



September 5, 2019

Mr. Michael McGoldrick  
Atwell, LLC  
143 Union Boulevard, Suite 700  
Lakewood, CO 80228

Re: Murphy Creek Filing 7  
Traffic Letter  
Aurora, CO  
LSC #190980

Dear Mr. McGoldrick:

Per your request, we have completed this traffic letter for the Murphy Creek Filing 7 development in Aurora, Colorado.

The overall site was previously studied in the November, 2000 *Murphy Creek Ranch TIA* (TIA) by LSC. Filing 7 (TAZ 35) previously assumed 155 single-family dwelling units. Table 1 and Figure 2 from the TIA are attached for reference.

The site is currently proposed to include 153 single-family residential dwelling units as shown in the attached site plan.

Table 1 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation potential for the site use based on rates from Trip Generation, 10<sup>th</sup> Edition, 2017 by the Institute of Transportation Engineers (ITE) as well as the trip generation potential for the previously approved land use.

The site is projected to generate about 39 fewer vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 1 fewer vehicle would enter and about 2 fewer vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:30 p.m., about 6 fewer vehicles would enter and the same number of vehicles would exit the site.

Figure 1 shows the proposed site plan along with dimensions between access points. The proposed access closest to E. Jewell Avenue will be right-in/right-out-only per direction from City staff, but residents will have connectivity to full movement access points to the south. The TIA for the adjacent Murphy Creek East development to the east shows a future school site east of Flat Rock Trail and noted that an enhanced pedestrian crossing will be provided when the school site plan is prepared.

We trust this information will assist you in planning for the Murphy Creek Filing 7 development.

Respectfully submitted,

LSC Transportation Consultants, Inc.

By:

  
Christopher S. McGranahan, P.E., PTOE



CSM/wc

9-5-19

Enclosure: Table 1 from November, 2000 *Murphy Creek Ranch TIA*  
Figure 2 from November, 2000 *Murphy Creek Ranch TIA*  
Table 1  
Figure 1

**Table 1**  
**Trip Generation Estimate**  
**Murphy Creek Ranch**  
**Aurora, Colorado**  
**Weekdays**

Traffic Analysis Zones	Item	Area	Quantity	Trip Generation Rates/Unit (1)					Driveway Trips Generated					Percent Internal Trips	Net External Trips Generated				
				Trips/Day Weekday	Trips/Hour @ Peak-Hour				Trips/Day Weekday	Trips/Hour @ Peak-Hour					Trips/Day Weekday	Trips/Hour @ Peak-Hour			
					A.M.		P.M.			A.M.		P.M.				A.M.		P.M.	
					In	Out	In	Out		In	Out	In	Out			In	Out	In	Out
1	Commercial (2)	23.3 Acres	203 KSF(3)	52.94 (4)	0.73	0.47	2.37	2.57	10,747	149	95	481	521	25%	8,061	111	71	361	391
2	Office	11.3 Acres	KSF98	11.01 (5)	1.37	0.19	0.25	1.24	1,085	135	19	25	122	25%	814	101	14	18	92
2	Commercial	11.2 Acres	KSF98	68.77 (4)	0.98	0.63	3.04	3.29	6,710	96	61	297	321	25%	5,033	72	46	222	241
2	Multi-Family	5.5 Acres	80 DU	5.86 (8)	0.08	0.36	0.36	0.18	469	6	29	29	14	25%	352	5	22	22	11
3	Multi-Family	16 Acres	232 DU	5.86 (8)	0.08	0.36	0.36	0.18	1,360	19	84	84	42	25%	1,019	14	63	63	31
4	Multi-Family	20 Acres	291 DU	5.86 (8)	0.08	0.36	0.36	0.18	1,705	23	105	105	52	25%	1,279	17	79	79	39
5	Single-Family	24.5 Acres	96 DU (6)	9.57 (7)	0.19	0.56	0.65	0.36	919	18	54	62	35	25%	689	14	40	47	26
6	Single-Family	8.4 Acres	72 DU	9.57 (7)	0.19	0.56	0.65	0.36	688	14	40	47	26	25%	515	10	30	35	19
7	Single-Family	7.8 Acres	27 DU	9.57 (7)	0.19	0.56	0.65	0.36	258	5	15	18	10	25%	193	4	11	13	7
8	Single-Family	11.5 Acres	39 DU	9.57 (7)	0.19	0.56	0.65	0.36	373	7	22	25	14	25%	280	6	16	19	11
9	Elementary School	10 Acres	500 Students	1.02 (9)	0.17	0.12	-	-	510	85	60	-	-	95%	26	4	3	0	0
9	Community Center	10.5 Acres	114 KSF	22.88 (10)	0.87	0.45	0.60	1.16	2,616	99	51	69	133	75%	655	25	13	17	33
10	Single-Family	25 Acres	135 DU	9.57 (7)	0.19	0.56	0.65	0.36	1,292	26	76	88	49	25%	970	19	57	66	36
11	Single-Family	28.9 Acres	100 DU	9.57 (7)	0.19	0.56	0.65	0.36	957	19	56	65	36	25%	717	14	42	49	27
12	Golf Course	249 Acres	18 Holes	35.74 (12)	1.75	0.47	1.21	1.53	643	32	8	22	28	75%	161	8	2	5	7
13	Single-Family	23.1 Acres	131 DU	9.57 (7)	0.19	0.56	0.65	0.36	1,254	25	73	85	47	25%	940	19	55	64	35
14	Single-Family	20.3 Acres	106 DU	9.57 (7)	0.19	0.56	0.65	0.36	1,014	20	59	69	38	25%	760	15	45	52	29
15	Single-Family	44.8 Acres	155 DU	9.57 (7)	0.19	0.56	0.65	0.36	1,483	29	87	101	56	25%	1,113	22	65	76	42
16	Single-Family	14.3 Acres	78 DU	9.57 (7)	0.19	0.56	0.65	0.36	746	15	44	51	28	25%	561	11	33	38	21
17	Single-Family	12.2 Acres	70 DU	9.57 (7)	0.19	0.56	0.65	0.36	670	13	39	46	25	25%	502	10	29	34	19
18	Single-Family	12.9 Acres	91 DU	9.57 (7)	0.19	0.56	0.65	0.36	871	17	51	59	33	25%	653	13	38	44	25
19	Single-Family	10.9 Acres	60 DU	9.57 (7)	0.19	0.56	0.65	0.36	574	11	34	39	22	25%	431	9	25	--	--
20	Single-Family	24.4 Acres	86 DU	9.57 (7)	0.19	0.56	0.65	0.36	823	16	48	56	31	25%	617	12	36	42	23
21	Single-Family	13.6 Acres	98 DU	9.57 (7)	0.19	0.56	0.65	0.36	938	19	55	64	35	25%	702	14	41	48	26
22	Commercial	14.8 Acres	129 KSF	62.25 (4)	0.88	0.56	2.76	2.99	8,028	113	72	356	386	45%	4,415	62	40	196	212

- (1) From "Trip Generation", 6th Edition, 1997, Institute of Transportation Engineers (ITE).  
(2) Commercial land has a FAR of 0.15 to 0.20  
(3) 1000 Feet  
(4) ITE land use #820. (Shopping Center)  
(5) ITE land use #710. (General Office Building)  
(6) Dwelling units  
(7) ITE land use #210. (Single-family detached housing)  
(8) ITE land use #230. (Residential Condominium/Townhouse)  
(9) ITE land use #520 (Elementary School)  
(10) ITE land use #495. (Recreational Community Center)  
(11) Trips generated estimated by LSC.  
(12) ITE land use #430. (Golf course)

**Table 1 (continued)**  
**Trip Generation Estimate**  
**Murphy Creek Ranch**  
**Aurora, Colorado**  
Weekdays

Traffic Analysis Zones	Item	Area	Quantity	Trip Generation Rates/Unit (1)					Driveway Trips Generated					Percent Internal Trips	Net External Trips Generated				
				Trips/Day Weekday	Trips/Hour @ Peak-Hour				Trips/Day Weekday	Trips/Hour @ Peak-Hour					Trips/Day Weekday	Trips/Hour @ Peak-Hour			
					A.M.		P.M.			A.M.		P.M.				A.M.		P.M.	
					In	Out	In	Out		In	Out	In	Out			In	Out	In	Out
23	Multi-Family	17 Acres	178 DU	5.86 (8)	0.080	0.360	0.360	0.180	1,043	14	64	64	32	25%	783	11	48	48	24
24	Multi-Family	8.1 Acres	81 DU	5.86 (8)	0.080	0.360	0.360	0.180	475	6	29	29	15	25%	357	5	22	22	11
24	Fire Station	1.5 Acres	2 Acres	50 (11)	5.000	5.000	5.000	5.000	75	8	8	8	8	80%	16	1	1	1	1
25	Office	7.15 Acres	62 KSF	11.01 (5)	1.370	0.190	0.250	1.240	687	85	12	16	77	25%	516	64	9	12	58
25	Commercial	7.15 Acres	62 KSF	80.72 (4)	1.180	0.754	3.540	3.835	5,029	73	47	221	239	45%	2,767	40	26	121	131
26	Office	3.2 Acres	28 KSF	11.01 (5)	1.370	0.190	0.250	1.240	308	38	5	7	35	25%	232	29	4	5	26
27	Single-Family	16 Acres	92 DU	9.57 (7)	0.190	0.560	0.650	0.360	880	17	52	60	33	25%	660	13	39	45	25
28	Office	6 Acres	52 KSF	11.01 (5)	1.370	0.190	0.250	1.240	577	72	10	13	65	25%	433	54	7	10	49
28	Commercial	6 Acres	52 KSF	85.93 (4)	1.267	0.810	3.758	4.071	4,493	66	42	196	213	45%	2,472	36	23	108	117
29	Office	7.55 Acres	66 KSF	11.01 (5)	1.370	0.190	0.250	1.240	725	90	12	16	82	25%	545	68	9	12	61
29	Commercial	7.55 Acres	66 KSF	79.16 (4)	1.154	0.738	3.475	3.765	5,208	76	49	229	248	45%	2,865	42	27	126	136
30	Multi-Family	28.6 Acres	282 DU	5.86 (8)	0.080	0.360	0.360	0.180	1,652	23	102	102	51	25%	1,239	17	76	76	38
31	Multi-Family	20.5 Acres	314 DU	5.86 (8)	0.080	0.360	0.360	0.180	1,839	25	113	113	57	25%	1,379	19	85	85	42
32	Multi-Family	2.9 Acres	41 DU	5.86 (8)	0.080	0.360	0.360	0.180	240	3	15	15	7	25%	180	2	11	11	6
32	Community Park	12.7 Acres	13 Acres	5 (11)	0.800	0.200	0.750	0.750	64	10	3	10	10	75%	16	3	1	2	2
33	Multi-Family	10 Acres	146 DU	5.86 (8)	0.080	0.360	0.360	0.180	856	12	53	53	26	25%	642	9	39	39	20
33	Community Park	8 Acres	8 Acres	5 (11)	0.800	0.200	0.750	0.750	40	6	2	6	6	75%	10	2	0	2	2
34	Multi-Family	14.7 Acres	297 DU	5.86 (8)	0.080	0.360	0.360	0.180	1,740	24	107	107	53	25%	1,305	18	80	80	40
35	Single-Family	47.8 Acres	155 DU	9.57 (7)	0.190	0.560	0.650	0.360	1,483	29	87	101	56	25%	1,113	22	65	76	42
36	Single-Family	58.6 Acres	189 DU	9.57 (7)	0.190	0.560	0.650	0.360	1,809	36	106	123	68	25%	1,357	27	79	92	51
36	Community Park	3 Acres	3 Acres	5.00 (11)	0.800	0.200	0.750	0.750	14	2	1	2	2	80%	2	0	0	0	0
37	Single-Family	56.8 Acres	214 DU	9.57 (7)	0.190	0.560	0.650	0.360	2,048	41	120	139	77	25%	1,536	30	90	104	58
37	Multi-Family	11 Acres	200 DU	5.86 (8)	0.080	0.360	0.360	0.180	1,172	16	72	72	36	25%	879	12	54	54	27
38	Commercial	62 Acres	540 KSF	37.33 (4)	0.493	0.315	1.699	1.840	20,164	266	170	917	994	45%	11,090	146	94	505	547
	Totals	616.1 Acres 167.2 Acres	4,136 DU 1,006 KSF					Total	99,354	2,053	2,615	4,957	4,591		63,851	1,282	1,807	3,246	2,918

- (1) From "Trip Generation", 6th Edition, 1997, Institute of Transportation Engineers (ITE).
- (2) Commercial land has a FAR of 0.15 to 0.20
- (3) 1000 Feet
- (4) ITE land use #820. (Shopping Center)
- (5) ITE land use #710. (General Office Building)
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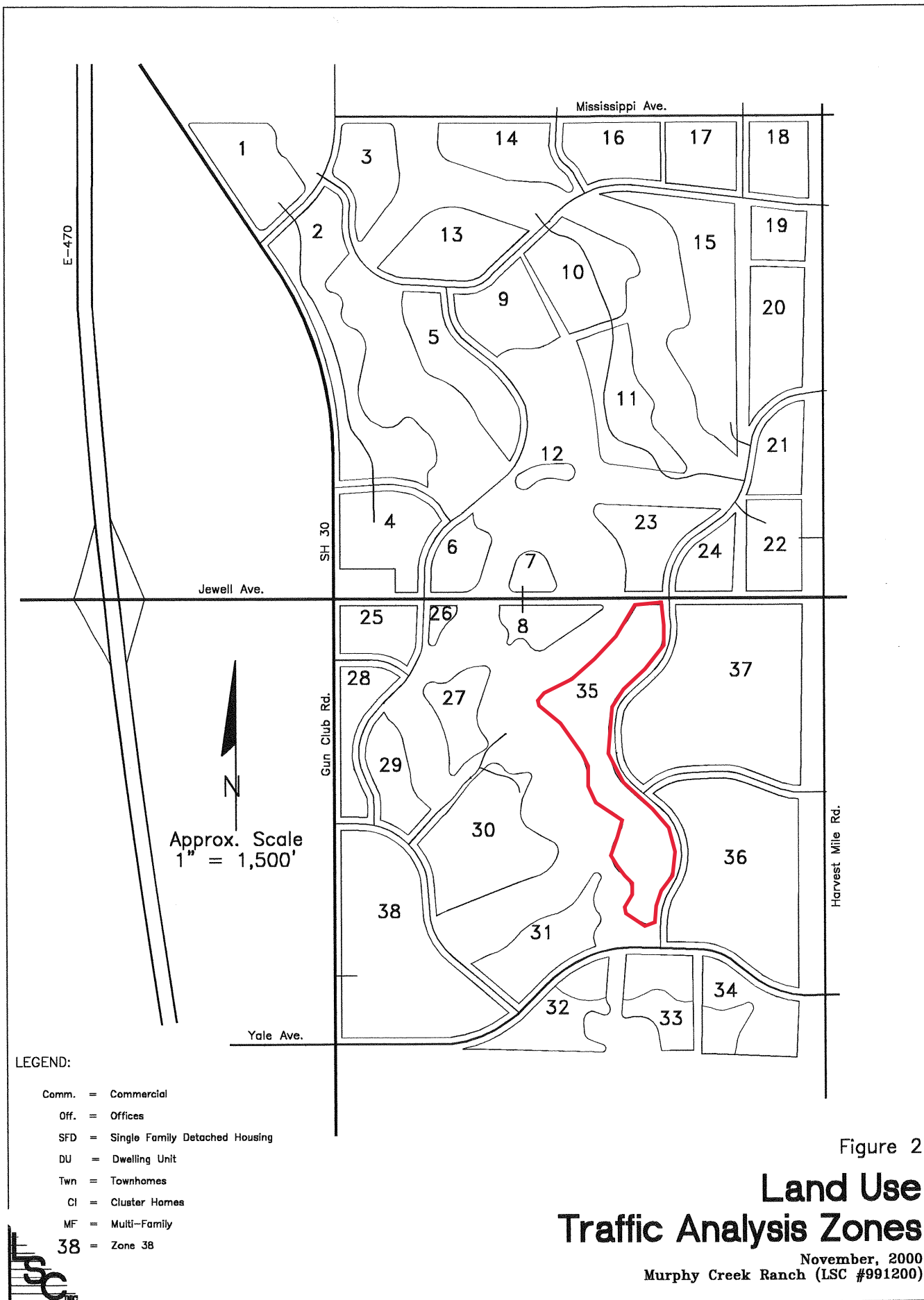


Figure 2

# Land Use Traffic Analysis Zones

November, 2000  
Murphy Creek Ranch (LSC #991200)

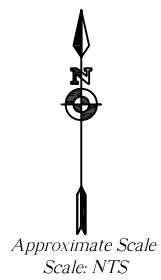
**Table 1**  
**ESTIMATED TRAFFIC GENERATION COMPARISON**  
**Murphy Creek Filing 7**  
**Aurora, CO**  
**LSC #190980; September, 2019**

Trip Generating Category	Quantity	Trip Generation Rates <sup>(1)</sup> <sup>(2)</sup>						Vehicle-Trips Generated				
		Average Weekday	AM Peak-Hour		PM Peak-Hour		Average Weekday	AM Peak-Hour		PM Peak-Hour		
		In	Out	In	Out	In	Out	In	Out	In	Out	
Land Use Assumed in the Traffic Study of Record per City Staff (November, 2000 <i>Murphy Creek Ranch TIA</i> by LSC)												
Single-Family Homes <sup>(3)</sup>	155 DU <sup>(4)</sup>	9.57	0.190	0.560	0.650	0.360	1,483	29	87	101	56	
Currently Proposed Land Use												
Single-Family Homes <sup>(3)</sup>	153 DU <sup>(4)</sup>	9.44	0.185	0.555	0.624	0.366	1,444	28	85	95	56	
Net Increase =							-39	-1	-2	-6	0	

Notes:

- (1) Source: *Trip Generation*, Institute of Transportation Engineers, 6th Edition, 1997 for previous studies.
- (2) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017 for current land use.
- (3) ITE Land Use 210 - Single-Family Detached Housing
- (4) DU = Dwelling Units





Note: All intersections are full movement unless noted otherwise.

Figure 1

## Site Plan

Murphy Creek Filing 7 (LSC #190980)