June 9, 2015

Paul Green, P.E.
Azure Green
409 East Pioneer
Puyallup, WA 98372

Subject: Fredrickson Town Center Comprehensive Plan Amendment

Mr. Green:

This letter provides supplemental information regarding the FRETOC comprehensive plan amendment.

The site has been the subject of several comprehensive traffic impact analysis to ascertain the effects on the localized street system with primary emphasis on the operation of the Canyon Road corridor and the 176th Street corridor. The various traffic analyses went through several iterations and was reviewed extensively by Pierce County traffic engineers and acceptable mitigation measures were established along with the substantial traffic impact fees associated with the development.

The change in use adding larger stores is expected to amount to a nominal change in traffic into and out of the site. A comparison of trip generation was made assuming a 190,000 square foot free standing super discount store in conjunction with 210,000 square feet of shopping center. The attached trip generation sheets show that under this scenario the PM peak hour traffic with unadjusted traffic is 1605 PM peak trips versus 1517 PM peak trips for a 400,000 square foot shopping center. The difference is 5.8 percent in project traffic.

The construction of the loop road through the FRETOC project also allows a significant opportunity for drivers traveling southbound to westbound to have a choice to avoid the intersection of 176th and Canyon road by passing through the FRETOC site. The driver choosing this route would make the right turn at the project's Canyon Road signal and then turn right at the project's 176th Street signal.

The nominal increase in traffic from the FRETOC center that includes a larger store is estimated to increase traffic volumes by less than one percent on the adjacent streets. Further reduction in trips caused when patrons and shoppers stay on site and avail themselves of additional opportunities could result in no additional trips at all from what has been analyzed as part of the previously approved traffic study. The result is a nominal to no effect on freight traffic to the Frederickson area.

The trip generation sheets are added to this letter.

Please call if you require anything further.

Sincerely,

Gregary B. Heath, P.E.

Detailed Average Rate Trip Calculations
For 400 Th.Sq.Ft. GLA of Shopping Center(820) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	41.80	0.00	1.00	16722
7-9 AM Peak Hour Enter	0.56	0.00	1.00	225
7-9 AM Peak Hour Exit	0.34	0.00	1.00	138
7-9 AM Peak Hour Total	0.91	0.00	1.00	363
4-6 PM Peak Hour Enter	1.82	0.00	1.00	728
4-6 PM Peak Hour Exit	1.97	0.00	1.00	789
4-6 PM Peak Hour Total	3.79	0.00	1.00	1517
AM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
AM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
AM Pk Hr, Generator, Total	0.00	0.00	1.00	0
PM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
PM Pk Hr, Generator, Total	0.00	0.00	1.00	0
Saturday 2-Way Volume	55.32	0.00	1.00	22129
Saturday Peak Hour Enter	2.80	0.00	1.00	1119
Saturday Peak Hour Exit	2.58	0.00	1.00	1034
Saturday Peak Hour Total	5.38	0.00	1.00	2153
Sunday 2-Way Volume	26.17	0.00	1.00	10466
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .65LN(X) + 5.83, R^2 = 0.79
7-9 AM Peak Hr. Total:	LN(T) = .61LN(X) + 2.24
	R^2 = 0.56 , 0.62 Enter, 0.38 Exit
4-6 PM Peak Hr. Total:	LN(T) = .67LN(X) + 3.31
	R^2 = 0.81 , 0.48 Enter, 0.52 Exit
AM Gen Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
PM Gen Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
Sat. 2-Way Volume:	LN(T) = .63LN(X) + 6.23, R^2 = 0.82
Sat. Pk Hr. Total:	LN(T) = .65LN(X) + 3.78
	R^2 = 0.83 , 0.52 Enter, 0.48 Exit
Sun. 2-Way Volume:	T = 15.63(X) + 4214.46, R^2 = 0.52
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Summary of Multi-Use Trip Generation
Average Weekday Driveway Volumes (Unadjusted for Internal Trips)

Project: Open Date:
Phase: Analysis Date:

Description:

ITE: Land Use	24 Hour Two-Way Volume	AM Pk Hour Enter	AM Pk Hour Exit	PM Pk Hour Enter	PM Pk Hour Exit
813: Free-Standing Discount Superstore 190 Th.Sq.Ft. GFA [R]	9643	198	154	405	421
820: Shopping Center 210 Th.Sq.Ft. GLA [R]	8967	126	76	374	405
Total Driveway Volume	18610	324	230	779	826
Total Peak Hour Pass-By Trips		0	0	240	256
Total Peak Hour Vol. Added to Adjacent Streets		324	230	539	570

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012