

# LOCHNER

## Quigley Canyon Traffic Report Addendum

As requested, the following addendum analyzes the possible addition of an 18 hole golf course, driving range, and clubhouse facility including a restaurant to the Quigley Canyon Development. The analysis includes new traffic projections based on these new traffic generators and Synchro analysis for horizon years 2024 and 2029. The Synchro analysis was performed using the proposed roadway and traffic improvements listed in the Traffic Impact Study for the AM and PM peak.

### Traffic Forecast Traffic Volumes

Forecast traffic volumes for the development were based on the ITE Trip Generation manual. This manual is an industry standard for determining anticipated traffic volumes generated by various types of land use. Land use Trip generation for the 18-hole golf course was calculated from Code 430, Golf Course, and volumes for the club house/Restaurant were calculated from Code 435, Multipurpose Recreational Facility. The anticipated traffic volume in and out of the development is 5280 vehicles per day with 381 and 523 vehicles during the AM and PM peak hour respectively. This is an increase of 1131 vehicle trips per day, 50 AM peak hour vehicles and 81 PM peak hour vehicles. Table 1 and 2 below show the updated traffic generation and development phasing with corresponding traffic generation. The golf course and clubhouse facility traffic was assumed to follow the same distribution as the other development traffic.

- 75% of traffic would use Fox Acres Road and 25% of traffic would use the Quigley Road. This distribution of traffic is based on the layout of the development. The majority of the traffic associated with the golf course and clubhouse will likely be regional traffic using SH-75 and Fox Acres Road.

All of the previous intersections were analyzed using the new trip generation and distribution. The intersections included in the previous and current analysis are:

- Main Street (SH-75)
- Creekside Drive
- Woodside Blvd.
- Eastridge Drive
- Foxmoor Drive
- Wood River High School Driveways (South, Middle, and North)
- 8<sup>th</sup>/ Croy St/ Eastridge Drive

**Table 1 – Development Category Traffic Volumes**

Traffic Generator	Houses	Town Houses	Golf Course (Holes)	Driving Range/Club House (Acres)	Total Traffic
Quantity	417	27	18	5.4	-
AM Peak Hour Traffic	313	18	40	10	381
In	78	5	32	5	119
Out	235	14	8	5	262
PM Peak Hour Traffic	421	21	49	31	523
In	265	12	22	16	315
Out	156	9	28	16	208
Average Weekday Traffic	3991	158	643	488	5280

**Table 2 – Development Phase Traffic Volumes**

Phase	Year	Traffic Generators (Cumulative)				Weekday Peak Hour Traffic						Average Weekday Traffic
						AM			PM			
		Houses	Town Houses	Golf Course (Holes)	Driving Range/Club House (Acres)	In	Out	Total	In	Out	Total	
1	2013	115	8	0	0	23	69	92	77	46	122	1147
2	2015	190	24	0	0	40	119	159	132	79	211	1959
3	2017	281	27	0	0	57	172	229	191	114	305	2847
4	2019	336	27	0	0	68	203	270	226	134	360	3374
5	2021	376	27	0	0	75	225	300	251	149	401	3757
6	2022	395	27	0	0	79	236	314	264	156	420	3938
7	2024	417	27	18	5.4	119	262	381	315	208	523	5280

**Study Area Roadway Improvements**

To accommodate additional traffic generated by the Quigley Canyon Development the following improvements were listed in the Traffic Impact Study and were included in the analysis of the additional traffic.

- Northbound right turn lane on SR-75 at the Fox Acres Road intersection.
- Northbound to westbound acceptance lane at the Creekside intersection.
- Westbound left turn lane at the Creekside intersection.
- Southbound to eastbound acceptance lane at the Eastridge intersection.
- Eastbound left turn lane at the Eastridge intersection.
- Eastbound right turn lane at the Wood River High School South driveway.
- All-way stop control at the Foxmoor and Fox Acres intersection.
- All-way stop control at the Eastridge Drive, 8<sup>th</sup> Avenue and Croy Street intersection.

**Traffic Analysis Results**

The traffic analysis with the addition of the golf facility traffic does not show any major changes to the overall traffic results. With the added improvements there is adequate capacity at all intersections to maintain a LOS of "D" or better during both AM and PM peak hours with only a few individual movements experiencing LOS "E". The overall difference in delay at most intersections is also quite small. The largest increase in delay for an individual movement is 11.1 seconds.

Based on this analysis, the addition of the golf course and clubhouse facility does not cause any need for greater improvements in the traffic impact area through horizon year 2029. The golf course facility does not produce a significant number of AM and PM peak hour trips to cause the overall traffic flow during these times to deteriorate to an unacceptable level. Table 3 below shows the results of the Synchro analysis.

**Table 3 – AM/PM Improvement Traffic Analysis Results with Golf Facilities**

Intersection	Approach	Traffic Control	2024 AM		2024 PM		2029 AM		2029 PM	
			W/ Phase 7		W/ Phase 7		W/ Phase 7		W/ Phase 7	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
SR-75/ Fox Acres	SB	Signal	C	22.1	D	35.4	C	28.2	E	60.1
	NB	Signal	C	30.1	B	16.0	D	45.5	B	18.8
	WB	Signal	D	48.3	D	36.7	E	55.9	D	41.8
	Intersection		C	32.7	C	31.4	D	43.7	D	47.1
Creekside/ Fox Acres	NB	Stop	B	14.7	C	17.5	C	15.6	C	18.4
	EB	Free	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WB	Free	A	0.1	A	0.1	A	0.1	A	0.1
	Intersection		N/A	0.7	N/A	0.3	N/A	0.8	N/A	0.3
Eastridge/ Fox Acres	SB	Stop	B	12.9	B	14.0	B	13.5	C	15.4
	EB	Free	A	1.1	A	3.1	A	1.1	A	3.2
	WB	Free	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Intersection		N/A	2.0	N/A	3.0	N/A	2.1	N/A	3.1
Foxmoor/ Fox Acres	SB	Stop	B	14.0	B	10.2	C	15.6	B	10.7
	EB	Stop	C	18.1	B	12.1	C	23.0	B	13.1
	WB	Stop	C	21.5	C	20.6	D	27.6	D	31.2
	Intersection		C	18.7	C	16.9	C	23.4	C	23.8
WRHS 1/ Fox Acres	NB	Stop	C	23.4	D	32.5	D	28.9	E	49.4
	EB	Free	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WB	Free	A	1.0	A	0.6	A	1.2	A	0.6
	Intersection		N/A	3.8	N/A	8.7	N/A	4.8	N/A	13.1
WRHS 2/ Fox Acres	SB	Free	A	0.5	A	0.4	A	0.5	A	0.4
	NB	Free	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WB	Stop	C	15.8	C	16.6	C	16.9	C	18.5
	Intersection		N/A	2.0	N/A	3.2	N/A	2.2	N/A	3.5
WRHS 3/ Fox Acres	SB	Free	A	0.6	A	0.6	A	0.6	A	0.6
	NB	Free	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WB	Stop	B	12.9	B	13.5	B	13.2	B	14.6
	Intersection		N/A	2.0	N/A	2.5	N/A	2.1	N/A	3.4
8th/ Eastridge/ Croy	SB	Stop	A	8.5	A	9.2	A	8.7	A	9.5
	NB	Stop	B	10.4	B	11.0	B	10.9	B	11.8
	EB	Stop	A	8.3	A	8.8	A	8.5	A	9.2
	Intersection		A	9.5	A	9.9	A	9.8	B	10.5

			AM Peak		PM Peak	
			2024	2029	2024	2029
			W/ Phase 7	W/ Phase 7	W/ Phase 7	W/ Phase 7
			v/c Ratio	v/c Ratio	v/c Ratio	v/c Ratio
Woodside/ Fox Acres	NB	Roundabout	0.37	0.4	0.69	0.72
	SB	Roundabout	0.55	0.61	0.60	0.70
	WB	Roundabout	0.46	0.53	0.37	0.42
	Int. Capacity Utilization		72.6%	78.0%	86.7%	92.9%

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***ADDENDUM TECHNICAL APPENDIX***

***APPENDIX A –FORECAST VOLUMES***

***APPENDIX B – 2024 ANALYSIS RESULTS WITH GOLF COURSE***

***APPENDIX C – 2029 ANALYSIS RESULTS WITH GOLF COURSE***