



May 31, 2024

Mr. Chris Fellows
 Windler Public Improvement Authority
 9155 E. Nicholls Ave, Suite 360
 Greenwood Village, CO 80112

**RE: Windler – Village North Neighborhood Traffic Conformance
 FHU Project No. 122259-01**

Dear Mr. Fellows:

Felsburg Holt & Ullevig (FHU) prepared a traffic impact study for the Windler Homestead development in July 2023. That report used the Institute of Transportation Engineers’ (ITE) publication *Trip Generation Manual, 11th Edition* (2021) to forecast vehicle-trips based on the land use types and sizes. Within that report the Village North Neighborhood illustrated in **Figure 1** included planning areas (PAs) 3, 17, and 15.22 acres of the 23.70-acre PA-2 which represent 64.2 percent of that planning area. The neighborhood is bounded by Denali Street to the east, 53rd Avenue to the south, Buchanan Street to the west, and 55th Avenue to the north. These PAs contemplated a combined 228 single family detached homes, 456 multifamily mid-rise units (64.2 percent of the 711 contemplated in PA-2), and 20,900 square feet of retail space. These parcels are now being contemplated as 97 single family detached homes, 228 single family attached homes, and 24,000 square feet of retail space.

The currently proposed site has also been analyzed using the ITE *Trip Generation Manual, 11th Edition* (2021) as it remains the most current publication. **Table 1** shows the equation and rates utilized in this analysis. **Table 2** shows the estimated trip generation for the current proposed site and a comparison to what was projected in the Windler Homestead Master TIS from July 2023.

Table 1. ITE Trip Generation Rates and Equations

Land Use	ITE Code	Unit	Daily	Peak	Equations & Rates	Distributions	
						In	Out
Single-family Detached Housing	210	DU	$\text{Ln}(T)=0.92*\text{Ln}(X)+2.68$	AM	$\text{Ln}(T)=0.91*\text{Ln}(T)+0.12$	26%	74%
				PM	$\text{Ln}(T)=0.94*\text{Ln}(X)+0.27$	63%	37%
Single-family Attached Housing	215	DU	$T=7.62*X-50.48$	AM	$T=0.52*X-5.7$	25%	75%
				PM	$T=0.60*X-3.93$	59%	41%
Strip Retail Plaza (<40 KSF)	822	KSF	$T=42.20*X+229.68$	AM	$\text{Ln}(T)=0.66*\text{Ln}(X)+1.84$	60%	40%
				PM	$\text{Ln}(T)=0.71*\text{Ln}(X)+2.72$	50%	50%

DU = Dwelling Units KSF = 1,000 SF

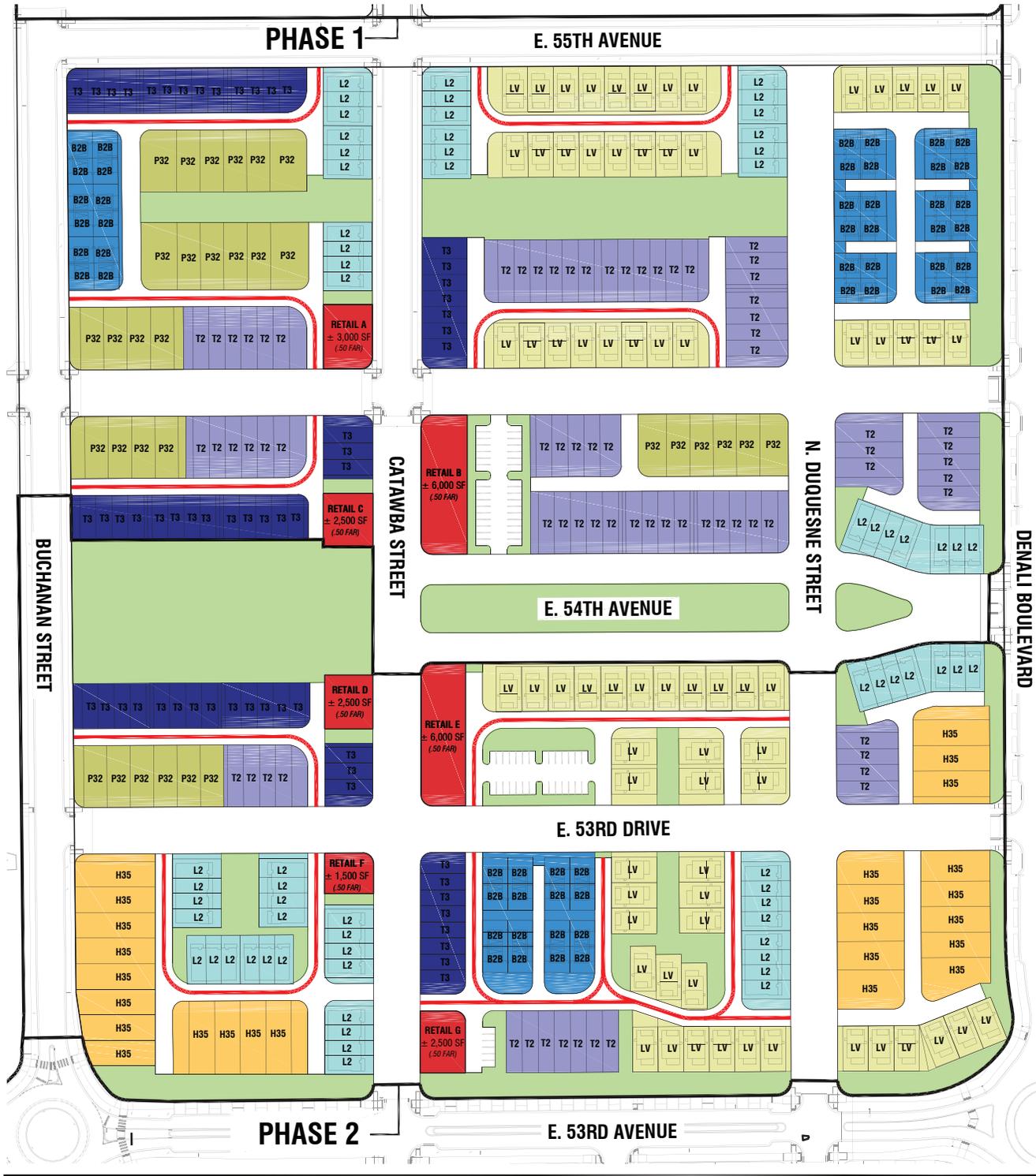


Table 2. Windler Village North Neighborhood Trip Generation

Land Use (Trip Generation Category)	Quantity	Daily Vehicle Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Current Village North Neighborhood Proposal								
Single Family Detached (#210)	97 DUs	981	18	54	72	61	36	97
Single Family Attached (#215)	228 DUs	1,687	28	85	113	78	55	133
Strip Retail Plaza (#822)	24 KSF	1,242	31	20	51	72	73	145
Subtotal		3,918	77	159	236	211	164	375
2023 Windler Master TIS								
64.2% of PA-2 Multifamily Low-Rise (#220)	457 DUs	2,975	37	119	156	132	78	210
PA-3 Single Family Detached (#210)	76 DUs	784	15	43	58	49	28	77
PA-3 Strip Retail Plaza (#822)	10 KSF	652	14	10	24	39	39	78
PA-17 Single Family Detached (#210)	152 DUs	1,483	27	82	109	93	54	147
PA-17 Strip Retail Plaza (#822)	10.9 KSF	690	15	11	26	41	42	83
Subtotal		6,584	108	265	373	354	241	595
Change from Previous Plan		-2,666	-31	-106	-127	-143	-77	-220
Percent Change		-40.5%	--	--	-36.7%	--	--	-37.0%

The comparison of trip generation indicates a decrease of 127 and 220 trips during the AM and PM peak hour respectively. These correspond to percentage decreases of 36.7 and 37.0 in those peak hours.

Conclusions

The study resulted in the following conclusions:

- The newly proposed Village North Neighborhood within Windler Homestead generates significantly less traffic as compared to the values analyzed in the master TIS. These decreases are approximately 2,665 daily trips and 125 and 220 trips in the AM and PM peak hours respectively. This equates to a roughly 40 percent decrease in daily traffic and 37 percent during the peak hours.
- It is not anticipated that any additional off-site roadway improvements will be needed, and that the Village North Neighborhood plan is in conformance with the previously assessed land use plan from the July 2023 Master TIS.
- Given the substantial reductions in trips it is believed that the remaining land area in PA-2 to the north of Village North fronting 56th Avenue can likely absorb a higher trip generating use such as retail or hotel while continuing to be in conformance with the July 2023 Master TIS.

Please let me know if you have any questions about this letter or need any additional information.



Philip Dunham, PE, PTOE
 Transportation Engineer