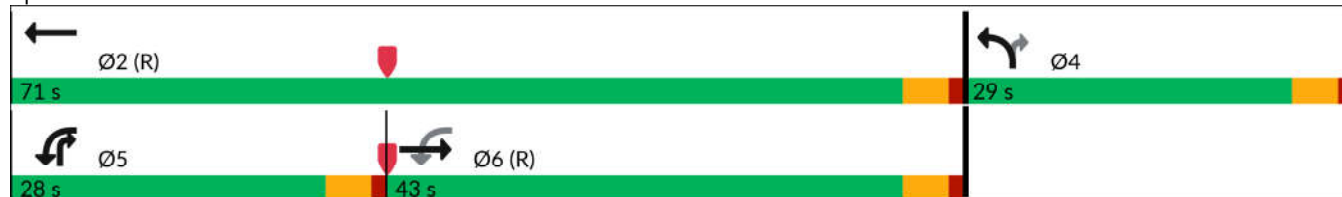
Intersection LOS: B

Intersection Capacity Utilization 56.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Parkview Dr & Bobcat Blvd



Queues

5: Parkview Dr & Bobcat Blvd

	→	↙	←	↖	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	678	243	420	187	184
v/c Ratio	0.39	0.48	0.18	0.43	0.27
Control Delay (s/veh)	14.7	7.6	4.4	35.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.7	7.6	4.4	35.6	3.8
Queue Length 50th (ft)	148	42	37	101	0
Queue Length 95th (ft)	118	m48	37	165	37
Internal Link Dist (ft)	396		523	340	
Turn Bay Length (ft)		125			
Base Capacity (vph)	1724	683	2353	433	849
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	0.39	0.36	0.18	0.43	0.22
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Existing (2024) AM Peak Hour with Signals
6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

05/07/2024

Intersection												
Int Delay, s/veh	136.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	158	386	8	37	460	467	6	3	64	77	1	139
Future Vol, veh/h	158	386	8	37	460	467	6	3	64	77	1	139
Conflicting Peds, #/hr	16	0	10	19	0	25	10	0	19	25	0	16
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	203	495	10	47	590	599	8	4	82	99	1	178
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1214	0	0	524	0	0	1331	2233	297	1690	1939	636
Stage 1	-	-	-	-	-	-	925	925	-	1009	1009	-
Stage 2	-	-	-	-	-	-	406	1308	-	681	930	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	570	-	-	1227	-	-	147	43	*949	~ 74	70	421
Stage 1	-	-	-	-	-	-	381	414	-	257	316	-
Stage 2	-	-	-	-	-	-	593	228	-	558	411	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	556	-	-	1204	-	-	50	22	*910	~ 36	37	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	22	-	~ 36	37	-
Stage 1	-	-	-	-	-	-	237	258	-	159	264	-
Stage 2	-	-	-	-	-	-	279	191	-	310	256	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	4.3		0.5		32.3		\$ 1109.9					
HCM LOS					D		F					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	223	556	-	-	1204	-	-	86				
HCM Lane V/C Ratio	0.42	0.364	-	-	0.039	-	-	3.235				
HCM Control Delay (s)	32.3	15.1	-	-	8.1	0.5		\$ 1109.9				
HCM Lane LOS	D	C	-	-	A	A	-	F				
HCM 95th %tile Q(veh)	1.9	1.7	-	-	0.1	-	-	27.8				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Timings

7: Trophy Club Dr & Bobcat Blvd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	55	373	535	117	245
Future Volume (vph)	55	373	535	117	245
Turn Type	Prot	pm+ov	D.P+P	NA	NA
Protected Phases	6	7	7	4	8
Permitted Phases		6	8		
Detector Phase	6	7	7	4	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	9.5	22.5	22.5
Total Split (s)	29.0	46.0	46.0	71.0	25.0
Total Split (%)	29.0%	46.0%	46.0%	71.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	C-Min	None	None	Max	Max
Act Effect Green (s)	9.3	43.7	77.2	81.7	42.8
Actuated g/C Ratio	0.09	0.44	0.77	0.82	0.43
v/c Ratio	0.43	0.61	0.79	0.05	0.45
Control Delay (s/veh)	48.1	10.6	17.2	2.1	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.1	10.6	17.2	2.1	14.7
LOS	D	B	B	A	B
Approach Delay (s/veh)	15.5			14.5	14.7
Approach LOS	B			B	B

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 5 (5%), Referenced to phase 6:EBL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay (s/veh): 14.8

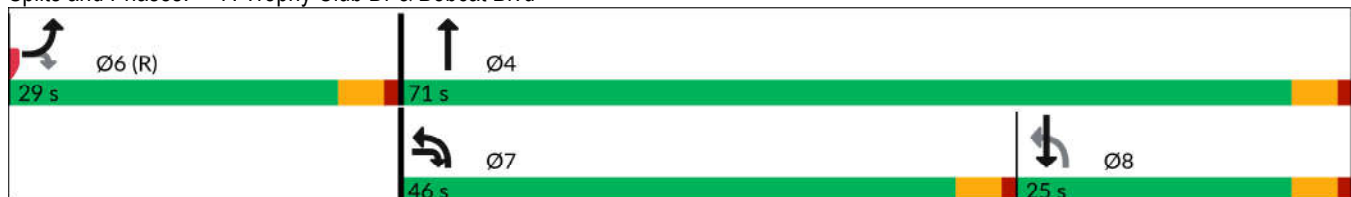
Intersection LOS: B

Intersection Capacity Utilization 72.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Trophy Club Dr & Bobcat Blvd



Queues

7: Trophy Club Dr & Bobcat Blvd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	69	466	669	146	686
v/c Ratio	0.43	0.61	0.79	0.05	0.45
Control Delay (s/veh)	48.1	10.6	17.2	2.1	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.1	10.6	17.2	2.1	14.7
Queue Length 50th (ft)	33	47	177	6	88
Queue Length 95th (ft)	62	38	235	13	146
Internal Link Dist (ft)	603			321	332
Turn Bay Length (ft)			125		
Base Capacity (vph)	425	889	966	2862	1533
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	0.16	0.52	0.69	0.05	0.45
Intersection Summary					

Existing (2024) PM Peak Hour with Signals

1: Bobcat Blvd & HS Drive 1

05/07/2024

Intersection							
Int Delay, s/veh	4.4						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	89	130	389	13	1	24	203
Future Vol, veh/h	89	130	389	13	1	24	203
Conflicting Peds, #/hr	22	3	0	22	1	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	75	75	75	75	75	75	75
Heavy Vehicles, %	7	12	2	23	2	33	2
Mvmt Flow	119	173	519	17	1	32	271
Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	774	293	0	0	536	558	0
Stage 1	550	-	-	-	-	-	-
Stage 2	224	-	-	-	-	-	-
Critical Hdwy	6.94	7.14	-	-	6.44	4.76	-
Critical Hdwy Stg 1	5.94	-	-	-	-	-	-
Critical Hdwy Stg 2	5.94	-	-	-	-	-	-
Follow-up Hdwy	3.57	3.42	-	-	2.52	2.53	-
Pot Cap-1 Maneuver	454	*921	-	-	954	1013	-
Stage 1	697	-	-	-	-	-	-
Stage 2	777	-	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	1	-
Mov Cap-1 Maneuver	420	*899	-	-	984	984	-
Mov Cap-2 Maneuver	420	-	-	-	-	-	-
Stage 1	683	-	-	-	-	-	-
Stage 2	735	-	-	-	-	-	-
Approach	WB		NB		SB		
HCM Control Delay, s	16.1		0		1		
HCM LOS	C						
Minor Lane/Major Mvmt	NBT		NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-		-		614	984	
HCM Lane V/C Ratio	-		-		0.476	0.034	
HCM Control Delay (s)	-		-		16.1	8.8	
HCM Lane LOS	-		-		C	A	
HCM 95th %tile Q(veh)	-		-		2.6	0.1	
Notes							
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon	

Existing (2024) PM Peak Hour with Signals
2: Bobcat Blvd & HS Drive 2

05/07/2024

Intersection							
Int Delay, s/veh	3.5						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	133	103	2	300	0	0	284
Future Vol, veh/h	133	103	2	300	0	0	284
Conflicting Peds, #/hr	5	5	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	3
Mvmt Flow	173	134	3	390	0	0	369
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	586	200	369	0	-	-	-
Stage 1	396	-	-	-	-	-	-
Stage 2	190	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	-	-
Pot Cap-1 Maneuver	577	*980	838	-	0	0	-
Stage 1	805	-	-	-	0	0	-
Stage 2	823	-	-	-	0	0	-
Platoon blocked, %	1	1		-			-
Mov Cap-1 Maneuver	571	*976	838	-	-	-	-
Mov Cap-2 Maneuver	571	-	-	-	-	-	-
Stage 1	801	-	-	-	-	-	-
Stage 2	819	-	-	-	-	-	-
Approach	WB		NB		SB		
HCM Control Delay, s	11.9		0.1		0		
HCM LOS	B						
Minor Lane/Major Mvmt	NBTWBLn1WBLn2		SBT				
Capacity (veh/h)	-		571	976	-		
HCM Lane V/C Ratio	-		0.302	0.137	-		
HCM Control Delay (s)	-		14	9.3	-		
HCM Lane LOS	-		B	A	-		
HCM 95th %tile Q(veh)	-		1.3	0.5	-		
Notes							
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon	

Existing (2024) PM Peak Hour with Signals
3: Bobcat Blvd & HS Drive 3

05/07/2024

Intersection							
Int Delay, s/veh	2.3						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	88	24	279	95	1	34	394
Future Vol, veh/h	88	24	279	95	1	34	394
Conflicting Peds, #/hr	6	6	0	6	0	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	111	30	353	120	1	43	499
Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	763	249	0	0	473	479	0
Stage 1	419	-	-	-	-	-	-
Stage 2	344	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	6.44	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.52	2.22	-
Pot Cap-1 Maneuver	434	*980	-	-	958	1225	-
Stage 1	782	-	-	-	-	-	-
Stage 2	689	-	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	1	-
Mov Cap-1 Maneuver	414	*969	-	-	1208	1208	-
Mov Cap-2 Maneuver	414	-	-	-	-	-	-
Stage 1	777	-	-	-	-	-	-
Stage 2	660	-	-	-	-	-	-
Approach	WB	NB		SB			
HCM Control Delay, s	15.9	0		0.7			
HCM LOS	C						
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT		
Capacity (veh/h)	-	-	472	1208	-		
HCM Lane V/C Ratio	-	-	0.3	0.037	-		
HCM Control Delay (s)	-	-	15.9	8.1	-		
HCM Lane LOS	-	-	C	A	-		
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-		
Notes							
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon	

Timings

4: Bobcat Blvd & Marshall Creek Rd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	52	275	285	362	345
Future Volume (vph)	52	275	285	362	345
Turn Type	Prot	pm+ov	D.P+P	NA	NA
Protected Phases	4	5	5	2	6
Permitted Phases		4	6		
Detector Phase	4	5	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	9.5	22.5	22.5
Total Split (s)	35.0	32.0	32.0	65.0	33.0
Total Split (%)	35.0%	32.0%	32.0%	65.0%	33.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effect Green (s)	8.6	21.1	79.9	85.3	66.3
Actuated g/C Ratio	0.09	0.21	0.80	0.85	0.66
v/c Ratio	0.38	0.66	0.40	0.13	0.22
Control Delay (s/veh)	49.3	19.2	2.3	0.7	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	19.2	2.3	0.7	8.0
LOS	D	B	A	A	A
Approach Delay (s/veh)	24.0			1.4	8.0
Approach LOS	C			A	A

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 24 (24%), Referenced to phase 2:NBT and 6:NBSB, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay (s/veh): 8.7

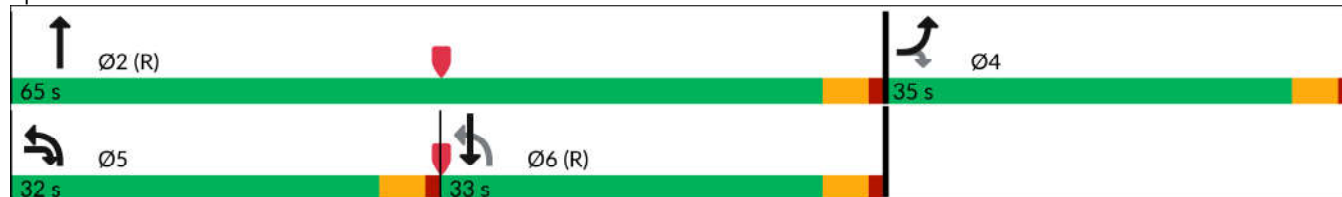
Intersection LOS: A

Intersection Capacity Utilization 54.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Bobcat Blvd & Marshall Creek Rd



Queues

4: Bobcat Blvd & Marshall Creek Rd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	57	302	313	398	492
v/c Ratio	0.38	0.66	0.40	0.13	0.22
Control Delay (s/veh)	49.3	19.2	2.3	0.7	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	19.2	2.3	0.7	8.0
Queue Length 50th (ft)	35	67	8	5	56
Queue Length 95th (ft)	73	126	24	14	109
Internal Link Dist (ft)	376			396	791
Turn Bay Length (ft)		175	125		
Base Capacity (vph)	539	657	955	3018	2254
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	0.11	0.46	0.33	0.13	0.22
Intersection Summary					

Timings

5: Parkview Dr & Bobcat Blvd

	→	↖	←	↙	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↖	↑↑	↙	↗
Traffic Volume (vph)	471	114	462	128	111
Future Volume (vph)	471	114	462	128	111
Turn Type	NA	D.P+P	NA	Prot	pm+ov
Protected Phases	6	5	2	4	5
Permitted Phases		6			4
Detector Phase	6	5	2	4	5
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5
Total Split (s)	50.0	19.0	69.0	31.0	19.0
Total Split (%)	50.0%	19.0%	69.0%	31.0%	19.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Recall Mode	C-Max	None	C-Max	Max	None
Act Effect Green (s)	51.9	60.0	64.5	26.5	34.6
Actuated g/C Ratio	0.52	0.60	0.65	0.27	0.35
v/c Ratio	0.39	0.27	0.22	0.29	0.20
Control Delay (s/veh)	11.5	5.6	4.9	31.4	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.5	5.6	4.9	31.4	4.5
LOS	B	A	A	C	A
Approach Delay (s/veh)	11.5		5.0	18.9	
Approach LOS	B		A	B	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 83 (83%), Referenced to phase 2:WBT and 6:EBWB, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay (s/veh): 10.2

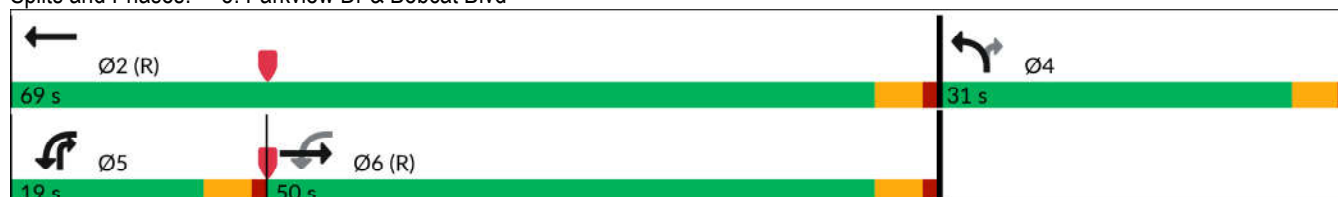
Intersection LOS: B

Intersection Capacity Utilization 51.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Parkview Dr & Bobcat Blvd



Queues

5: Parkview Dr & Bobcat Blvd

					
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	671	123	497	138	119
v/c Ratio	0.39	0.27	0.22	0.29	0.20
Control Delay (s/veh)	11.5	5.6	4.9	31.4	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.5	5.6	4.9	31.4	4.5
Queue Length 50th (ft)	110	24	54	70	0
Queue Length 95th (ft)	127	27	52	123	33
Internal Link Dist (ft)	396		523	340	
Turn Bay Length (ft)		125			
Base Capacity (vph)	1702	562	2282	469	682
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	0.39	0.22	0.22	0.29	0.17
Intersection Summary					

Existing (2024) PM Peak Hour with Signals
6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

05/07/2024

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	557	1	45	523	61	5	0	73	106	0	71
Future Vol, veh/h	44	557	1	45	523	61	5	0	73	106	0	71
Conflicting Peds, #/hr	57	0	56	9	0	10	56	0	9	10	0	57
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	2	2
Mvmt Flow	48	605	1	49	568	66	5	0	79	115	0	77
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	691	0	0	662	0	0	1197	1547	369	1165	1514	431
Stage 1	-	-	-	-	-	-	758	758	-	756	756	-
Stage 2	-	-	-	-	-	-	439	789	-	409	758	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.56	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.53	4.02	3.32
Pot Cap-1 Maneuver	900	-	-	1239	-	-	250	153	*855	*266	163	573
Stage 1	-	-	-	-	-	-	651	603	-	*364	414	-
Stage 2	-	-	-	-	-	-	567	400	-	*804	603	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	851	-	-	1173	-	-	173	121	*802	*204	129	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	173	121	-	*204	129	-
Stage 1	-	-	-	-	-	-	582	539	-	*325	366	-
Stage 2	-	-	-	-	-	-	426	354	-	*677	539	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.8			11.4			46		
HCM LOS							B			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	650	851	-	-	1173	-	-	269				
HCM Lane V/C Ratio	0.13	0.056	-	-	0.042	-	-	0.715				
HCM Control Delay (s)	11.4	9.5	-	-	8.2	0.2	-	46				
HCM Lane LOS	B	A	-	-	A	A	-	E				
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-	-	5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Timings

7: Trophy Club Dr & Bobcat Blvd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	69	495	466	209	234
Future Volume (vph)	69	495	466	209	234
Turn Type	Prot	pm+ov	D.P+P	NA	NA
Protected Phases	6	7	7	4	8
Permitted Phases		6	8		
Detector Phase	6	7	7	4	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	9.5	22.5	22.5
Total Split (s)	27.0	47.0	47.0	73.0	26.0
Total Split (%)	27.0%	47.0%	47.0%	73.0%	26.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	C-Min	None	None	Max	Max
Act Effect Green (s)	9.7	30.9	76.8	81.3	55.6
Actuated g/C Ratio	0.10	0.31	0.77	0.81	0.56
v/c Ratio	0.45	0.87	0.56	0.08	0.20
Control Delay (s/veh)	45.7	23.3	5.6	2.2	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	23.3	5.6	2.2	10.8
LOS	D	C	A	A	B
Approach Delay (s/veh)	26.0			4.5	10.8
Approach LOS	C			A	B

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 8 (8%), Referenced to phase 6:EBL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay (s/veh): 13.6

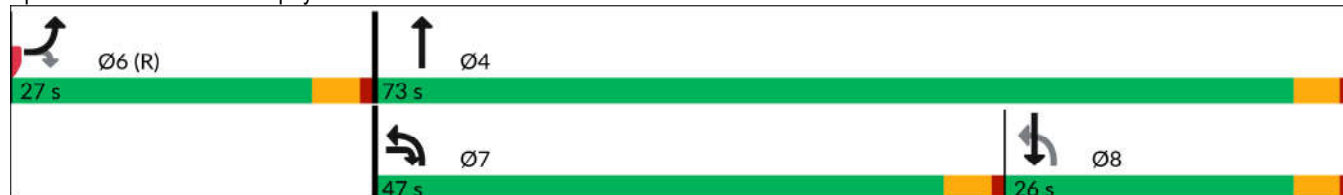
Intersection LOS: B

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Trophy Club Dr & Bobcat Blvd



Queues

7: Trophy Club Dr & Bobcat Blvd

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	76	544	512	230	379
v/c Ratio	0.45	0.87	0.56	0.08	0.20
Control Delay (s/veh)	45.7	23.3	5.6	2.2	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	23.3	5.6	2.2	10.8
Queue Length 50th (ft)	34	165	64	11	47
Queue Length 95th (ft)	66	229	121	23	95
Internal Link Dist (ft)	603			321	332
Turn Bay Length (ft)			125		
Base Capacity (vph)	390	922	1123	2875	1876
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	0.19	0.59	0.46	0.08	0.20
Intersection Summary					

Timings

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) AM Peak Hour with Signals

						
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Configurations						
Traffic Volume (vph)	158	386	37	460	3	1
Future Volume (vph)	158	386	37	460	3	1
Turn Type	D.P+P	NA	Perm	NA	NA	NA
Protected Phases	1	6		2	4	8
Permitted Phases	2		2			
Detector Phase	1	6	2	2	4	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	9.5	22.5	9.5
Total Split (s)	16.0	62.0	46.0	46.0	15.0	23.0
Total Split (%)	16.0%	62.0%	46.0%	46.0%	15.0%	23.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	Max
Act Effect Green (s)	53.0	57.5		41.5	7.2	23.8
Actuated g/C Ratio	0.53	0.58		0.42	0.07	0.24
v/c Ratio	0.73	0.25		0.90	0.50	0.62
Control Delay (s/veh)	38.4	6.9		25.3	22.1	32.8
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	38.4	6.9		25.3	22.1	32.8
LOS	D	A		C	C	C
Approach Delay (s/veh)		15.9		25.3	22.1	32.8
Approach LOS		B		C	C	C

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 68 (68%), Referenced to phase 2:EBWB and 6:EBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay (s/veh): 23.2

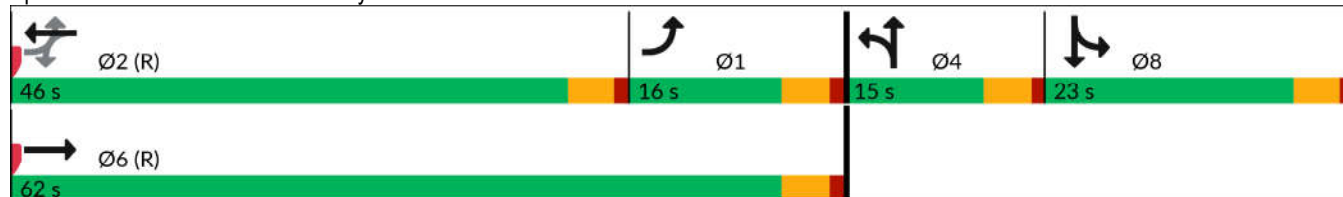
Intersection LOS: C

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd



Queues

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) AM Peak Hour with Signals

					
Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	203	505	1236	94	278
v/c Ratio	0.73	0.25	0.90	0.50	0.62
Control Delay (s/veh)	38.4	6.9	25.3	22.1	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.4	6.9	25.3	22.1	32.8
Queue Length 50th (ft)	68	41	316	7	115
Queue Length 95th (ft)	123	52	240	40	174
Internal Link Dist (ft)		523	603	280	279
Turn Bay Length (ft)	250				
Base Capacity (vph)	279	2028	1377	238	448
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	0.73	0.25	0.90	0.39	0.62
Intersection Summary					

Timings

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) PM Peak Hour with Signals

						
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Configurations						
Traffic Volume (vph)	44	557	45	523	0	0
Future Volume (vph)	44	557	45	523	0	0
Turn Type	D.P+P	NA	Perm	NA	NA	NA
Protected Phases	1	6		2	4	8
Permitted Phases	2		2			
Detector Phase	1	6	2	2	4	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	9.5	22.5	9.5
Total Split (s)	10.0	66.0	56.0	56.0	18.0	26.0
Total Split (%)	9.1%	60.0%	50.9%	50.9%	16.4%	23.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	Max
Act Effect Green (s)	57.9	61.5		53.5	6.3	30.7
Actuated g/C Ratio	0.53	0.56		0.49	0.06	0.28
v/c Ratio	0.13	0.31		0.47	0.45	0.36
Control Delay (s/veh)	12.0	13.4		20.2	13.9	17.9
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	12.0	13.4		20.2	13.9	17.9
LOS	B	B		C	B	B
Approach Delay (s/veh)		13.3		20.2	13.9	17.9
Approach LOS		B		C	B	B

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay (s/veh): 16.8

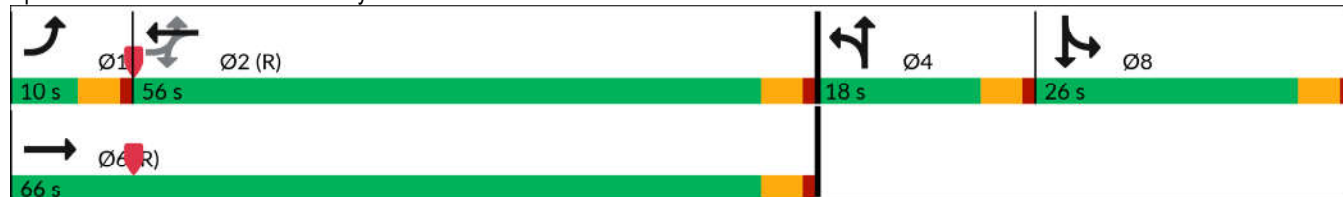
Intersection LOS: B

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd



Queues

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) PM Peak Hour with Signals

					
Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	48	606	683	84	192
v/c Ratio	0.13	0.31	0.47	0.45	0.36
Control Delay (s/veh)	12.0	13.4	20.2	13.9	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.0	13.4	20.2	13.9	17.9
Queue Length 50th (ft)	15	113	165	0	48
Queue Length 95th (ft)	32	148	218	33	117
Internal Link Dist (ft)		523	603	280	279
Turn Bay Length (ft)	250				
Base Capacity (vph)	363	1978	1463	283	529
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	0.13	0.31	0.47	0.30	0.36
Intersection Summary					

Timings

5: Parkview Dr & Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation

	→	↖	←	↙	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↖	↑↑	↖	↖
Traffic Volume (vph)	411	216	374	166	164
Future Volume (vph)	411	216	374	166	164
Turn Type	NA	Split	NA	Prot	Perm
Protected Phases	2	6	6	4	
Permitted Phases					4
Detector Phase	2	6	6	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0
Total Split (s)	22.0	15.0	15.0	13.0	13.0
Total Split (%)	44.0%	30.0%	30.0%	26.0%	26.0%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effect Green (s)	20.0	13.0	13.0	11.0	11.0
Actuated g/C Ratio	0.40	0.26	0.26	0.22	0.22
v/c Ratio	0.47	0.53	0.46	0.48	0.38
Control Delay (s/veh)	6.7	11.6	8.5	21.9	6.0
Queue Delay	0.2	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.8	11.6	8.5	21.9	6.0
LOS	A	B	A	C	A
Approach Delay (s/veh)	6.8		9.6	14.0	
Approach LOS	A		A	B	

Intersection Summary

Cycle Length: 50

Actuated Cycle Length: 50

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.53

Intersection Signal Delay (s/veh): 9.5

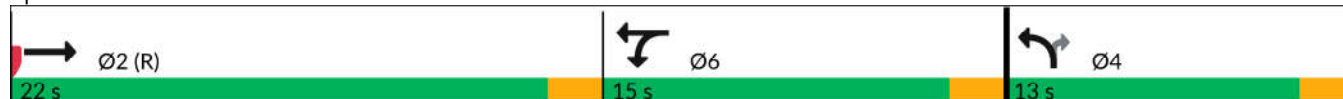
Intersection LOS: A

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Parkview Dr & Bobcat Blvd



Queues

5: Parkview Dr & Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation

	→	↖	←	↙	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	678	243	420	187	184
v/c Ratio	0.47	0.53	0.46	0.48	0.38
Control Delay (s/veh)	6.7	11.6	8.5	21.9	6.0
Queue Delay	0.2	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.8	11.6	8.5	21.9	6.0
Queue Length 50th (ft)	51	41	33	48	0
Queue Length 95th (ft)	71	m66	m48	95	38
Internal Link Dist (ft)	180		523	340	
Turn Bay Length (ft)		125			
Base Capacity (vph)	1448	460	920	389	486
Starvation Cap Reductn	186	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.53	0.46	0.48	0.38

Intersection Summary

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

Timings

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	Ø12
Lane Configurations								
Traffic Volume (vph)	158	386	37	460	467	3	1	
Future Volume (vph)	158	386	37	460	467	3	1	
Turn Type	Prot	NA	Perm	NA	Perm	NA	NA	
Protected Phases	7	4		8		2	6	12
Permitted Phases			8		8			
Detector Phase	7	4	8	8	8	2	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)	9.5	7.0	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	22.0	52.0	30.0	30.0	30.0	9.0	19.0	20.0
Total Split (%)	22.0%	52.0%	30.0%	30.0%	30.0%	9.0%	19.0%	20%
Yellow Time (s)	3.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	2.0		2.0	2.0	2.0	2.0	
Lead/Lag	Lead		Lag	Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes	Yes			
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	17.5	50.0		28.0	28.0	7.0	17.0	
Actuated g/C Ratio	0.18	0.50		0.28	0.28	0.07	0.17	
v/c Ratio	0.66	0.29		0.73	0.71	0.52	0.82	
Control Delay (s/veh)	49.3	11.4		32.0	7.9	24.0	49.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay (s/veh)	49.3	11.4		32.0	7.9	24.0	49.1	
LOS	D	B		C	A	C	D	
Approach Delay (s/veh)		22.3		20.3		24.0	49.1	
Approach LOS		C		C		C	D	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.82

Intersection Signal Delay (s/veh): 24.5

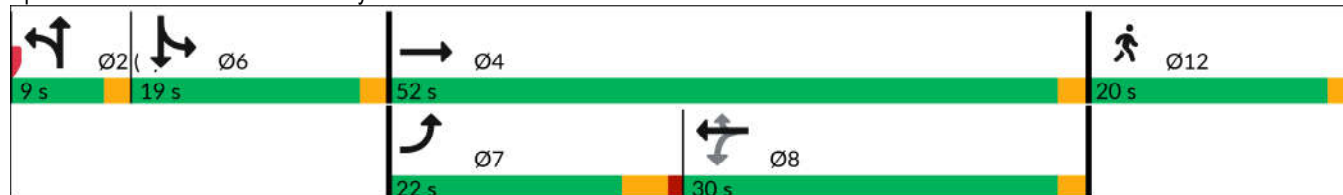
Intersection LOS: C

Intersection Capacity Utilization 58.3%

ICU Level of Service B

Analysis Period (min) 15

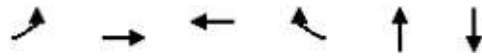
Splits and Phases: 6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd



Queues

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation



Lane Group	EBL	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	203	505	637	599	94	278
v/c Ratio	0.66	0.29	0.73	0.71	0.52	0.82
Control Delay (s/veh)	49.3	11.4	32.0	7.9	24.0	49.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	11.4	32.0	7.9	24.0	49.1
Queue Length 50th (ft)	131	93	181	30	7	126
Queue Length 95th (ft)	181	107	194	49	42	#184
Internal Link Dist (ft)		523	603		280	279
Turn Bay Length (ft)	250			150		
Base Capacity (vph)	309	1764	875	844	181	340
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	0.66	0.29	0.73	0.71	0.52	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Timings

7: Trophy Club Dr & Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	55	373	535	117	245
Future Volume (vph)	55	373	535	117	245
Turn Type	Prot	pm+ov	D.P+P	NA	NA
Protected Phases	6	7	7	4	8
Permitted Phases		6	8		
Detector Phase	6	7	7	4	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	9.5	22.5	22.5
Total Split (s)	29.0	46.0	46.0	71.0	25.0
Total Split (%)	29.0%	46.0%	46.0%	71.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lag		Lead
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	C-Min	None	None	Max	Max
Act Effect Green (s)	9.3	50.8	77.2	81.7	35.7
Actuated g/C Ratio	0.09	0.51	0.77	0.82	0.36
v/c Ratio	0.43	0.54	0.74	0.05	0.52
Control Delay (s/veh)	38.5	4.3	20.7	2.1	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.5	4.3	20.7	2.1	16.3
LOS	D	A	C	A	B
Approach Delay (s/veh)	8.7			17.4	16.3
Approach LOS	A			B	B

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 79 (79%), Referenced to phase 6:EBL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay (s/veh): 14.8

Intersection LOS: B

Intersection Capacity Utilization 72.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Trophy Club Dr & Bobcat Blvd



Queues

7: Trophy Club Dr & Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	69	466	669	146	686
v/c Ratio	0.43	0.54	0.74	0.05	0.52
Control Delay (s/veh)	38.5	4.3	20.7	2.1	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.5	4.3	20.7	2.1	16.3
Queue Length 50th (ft)	38	29	197	6	102
Queue Length 95th (ft)	m63	28	276	13	132
Internal Link Dist (ft)	603			321	332
Turn Bay Length (ft)			125		
Base Capacity (vph)	425	871	908	2862	1324
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	0.16	0.54	0.74	0.05	0.52
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Timings 18: Bobcat Blvd

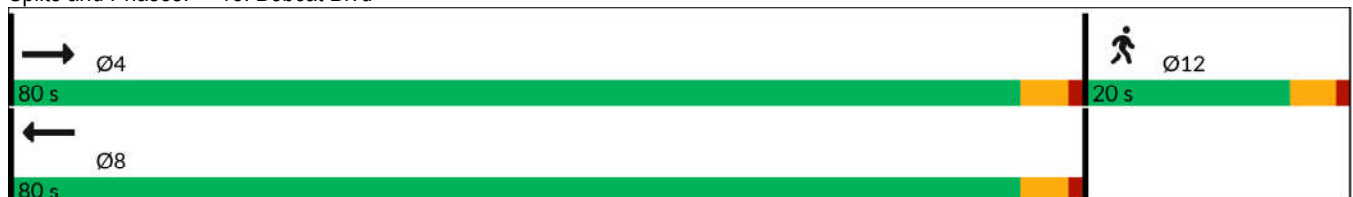
Existing (2024) AM Peak Hour with Mitigation

→

←

Lane Group	EBT	WBT	Ø12
Lane Configurations	↑↑	↑↑	
Traffic Volume (vph)	628	540	
Future Volume (vph)	628	540	
Turn Type	NA	NA	
Protected Phases	4	8	12
Permitted Phases			
Detector Phase	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	80.0	80.0	20.0
Total Split (%)	80.0%	80.0%	20%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	4.5	4.5	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	Max	Max	Max
Act Effct Green (s)	75.5	75.5	
Actuated g/C Ratio	0.76	0.76	
v/c Ratio	0.26	0.22	
Control Delay (s/veh)	4.0	13.6	
Queue Delay	0.0	0.5	
Total Delay (s/veh)	4.0	14.2	
LOS	A	B	
Approach Delay (s/veh)	4.0	14.2	
Approach LOS	A	B	
Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.26			
Intersection Signal Delay (s/veh): 8.7		Intersection LOS: A	
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: Bobcat Blvd



Queues

18: Bobcat Blvd

Existing (2024) AM Peak Hour with Mitigation

	→	←
Lane Group	EBT	WBT
Lane Group Flow (vph)	683	587
v/c Ratio	0.26	0.22
Control Delay (s/veh)	4.0	13.6
Queue Delay	0.0	0.5
Total Delay (s/veh)	4.0	14.2
Queue Length 50th (ft)	57	146
Queue Length 95th (ft)	75	171
Internal Link Dist (ft)	143	180
Turn Bay Length (ft)		
Base Capacity (vph)	2671	2671
Starvation Cap Reductn	0	1597
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.26	0.55
Intersection Summary		

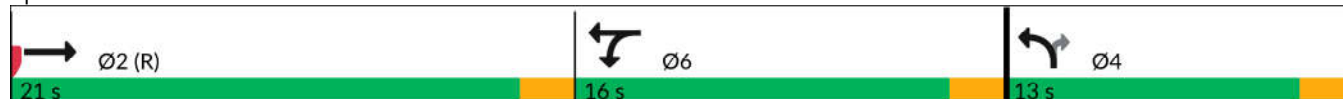
Timings

5: Parkview Dr & Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation

	→	↖	←	↙	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↘	↖	↑↑	↙	↗
Traffic Volume (vph)	471	114	462	128	111
Future Volume (vph)	471	114	462	128	111
Turn Type	NA	Split	NA	Prot	Perm
Protected Phases	2	6	6	4	
Permitted Phases					4
Detector Phase	2	6	6	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	7.0	7.0	7.0	7.0
Total Split (s)	21.0	16.0	16.0	13.0	13.0
Total Split (%)	42.0%	32.0%	32.0%	26.0%	26.0%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	19.0	14.0	14.0	11.0	11.0
Actuated g/C Ratio	0.38	0.28	0.28	0.22	0.22
v/c Ratio	0.50	0.25	0.50	0.35	0.29
Control Delay (s/veh)	8.8	7.6	9.8	19.6	6.4
Queue Delay	0.2	0.0	0.0	0.2	0.0
Total Delay (s/veh)	9.0	7.6	9.8	19.8	6.4
LOS	A	A	A	B	A
Approach Delay (s/veh)	9.0		9.3	13.6	
Approach LOS	A		A	B	
Intersection Summary					
Cycle Length: 50					
Actuated Cycle Length: 50					
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green					
Natural Cycle: 40					
Control Type: Pretimed					
Maximum v/c Ratio: 0.50					
Intersection Signal Delay (s/veh): 9.9			Intersection LOS: A		
Intersection Capacity Utilization 42.2%			ICU Level of Service A		
Analysis Period (min) 15					

Splits and Phases: 5: Parkview Dr & Bobcat Blvd



Queues

5: Parkview Dr & Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation

	→	↖	←	↙	↗
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	671	123	497	138	119
v/c Ratio	0.50	0.25	0.50	0.35	0.29
Control Delay (s/veh)	8.8	7.6	9.8	19.6	6.4
Queue Delay	0.2	0.0	0.0	0.2	0.0
Total Delay (s/veh)	9.0	7.6	9.8	19.8	6.4
Queue Length 50th (ft)	63	12	45	34	0
Queue Length 95th (ft)	86	m22	67	74	31
Internal Link Dist (ft)	176		523	340	
Turn Bay Length (ft)		125			
Base Capacity (vph)	1333	495	990	389	416
Starvation Cap Reductn	142	0	0	0	0
Spillback Cap Reductn	0	0	0	32	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.25	0.50	0.39	0.29
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Timings

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation

								
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	Ø12
Lane Configurations								
Traffic Volume (vph)	44	557	45	523	61	0	0	
Future Volume (vph)	44	557	45	523	61	0	0	
Turn Type	Prot	NA	Perm	NA	Perm	NA	NA	
Protected Phases	7	4		8		2	6	12
Permitted Phases			8		8			
Detector Phase	7	4	8	8	8	2	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)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	20.0
Total Split (s)	14.0	44.0	30.0	30.0	30.0	15.0	21.0	20.0
Total Split (%)	14.0%	44.0%	30.0%	30.0%	30.0%	15.0%	21.0%	20%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	
Lead/Lag	Lead		Lag	Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes	Yes			
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	12.0	42.0		28.0	28.0	13.0	19.0	
Actuated g/C Ratio	0.12	0.42		0.28	0.28	0.13	0.19	
v/c Ratio	0.23	0.41		0.72	0.14	0.31	0.54	
Control Delay (s/veh)	45.0	15.6		34.0	5.8	13.6	32.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay (s/veh)	45.0	15.6		34.0	5.8	13.6	32.3	
LOS	D	B		C	A	B	C	
Approach Delay (s/veh)		17.8		31.3		13.6	32.3	
Approach LOS		B		C		B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.72

Intersection Signal Delay (s/veh): 25.0

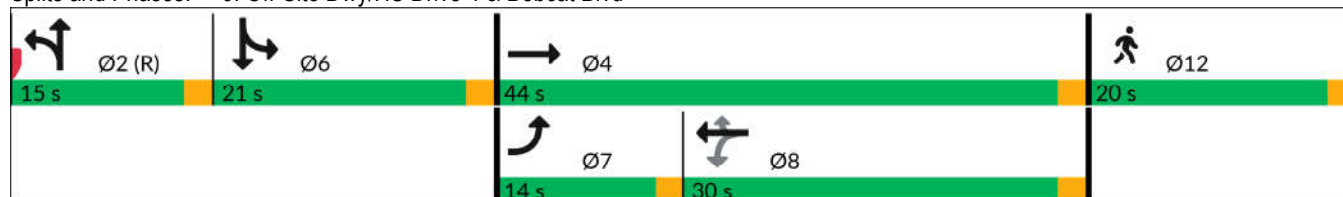
Intersection LOS: C

Intersection Capacity Utilization 59.8%

ICU Level of Service B

Analysis Period (min) 15

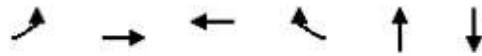
Splits and Phases: 6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd



Queues

6: Off-Site Dwy/HS Drive 4 & Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation



Lane Group	EBL	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	48	606	617	66	84	192
v/c Ratio	0.23	0.41	0.72	0.14	0.31	0.54
Control Delay (s/veh)	45.0	15.6	34.0	5.8	13.6	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.0	15.6	34.0	5.8	13.6	32.3
Queue Length 50th (ft)	32	126	186	1	3	78
Queue Length 95th (ft)	m66	157	213	23	46	151
Internal Link Dist (ft)		523	603		280	279
Turn Bay Length (ft)	250			150		
Base Capacity (vph)	212	1486	857	470	272	353
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.41	0.72	0.14	0.31	0.54

Intersection Summary

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

Timings

7: Trophy Club Dr & Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	69	495	466	209	234
Future Volume (vph)	69	495	466	209	234
Turn Type	Prot	pm+ov	D.P+P	NA	NA
Protected Phases	6	7	7	4	8
Permitted Phases		6	8		
Detector Phase	6	7	7	4	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	9.5	22.5	22.5
Total Split (s)	27.0	43.0	43.0	73.0	30.0
Total Split (%)	27.0%	43.0%	43.0%	73.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	C-Min	None	None	Max	Max
Act Effect Green (s)	9.7	27.4	76.8	81.3	59.1
Actuated g/C Ratio	0.10	0.27	0.77	0.81	0.59
v/c Ratio	0.45	0.87	0.58	0.08	0.19
Control Delay (s/veh)	49.0	43.2	5.8	2.2	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.0	43.2	5.8	2.2	9.2
LOS	D	D	A	A	A
Approach Delay (s/veh)	43.9			4.7	9.2
Approach LOS	D			A	A

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 6:EBL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay (s/veh): 19.7

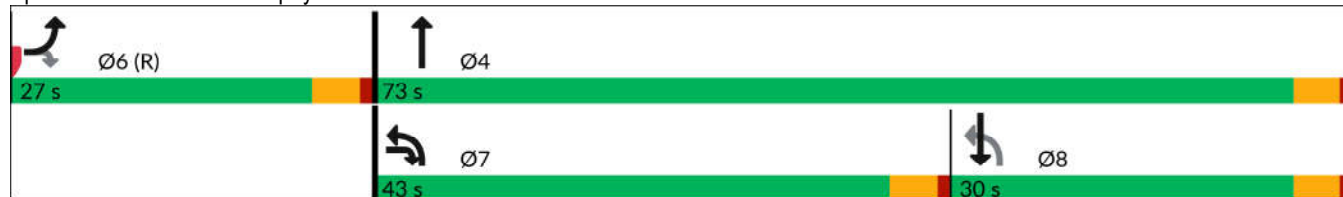
Intersection LOS: B

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Trophy Club Dr & Bobcat Blvd



Queues

7: Trophy Club Dr & Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation

					
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	76	544	512	230	379
v/c Ratio	0.45	0.87	0.58	0.08	0.19
Control Delay (s/veh)	49.0	43.2	5.8	2.2	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.0	43.2	5.8	2.2	9.2
Queue Length 50th (ft)	52	243	64	11	42
Queue Length 95th (ft)	m100	311	121	23	88
Internal Link Dist (ft)	603			321	332
Turn Bay Length (ft)			125		
Base Capacity (vph)	390	900	1094	2875	1992
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	0.19	0.60	0.47	0.08	0.19
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Timings

18: Bobcat Blvd

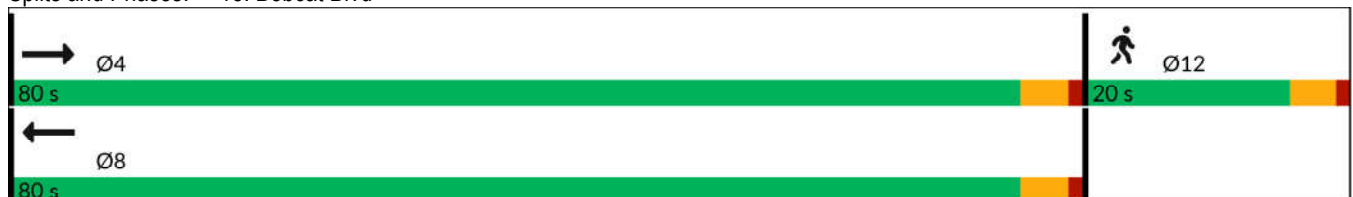
Existing (2024) PM Peak Hour with Mitigation

→

←

Lane Group	EBT	WBT	Ø12
Lane Configurations	↑↑	↑↑	
Traffic Volume (vph)	620	590	
Future Volume (vph)	620	590	
Turn Type	NA	NA	
Protected Phases	4	8	12
Permitted Phases			
Detector Phase	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	80.0	80.0	20.0
Total Split (%)	80.0%	80.0%	20%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	4.5	4.5	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	Max	Max	Max
Act Effct Green (s)	75.5	75.5	
Actuated g/C Ratio	0.76	0.76	
v/c Ratio	0.25	0.24	
Control Delay (s/veh)	4.0	16.5	
Queue Delay	0.0	0.6	
Total Delay (s/veh)	4.0	17.1	
LOS	A	B	
Approach Delay (s/veh)	4.0	17.1	
Approach LOS	A	B	
Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.25			
Intersection Signal Delay (s/veh): 10.4		Intersection LOS: B	
Intersection Capacity Utilization 20.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: Bobcat Blvd



Queues

18: Bobcat Blvd

Existing (2024) PM Peak Hour with Mitigation

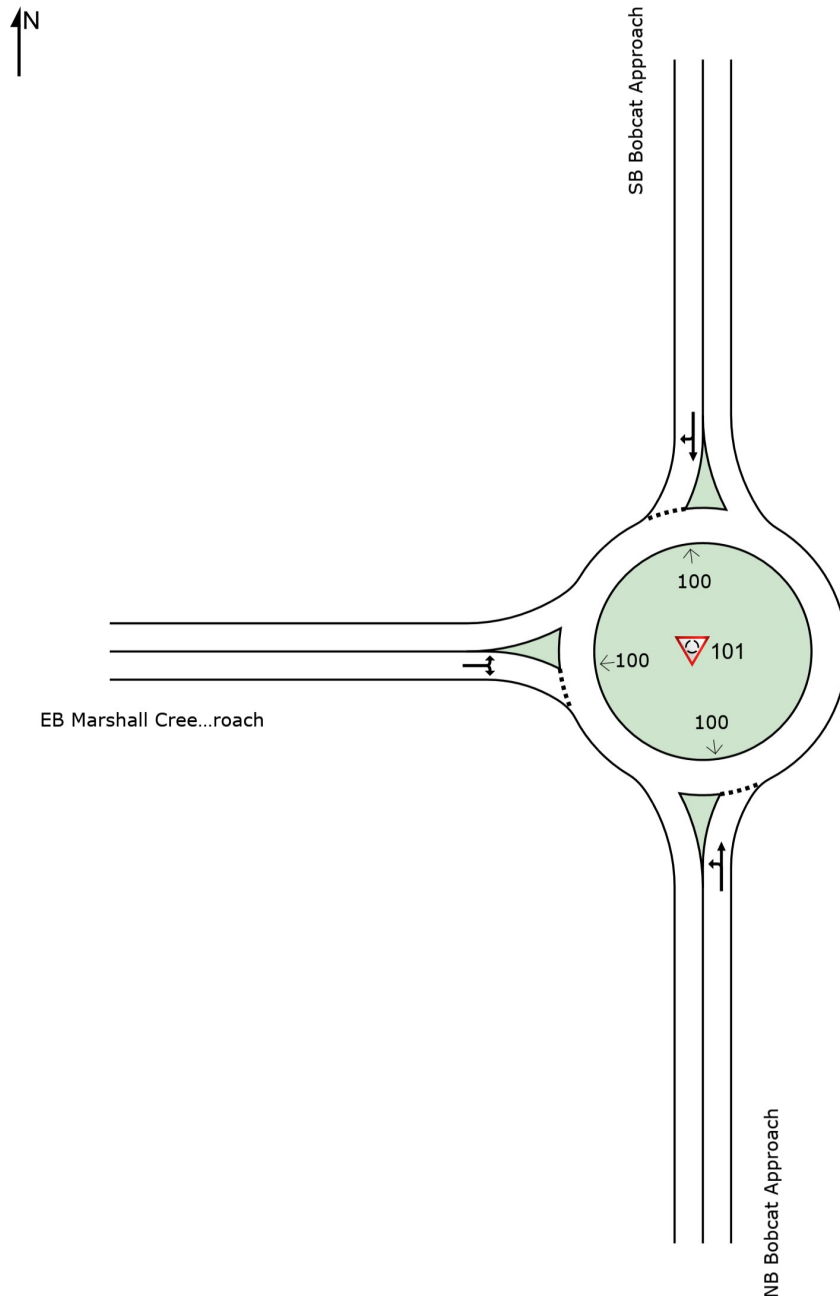
	→	←
Lane Group	EBT	WBT
Lane Group Flow (vph)	674	641
v/c Ratio	0.25	0.24
Control Delay (s/veh)	4.0	16.5
Queue Delay	0.0	0.6
Total Delay (s/veh)	4.0	17.1
Queue Length 50th (ft)	56	182
Queue Length 95th (ft)	74	185
Internal Link Dist (ft)	144	176
Turn Bay Length (ft)		
Base Capacity (vph)	2671	2671
Starvation Cap Reductn	0	1547
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.25	0.57
Intersection Summary		

SITE LAYOUT

 **Site: 101 [4. 2024 AM - Marshall Creek at Bobcat (Site Folder: General)]**

Marshall Creek Rd at Bobcat Blvd
Single-lane Roundabout
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

 **Site: 101 [4. 2024 AM - Marshall Creek at Bobcat (Site Folder: General)]**

Marshall Creek Rd at Bobcat Blvd
Single-lane Roundabout
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: NB Bobcat Approach														
3	L2	158	3.0	193	3.0	0.616	12.2	LOS B	6.7	171.3	0.69	0.69	0.94	31.0
8	T1	352	3.0	429	3.0	0.616	12.2	LOS B	6.7	171.3	0.69	0.69	0.94	31.0
Approach		510	3.0	622	3.0	0.616	12.2	LOS B	6.7	171.3	0.69	0.69	0.94	31.0
North: SB Bobcat Approach														
4	T1	307	3.0	374	3.0	0.428	7.9	LOS A	2.6	65.6	0.48	0.34	0.48	33.7
14	R2	77	3.0	94	3.0	0.428	7.9	LOS A	2.6	65.6	0.48	0.34	0.48	32.8
Approach		384	3.0	468	3.0	0.428	7.9	LOS A	2.6	65.6	0.48	0.34	0.48	33.5
West: EB Marshall Creek Approach														
5	L2	219	3.0	267	3.0	0.728	17.5	LOS C	11.0	281.0	0.85	1.12	1.60	28.6
12	R2	321	3.0	391	3.0	0.728	17.5	LOS C	11.0	281.0	0.85	1.12	1.60	27.9
Approach		540	3.0	659	3.0	0.728	17.5	LOS C	11.0	281.0	0.85	1.12	1.60	28.2
All Vehicles		1434	3.0	1749	3.0	0.728	13.0	LOS B	11.0	281.0	0.69	0.76	1.07	30.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: H:\T2124.01 - School Area Eval-Traffic Flow_Control Devices\SIDRA\Bobcat Blvd roundabout test.sip9

MOVEMENT SUMMARY

 **Site: 101 [4. 2024 PM - Marshall Creek at Bobcat (Site Folder: General)]**

Marshall Creek Rd at Bobcat Blvd
Single-lane Roundabout
Existing (2024) PM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: NB Bobcat Approach														
3	L2	285	3.0	313	3.0	0.567	9.4	LOS A	4.7	120.2	0.33	0.15	0.33	31.9
8	T1	362	3.0	398	3.0	0.567	9.4	LOS A	4.7	120.2	0.33	0.15	0.33	31.9
Approach		647	3.0	711	3.0	0.567	9.4	LOS A	4.7	120.2	0.33	0.15	0.33	31.9
North: SB Bobcat Approach														
4	T1	345	3.0	379	3.0	0.511	10.1	LOS B	3.7	94.5	0.64	0.59	0.74	32.6
14	R2	103	3.0	113	3.0	0.511	10.1	LOS B	3.7	94.5	0.64	0.59	0.74	31.7
Approach		448	3.0	492	3.0	0.511	10.1	LOS B	3.7	94.5	0.64	0.59	0.74	32.4
West: EB Marshall Creek Approach														
5	L2	52	3.0	57	3.0	0.400	8.6	LOS A	2.1	53.1	0.61	0.54	0.61	32.9
12	R2	275	3.0	302	3.0	0.400	8.6	LOS A	2.1	53.1	0.61	0.54	0.61	31.9
Approach		327	3.0	359	3.0	0.400	8.6	LOS A	2.1	53.1	0.61	0.54	0.61	32.0
All Vehicles		1422	3.0	1563	3.0	0.567	9.5	LOS A	4.7	120.2	0.49	0.38	0.52	32.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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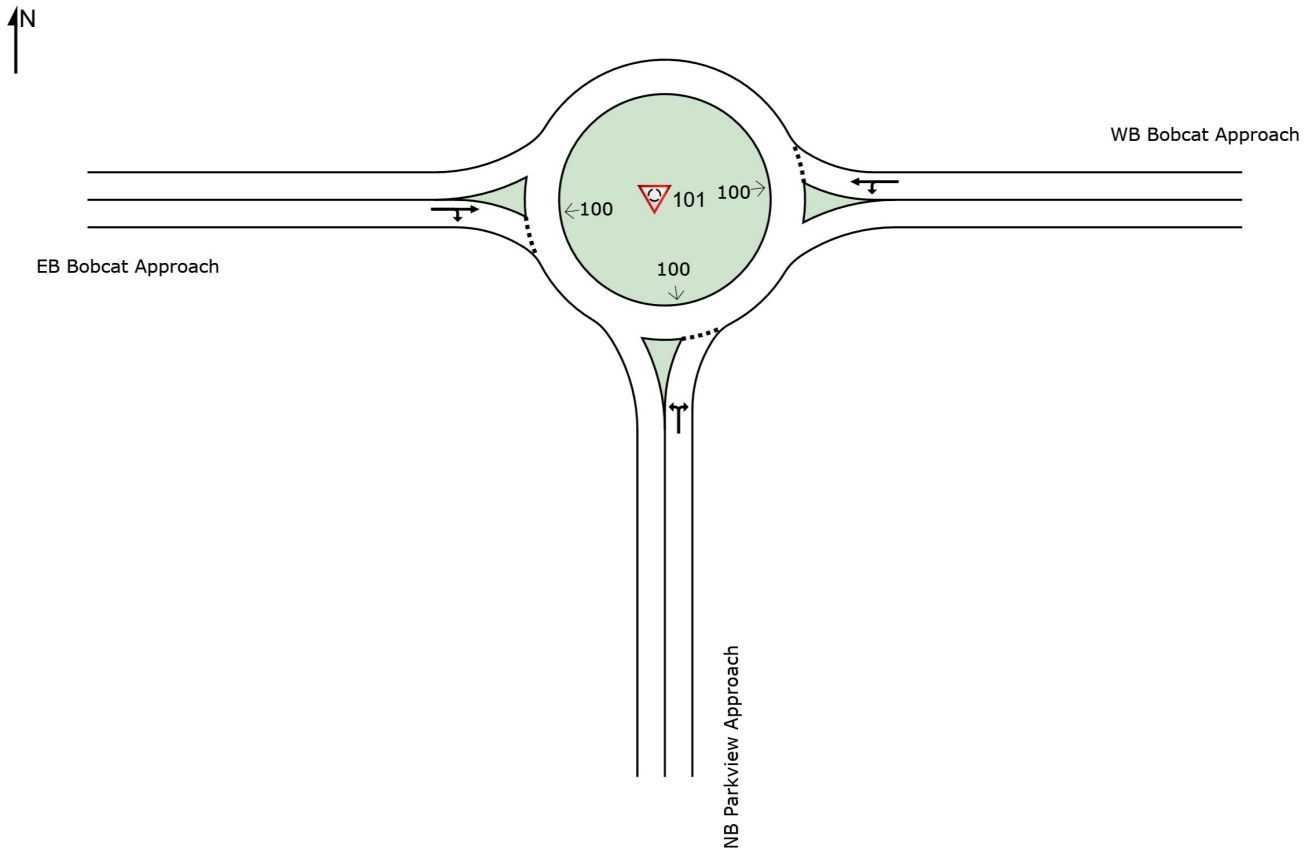
Project: H:\T2124.01 - School Area Eval-Traffic Flow_Control Devices\SIDRA\Bobcat Blvd roundabout test.sip9

SITE LAYOUT

 **Site: 101 [5. 2024 AM - Parkview at Bobcat (Site Folder: General)]**

Parkview Dr at Bobcat Blvd
Single-lane Roundabout
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

 **Site: 101 [5. 2024 AM - Parkview at Bobcat (Site Folder: General)]**

Parkview Dr at Bobcat Blvd
Single-lane Roundabout
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: NB Parkview Approach														
3	L2	166	3.0	189	3.0	0.457	10.3	LOS B	2.9	73.6	0.68	0.72	0.84	31.3
18	R2	164	3.0	186	3.0	0.457	10.3	LOS B	2.9	73.6	0.68	0.72	0.84	30.4
Approach		330	3.0	375	3.0	0.457	10.3	LOS B	2.9	73.6	0.68	0.72	0.84	30.9
East: WB Bobcat Approach														
1	L2	216	3.0	245	3.0	0.610	11.3	LOS B	4.8	122.0	0.61	0.45	0.62	31.3
6	T1	374	3.0	425	3.0	0.610	11.3	LOS B	4.8	122.0	0.61	0.45	0.62	31.2
Approach		590	3.0	670	3.0	0.610	11.3	LOS B	4.8	122.0	0.61	0.45	0.62	31.2
West: EB Bobcat Approach														
2	T1	411	3.0	467	3.0	0.664	13.4	LOS B	8.8	225.7	0.72	0.74	1.05	31.1
12	R2	192	3.0	218	3.0	0.664	13.4	LOS B	8.8	225.7	0.72	0.74	1.05	30.3
Approach		603	3.0	685	3.0	0.664	13.4	LOS B	8.8	225.7	0.72	0.74	1.05	30.9
All Vehicles		1523	3.0	1731	3.0	0.664	11.9	LOS B	8.8	225.7	0.67	0.62	0.84	31.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [5. 2024 PM - Parkview at Bobcat (Site Folder: General)]**

Parkview Dr at Bobcat Blvd
Single-lane Roundabout
Existing (2024) PM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: NB Parkview Approach														
3	L2	128	3.0	138	3.0	0.329	8.5	LOS A	1.5	38.6	0.63	0.61	0.63	32.0
18	R2	111	3.0	119	3.0	0.329	8.5	LOS A	1.5	38.6	0.63	0.61	0.63	31.1
Approach		239	3.0	257	3.0	0.329	8.5	LOS A	1.5	38.6	0.63	0.61	0.63	31.6
East: WB Bobcat Approach														
1	L2	114	3.0	123	3.0	0.534	9.3	LOS A	3.9	99.0	0.48	0.31	0.48	32.6
6	T1	462	3.0	497	3.0	0.534	9.3	LOS A	3.9	99.0	0.48	0.31	0.48	32.5
Approach		576	3.0	619	3.0	0.534	9.3	LOS A	3.9	99.0	0.48	0.31	0.48	32.6
West: EB Bobcat Approach														
2	T1	471	3.0	506	3.0	0.573	10.0	LOS A	4.4	113.5	0.49	0.30	0.49	32.7
12	R2	153	3.0	165	3.0	0.573	10.0	LOS A	4.4	113.5	0.49	0.30	0.49	31.8
Approach		624	3.0	671	3.0	0.573	10.0	LOS A	4.4	113.5	0.49	0.30	0.49	32.5
All Vehicles		1439	3.0	1547	3.0	0.573	9.4	LOS A	4.4	113.5	0.51	0.35	0.51	32.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

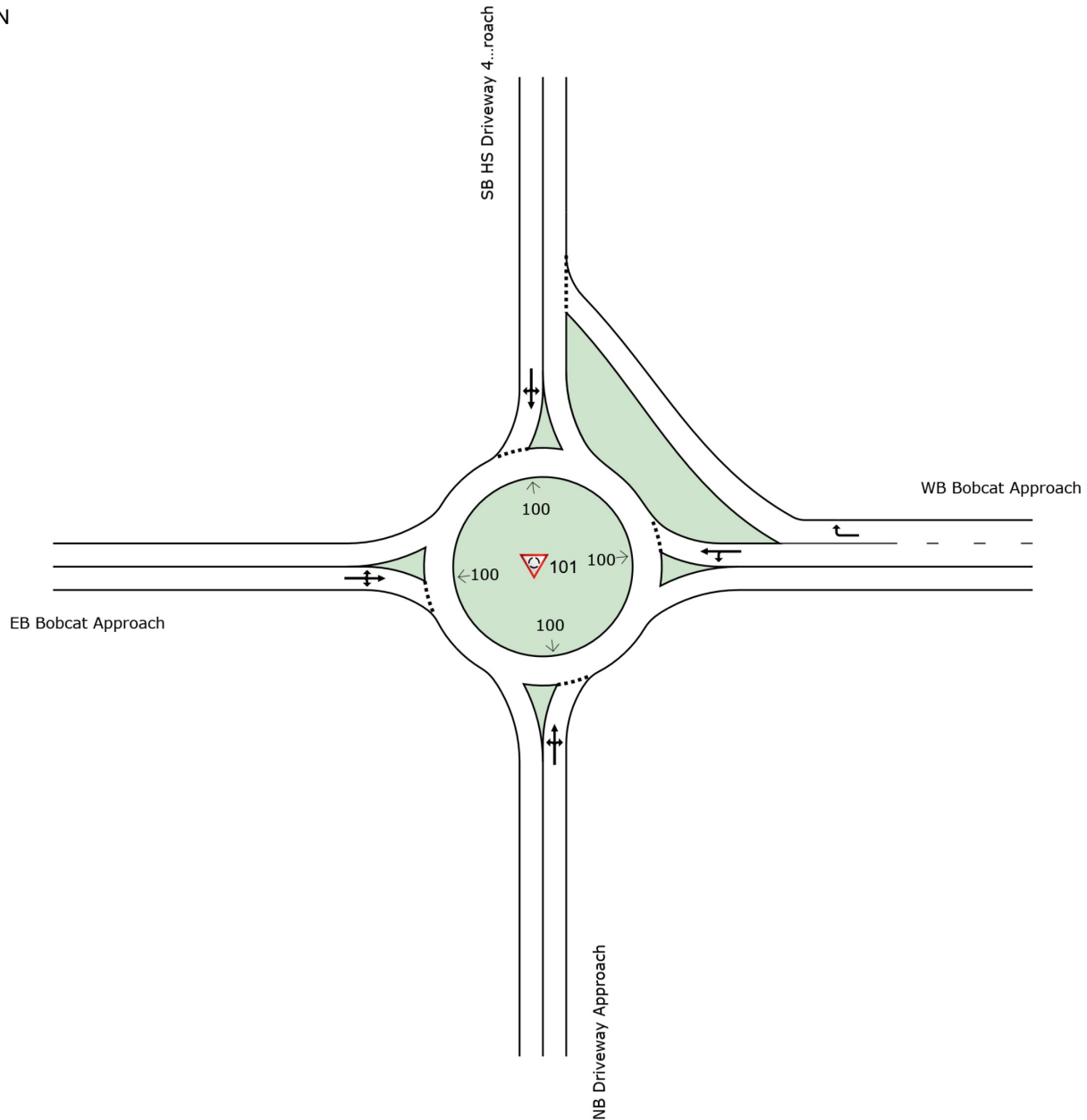
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SITE LAYOUT

 **Site: 101 [6. 2024 AM - HS Dwy 4 at Bobcat w RT Lane (Site Folder: General)]**

High School Driveway 4 at Bobcat Blvd
Single-lane Roundabout with WB Right Turn Lane
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

 **Site: 101 [6. 2024 AM - HS Dwy 4 at Bobcat w RT Lane (Site Folder: General)]**

High School Driveway 4 at Bobcat Blvd
Single-lane Roundabout with WB Right Turn Lane
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: NB Driveway Approach														
3	L2	6	3.0	8	3.0	0.161	8.2	LOS A	0.6	15.9	0.65	0.65	0.65	33.3
8	T1	3	3.0	4	3.0	0.161	8.2	LOS A	0.6	15.9	0.65	0.65	0.65	33.2
18	R2	64	3.0	82	3.0	0.161	8.2	LOS A	0.6	15.9	0.65	0.65	0.65	32.3
Approach		73	3.0	94	3.0	0.161	8.2	LOS A	0.6	15.9	0.65	0.65	0.65	32.4
East: WB Bobcat Approach														
1	L2	37	3.0	47	3.0	0.565	10.1	LOS B	3.7	95.8	0.56	0.42	0.56	32.5
6	T1	460	3.0	590	3.0	0.565	10.1	LOS B	3.7	95.8	0.56	0.42	0.56	32.5
16	R2	467	3.0	599	3.0	0.527	9.3	LOS A	3.3	85.3	0.52	0.38	0.52	32.0
Approach		964	3.0	1236	3.0	0.565	9.7	LOS A	3.7	95.8	0.54	0.40	0.54	32.3
North: SB HS Driveway 4 Approach														
7	L2	77	3.0	99	3.0	0.409	10.9	LOS B	2.2	55.9	0.70	0.76	0.88	31.3
4	T1	1	3.0	1	3.0	0.409	10.9	LOS B	2.2	55.9	0.70	0.76	0.88	31.3
14	R2	139	3.0	178	3.0	0.409	10.9	LOS B	2.2	55.9	0.70	0.76	0.88	30.5
Approach		217	3.0	278	3.0	0.409	10.9	LOS B	2.2	55.9	0.70	0.76	0.88	30.8
West: EB Bobcat Approach														
5	L2	158	3.0	203	3.0	0.619	11.2	LOS B	5.0	129.1	0.57	0.38	0.57	31.5
2	T1	386	3.0	495	3.0	0.619	11.2	LOS B	5.0	129.1	0.57	0.38	0.57	31.5
12	R2	8	3.0	10	3.0	0.619	11.2	LOS B	5.0	129.1	0.57	0.38	0.57	30.6
Approach		552	3.0	708	3.0	0.619	11.2	LOS B	5.0	129.1	0.57	0.38	0.57	31.5
All Vehicles		1806	3.0	2315	3.0	0.619	10.2	LOS B	5.0	129.1	0.57	0.45	0.59	31.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [6. 2024 PM - HS Dwy 4 at Bobcat w RT Lane (Site Folder: General)]**

High School Driveway 4 at Bobcat Blvd
Single-lane Roundabout with WB Right Turn Lane
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: NB Driveway Approach														
3	L2	5	3.0	5	3.0	0.144	7.8	LOS A	0.6	14.1	0.64	0.64	0.64	33.6
8	T1	1	3.0	1	3.0	0.144	7.8	LOS A	0.6	14.1	0.64	0.64	0.64	33.5
18	R2	73	3.0	79	3.0	0.144	7.8	LOS A	0.6	14.1	0.64	0.64	0.64	32.5
Approach		79	3.0	86	3.0	0.144	7.8	LOS A	0.6	14.1	0.64	0.64	0.64	32.6
East: WB Bobcat Approach														
1	L2	45	3.0	49	3.0	0.471	7.5	LOS A	3.1	79.4	0.25	0.11	0.25	33.8
6	T1	523	3.0	568	3.0	0.471	7.5	LOS A	3.1	79.4	0.25	0.11	0.25	33.7
16	R2	61	3.0	66	3.0	0.050	3.1	LOS A	0.2	5.0	0.14	0.05	0.14	35.1
Approach		629	3.0	684	3.0	0.471	7.1	LOS A	3.1	79.4	0.24	0.10	0.24	33.8
North: SB HS Driveway 4 Approach														
7	L2	106	3.0	115	3.0	0.278	8.5	LOS A	1.2	30.5	0.64	0.64	0.64	31.9
4	T1	1	3.0	1	3.0	0.278	8.5	LOS A	1.2	30.5	0.64	0.64	0.64	31.8
14	R2	71	3.0	77	3.0	0.278	8.5	LOS A	1.2	30.5	0.64	0.64	0.64	31.0
Approach		178	3.0	193	3.0	0.278	8.5	LOS A	1.2	30.5	0.64	0.64	0.64	31.5
West: EB Bobcat Approach														
5	L2	44	3.0	48	3.0	0.583	10.5	LOS B	4.4	112.4	0.56	0.39	0.56	32.3
2	T1	557	3.0	605	3.0	0.583	10.5	LOS B	4.4	112.4	0.56	0.39	0.56	32.3
12	R2	1	3.0	1	3.0	0.583	10.5	LOS B	4.4	112.4	0.56	0.39	0.56	31.4
Approach		602	3.0	654	3.0	0.583	10.5	LOS B	4.4	112.4	0.56	0.39	0.56	32.3
All Vehicles		1488	3.0	1617	3.0	0.583	8.7	LOS A	4.4	112.4	0.44	0.31	0.44	32.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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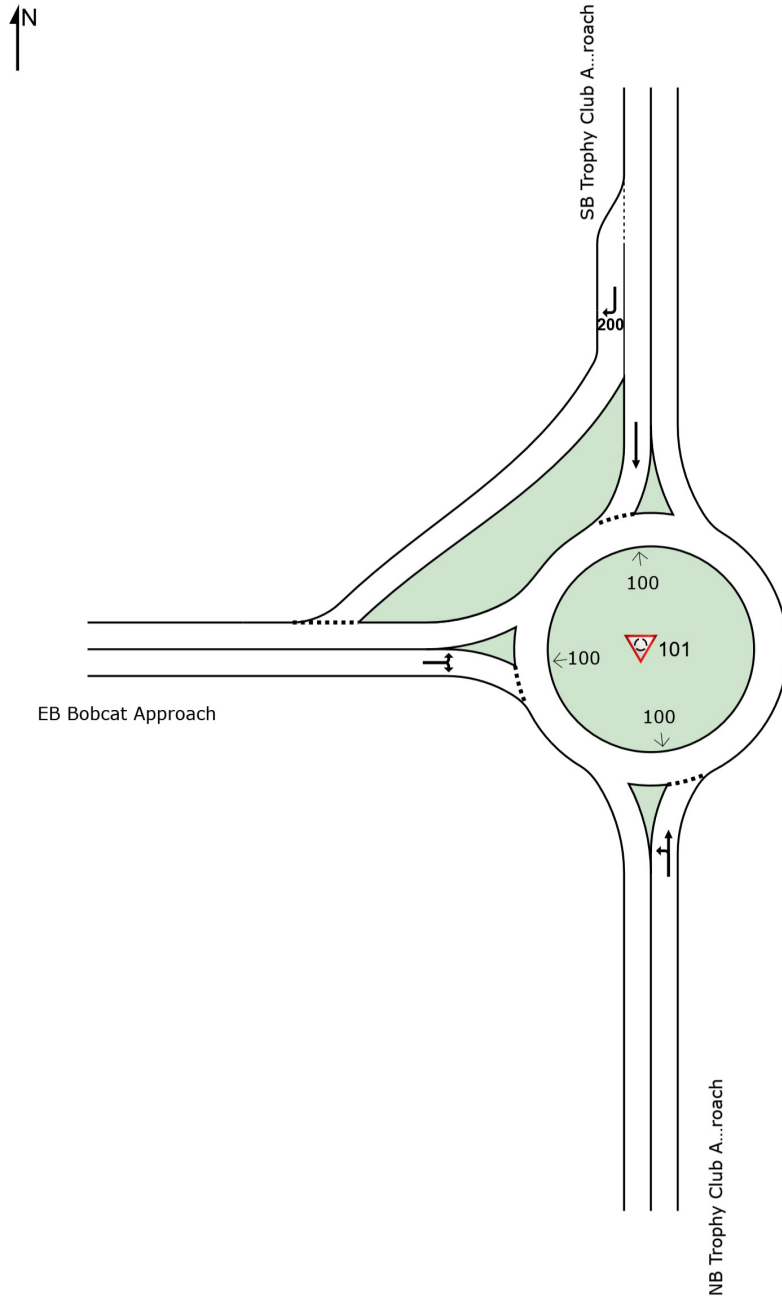
Project: H:\T2124.01 - School Area Eval-Traffic Flow_Control Devices\SIDRA\Bobcat Blvd roundabout test.sip9

SITE LAYOUT

 **Site: 101 [7. 2024 AM - Trophy Club at Bobcat (Site Folder: General)]**

Marshall Creek Rd at Bobcat Blvd
Single-lane Roundabout
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

 **Site: 101 [7. 2024 AM - Trophy Club at Bobcat (Site Folder: General)]**

Marshall Creek Rd at Bobcat Blvd
Single-lane Roundabout
Existing (2024) AM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: NB Trophy Club Approach														
3	L2	535	3.0	669	3.0	0.655	11.5	LOS B	6.4	165.0	0.44	0.22	0.44	30.2
8	T1	117	3.0	146	3.0	0.655	11.5	LOS B	6.4	165.0	0.44	0.22	0.44	30.2
Approach		652	3.0	815	3.0	0.655	11.5	LOS B	6.4	165.0	0.44	0.22	0.44	30.2
North: SB Trophy Club Approach														
4	T1	245	3.0	306	3.0	0.417	10.4	LOS B	2.2	55.7	0.67	0.74	0.87	32.5
14	R2	304	3.0	380	3.0	0.517	12.6	LOS B	3.3	85.4	0.72	0.85	1.10	30.5
Approach		549	3.0	686	3.0	0.517	11.6	LOS B	3.3	85.4	0.70	0.80	1.00	31.4
West: EB Bobcat Approach														
5	L2	55	4.0	69	4.0	0.552	11.0	LOS B	4.7	120.0	0.66	0.65	0.84	31.8
12	R2	373	3.0	466	3.0	0.552	10.9	LOS B	4.7	120.0	0.66	0.65	0.84	30.9
Approach		428	3.1	535	3.1	0.552	10.9	LOS B	4.7	120.0	0.66	0.65	0.84	31.1
All Vehicles		1629	3.0	2036	3.0	0.655	11.4	LOS B	6.4	165.0	0.59	0.53	0.73	30.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [7. 2024 PM - Trophy Club at Bobcat (Site Folder: General)]**

Marshall Creek Rd at Bobcat Blvd
Single-lane Roundabout
Existing (2024) PM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: NB Trophy Club Approach														
3	L2	466	3.0	512	3.0	0.600	10.2	LOS B	5.2	133.8	0.41	0.21	0.41	31.0
8	T1	209	3.0	230	3.0	0.600	10.2	LOS B	5.2	133.8	0.41	0.21	0.41	30.9
Approach		675	3.0	742	3.0	0.600	10.2	LOS B	5.2	133.8	0.41	0.21	0.41	31.0
North: SB Trophy Club Approach														
4	T1	234	3.0	257	3.0	0.303	7.6	LOS A	1.3	33.2	0.58	0.55	0.58	33.9
14	R2	111	3.0	122	3.0	0.144	5.7	LOS A	0.6	14.1	0.52	0.46	0.52	33.8
Approach		345	3.0	379	3.0	0.303	7.0	LOS A	1.3	33.2	0.56	0.52	0.56	33.9
West: EB Bobcat Approach														
5	L2	69	4.0	76	4.0	0.607	11.9	LOS B	6.3	160.8	0.67	0.65	0.88	31.4
12	R2	495	3.0	544	3.0	0.607	11.8	LOS B	6.3	160.8	0.67	0.65	0.88	30.6
Approach		564	3.1	620	3.1	0.607	11.8	LOS B	6.3	160.8	0.67	0.65	0.88	30.7
All Vehicles		1584	3.0	1741	3.0	0.607	10.1	LOS B	6.3	160.8	0.54	0.44	0.61	31.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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TRAFFIC SIGNAL WARRANT – PRELIMINARY ANALYSIS

A description of the evaluated warrants is provided below.

Warrant 1 – Eight-Hour Vehicular Volume

Warrant 1 is based on the volumes from both approaches on the major street and the higher approach volume on the minor street. It also uses the number of lanes for moving traffic on each approach. Either Condition A or Condition B of this warrant must be met for Warrant 1 to be satisfied.

The *Texas MUTCD* allows for the use of a reduced warranting threshold (70%) for intersections where the posted or 85th-percentile speed exceeds 40 mph or if the intersection is located in a community with a population under 10,000. Since the posted speed limits (30 mph) on the major roads (Bobcat Boulevard and/or Trophy Club Road) are less than 40 mph, the reduced warranting threshold was not utilized for this analysis.

Condition A of Warrant 1 is met when, for each of any eight (8) hours of an average day, the warranting volumes exist on the major street and on the higher-volume minor street approach to the intersection during the same eight hours. The warranting threshold for an approach with two or more lanes on the major street and an approach with two or more lanes on the minor street is:

Major Street: 600 vph (total for both directions)
Minor Street: 200 vph (higher volume approach)

Condition B of Warrant 1 applies to operating conditions where the major street traffic is so heavy that it creates excessive delay or hazardous conditions for minor street traffic when entering or crossing the major street. The warrant condition is met when, for each of any eight hours of an average day, the warranting volumes exist on the major street and on the higher-volume minor street approach to an intersection. The warranting threshold for an approach with two or more lanes on the major street and an approach with two or more lanes on the minor street is:

Major Street: 900 vph (total for both directions)
Minor Street: 100 vph (higher volume approach)

A combination of Conditions A and B may be applied at locations where Conditions A and B are not satisfied. The same eight hours of the day are not required to be used for meeting both conditions. Under the combination warrant, the warranting thresholds are:

Major Street: 480 vph and 720 vph for Conditions A and B, respectively
(total for both directions)
Minor Street: 160 vph and 80 vph for Conditions A and B, respectively
(higher volume approach)

Warrant 2 – Four-Hour Volumes

Warrant 2 is satisfied when the volumes for any four (4) hours of an average day, when plotted on Figure 4C-1 (or 4C-2 when applicable) of the *Texas MUTCD*, fall above the curve for the appropriate number of lanes. Since the posted speed limits (30 mph) on the major roads (Bobcat Boulevard and/or Trophy Club Road) are less than 40 mph, the reduced warranting threshold was not utilized for this analysis and Figure 4C-1 was utilized for all four intersections.

Warrant 3 – Peak Hour Volume

Warrant 3 is intended for application when traffic conditions are such that for at least one (1) hour of the day, the minor street traffic experiences undue delays entering or crossing the major street. Warrant 3 is satisfied when either of the following conditions is met:

1. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
 - a. The delay experienced by the traffic on the minor-street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach, and
 - b. The volume on the same minor-street approach equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
 - c. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

TRAFFIC SIGNAL WARRANT – PRELIMINARY ANALYSIS

A description of the evaluated warrants is provided below.

Warrant 1 – Eight-Hour Vehicular Volume

Warrant 1 is based on the volumes from both approaches on the major street and the higher approach volume on the minor street. It also uses the number of lanes for moving traffic on each approach. Either Condition A or Condition B of this warrant must be met for Warrant 1 to be satisfied.

The *Texas MUTCD* allows for the use of a reduced warranting threshold (70%) for intersections where the posted or 85th-percentile speed exceeds 40 mph or if the intersection is located in a community with a population under 10,000. Since the posted speed limits (30 mph) on the major roads (Bobcat Boulevard and/or Trophy Club Road) are less than 40 mph, the reduced warranting threshold was not utilized for this analysis.

Condition A of Warrant 1 is met when, for each of any eight (8) hours of an average day, the warranting volumes exist on the major street and on the higher-volume minor street approach to the intersection during the same eight hours. The warranting threshold for an approach with two or more lanes on the major street and an approach with two or more lanes on the minor street is:

Major Street: 600 vph (total for both directions)
Minor Street: 200 vph (higher volume approach)

Condition B of Warrant 1 applies to operating conditions where the major street traffic is so heavy that it creates excessive delay or hazardous conditions for minor street traffic when entering or crossing the major street. The warrant condition is met when, for each of any eight hours of an average day, the warranting volumes exist on the major street and on the higher-volume minor street approach to an intersection. The warranting threshold for an approach with two or more lanes on the major street and an approach with two or more lanes on the minor street is:

Major Street: 900 vph (total for both directions)
Minor Street: 100 vph (higher volume approach)

A combination of Conditions A and B may be applied at locations where Conditions A and B are not satisfied. The same eight hours of the day are not required to be used for meeting both conditions. Under the combination warrant, the warranting thresholds are:

Major Street: 480 vph and 720 vph for Conditions A and B, respectively
(total for both directions)
Minor Street: 160 vph and 80 vph for Conditions A and B, respectively
(higher volume approach)

Warrant 2 – Four-Hour Volumes

Warrant 2 is satisfied when the volumes for any four (4) hours of an average day, when plotted on Figure 4C-1 (or 4C-2 when applicable) of the *Texas MUTCD*, fall above the curve for the appropriate number of lanes. Since the posted speed limits (30 mph) on the major roads (Bobcat Boulevard and/or Trophy Club Road) are less than 40 mph, the reduced warranting threshold was not utilized for this analysis and Figure 4C-1 was utilized for all four intersections.

Warrant 3 – Peak Hour Volume

Warrant 3 is intended for application when traffic conditions are such that for at least one (1) hour of the day, the minor street traffic experiences undue delays entering or crossing the major street. Warrant 3 is satisfied when either of the following conditions is met:

1. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
 - a. The delay experienced by the traffic on the minor-street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach, and
 - b. The volume on the same minor-street approach equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
 - c. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

2. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 (or Figure 4C-4) for the existing combination of approach lanes.

As further specified in the *Texas MUTCD*:

“This signal warrant shall be applied only in unusual cases such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.”

It is unclear if traffic characteristics at these intersections fall under the unusual cases identified above. A school does tend to attract or discharge a large number of vehicles over a short time. However, schools are not specifically mentioned in the *Texas MUTCD*. However, Warrant 3 graphs were evaluated for reference. Since the posted speed limits (30 mph) on the major roads (Bobcat Boulevard and/or Trophy Club Road) are less than 40 mph, the reduced warranting threshold was not utilized for this analysis and Figure 4C-3 was utilized for all four intersections.

For the delay portion of Warrant 3, delay was estimated using *Synchro* traffic analysis software, as presented in the letter. Based on this analysis, all four intersections are anticipated to meet the delay portion of Warrant 3 during the AM peak hour. Additionally, all intersections except at Marshall Creek Road are anticipated to meet delay thresholds during the School PM peak hour. See the estimated delay values for each intersection below for reference.

Intersection	Delay in Vehicle-Hours for Minor Street Approach	
	AM Peak Hour	School PM Peak Hour
Marshall Creek at Bobcat	19.5	2.5
Parkview at Bobcat	20.8	6.3
High School Dwy 4 at Bobcat	89.7	9.9
Bobcat at Trophy Club	37.7	8.1

Warrant 5 – School Crossing

This warrant applies at an established school crossing where a traffic engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at the school crossing shows that the number of adequate gaps in the traffic during the period when the children are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 school children during the highest crossing hour. This warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict progression. It is recommended to consider implementing other remedial measures prior to signal installation, such as warning signs/flashers, school speed zones, crossing guards, and grade-separated crossings.

Each of the four intersections has at least one marked crosswalk on the major roadway. As identified in Table 6 of the letter, there are enough pedestrians crossing to satisfy this warrant at all intersections except the intersection of Bobcat Boulevard and Trophy Club Drive.

As previously noted, gap studies were not performed as part of this work effort. For reference, the length of gap required is based on average walking speed (assumed 3.5 ft/sec), pedestrian start-up and clearance time (assumed 5 seconds) and crossing distance. The crossing distance is impacted by whether a median exists such that a pedestrian can stop in the median to wait for additional gaps in traffic and thus make a two-stage crossing. At the intersections at Marshall Creek Road and at Parkview Drive, there is a median present and the crossing may be completed in two stages. When treated as a two-stage crossing, the crossing distance across Bobcat Boulevard at the crosswalk is approximately 42 feet from the center of curb ramp to center of the median. In this case, pedestrians would require a 17-second gap in vehicular traffic to cross each leg of Bobcat Boulevard. At the High School Driveway 4 intersection, there is no median and the crossing distance across Bobcat Boulevard at the crosswalk is approximately 50 feet from the center of curb ramp to center of curb ramp. In this case, pedestrians would require a 19-second gap in vehicular traffic to cross the entirety of Bobcat Boulevard.

In order to evaluate whether an adequate number of gaps exists, a gap study would be required on Bobcat Boulevard. However, as noted above, this warrant recommends other measures before traffic signal installation. These locations are already within a 20-mph reduced speed school zone and there are crossing guards present during school peak hours.

Warrant 7 – Crash Experience

The warrant is satisfied when:

1. Adequate trial of less restrictive remedies with satisfactory observance and enforcement has failed to reduce the crash frequency; and
2. Five or more reported crashes, of types susceptible to correction by traffic signal control, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
3. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1, or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours. If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Lee Engineering obtained all available crash reports that have occurred at these intersections between 2014 and present from TxDOT's online C.R.I.S. Query tool. As noted in Table 6 of this letter, none of the intersections had five or more crashes susceptible to correction by traffic signal control within a 12-month period. The highest number of crashes occurred at the intersection of Bobcat Boulevard and Trophy Club Drive, where four (4) crashes susceptible to correction by traffic signal control occurred within a 12-month period. A summary of all available crash data is shown below for reference. The highest number of crashes susceptible to correction by traffic signal control within a 12-month period are highlighted for each intersection.

Crash ID	Crash Type	Potentially Correctible by Signal?	Crash Date	Crash Severity	Light Condition	Pavement Surface Condition
Marshall Creek Road at Bobcat Boulevard						
13703655	Right Turn	No	2/6/2014	Not Injured	Daylight	Snow
Parkview Drive at Bobcat Boulevard						
14352739	Right Angle	YES	2/27/2015	Not Injured	Daylight	Slush
16538943	Fixed Object	No	7/15/2018	Fatal Injury	Daylight	Dry
17355925	Fixed Object	No	10/21/2019	Not Injured	Daylight	Dry
17969728	Right Angle	YES	11/13/2020	Not Injured	Daylight	Dry
High School Driveway 4 at Bobcat Boulevard						
15331510	Pedestrian	YES	9/15/2016	Suspected Minor Injury	Daylight	Dry
16418931	Rear End	No	5/16/2018	Not Injured	Daylight	Dry
19152169	Fixed Object	No	10/5/2022	Suspected Minor Injury	Daylight	Dry
19507546	Fixed Object	No	4/23/2023	Not Injured	Daylight	Dry
19892782	Right Angle	YES	11/6/2023	Not Injured	Daylight	Dry
Bobcat Boulevard at Trophy Club Drive						
13698685	Sideswipe	No	2/6/2014	Not Injured	Daylight	Snow
13757587	Fixed Object	No	2/8/2014	Not Injured	Daylight	Dry
13836908	Left Turn	YES	5/10/2014	Possible Injury	Daylight	Dry
15543732	Rear End	No	1/15/2017	Not Injured	Daylight	Wet
16849370	Right Angle	YES	1/10/2019	Suspected Minor Injury	Dark, Lighted	Dry
18785601	Rear End	No	2/28/2022	Not Injured	Daylight	Dry
19165980	Left Turn	YES	10/8/2022	Not Injured	Daylight	Dry
19458297	Right Angle	YES	3/26/2023	Not Injured	Daylight	Dry
19600321	Right Angle	YES	6/14/2023	Not Injured	Daylight	Dry
19705873	Right Angle	YES	8/16/2023	Not Injured	Daylight	Dry
19855903	Left Turn	YES	11/4/2023	Not Injured	Daylight	Dry
20159027	Left Turn	YES	4/23/2024	Not Injured	Daylight	Dry

Warrant Volume Data

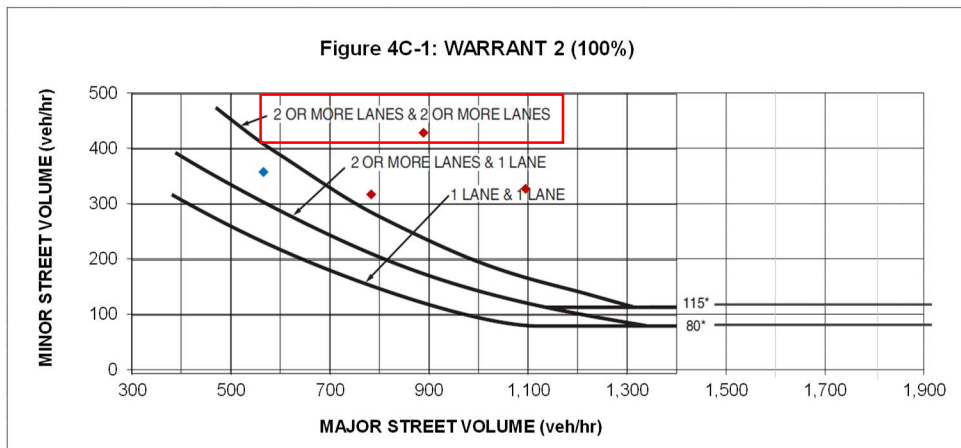
The following four pages include traffic volume data and applicable graphs for Warrants 2 and 3 for each intersection.

Marshall Creek Road at Bobcat Boulevard

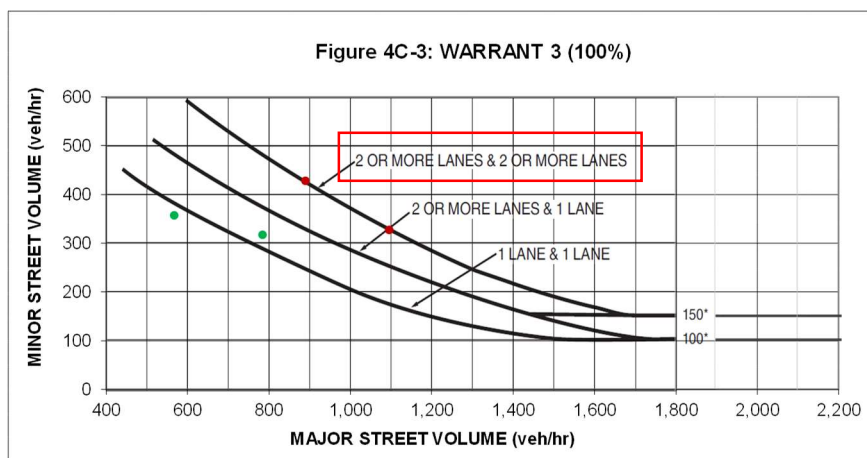
The four-hour volumes and volume warrant results for the intersection of Marshall Creek Road and Bobcat Boulevard are shown below.

Hour Begin	Bobcat Blvd			Marshall Creek Rd			Pedestrians Crossing Major	Meets Warrants?					
	NB Volume	SB Volume	Total Volume	EB Volume	WB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	306	260	566	357	0	357	11	-	-	Y	-	-	-
8:00	513	376	889	428	0	428	20	Y	-	Y	Y	Y	Y
15:00	449	334	783	317	0	317	16	Y	-	Y	Y	Y	-
16:00	647	448	1,095	327	0	327	46	Y	Y	Y	Y	Y	Y
TOTAL	1,915	1,418	3,333	1,429	0	1,429	93	3	1	4	3	3	2
										3			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.

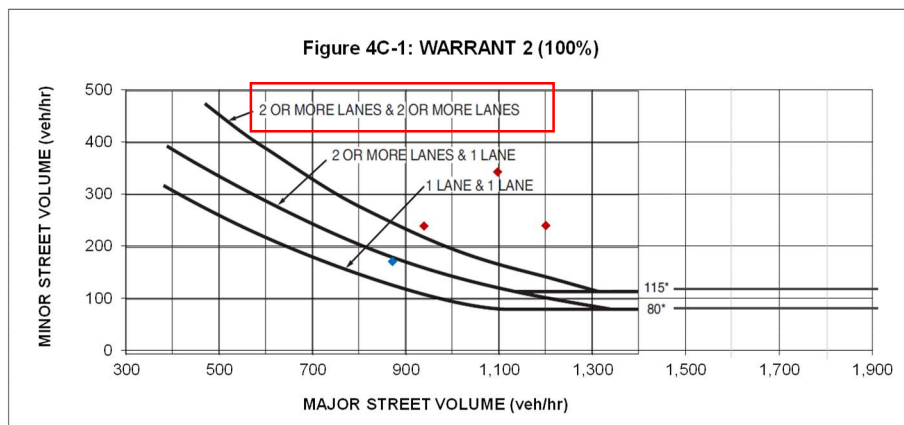


Parkview Drive at Bobcat Boulevard

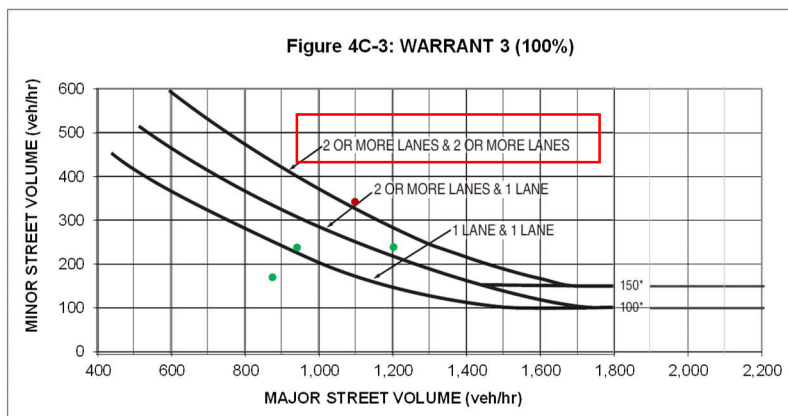
The four-hour volumes and volume warrant results for the intersection of Parkview Drive and Bobcat Boulevard are shown below.

Hour Begin	Bobcat Blvd			Parkview Drive			Pedestrians Crossing Major	Meets Warrants?					
	EB Volume	WB Volume	Total Volume	NB Volume	SB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	514	425	939	238		238	12	Y	Y	Y	Y	Y	-
8:00	546	550	1,096	342		342	14	Y	Y	Y	Y	Y	Y
15:00	415	457	872	170		170	7	-	-	Y	Y	-	-
16:00	624	576	1,200	239		239	38	Y	Y	Y	Y	Y	-
TOTAL	2,099	2,008	4,107	989	0	989	71	3	3	4	4	3	1
										4			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.

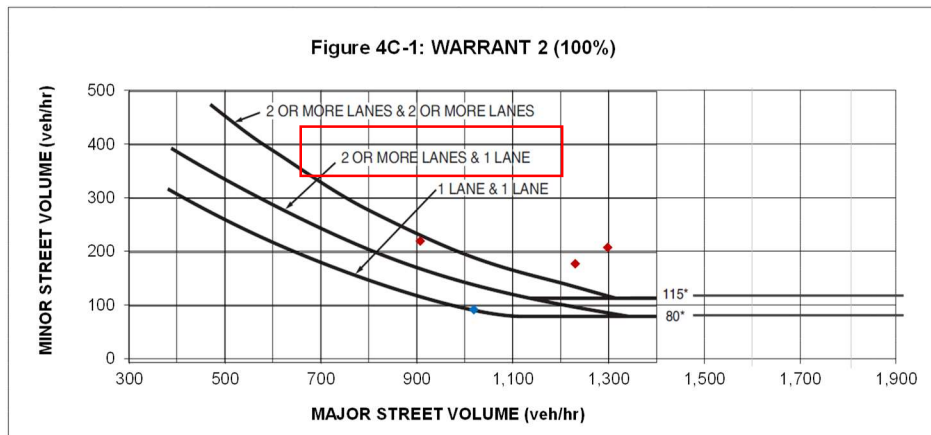


High School Driveway 4 at Bobcat Boulevard

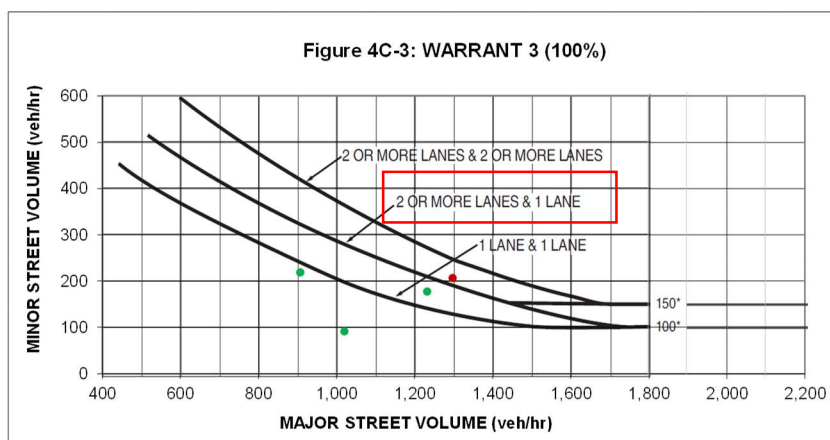
The four-hour volumes and volume warrant results for the intersection of High School Driveway 4 and Bobcat Boulevard are shown below.

Hour Begin	Bobcat Blvd			High School Driveway 4			Pedestrians Crossing Major	Meets Warrants?					
	EB Volume	WB Volume	Total Volume	NB Volume	SB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	485	535	1,020	30	91	91	1	-	Y	-	Y	-	-
8:00	484	814	1,298	84	207	207	22	Y	Y	Y	Y	Y	Y
15:00	468	439	907	48	219	219	13	Y	Y	Y	Y	Y	-
16:00	602	629	1,231	78	177	177	53	Y	Y	Y	Y	Y	-
TOTAL	2,039	2,417	4,456	240	694	694	89	3	4	3	4	3	1
										3			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.

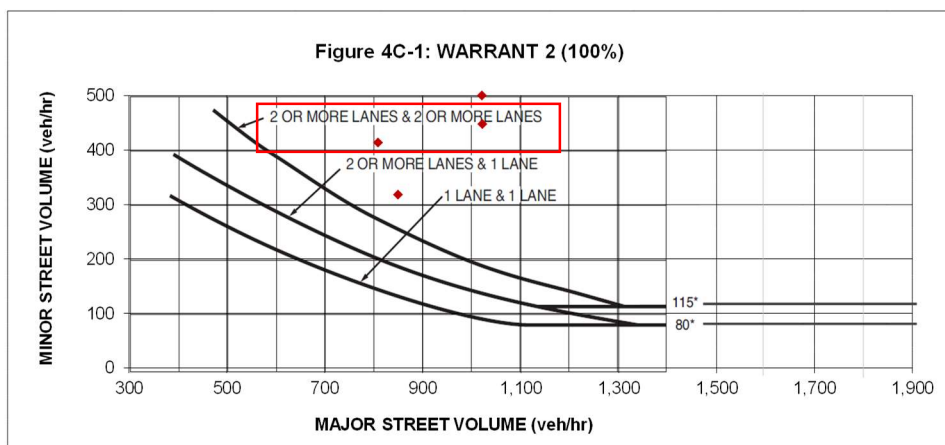


Bobcat Boulevard at Trophy Club Drive

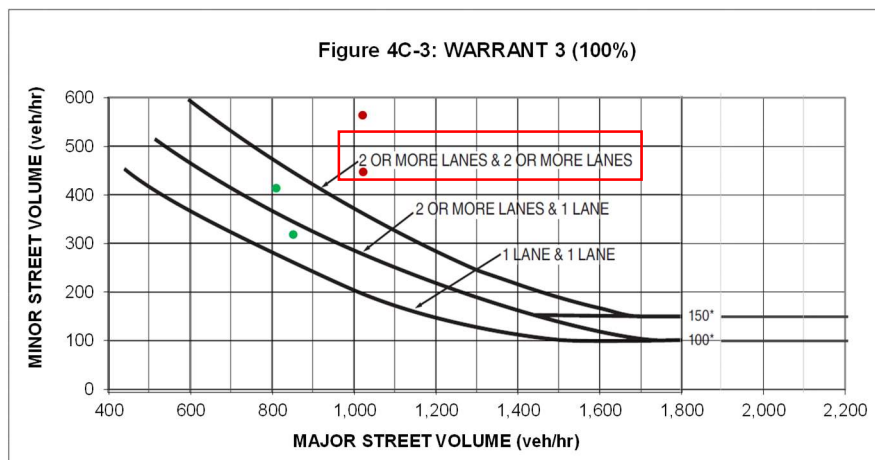
The four-hour volumes and volume warrant results for the intersection of Bobcat Boulevard and Trophy Club Drive are shown below.

Hour Begin	Trophy Club Drive			Bobcat Blvd			Pedestrians Crossing Major	Meets Warrants?					
	NB Volume	SB Volume	Total Volume	EB Volume	WB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	345	504	849	318		318	0	Y	-	Y	Y	Y	-
8:00	554	467	1,021	448		448	9	Y	Y	Y	Y	Y	Y
15:00	540	268	808	414		414	0	Y	-	Y	Y	Y	-
16:00	675	345	1,020	564		564	13	Y	Y	Y	Y	Y	Y
TOTAL	2,114	1,584	3,698	1,744	0	1,744	22	4	2	4	4	4	2
										4			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.



Warrant 7 – Crash Experience

The warrant is satisfied when:

1. Adequate trial of less restrictive remedies with satisfactory observance and enforcement has failed to reduce the crash frequency; and
2. Five or more reported crashes, of types susceptible to correction by traffic signal control, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
3. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1, or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours. If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Lee Engineering obtained all available crash reports that have occurred at these intersections between 2014 and present from TxDOT's online C.R.I.S. Query tool. As noted in Table 6 of this letter, none of the intersections had five or more crashes susceptible to correction by traffic signal control within a 12-month period. The highest number of crashes occurred at the intersection of Bobcat Boulevard and Trophy Club Drive, where four (4) crashes susceptible to correction by traffic signal control occurred within a 12-month period. A summary of all available crash data is shown below for reference. The highest number of crashes susceptible to correction by traffic signal control within a 12-month period are highlighted for each intersection.

Crash ID	Crash Type	Potentially Correctible by Signal?	Crash Date	Crash Severity	Light Condition	Pavement Surface Condition
Marshall Creek Road at Bobcat Boulevard						
13703655	Right Turn	No	2/6/2014	Not Injured	Daylight	Snow
Parkview Drive at Bobcat Boulevard						
14352739	Right Angle	YES	2/27/2015	Not Injured	Daylight	Slush
16538943	Fixed Object	No	7/15/2018	Fatal Injury	Daylight	Dry
17355925	Fixed Object	No	10/21/2019	Not Injured	Daylight	Dry
17969728	Right Angle	YES	11/13/2020	Not Injured	Daylight	Dry
High School Driveway 4 at Bobcat Boulevard						
15331510	Pedestrian	YES	9/15/2016	Suspected Minor Injury	Daylight	Dry
16418931	Rear End	No	5/16/2018	Not Injured	Daylight	Dry
19152169	Fixed Object	No	10/5/2022	Suspected Minor Injury	Daylight	Dry
19507546	Fixed Object	No	4/23/2023	Not Injured	Daylight	Dry
19892782	Right Angle	YES	11/6/2023	Not Injured	Daylight	Dry
Bobcat Boulevard at Trophy Club Drive						
13698685	Sideswipe	No	2/6/2014	Not Injured	Daylight	Snow
13757587	Fixed Object	No	2/8/2014	Not Injured	Daylight	Dry
13836908	Left Turn	YES	5/10/2014	Possible Injury	Daylight	Dry
15543732	Rear End	No	1/15/2017	Not Injured	Daylight	Wet
16849370	Right Angle	YES	1/10/2019	Suspected Minor Injury	Dark, Lighted	Dry
18785601	Rear End	No	2/28/2022	Not Injured	Daylight	Dry
19165980	Left Turn	YES	10/8/2022	Not Injured	Daylight	Dry
19458297	Right Angle	YES	3/26/2023	Not Injured	Daylight	Dry
19600321	Right Angle	YES	6/14/2023	Not Injured	Daylight	Dry
19705873	Right Angle	YES	8/16/2023	Not Injured	Daylight	Dry
19855903	Left Turn	YES	11/4/2023	Not Injured	Daylight	Dry
20159027	Left Turn	YES	4/23/2024	Not Injured	Daylight	Dry

Warrant Volume Data

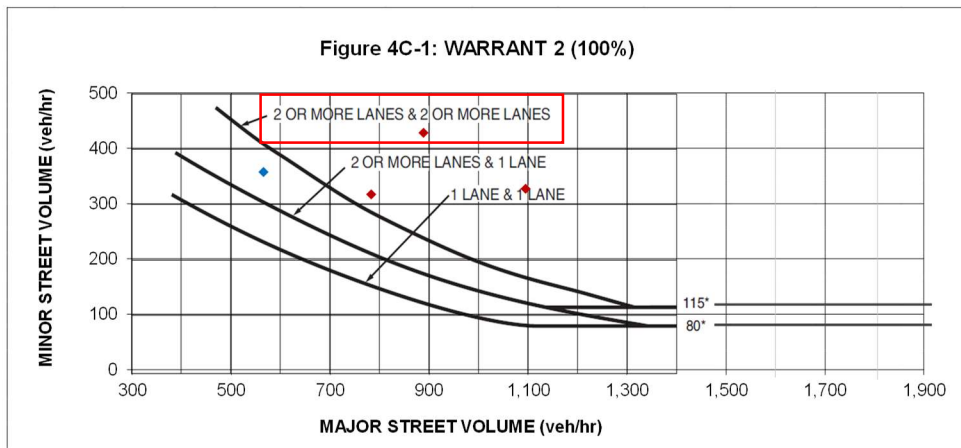
The following four pages include traffic volume data and applicable graphs for Warrants 2 and 3 for each intersection.

Marshall Creek Road at Bobcat Boulevard

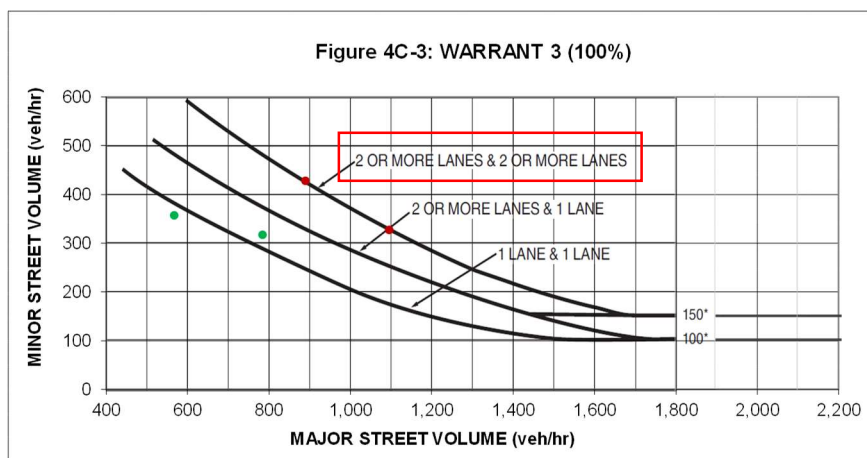
The four-hour volumes and volume warrant results for the intersection of Marshall Creek Road and Bobcat Boulevard are shown below.

Hour Begin	Bobcat Blvd			Marshall Creek Rd			Pedestrians Crossing Major	Meets Warrants?					
	NB Volume	SB Volume	Total Volume	EB Volume	WB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	306	260	566	357	0	357	11	-	-	Y	-	-	-
8:00	513	376	889	428	0	428	20	Y	-	Y	Y	Y	Y
15:00	449	334	783	317	0	317	16	Y	-	Y	Y	Y	-
16:00	647	448	1,095	327	0	327	46	Y	Y	Y	Y	Y	Y
TOTAL	1,915	1,418	3,333	1,429	0	1,429	93	3	1	4	3	3	2
										3			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.

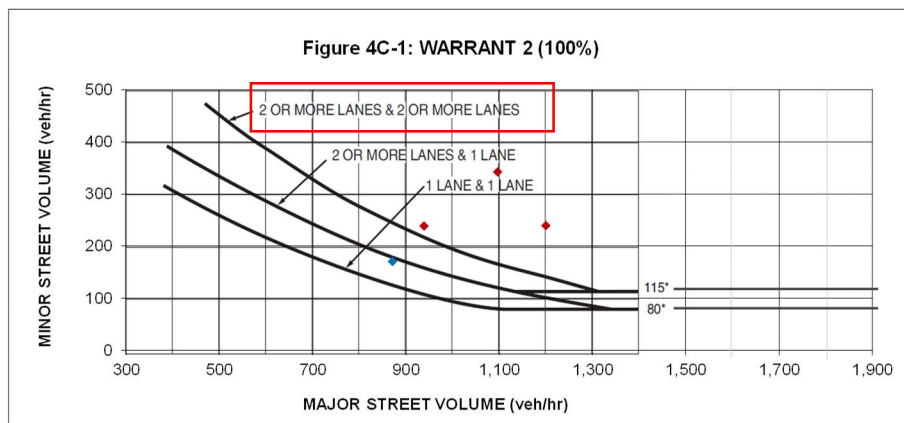


Parkview Drive at Bobcat Boulevard

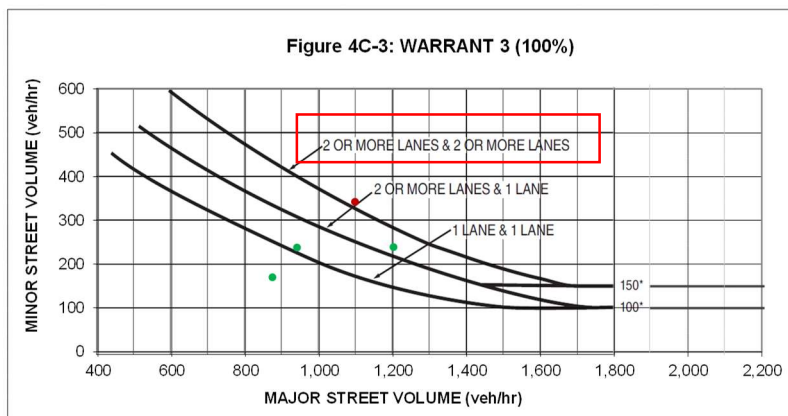
The four-hour volumes and volume warrant results for the intersection of Parkview Drive and Bobcat Boulevard are shown below.

Hour Begin	Bobcat Blvd			Parkview Drive			Pedestrians Crossing Major	Meets Warrants?					
	EB Volume	WB Volume	Total Volume	NB Volume	SB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	514	425	939	238		238	12	Y	Y	Y	Y	Y	-
8:00	546	550	1,096	342		342	14	Y	Y	Y	Y	Y	Y
15:00	415	457	872	170		170	7	-	-	Y	Y	-	-
16:00	624	576	1,200	239		239	38	Y	Y	Y	Y	Y	-
TOTAL	2,099	2,008	4,107	989	0	989	71	3	3	4	4	3	1
										4			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.

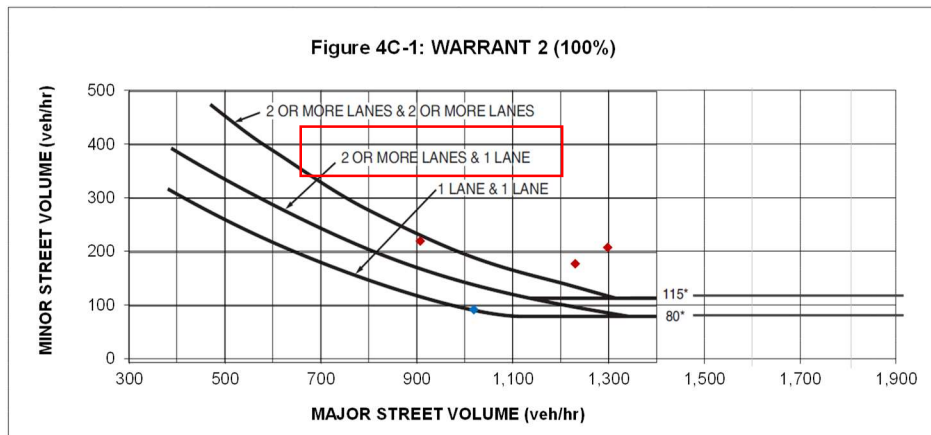


High School Driveway 4 at Bobcat Boulevard

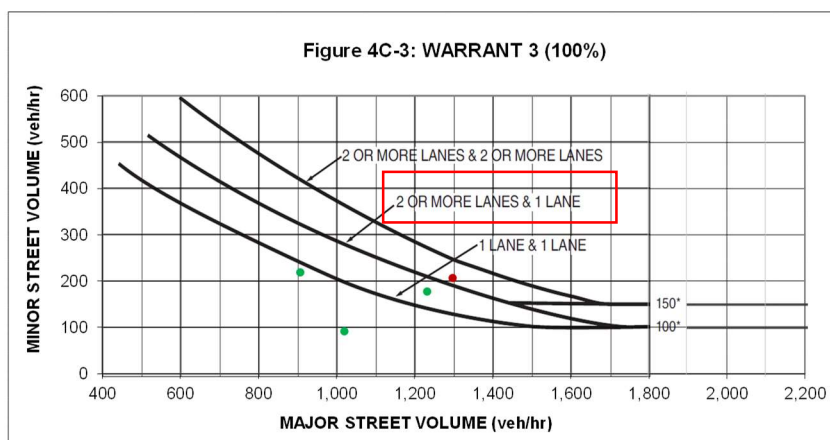
The four-hour volumes and volume warrant results for the intersection of High School Driveway 4 and Bobcat Boulevard are shown below.

Hour Begin	Bobcat Blvd			High School Driveway 4			Pedestrians Crossing Major	Meets Warrants?					
	EB Volume	WB Volume	Total Volume	NB Volume	SB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	485	535	1,020	30	91	91	1	-	Y	-	Y	-	-
8:00	484	814	1,298	84	207	207	22	Y	Y	Y	Y	Y	Y
15:00	468	439	907	48	219	219	13	Y	Y	Y	Y	Y	-
16:00	602	629	1,231	78	177	177	53	Y	Y	Y	Y	Y	-
TOTAL	2,039	2,417	4,456	240	694	694	89	3	4	3	4	3	1
										3			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.

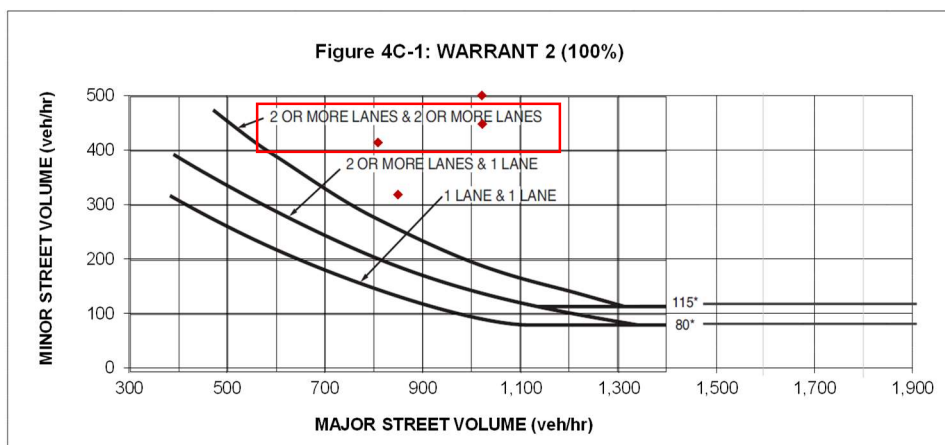


Bobcat Boulevard at Trophy Club Drive

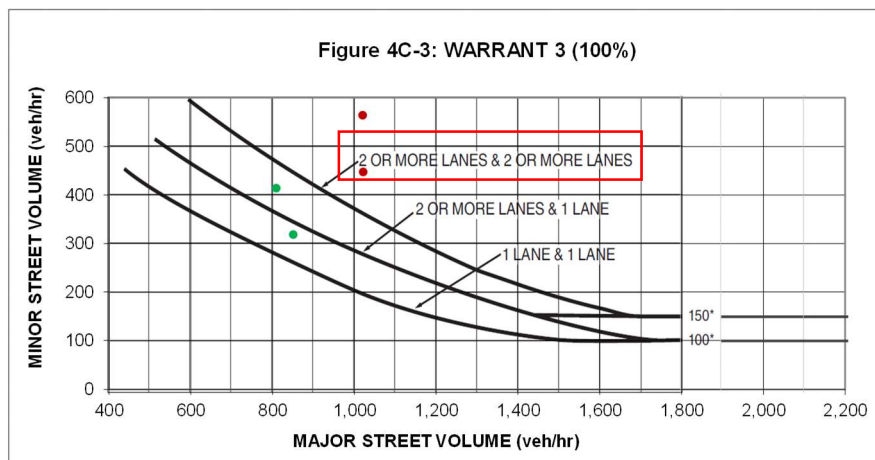
The four-hour volumes and volume warrant results for the intersection of Bobcat Boulevard and Trophy Club Drive are shown below.

Hour Begin	Trophy Club Drive			Bobcat Blvd			Pedestrians Crossing Major	Meets Warrants?					
	NB Volume	SB Volume	Total Volume	EB Volume	WB Volume	Max Volume		1A	1B	1-Combo		2	3
										A	B		
7:00	345	504	849	318		318	0	Y	-	Y	Y	Y	-
8:00	554	467	1,021	448		448	9	Y	Y	Y	Y	Y	Y
15:00	540	268	808	414		414	0	Y	-	Y	Y	Y	-
16:00	675	345	1,020	564		564	13	Y	Y	Y	Y	Y	Y
TOTAL	2,114	1,584	3,698	1,744	0	1,744	22	4	2	4	4	4	2
										4			

The applicable graph for Warrant 2 is shown below.



The applicable graph for Warrant 3 is shown below.





TOWN COUNCIL COMMUNICATION

MEETING DATE: July 22, 2024

FROM: Tammy Dixon, Town Secretary

AGENDA ITEM: Consider approval of the June 24, 2024, Town Council work session and regular meeting minutes. (Tammy Dixon, Town Secretary)

BACKGROUND/SUMMARY: The Town Council held a work session and regular meeting on June 24, 2024.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Draft Minutes 06.24.2024

ACTIONS/OPTIONS:

Move to approve the June 24, 2024, Town Council work session and regular meeting minutes.

Town of Trophy Club Town Council Meeting Minutes
June 24, 2024, 6:00 p.m., Work Session and Regular Meeting
1 Trophy Wood Drive, Trophy Club, Texas 76262

CALL WORK SESSION TO ORDER

Mayor Tiffany called the work session to order at 6:00 p.m.

COUNCIL MEMBERS PRESENT

Jeannette Tiffany, Mayor
Steve Flynn, Mayor Pro Tem
Stacey Bauer, Council Member Place 1
Jeff Beach, Council Member Place 2
Dennis Sheridan, Council Member Place 3
LuAnne Oldham, Council Member Place 5

With the following member absent:

Rhylan Rowe, Council Member Place 4

STAFF MEMBERS PRESENT

Brandon Wright, Town Manager
Tammy Dixon, Town Secretary
Dean Roggia, Town Attorney
Jason Wise, Fire Chief
April Duvall, Director of Finance
Matt Cox, Director of Community Development
Denise Deprato, Director of Human Resources
Chase Ellis, Director of Parks and Recreation
Jill Lind, Director of Communications and Marketing

WORK SESSION ITEM

1. Presentation and discussion of legal concerns regarding regulating short-term rental properties. (Dean Roggia, Town Attorney and Brandon Wright, Town Manager)

Town Manager Wright and Town Attorney Roggia gave a presentation on the comprehensive process of adopting and implementing short-term rental (STR) regulations as follows and answered questions from the Town Council:

THRESHOLD QUESTIONS

**DRAFTING, ADOPTION, AND
IMPLEMENTATION**
DEVELOPING DEFENSIBLE STR ORDINANCES

- Identify the current status of short-term rentals in the city.
- Any pre-existing STR regulations requiring amendment?
- Any record of STR-related complaints?
 - What types of complaints?
 - Who complains? STR occupants, long-term residential neighbors?

THRESHOLD QUESTIONS

- What are the governing body's goals?
 - Limit or reduce STRs?
 - Address nuisance-type issues?
 - Life safety for STR occupants?
 - Repair an existing ordinance?
- Zoning regulations vs. traditional permitting & enforcement

CREATING A RECORD

- Courts look more favorably upon regulations that have a strong basis in public record
 - Complaints
 - STR data
 - Police/Code Enforcement calls
 - Municipal Court
- Encourage staff to create a record in support of the regulations
- What kind of record will you need if an STR owner brings a lawsuit?

DRAFTING

- Zoning ordinance or general code of ordinances?
- Safety valves to protect against threats of litigation
 - Special exception to the Zoning Ordinance
 - How to handle nonconforming uses?
- Identify appropriate appeal structures for permit revocation, suspension, or denial
 - Who is the initial decisionmaker? (ex. planning director, city manager)
 - Who reviews their decision? (ex. city manager, City Council)
 - Set parameters for any appeal

ADOPTION

- Public hearings
 - Still creating a record
- Deliberations
 - Encourage governing body to discuss broader areas of concern related to STR operations
 - Affordable housing
 - Preservation of neighborhood character
 - Rights of non-STR property owners

ENFORCEMENT

- Remind staff: not every rental issue is an STR issue
- Work closely with Code Enforcement and municipal court staff
 - Assist prosecutors with complaint language
 - Assist with development of internal policies for issuance of citations

WORK SESSIONS

- Consider: appointing a task force
 - Are STRs a particularly hot political topic?
 - Stakeholders: STR owners, residents, Council, tourism board
- Staff work sessions
 - Representatives from departments involved
 - Police, fire, code, finance, planning/development, legal
 - Stress the importance of gathering data
- Preliminary Council/Planning & Zoning work sessions

DRAFTING

- Return to your threshold questions
- Consider results of work sessions
- Draft to address problem areas
 - STR density
 - Parking
 - Inspections/life safety
 - Nuisance-type violations
 - Permit transfers
 - Due process

WORK SESSIONS (ROUND 2)

- Helpful once an ordinance draft exists
- Public Meetings
 - Planning & zoning bodies
 - City Council
- Continued staff meetings
 - Focus on feasibility of implementation and enforcement
 - Consider software compatibility
- More public input creates a better record

IMPLEMENTATION

- Effective date – does staff need time to prepare?
- Consider software needs – check in with staff on capabilities
- Assist with permit forms, form letters for notices of violation, etc.
 - Does everything match up with the ordinance?
- Do any boards/commissions need training on STR-specific issues?
 - Zoning boards of adjustment if implementing mechanism like special exception

HOTEL OCCUPANCY TAX COLLECTION

- Platforms typically do not collect HOT on behalf of STR operators
- Example: Airbnb users are required to click a "check box" for terms and conditions acknowledging that Airbnb does not collect HOT
- Owners/operators are responsible for complying with HOT laws
- Enforcement options?
 - Conduct an audit (costs to be paid by delinquent party under certain conditions)
 - Require payment of penalties and interest
 - File tax collection suit (authorizes municipality to collect attorneys' fees)

SOME FINAL THOUGHTS

- Expect this to be a long process
- Expect a lot of public input & threats of litigation
- Expect your governing body to push for a more aggressive approach
- Remember to create a record to support the regulations
- Coordinate closely with staff – more closely than may be typical

Following discussion staff was directed to:

1. Review Rental Registration Ordinance: Staff to provide recommended language updates for the existing rental registration ordinance.
2. Identify Potential Rental Properties: Initiate a project aimed at identifying potential rental properties within Trophy Club.
3. Create Nuisance/Police Report Summary: Develop a summary of nuisance and police reports specific to rental properties once these properties have been identified.

ADJOURN

Mayor Tiffany adjourned the work session at 6:54 p.m.

CALL REGULAR MEETING TO ORDER

Mayor Tiffany, assisted by Mayor of the Day Isabella Ramos, called the regular meeting to order at 7:00 p.m.

INVOCATION

Chaplain David Impwi, Chaplain at Methodist Southlake Medical Center, led the invocation.

PLEDGES

Mayor Pro Tem Flynn led the Pledge of Allegiance to the American and Texas Flags.

Mayor Tiffany presented Isabella Ramos with a Proclamation proclaiming June 24, 2024, Isabella Ramos Mayor of a Day.

PUBLIC COMMENTS

There were none.

COMMUNITY SPOTLIGHT

2. Trophy Club Stars and Stripes

Tiffany Nimphius, Mindi Bone, and Kelly Castonguay gave a presentation on the Trophy Club Stars and Stripes program noting the following:

- The program began in 2012 with the planting of 11,000 flags along the primary streets throughout town. It has since grown significantly, now including over 40,000 flags planted by approximately 175 volunteers.
- They emphasized the importance of the volunteers, expressing a huge thank you to all of them, as the program would not be in place without their support.
- They reviewed the planned activities, volunteer opportunities, and promotional strategies to maximize community participation and enjoyment.
- The dedication and efforts of the volunteers were highlighted as the cornerstone of the program's success, ensuring its continued impact on the community.

3. Working for You . . . Trophy Club

a) Update from Town Council Members

Council Member Oldham expressed her gratitude to all community volunteers serving on boards, commissions, or corporations. She highlighted that these groups, composed of resident volunteers, play a crucial role in advising on important issues and shaping policies for the town. To join, one must be a resident and a qualified voter of Trophy Club. She encouraged residents ready to take on leadership roles to apply.

Council Member Oldham shared information from a Dallas Morning News article written by Dave Leberman regarding the Texas Data Privacy and Security Act (TDPSA), a new state data and privacy law that goes into effect on July 1. This law allows residents to request, edit, and delete data kept on them by large companies. She encouraged residents to learn their rights under this new legislation.

Mayor Pro Tem Flynn thanked Chase Ellis, Director of Parks and Recreation, for the successful pickleball public engagement pop-up event held on June 22nd at Harmony Park, which allowed the community to share their input on the future of pickleball. He encouraged residents to attend the next event scheduled for June 29th, 4 – 6 p.m., at Independence Park.

Mayor Tiffany stated that she and Matt Cox, Director of Community Development, attended a North Central Texas Council of Governments (NCTCOG) luncheon on June 14th. The luncheon highlighted the upcoming 2026 World Cup in North Texas, noting its significant economic impact, equivalent to hosting nine Super Bowls over a 38-day period.

b) Update from Town Manager

Town Manager Wright provided the following updates:

- Pickleball public engagement pop up event held on June 22nd at Harmony Park was successful with another event scheduled on June 29th, 4 – 6 p.m., at Independence Park.
- Fourth of July Planning
 - Patriot 5K and 1 Mile Fun Run starts at 7:15 AM
 - Parade of Patriots follows at 10:00 a.m.
 - Fireworks Celebration starts at 6:00 p.m.
- Upcoming Boards and Commissions Meetings
 - July 15, 2024, 6:00 p.m., Parks and Recreation Board
 - July 15, 2024, 7:00 p.m., Economic Development Corp. Board

Town Secretary Dixon provided an overview of the Town’s updated Boards and Commission webpage and portal.

c) Quick Civic Tip

Town Attorney Dean Roggia provided an overview of the signature authority of the mayor and town manager as outlined in the Town’s Charter.

CONSENT AGENDA

4. Consider approval of the Town Council meeting minutes for the May 28, 2024, regular meeting; June 6 and 7, 2024, Town Council retreat; and the June 10, 2024, regular meeting. (Tammy Dixon, Town Secretary)
5. Consider a developer's agreement between the Town of Trophy Club and Beldonia Town Homes, LLC for the Beldonia Townhomes and authorizing the Mayor or her designee to execute same on behalf of the Town. (Matt Cox, Director of Community Development)

Council Member Beach moved to approve Consent Items 4-5. Mayor Pro Tem Flynn seconded the motion.

VOTE ON MOTION

AYES: Bauer, Beach, Sheridan, Tiffany, Oldham, Flynn
NAYES: None
ABSENT: Rowe
VOTE: 6-0-1

PUBLIC HEARINGS**6. Case PD-AMD-24-002 PD-30 Amendment Multi-tenant Monument**

Conduct a public hearing and consider an ordinance amending Planned Development District (PD-30) to allow a multi-tenant monument sign with CEVMS display located at 2200-2300 SH 114 on Lot 2, Block A, of the Trophy Club Town Center Addition, of the C. Medlin Survey, Abstract No. 823, Denton County, Texas. (Matt Cox, Director of Community Development)

Mayor Tiffany opened the public hearing at 7:36 p.m.

Staff presentation:

Matt Cox, Director of Community Development, gave a presentation noting the following:

- The proposed multi-tenant monument sign with CEVMS does not fit in the Freestanding Development Identification Sign category in PD-30 due to the tenant advertising.
- As proposed, the structure is angled southeast to 114 and specified to be 35' tall and 17' wide, 20 tenant panels, and one CEVMS 128 sq. ft. panel.

Planning and Zoning Commission (P&Z) Chair Briggs advised that the P&Z unanimously recommended approval at its June 6, 2024, meeting.

Mr. Arrouas, Director of Operations for the applicant, answered questions from the Town Council.

No one spoke in favor.

The following spoke in opposition:

- Paul Jablonski, 104 Greenhill Trail S., Trophy Club, TX 76262

Mayor Tiffany closed the public hearing at 7:54 p.m.

The Town Council discussed the size of the CEVMS display sign on the monument sign, the overall height of the monument sign, and expressed that the wording for Trophy Club Town Center should be at the top of the sign. The Council also raised concerns about the overall size of the display, believing it does not align with the community's aesthetic. Council members recognized the importance of supporting local businesses and their advertising efforts but emphasized the need to balance effective advertising with maintaining the town's character and appeal. The consensus was in favor of sending the item back to the P&Z with these concerns.

Mayor Tiffany moved to remand Case PD-AMD-24-002 PD-30 Amendment Multi-tenant Monument back to the Planning and Zoning Commission. Council Member Beach seconded the motion.

VOTE ON MOTION

AYES: Bauer, Beach, Sheridan, Tiffany, Oldham, Flynn
NAYES: None
ABSENT: Rowe
VOTE: 6-0-1

INDIVIDUAL ITEMS

7. Consider a resolution casting the Town of Trophy Club's vote appointing a candidate to the Denco Area 9-1-1 District Board of Managers. (Tammy Dixon, Town Secretary)

Ms. Dixon explained that the Denco Area 9-1-1 District Board of Managers includes two members appointed jointly by all participating municipalities. Each municipality is asked to vote for one of the nominees, Jim Carter or Greg Kohn.

Council Member Sheridan moved to approve Resolution No. 2024-11 casting the Town of Trophy Club's vote appointing Jim Carter to the Denco Area 9-1-1 District Board of Managers. Council Member Bauer seconded the motion. The caption of the resolution reads as follows:

RESOLUTION NO. 2024-11

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF TROPHY CLUB, TEXAS, CASTING THE TOWN OF TROPHY CLUB'S VOTE TO APPOINT A CANDIDATE AS A MEMBER OF THE BOARD OF MANAGERS OF THE Denco AREA 9-1-1 DISTRICT; AND PROVIDING AN EFFECTIVE DATE.

VOTE ON MOTION

AYES: Bauer, Beach, Sheridan, Tiffany, Oldham, Flynn
NAYES: None
ABSENT: Rowe
VOTE: 6-0-1

8. Consider authorizing the Town Manager to pay Oncor Electric Delivery Company, LLC \$43,215.12 for services rendered to lower a main power line required by the Indian Creek/Fair Green Storm Drainage Project. (Matt Cox, Director of Community Development)

Council Member Beach moved to authorize the Town Manager to pay Oncor Electric Delivery Company, LLC \$43,215.12 for services rendered to lower a main power line required by the Indian Creek/Fair Green Storm Drainage Project. Council Member Sheridan seconded the motion.

VOTE ON MOTION

AYES: Bauer, Beach, Sheridan, Tiffany, Oldham, Flynn
NAYES: None
ABSENT: Rowe
VOTE: 6-0-1

9. Consider rescinding the previous Town Council motion on November 13, 2023 expanding the community pool amenities through Phase 2 of the Community Pool Project and authorizing the Town Manager to negotiate and execute a professional services agreement with Parkhill for public engagement, the development of pool amenity options, schematic design, and construction cost analysis services in the amount of \$101,759. (Chase Ellis, Director of Parks and Recreation)

Chase Ellis, Director of Parks and Recreation, explained that on November 8, 2022, the Town Council approved a \$4 million community pool renovation project, initially managed by Halff & Associates. Phase 1, included upgrades to mechanical systems, restrooms, concessions, office areas, and splash pad amenities.

Director Ellis advised that before commencing Phase 2, the Town terminated the agreement with Halff & Associates and initiated a new RFQ process. After evaluating and interviewing four firms, Parkhill was selected and recommended by the Park Board on May 20, 2024.

He explained to proceed with Parkhill, the Town Council needed to rescind their November 13, 2023, action which would allow for full project design, funding allocation, and additional community input, ensuring high-quality amenities that meet residents' needs and expectations.

Chris Tribble, Senior Advisor of Parkhill provided a presentation on his firm and example community projects.

Director Ellis answered questions from the Town Council regarding costs, community engagement and steps for future approvals of the project.

Council Member Sheridan noted that the community input had come from the Parks Board, which had unanimously approved the original plan. He raised concerns about the recent Parks Board discussions, which included more amenities than just the meeting room and slide. He expressed concern about revisiting previously approved decisions. While he objected to spending additional money, he did not oppose ending the original contract.

Mayor Tiffany praised the pickleball initiative as a successful example of community engagement and suggested using a similar approach for the pool project. She emphasized the importance of gathering input from those who do not usually attend park board meetings and highlighted that projects like the bobcat and pickleball explorations set a precedent for future community involvement. Additionally, she advocated hiring the consultant to help the town progress, adding that an upfront investment would help avoid future problems.

Council Member Oldham praised the presentation and the community engagement efforts but opposed reversing the prior decision due to concerns about additional costs and redundancy. She objected to spending more taxpayer dollars to redo work. She added that while she supports community engagement, she did not want to reimagine the entire pool project.

Council Member Beach moved to rescinding the previous Town Council motion on November 13, 2023 expanding the community pool amenities through Phase 2 of the Community Pool Project; and to authorize the Town Manager to negotiate and execute a professional services agreement with Parkhill for public engagement, the development of pool amenity options, schematic design, and construction cost analysis services in the amount of \$101,759. Council Member Bauer seconded the motion.

VOTE ON MOTION

AYES: Bauer, Beach, Tiffany, Oldham

NAYES: Sheridan, Oldham

ABSENT: Rowe

VOTE: 4-2-1

ADJOURNMENT

Mayor Tiffany adjourned the Town Council meeting 8:52 p.m.

Jeannette Tiffany, Mayor

Attest:

Tammy Dixon, Town Secretary



TOWN COUNCIL COMMUNICATION

MEETING DATE: July 22, 2024

FROM: Patrick Arata, Chief of Police

AGENDA ITEM: Consider a consolidated radio communications interlocal agreement between the Denton County Sheriff's Office and the Town of Trophy Club for the use of a radio communication system for FY 2025. (Patrick Arata, Police Chief)

BACKGROUND/SUMMARY: The Town of Trophy Club utilizes an interlocal agreement with Denton County to provide consolidated radio communication services to the Trophy Club Police Department and Trophy Club Fire Department. The county-wide radio system provides constant and consistent radio communication services to the Town of Trophy Club and surrounding municipalities to ensure radio interoperability during emergencies. This annual agreement will cover the period from October 1, 2024, through September 30, 2025.

Under the agreement, Denton County has the responsibility of maintaining, operating, and controlling the communication system. The Town is responsible for purchasing, maintaining, supporting, and programming radios. The Police and Fire Department will maintain Tier 3 support on the radios through Denton County, which provides additional subscriber services including radio programming once per year and preventive maintenance every two years. The Trophy Club Police Department has 46 radios and the Trophy Club Fire Department has 35 radios.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

FISCAL IMPACT: Trophy Club's fees are based on the number of radios utilized by the Police Department and the Fire Department. Under the Tier 3 user rate, each radio has a monthly fee of \$6. With the current number of radios in use, the Trophy Club Police Department's fees will be \$3,312, and the Trophy Club Fire Department's fees will be \$2,520. Trophy Club's total annual amount is \$5,832. This amount is covered through the departments' operating budgets in the General Fund. Half of the Trophy Club Fire Department fee is paid for by Trophy Club Municipal Utility District #1.

LEGAL REVIEW: Town Attorney Roggia has reviewed the interlocal agreement as to form and legality.

ATTACHMENTS:

1. 2024-25 Trophy Club FD & PD Consolidated Radio Communications Contract
2. 2024-25 Trophy Club FD & PD Consolidated Radio Communications Worksheet

ACTIONS/OPTIONS:

Staff recommends that the Town Council move to approve the consolidated radio communications interlocal agreement between the Denton County Sheriff's Office and the Town of Trophy Club for the use of a radio communication system for FY 2025.

INTER-LOCAL COOPERATION AGREEMENT BETWEEN DENTON COUNTY AND THE TOWN OF TROPHY CLUB FOR THE USE OF THE DENTON COUNTY RADIO COMMUNICATIONS SYSTEM

This Inter-Local Agreement (“Agreement”) is entered into by and between the County of Denton, Texas (“the County”) and the Town of Trophy Club, a Texas home rule municipality, (“Trophy Club”), both entities being located in Denton County, Texas (collectively, the “Parties” or separately as an “Agency” or “Party”). The Parties execute this agreement as hereinafter provided, pursuant to the Texas Governmental Code, Chapter 791, known as the Inter-Local Cooperation Act:

WHEREAS, Denton County and Trophy Club are political subdivisions within the State of Texas, each of which engages in the provision of governmental services for the benefit of its citizens; and

WHEREAS, the Agencies are duly organized and operating under the laws of the State of Texas engaged in the provision of municipal government and/or related services for the benefit of the citizens of Agencies; and

WHEREAS, the Inter-Local Cooperation Act, Texas Government Code, Chapter 791, as amended “the Act” provides authority for local governments of the State of Texas to enter into Inter-local agreements with each other for the purpose of performing governmental functions and services as set forth in the Act; and

WHEREAS, the County owns, operates, and maintains the radio-communications system, exclusive of the radios owned individually by each User Agency (“System”) for the purpose of providing radio communications in support of its governmental operations; and

WHEREAS, Trophy Club wishes to use certain portions of the System for its governmental operations; and

WHEREAS, the use of the System in the provision of governmental services benefits the public health and welfare, promotes efficiency and effectiveness of local governments, and is of mutual concern to the contracting Parties; and

WHEREAS, Trophy Club and the County have current funds available to satisfy any fees and costs required pursuant to this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreement herein contained, the sufficiency of which are hereby acknowledged, and upon and subject to the terms and conditions hereinafter set forth, the Parties agree as follows:

I.

DEFINITIONS

“Assignee” means the Agency’s employee assigned to a specific Subscriber Unit.

“Communications System” or *“System”* means a wide area, multi-agency digital trunked radio system compliant with P-25 interoperability standards to be used jointly by the City of Lewisville, the City of Denton, Denton County, and other Infrastructure Members, if any, primarily for providing public safety dispatch and communications for fire, emergency medical and police services and such other governmental services as may be agreed from time to time by the Parties.

“Coordinating Committee” means the committee that is responsible for making recommendations to the Infrastructure Management Committee on the administration and operation of the Communications System.

“Infrastructure Management Committee” means the committee that is responsible for the administration and operation of the Communications System.

“Infrastructure Member” means the parties and other entities which have built Infrastructure connected to the Communications System in accordance with the system requirements and consent of the Denton County Sheriff.

“Subscriber Units” means mobile radios, portable radios or any similar devices used for communicating over the Communications System.

“Talk Group” means a specific group of Subscriber Units allowed to communicate privately within that group over shared infrastructure resources.

“Technical Committee” means the committee that advises the Coordinating Committee on technical issues related to the operation of the Communications System.

“User” means any entity with which the City of Denton, the City of Lewisville, Denton County, or other Infrastructure Member has entered into a contractual agreement for the provision of radio communication services through the Consolidated Communications System.

II.

TERM

2.1 This Agreement is for a period of a one (1) year term, beginning on the 1st day of October, 2024, and ending on the 30th day of September, 2025, unless terminated earlier pursuant to Section 7.1.

2.2 It is the intention of the Parties for this to be a long term enterprise which will be renewed with a new inter-local agreement each year subject to approval by each Party's governing body.

III.

OBLIGATIONS OF TOWN OF TROPHY CLUB

3.1 Trophy Club shall use the System in accordance with this Agreement to provide integration of communications by Trophy Club between its Users on the System for governmental operations.

3.2 When using the System, Trophy Club shall abide by all applicable Federal and State laws and regulations, including any regulations of the Denton County Radio Communications System. When Trophy Club uses the System for interoperability with Talk Groups (hereinafter defined) other than those provided by this Agreement, Trophy Club will also abide by the User rules of those Talk Groups.

3.3 Trophy Club must provide a written request to the Denton County Radio System Manager ("System Manager") or his designee, to activate radios ("Subscriber Units") on the System. Such request must include the model and serial number of the Subscriber Unit, the name of the Assignee, and identifying Talk Groups required in the Subscriber Unit.

3.4 Trophy Club is responsible for furnishing its own Subscriber Units, which must be compatible with the APCO P-25 Phase 2 TDMA Digital System, and for maintenance of the Subscriber Units. Trophy Club is responsible for all programming of Agency-owned Subscriber Units.

3.5 Trophy Club shall be solely responsible for obtaining a technical services support contract and a maintenance contract for all Agencies-owned dispatch infrastructure equipment, either from the manufacturer of the equipment or from a manufacturer-authorized service provider. The County shall not be responsible for maintenance of any of Trophy Club's Agency-owned equipment.

3.6 Depending on the equipment that will be purchased and installed by Trophy Club, the Agencies shall be solely responsible for entering into such Software Update Agreements and/or Software Maintenance Agreements from the manufacturer as necessary to ensure that the equipment owned by the Agencies will be maintained and upgraded to meet the requirements of the System when the County performs System upgrades.

3.7 Trophy Club shall be solely responsible for having periodic maintenance (PM) performed on its Subscriber Units at least every two years which shall include tuning and alignment of the Subscriber Units and updating the Subscriber Units with the latest firmware available.

3.8 The County shall not be liable to Trophy Club for the lack of interoperability between the Subscriber Units and the System if Trophy Club fails to perform the required PM and/or obtain the software and/or firmware upgrades recommended by the County and/or the manufacturer of the Subscriber Units necessary to communicate through the System as set forth in Sections 3.5, 3.6, and 3.7 above.

IV.

OBLIGATIONS OF THE COUNTY

4.1 The County will allow Trophy Club to use County provided Talk Groups, which are a primary level of communication for Users on the System (“Talk Group”), comparable to a channel on a conventional radio system, for the exclusive use of Trophy Club. Talk Groups will be established for Trophy Club by the County.

4.2 The System Manager will not activate radios on the Trophy Club Talk Groups nor make changes to the Trophy Club radios without first receiving authorization from the designated representative of the Agencies, unless, in the opinion of the County, such action is necessary to eliminate harmful interference.

4.3 The County is solely responsible for:

- (1) Coordinating Talk Groups among System Users;
- (2) Grouping of Talk Groups to allow transmitting and receiving on all associated Talk Groups as required by the Agencies; and
- (3) The operation, maintenance, and control of the System

V.

FEEES

5.1 The fees payable for the term of this Agreement are set out in **Exhibit A** which is attached to this Agreement and incorporated herein for all purposes.

5.2 The County may increase the fees each October 1st, the beginning of each County fiscal year, by an amount not to exceed five percent (5%) of the previous year’s fees. The County will provide ninety (90) days’ notice to Trophy Club before increasing the fees.

5.3 Based on the fees described above, the County will calculate the annual fee due based upon the total number of Subscriber Units and submit an invoice to the Agencies on or before October 1st of each year. This amount is subject to change when the Agencies add or delete the number of Subscriber Units in service. The Agencies must notify the System Manager in writing of any addition or deletion of Subscriber Units.

5.4 Fees for Additions - The amount owed for annual fees for additions of Subscriber Units will be prorated for the year added, invoiced immediately, and amounts will be due within thirty (30) days of receipt of the invoice for the addition(s).

5.5 Deletions - No refunds for deletions will be made for the Agencies deletion of Subscriber Units during the period of the Agreement. The fees for the upcoming fiscal year will be calculated based on the number of Subscriber Units in service on the radio system as of May 1st of the current contract year.

5.6 In the event a new Inter-Local Agreement is not executed prior to the expiration of this Agreement, and the Sheriff's Office continues to provide access to the Radio Communications System, the Agencies shall reimburse and compensate the County for access to the Denton County Radio Communications System at the rate set by the Denton County Sheriff and approved by the Denton County Commissioners Court for the next fiscal year.

VI.

PAYMENT DUE

6.1 Trophy Club agrees to pay the County the annual fees specified under Article V within thirty (30) days of the receipt of the invoice. Should Trophy Club add Subscriber Units or Talk Groups to the Service within a Term, Trophy Club agrees to pay the additional fee(s) due within thirty (30) days of invoice. All payments for expenses incurred as a result of the performance of the Agreement shall be made only from current revenues legally available to each respective Party.

VII.

TERMINATION

7.1 Either Party may terminate this Agreement at any time by giving ninety (90) days advance written notice. The Agencies shall pay for all fees incurred through the effective date of termination. If the County permanently discontinues the operation of its System, this Agreement shall terminate on the date of discontinuance without further notice, and the County will reimburse the Agencies the pro-rated amount of the fees previously paid by the Agencies for the use of the System for the then current fiscal year.

VIII.

RELEASE AND HOLD HARMLESS

TO THE EXTENT PERMITTED BY LAW, EACH PARTY AGREES TO WAIVE ALL CLAIMS AGAINST, TO RELEASE, AND TO HOLD HARMLESS THE OTHER PARTY AND ITS RESPECTIVE OFFICIALS, OFFICERS, AGENTS, EMPLOYEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM ANY AND ALL LIABILITY, CLAIMS, SUITS, DEMANDS, LOSSES, DAMAGES, ATTORNEYS, FEES, INCLUDING ALL EXPENSES OF LITIGATION OR SETTLEMENT, OR CAUSES OF ACTION WHICH MAY ARISE BY REASON OR INJURY TO OR DEATH OF ANY PERSON OR FOR LOSS OF, DAMAGE TO, OR LOSS OF USE OF ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT. IN THE EVENT THAT A CLAIM IS FILED, EACH PARTY SHALL BE RESPONSIBLE FOR ITS PROPORTIONATE SHARE OF LIABILITY. IN ACCORDANCE WITH SUBSECTION 791.006(a-1) OF THE ACT, THE ASSIGNMENT OF LIABILITY IN THIS AGREEMENT IS INTENDED TO BE DIFFERENT THAN THE LIABILITY OTHERWISE ASSIGNED UNDER SUBSECTION 791.006(a) OF THE ACT.

IX.

IMMUNITY

In the execution of this Agreement, neither of the Parties waives, nor shall be deemed hereby to have waived any immunity or any legal or equitable defense otherwise available against claims arising in the exercise of governmental powers and functions. By entering into this Agreement, the Parties do not create any obligations, express or implied, other than those set forth herein, and this Agreement does not create any rights in parties who are not signatories to this Agreement.

X.

ASSIGNMENT

Trophy Club agrees to retain control and to give full attention to the fulfillment of this Agreement. Trophy Club cannot assign or sublet this Agreement without the prior written consent of the County. Further, the Agencies cannot sublet any part or feature of the work to anyone objectionable to Denton County. Trophy Club also agrees that the subletting of any portion or feature of the work, or materials required in the performance of this Agreement, does not relieve Trophy Club from its full obligations to the County as provided by this Agreement.

XI.

ENTIRE AGREEMENT

This Agreement represents the entire and integrated agreement between Denton County and Trophy Club and supersedes all prior negotiations, representations and/or agreements, either

written or oral, between Denton County and Trophy Club. This Agreement may be amended only by written instrument signed by Denton County and Trophy Club.

XII.

NOTICES

Unless notified otherwise in writing, all notices are required to be given to either Party in writing and delivered in person or sent via certified mail to the other Party at the following respective addresses:

County:	1	Denton County Judge Denton County Commissioners Court 1 Courthouse Drive, Ste 3100 Denton, Texas 76201
	2	Denton County Sheriff Denton County Sheriff's Office 127 N. Woodrow Lane Denton, Texas 76205
	3	Assistant District Attorney Counsel to the Sheriff 127 N. Woodrow Lane Denton, Texas 76205

Name of Agency:	Town of Trophy Club
Contact Person	Brandon Wright, Town Manager
Address	1 Trophy Wood Dr.
City, State, Zip	Trophy Club, TX 76262
Telephone	682-237-2900
Email	bwright@trophyclub.org

XIII.

AUTHORITY TO SIGN

The undersigned officers and/or agents of the Parties hereto are the properly authorized officials or representatives and have the necessary authority to execute this Agreement on behalf of the Parties.

XIV.

SEVERABILITY

The provisions of this Agreement are severable. If any paragraph, section, subdivision, sentence, clause, or phrase of this Agreement is for any reason held to be contrary to the law or

contrary to any rule or regulation having the force and effect of the law, such decisions shall not affect the remaining portions of the Agreement. However, upon the occurrence of such event, either Party may terminate this Agreement by giving the other Party thirty (30) days written notice.

XV.

VENUE

This Agreement and any of its terms or provisions, as well as the rights and duties of the Parties hereto, shall be governed by the laws of the State of Texas, without regard to conflict of law principles. The Parties agree that this Agreement shall be enforceable in Denton County, Texas, and if legal and necessary, exclusive venue shall lie in state court in Denton County, Texas.

XVI.

INTERPRETATION OF AGREEMENT

Although this Agreement is drafted by the County, this is a negotiated document. Should any part of this Agreement be in dispute, the Parties agree that the Agreement shall not be construed more favorably for either Party.

XVII.

REMEDIES

No right or remedy granted herein or reserved to the Parties is exclusive of any right or remedy granted by law or equity; but each shall be cumulative of every right or remedy given hereunder. No covenant or condition of this Agreement may be waived without the express written consent of the Parties. It is further agreed that one (1) or more instances of forbearance by either Party in the exercise of its respective rights under this Agreement shall in no way constitute a waiver thereof.

XVIII.

SUCCESSORS AND ASSIGNS

The Parties each bind themselves, their respective successors, executors, administrators, and assigns to the other Party to this contract. Neither Party will assign, sublet, subcontract or transfer any interest in this Agreement without the prior written consent of the other Party. No assignment, delegation of duties or subcontract under this Agreement will be effective without the written consent of all Parties.

EXECUTED duplicate originals on the dates indicated below:

SIGNED AND AGREED BY THE TOWN OF TROPHY CLUB, TEXAS:

BY:

Date: _____

Brandon Wright, Town Manager

Town of Trophy Club

1 Trophy Wood Dr.

Trophy Club, TX 76262

682-237-2900

Approved as to content:

Jason Wise, Fire Chief

Patrick Arata, Chief of Police

Attest:

Tammy Dixon, Town Secretary

Approved as to form:

Dean Roggia, Town Attorney

**APPROVED BY THE DENTON COUNTY COMMISSIONERS COURT OF DENTON
COUNTY, TEXAS:**

BY:

Andy Eads, County Judge
Denton County Commissioners Court
1 Courthouse Drive, Ste 3100
Denton, Texas 76201
(940)349-2820

Date: _____

Approved as to content:

Denton County Sheriff's Office

Approved as to form:

Assistant District Attorney
Counsel to the Sheriff

Exhibit A
Denton County Sheriff's Office
Consolidated Radio Communications System Agreement
FY24-25 Agency Payment Worksheet/Invoice

Agency:	Town of Trophy Club
Payment Contact Person:	Brandon Wright, Town Manager and/or Tammy Dixon, Town Secretary
Phone Number:	682-237-2900
Email(s):	bwright@trophyclub.org and/or tdixon@trophyclub.org
Address:	1 Trophy Wood Drive
City, State, Zip	Trophy Club, TX 76262
Agency Should Include this Worksheet with Each Payment Sent to Denton County.	
Make checks payable to:	Denton County
Mail payments to:	Consolidated Radio Communications Systems Agreement Payments Denton County Sheriff's Office Attn: Sherry Cochran 127 N. Woodrow Lane Denton, Texas 76205
<u>Tier 3</u>	
Includes Tier 1 User + add on of Subscriber Services (program once per year and PM radios every two years) - \$6 each per month	
35 FD Radio Subscribers = \$2,520.00	
46 PD Radio Subscribers = \$3,312.00	
Total Amt Per Year = <u>\$5832.00</u>	
<u>BILLED ANNUALLY</u>	

Please sign and date below.

Signature of Agency Representative	Title	Date
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TOWN COUNCIL COMMUNICATION

MEETING DATE: July 22, 2024

FROM: Matt Cox, Director of Community Development

AGENDA ITEM: Consider an ordinance amending the FY 2024 Budget to increase construction inspection fee revenue and professional engineering services in the Community Development Department by \$68,000 for additional construction inspection services related to Trophy Club residential developments. (Matt Cox, Community Development Director)

BACKGROUND/SUMMARY: The attached budget amendment represents the second proposed adjustment of the FY 2023-2024 Annual Budget. According to Section 9.06 of the Town Charter, "If during or before the fiscal year the Town Manager certifies that there are available for appropriation revenues in excess of those estimated in the budget, the Council by ordinance may make supplemental appropriations for the year up to the amount of such excess." Transfers such as these are presented to the Town Council throughout the fiscal year in an effort to resolve variances from the Annual Budget and reallocate resources to cover unanticipated expenditures.

Upon approval, there will be a \$68,000 increase in General Fund revenues, raising the total revenue from \$14,465,015 to \$14,533,015, as well as an increase in General Fund (Community Development) expenditures raising the total from \$14,435,126 to \$14,503,126.

The Community Development Engineering Budget will increase by \$68,000, resulting in a total engineering services line item amount of \$110,000. Originally approved at \$42,000, this increase is related to additional construction inspection services for new developments including Willow Estates, Cypress Estates, Oak Estates, Triple Crown, and the Beldonia (formerly the Trophy) Townhomes. Construction inspection fees are collected from developers and utilized to pay the Town's engineering fees to Teague, Nall & Perkins, Inc. The Town anticipates collecting approximately \$68,000 in construction fee revenues from developers for the above-mentioned projects. In turn, this budget amendment will increase both General Fund revenues and General Fund expenditures by \$68,000 resulting in a budget-neutral amendment since the additional expenditures are absorbed by offsetting revenues from the developers.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

FISCAL IMPACT: This budget amendment will result in an increase in General Fund revenues from \$14,465,015 to \$14,533,015 as well as an increase in General Fund expenditures from

\$14,435,126 to \$14,503,126. The overall increase in both General Fund revenues and General Fund expenditures is \$68,000 resulting in a budget-neutral amendment.

LEGAL REVIEW: Town Attorney, Dean Roggia, has reviewed the ordinance as to form and legality.

ATTACHMENTS:

1. FY23-24 Budget Amendment #2 - Ordinance with Exhibit
2. FY24 Approved Budget - Community Development

ACTIONS/OPTIONS:

Staff recommends that the Town Council move to approve the ordinance amending the FY 2024 Budget to increase construction inspection fee revenue and professional engineering services in the Community Development Department by \$68,000 for additional construction inspection services related to Trophy Club residential developments.

**TOWN OF TROPHY CLUB
ORDINANCE NO. 2024-XX**

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF TROPHY CLUB, TEXAS, AMENDING THE TOWN'S ANNUAL BUDGET FOR THE FISCAL YEAR BEGINNING ON OCTOBER 1, 2023, AND ENDING ON SEPTEMBER 30, 2024, AS ADOPTED BY ORDINANCE NO. 2023-15, AND AMENDED BY ORDINANCE NO. 2024-11, BY PROVIDING FOR ADJUSTMENTS TO THE GENERAL FUND; PROVIDING THAT EXPENDITURES FOR SAID FISCAL YEAR SHALL BE MADE IN ACCORDANCE WITH THE ANNUAL BUDGET, AS AMENDED; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Trophy Club, Texas (the "Town"), is a home rule municipality acting under its Town Charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, the Town Council previously adopted its budget for the fiscal year beginning on October 1, 2023, and ending on September 30, 2024 (the "Annual Budget"); and

WHEREAS, the Annual Budget was adopted by Ordinance No. 2023-15 on September 11, 2023; and

WHEREAS, the Annual Budget was amended by Ordinance No. 2024-11 on May 28, 2024; and

WHEREAS, after the Town Council's approval of the Annual Budget, unexpected needs have arisen which require amendment of the Annual Budget; and

WHEREAS, Town Charter Sec. 9.13 and Section 102.010 of the Texas Local Government Code allow the Town to amend its Annual Budget as deemed necessary for any municipal purpose; and

WHEREAS, the Town is also allowed to amend its Annual Budget for emergency appropriations to meet a pressing need for public expenditure to protect the public health, safety, and welfare as a result of unusual and unforeseen conditions; and

WHEREAS, the Town Council has determined that an amendment to the Annual Budget pursuant to this Ordinance is a public necessity and in the best interest of the public health and general welfare of the Town and its citizens.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF TROPHY CLUB, TEXAS, THAT:

SECTION 1.

All of the above premises are hereby found to be true and correct factual and legislative determinations of the Town and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2.

The Annual Budget of the Town for the fiscal year beginning on October 1, 2023, and ending on September 30, 2024, as adopted by Ordinance No. 2023-15, and as amended by Ordinance 2024-11, is hereby amended to provide for adjustments to the General Fund, as shown in Exhibit "A," which is attached hereto and incorporated herein, and expenditures for said fiscal year shall be made in accordance with the Annual Budget, as amended.

SECTION 3.

The expenditures and amendments authorized by this Ordinance are necessary to meet unusual and/or unforeseen conditions or circumstances that could not have been included in the original budget through the use of reasonably diligent thought and attention.

SECTION 4.

A true and correct copy of this Ordinance showing the approved budget amendments shall be filed with the Town Secretary and in the office of the County Clerk as required by Section 102.009 of the Local Government Code.

SECTION 5.

This Ordinance shall be cumulative of all other provisions of ordinances of the Town, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 6.

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance should be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this Ordinance, since the same would have been enacted by the Town Council without incorporation in this Ordinance of such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 7.

This Ordinance shall be in full force and effect from and after its date of passage and it is so ordained.

PASSED AND APPROVED by the Town Council of the Town of Trophy Club, Texas, this 22nd day of July, 2024.

APPROVED:

Jeannette Tiffany, Mayor

ATTEST:

Tammy Dixon, Town Secretary

APPROVED AS TO FORM:

Dean Roggia, Town Attorney

Exhibit "A"
Town of Trophy Club
Budget Amendment No. 2

FY24 BUDGET AMENDMENT #2:

Department	Line Item	Line Item Description		Budget Total	Recommended Change	Amended Budget
<u>Section 1</u>						
<u>General Fund Revenue</u>						
	01-000-41327	Construction Inspections		\$ -	\$ (68,000)	\$ (68,000)
		Total General Fund Revenue:		\$ -	\$ (68,000)	\$ (68,000)
<u>Community Development</u>						
	01-522-60500	Engineering		\$ 42,000	\$ 68,000	\$ 110,000
		Total Community Development:		\$ -	\$ 68,000	\$ 68,000
<u>Total Revenue Increase</u>					\$ (68,000)	
<u>Total Expenditure Increase</u>					\$ 68,000	

TOWN OF TROPHY CLUB, TEXAS

Annual Program of Services

Community Development	FY 2021 ACTUAL	FY 2022 AMENDED BUDGET	FY 2022 ACTUAL	FY 2023 AMENDED BUDGET	FY 2023 ESTIMATE	FY 2024 ADOPTED	FY 2025 PROJECTED	FY 2026 PROJECTED
Personnel								
Salaries	\$ 280,257	\$ 273,470	\$ 254,178	\$ 243,196	\$ 283,272	\$ 231,890	\$ 236,528	\$ 241,259
Merits	-	3,948	-	11,485	-	-	-	-
Overtime	2,547	5,000	-	5,000	595	5,000	5,100	5,202
Longevity	1,928	963	963	1,031	1,275	1,746	1,780	1,816
Stipend	1,875	-	-	-	-	-	-	-
Certification	1,450	900	1,412	1,500	2,634	3,000	3,060	3,121
Cell Phone Stipend	-	1,800	1,715	1,350	1,736	1,350	1,800	1,800
Retirement	38,878	27,062	32,839	31,871	36,688	31,260	31,885	32,523
Medical Insurance	21,503	11,404	18,010	18,173	13,973	9,880	10,078	10,279
Dental Insurance	1,372	1,525	1,607	1,937	1,637	1,554	1,585	1,617
Vision Insurance	178	166	266	223	273	383	391	399
Life Insurance & Other	1,498	1,480	1,349	1,678	1,506	1,185	1,209	1,233
Social Security Taxes	17,607	13,022	15,390	14,797	11,382	14,672	14,965	15,264
Medicare Taxes	4,118	3,046	3,600	3,461	2,662	3,431	3,500	3,570
Unemployment Taxes	1,557	756	158	882	73	882	900	918
Workers' Compensation	3,028	3,419	3,886	2,099	2,099	1,742	1,777	1,813
Pre-Employment Physicals/Testing	45	-	45	-	-	-	-	-
Total Personnel	\$ 377,841	\$ 347,961	\$ 335,417	\$ 338,683	\$ 359,805	\$ 307,976	\$ 314,559	\$ 320,814
Services/Supplies								
Professional Outside Services	\$ -	\$ -	\$ -	\$ 42,000	\$ 42,000	\$ 32,000	\$ 32,640	\$ 33,293
Engineering	79,211	90,000	59,747	42,000	42,000	42,000	42,840	43,697
Plan Review Services	10,173	10,000	-	4,000	4,000	4,000	4,080	4,162
Health Inspections	7,255	7,000	11,664	14,000	14,000	18,000	18,360	18,727
Inspection Services	36,890	10,000	19,210	18,000	18,000	24,000	24,480	24,970
Advertising	1,296	1,500	2,219	1,500	1,500	1,500	1,530	1,561
Legal Notices	147	-	946	-	-	-	-	-
Printing	35	600	102	600	600	600	612	624
Abateements	765	2,000	935	2,000	2,000	2,000	2,040	2,081
Schools & Training	1,575	4,000	1,456	4,000	4,000	4,000	4,080	4,162
Communications/Pagers/Mobiles	2,793	4,000	1,368	4,000	1,949	2,000	2,040	2,081
Vehicle Maintenance	1,774	4,000	4,824	4,000	4,000	3,000	3,060	3,121
Dues & Membership	1,664	1,500	170	1,500	1,500	1,500	1,530	1,561
Travel & Per Diem	84	2,000	1,701	2,000	2,000	2,000	2,040	2,081
Meetings	23	250	142	250	250	500	510	520
Plat Filing Fees	-	350	-	350	350	850	867	884
Inspection Fees	-	-	145	145	145	145	145	148
Office Supplies	1,046	1,000	1,107	1,000	1,000	1,000	1,020	1,040
Postage	445	500	451	500	500	500	510	520
Publications/Books/Subscriptions	1,031	2,000	1,525	3,000	3,000	3,000	3,060	3,121
Fuel	1,215	4,000	2,850	4,000	4,000	4,000	4,080	4,162
Uniforms	914	2,000	1,558	2,000	2,000	2,000	2,040	2,081
Miscellaneous Expense	-	500	182	500	500	500	510	520
Vehicles	-	-	10	-	-	2,000	2,040	2,081
Total Services/Supplies	\$ 148,336	\$ 147,200	\$ 112,312	\$ 151,345	\$ 149,294	\$ 151,095	\$ 154,114	\$ 157,196
Total Expenditures	\$ 526,177	\$ 495,161	\$ 447,729	\$ 490,028	\$ 509,099	\$ 459,071	\$ 468,673	\$ 478,010



TOWN COUNCIL COMMUNICATION

MEETING DATE: July 22, 2024

FROM: Tamara Smith, MSL, Assistant to the Town Manager

AGENDA ITEM: Presentation and discussion regarding an update from the arts commission ad hoc committee on the development of an arts commission in Trophy Club.
(Tamara Smith, Assistant to the Town Manager)

BACKGROUND/SUMMARY:

On September 25, 2023, a resolution was passed to establish an ad hoc committee focused on arts and culture in Trophy Club. The committee's objective was to research, develop, and establish an arts commission in the community. In January 2024, the Town of Trophy Club secured a consultant, Margie Reese, to facilitate this initiative. Ms. Reese brings a wealth of experience in the arts, boasting a thirty-year career as an arts advocate and professional in arts management. She spent years working for the City of Dallas and City of Los Angeles in cultural affairs and has also worked with non-profit organizations like the Ford Foundation. Her efforts have centered on leveraging resources from both public and private sectors to enhance arts education opportunities for children and their families. Additionally, she has played a pivotal role as a strategic consultant, contributing to numerous community cultural plans for local arts agencies nationwide.

Following Ms. Reese's guidance, the arts ad hoc committee has conducted several meetings and organized a series of input sessions involving town staff and members of the public. During the committee's meetings, the following purposes were completed:

1. Facilitation of workshops and discovery sessions
2. Drafting initial strategic directions
3. Developing a framework
4. Conducting a series of community conversations
5. Presenting preliminary findings

Ms. Reese will present an update on the process and accomplishments to date. Feedback from the Town Council will be incorporated into the draft documents. A final report will then be reviewed by the ad hoc committee and Town staff.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

FISCAL IMPACT: The total amount for the facilitator fee for the arts and cultural ad hoc committee is \$14,400. This amount is being paid for by the Hotel Occupancy Tax Fund, which can be utilized to support Trophy Club's arts program.

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Calendar
2. Formation Concept 7_16.2

ACTIONS/OPTIONS:

This agenda item is being presented for discussion and feedback purposes only. No action will be taken by the Town Council during this Town Council Meeting.

Work Plan – Town of Trophy Club
To date: 4/30/24

Task	Completion Date	Presentation Format	Reviewers	
Set remaining summer meeting	May 3			
Complete additional community interviews	May 10			
Preliminary document workshop	Week of May 26	In person	Full Committee	
Insert City agreements: -Use and projections of HOT Funds; -Pro Forma schedule of programs; FY24/25 actions	By May 28	Virtual	Town Manager/staff	
Develop full Preliminary document draft	May 30	Digital submission	Town Manager Full Committee	
Edit and present second draft of full document and recommendations	July 16	Digital report	Town Manager Full Committee	
Brief Mayor and Town Manager on Final Draft Report	July 22	In person	Committee Chair Town Manager	
Finalize Report and recommendations	By August	TBD	Full Committee	
Final presentation as requested	By August	Digital		
Follow up as requested	TDB Thru Sept. 13			

MJR
4/30/24



Observations and Opportunities
Creating an Arts and Culture Commission
for
The Town of Trophy Club, Texas
Update on activities and work plan

Presented to the Mayor and Town Council
July 22, 2024

Margie J. Reese, Facilitator

Ad Hoc Arts and Culture Committee Members:

Candace Dillard	Chairperson
Wanda Brewster	Committee Member
Melissa Eason	Vice Chairperson
Jean Frazier	Committee Member
Janet Greedy	Committee Member
Beth Ann Sands	Committee Member
Carol Tombari	Committee Member



Observations and Opportunities
Creating an Arts and Culture Commission
for
The Town of Trophy Club, Texas
July 22, 2024

Background and Introduction

Through the Town Manager's Office, the Mayor and Council of the Town of Trophy Club are considering new ways to formalize and provide civic-funded arts and culture services for the public's benefit. To achieve this goal, The Town Manager contracted with Margie J. Reese, Arts Management Consulting Services, to engage in conversations and work sessions to explore possibilities for formalizing the city's role in supporting arts programming to enhance civic pride and further establish the Town's identity.

Margie Johnson Reese has a 45-year portfolio in arts management. She was Executive Director and General Manager for Cultural Affairs in Dallas and Los Angeles. The Ford Foundation appointed her as their Media, Arts, and Culture Program Officer based in Lagos, Nigeria. Returning to the United States, she accepted the task of creating an arts council for Wichita Falls, Texas. She served as Executive Director of that agency and hired and trained her successor. She is currently Consultant-in-Residence for Mid-America Arts Alliance, based in Kansas City, MO, and the Western States Arts Federation (WESTAF) in Denver, CO.

Margie contributes to arts policy nationwide, advising on grantmaking, cultural planning, public art, and change management. She is a Board Member Emeritus at Americans for the Arts in Washington, D.C.

Since March 2024, facilitated in-person and virtual conversations with members of the Ad Hoc Arts and Culture committee, Trophy Club artists, and Town staff. Those discussions inform the following report. The conversations were structured to allow interviewees to think out loud about definitions of art, heritage, and culture.

With help from the Ad Hoc Arts and Culture Committee members, input from residents was also gathered around a few baseline questions to gather observations, ideas, and aspirations that would be helpful in creating a system to support arts and cultural programs in the Town of Trophy Club. The following report summarizes the listening process, proposes a Concept Model for creating a local arts agency in the Town of Trophy Club, and suggests a series of initiatives for consideration.

Concept Model
Arts and Culture Commission
for
The Town of Trophy Club, Texas

The Ad Hoc Arts and Culture Committee investigated the role and potential structure of an arts agency for Trophy Club. They discussed and adopted the following Concept Model, which is presented to the Town Council and leadership for consideration. Based on the strong interest in the arts expressed by interviewees, including resident artists and educators, The Town of Trophy Club is well positioned to successfully create an agency within the Town Manager's office to support, promote, and coordinate the arts for the benefit of the public.

Proposed Advisory Body

The Trophy Club Arts and Culture Commission

The Trophy Club Arts and Culture Commission (the Commission) is the agency that promotes arts and cultural activities as essential components of community development, enriching the lives of residents and visitors to our community.

Proposed Mission Statement

The mission of the Trophy Club Arts and Culture Commission is to promote, present, and support high-quality, accessible arts and cultural activities that benefit the public.

The Work of the Commission

The Trophy Club Arts Commission is an advisory body to the Mayor, Town Council, and Town Manager. It promotes lifelong learning through various creative activities, inviting residents of all ages to explore the arts and discover their creative potential. The primary role of the Commission is to:

1. Advise on the allocation of public funding
2. Present and promote accessible arts and cultural programming
3. Solicit and manage grants and encourage private-sector investment in the arts
4. Support arts education
5. Establish protocols for commissioning Public Art Projects

Recommendations for launching the Arts and Culture Commission

Four initiatives are proposed for consideration:

Initiative One - Invest in Public Art and Historic Markers

- 1) Develop and adopt measures to maintain existing and future objects of art in public places and,
- 2) Develop criteria for Determining Historical Significance.

Several key criteria must be considered to determine whether a property is historic. The following are some of the most often-used guiding principles:

- **Age of the Property:** Age is often one of the first considerations when evaluating a property for historical significance. Properties that are 50 years or older are typically considered historic. However, the age of a property alone does not guarantee its historical significance.
- **Architectural Style and Rarity:** Another important consideration is the style and rarity of a property's architecture. Properties that show a unique or innovative architectural design or represent a particular style or period are usually considered historic.
- **Association with Important Events, people, or architectural movements:** Properties directly associated with significant events, people, or architectural movements are typically considered historically substantial—for example, a property associated with a famous historical figure or a significant historical event. (For example: the original Fire Station in Trophy Club should be preserved)
- **Uniqueness and Cultural Significance:** Properties that are unique in terms of their design, materials, construction techniques, or cultural significance are also often considered historically significant. Even for a planned or newly created community like Trophy Club, strategic foresight is important to prevent the loss of significant traces of the community's origin story.

Initiative Two-Art in Public Places Projects

Public art enhances the visual attractiveness of communities, gives cities local distinctiveness, and could further attract investment, boost cultural tourism, create local employment, maximizes the use of land and spaces, and gives a community a stronger sense of place and identity.

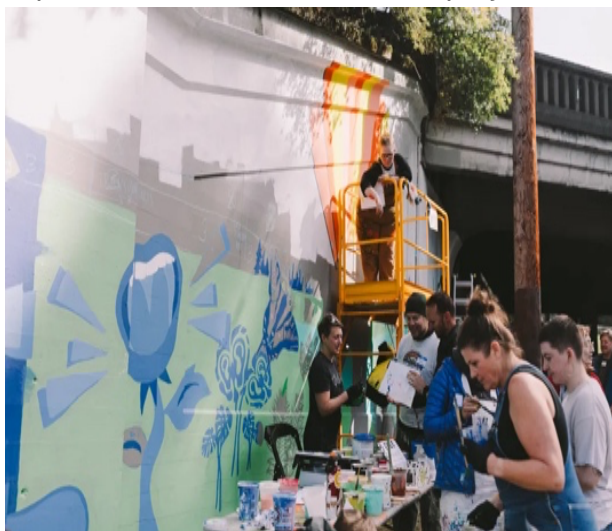
- The Town of Trophy Club should consider drafting criteria for designating local historic sites, existing structures, art on public and private property, and designation of historic markers. Launching this process now can connect the area's history to Texas history, and provide background information for educational purposes.

Resource: Texas Historical Commission <https://thc.texas.gov/preserve/preservation-programs/historical-markers>

The Town of Trophy Club should commission a historian/researcher to document the full story of the Town's unique history and connection to Texas history. *Solicit recommendations for the project from the Texas Historical Commission.*
Estimated project cost: \$6,500-\$10,000

Potential funding resource: The Summerlee Foundation – “Texas History Program
Since 1988, the Texas History Program has embraced a broad and diverse group of projects from all regions of Texas. These projects have included the disciplines of archaeology, archives, libraries, media, museums, middle and secondary schools, higher education, preservation, publications, and scholarly research”.
<https://summerlee.org/texas-history-program-overview/>

Submit the Letter of Intent to the Summerlee Foundation before the next deadline of September 30, 2024. Estimated project cost: No cost



- Draft a Public Art Procedures statement. This statement should frame a process for launching a public art program in the Town of Trophy Club. *No cost*
- Determine a reasonable budget to commission an artist or artist team to design and facilitate an inaugural temporary or permanent public art activity informed by community participation. *Estimated project cost (TBD)*

Public Art Projects *continued*

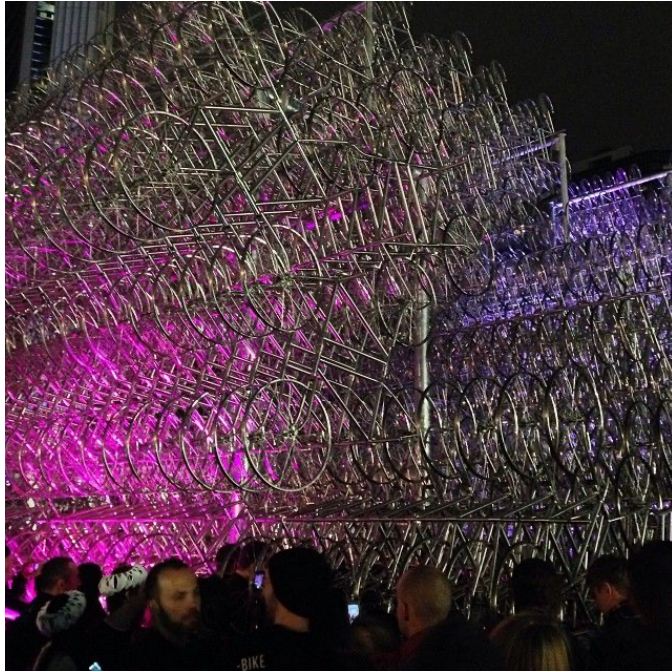
- Commission local artist(s) to produce a community-informed temporary or permanent work of art to be sited in a public/accessible space. (Budget to be determined)
- Create a Public Art Information page on the city's website to build public awareness of the value of public art in building local identity. *No cost*
- Collaborate with the Parks Department to develop a Sculpture Trail as part of the Park Department Master Plan.

Estimated Project cost to be reserved for art projects over a 3–5-year period: \$50,000 up to \$250,000, depending on project size and intended impact.

Examples of public art



Street art in Abu Dhabi in the UAE



*Ai Weiwei – Forever Bicycles, 2014, 1,254 bicycles.
The Contemporary Austin – Museum Without Walls Program
Austin, Texas, 2017, photo: Brian Fitzsimmons/The Contemporary Austin.*



*Skate
(Fiberglass) Paul Quilter, artist
Salt Lake City, Uta*

Initiative Three - Trophy Club Artist Grants and Awards

A fully developed Arts Grants Program is not recommended at this point. However, as a foundational step, it is important to build visibility for local professional artists. Therefore, the proposed Fellowship program would demonstrate to the public the artists' roles in civic development and public participation.

The Trophy Club Artist Fellowship

The Trophy Club Artist Fellowship (TCAF) program would provide monetary awards to outstanding professional artists (i.e., those individuals who, by education, experience, or natural talent, engage in a particular art form or discipline) who live in The Town of Trophy Club or within a designated adjoining community. This program is proposed as a *three-year initiative* to be evaluated annually by the Trophy Club Arts Commission and Town Manager to determine need and impact.

Trophy Club Arts Fellows would present or culminating exhibitions and activities; or offer programs, classes, or workshops as appropriate to their artistic practice. The schedule of these activities would be agreed upon with the Trophy Club Arts Commission at the time of the award. The term of the Fellowship is 12 months. Fellows will meet quarterly with City staff and/or the Arts Commission to report on activities and progress. Collaborative ventures among the TCAF are encouraged. Fellows could be paired with “host city departments” to design and facilitate arts and cultural programming that supports strategic departmental plans.

Estimated Project Cost (to be determined): Fellowship awards should be between \$5,000 to \$8,000 per award.

Proposed categories for Fellowships:

- Visual Art
- Crafts
 - Film and Photography
- Dance Instruction
- Music Performance (Instrumental or Vocal)
- Theatre
 - Acting or Directing
 - Instruction
- Literary Arts
 - Children’s Literature/Young Adult Literature
 - Poetry

Eligibility

- Fellowship applicants may be individual artists, ensembles of artists, or organizations based in The Town of Trophy Club that provide arts programs to the public. They must be professional, practicing artists working in their chosen discipline.
- Fellowship applicants must be at least 18 years of age and be residents of The Town of Trophy Club.
- Applicants may apply for only one fellowship each fiscal year.
- Those **not** eligible to apply include past fellowship and partial fellowship recipients, minors (individuals under 18 years of age), full-time students (elementary, secondary, college, or university), full-time Town of Trophy Club employees, Commission or staff members, or members of their families.

Applications for consideration must be submitted to the Trophy Club Arts Commission for review. The primary evaluation criterion is based on the work samples and references submitted with the application.

Initiative Four - *Trophy Club Presents*

This initiative might be launched following several stages of community engagement and will require some investigation regarding community interests and possible venues. The goal is to begin building audiences for presenting guest artists, touring exhibitions, or creating an artist residency program. Organizations like the Greater Dallas Youth Orchestras and Dallas Black Dance Theatre might be considered as potential guest artists.

Storytellers and poets are interesting resources for multi-generational audiences. The Trophy Club Park is an inviting space for “presenting” puppetry artists, storytellers, or writing coaches that would encourage adult groups to write the “great American novel.

Estimated Project Costs:

Project Coordinator - (TBD)

Budget for presenting activities –\$ 38,000

These ideas are suggested directions for the Town Council to consider and are drafted for discussion purposes only.

Margie J. Reese
MJR PARTNERS