CITY OF
West Linn

Date: November 26, 2014

To: John Kovash, Mayor
Members, West Linn City Council

From: Chris Kerr
Community Development Director

Subject: Trip Generation analysis for Arch Bridge / Bolton Master Plan

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Staff asked the Traffic Engineering office of Kittleson & Associaties, Inc. to provide a comparison of the potential trip generation of the Arch Bridge are under the current zoning to the development presumed under the Master Plan. That report is attached for your review.

The purpose of the analysis was to determine if the anticipated traffic impacts under the proposed Plan were significantly greater or lesser than development that is expected under the current conditions. Because it is difficult to presume the exact development that is expected at this location over time, the consultant recommended providing a range at both "low-density" and "high density" development scenarios in order to recognize the potential range of uses and intensities that may occur. Table 4 of the document is shown below:

Table 4 Trip Generation Scenario Summary

Land Use Scenario	Daily Trips	PM Peak Hour		
		Total	In	Out
Existing Zoning (Low Density)	4,188	387	192	195
Existing Zoning (High Density)	5,461	502	243	258
Draft Town Center Plan	3,375	291	152	139

The report concludes that the traffic impacts for the proposed Arch Bridge development are expected provides a significant decrease in traffic (both daily trips and peak hour) compared to expected development under the existing zoning.

Attachment

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

November 26, 2014 Project #: 18470.0

Chris Kerr
City of West Linn
22500 Salamo Road
West Linn, Oregon 97068

RE: Arch Bridge/Bolton Town Center Trip Generation – West Linn, Oregon

Dear Chris,

This letter provides a comparison of the potential trip generation of the Arch Bridge/Bolton Town Center area under existing zoning and per the draft Town Center Plan. A low-density and a high-density scenario were developed and evaluated for the existing zoning which includes areas of residential, commercial, and industrial zoning. The scenarios were developed jointly with City and generally assume a commercial area floor-area-ratio (FAR) of 0.25 for the low-density scenario and 0.5 for the high-density scenario. The trip generation estimates are based on the *Trip Generation Manual, 9th Edition*, published by the Institute of Transportation Engineers (ITE).

The trip generation assumptions for the low-density scenario under existing zoning are shown Table 1. As shown in Table 1, the area could generate approximately 4,200 net new daily trips and 400 net new weekday p.m. peak hour trips under existing zoning based on a low-density development scenario.

Table 1 Trip Generation Estimate – Existing Zoning (Low Density)

Land Use	ITE Code	Size (sq. ft. or units)	Daily Trips	PM Peak Hour		
				Total	In	Out
Single Family Homes	210	15	143	15	9	6
Apartment	220	18	120	11	7	4
Shopping Center *Pass-by Trips Weekday & PM (34%)*	820	25,000	1,068 (363)	93 *(32)*	45 *(16)*	48 *(16)*
Quality Restaurant *Pass-by Trips (44%)*	931	6,500	585 (257)	49 *(22)*	33 *(11)*	16 *(11)*
Fast Food Restaurant w/ Drive-Through *Pass-by Trips (49%)*	934	3,500	1,642 (805)	114 *(56)*	59 *(28)*	55 *(28)*
Bank w/ Drive-Thru *Pass-by Trips (47%)*	912	4,000	593 (279)	97 *(46)*	49 *(23)*	48 *(23)*
Fuel Station w/ Convenience Market and Car Wash *Pass-by Trips (62%)*	946	12	1,834 (1,137)	166 *(103)*	85 *(52)*	81 *(52)*
General Office Space	710	10,000	110	15	3	12
Medical Office Space	720	10,000	361	36	10	26
Auto Care Center	942	25,000	780	78	37	41
Auto Sales	841	5,000	162	13	5	8
Gross New Trips *Internal Trips* *Pass-by Trips*			7,397 (369) (2,841)	*687* *(40)* *(259)*	*342* *(20)* *(130)*	*345* *(20)* *(130)*
Net New Trips			**4,188**	**387**	**192**	**195**

The trip generation assumptions for the high-density scenario under existing zoning are shown Table 2. As shown in Table 2, the area could generate approximately 5,500 net new daily trips and 500 net new weekday p.m. peak hour trips under existing zoning based on a high-density development scenario.

Table 2 Trip Generation Estimate – Existing Zoning (High Density)

Land Use	ITE Code	Size (sq. ft. or units)	Daily Trips	PM Peak Hour		
				Total	In	Out
Single Family Homes	210	15	143	15	9	6
Apartment	220	18	120	11	7	4
Shopping Center *Pass-by Trips Weekday & PM (34%)*	820	40,000	1,708 (581)	148 *(50)*	71 *(25)*	77 *(25)*
Quality Restaurant *Pass-by Trips (44%)*	931	13,000	1,169 (514)	97 *(43)*	65 *(22)*	32 *(22)*
Fast Food Restaurant *Pass-by Trips (43%)*	934	3,500	1,642 (805)	114 *(56)*	59 *(28)*	55 *(28)*
Bank w/ Drive-Thru *Pass-by Trips (47%)*	912	4,000	593 (279)	97 *(46)*	49 *(23)*	48 *(23)*
Fuel Station w/ Convenience Market and Car Wash *Pass-by Trips (62%)*	946	12	1,834 (1,137)	166 *(103)*	85 *(52)*	81 *(52)*
Hotel (w/ conference space)	310	100	817	60	31	29
General Office Space	710	20,000	221	30	5	25
Medical Office Space	720	20,000	723	71	20	51
Auto Care Center	942	25,000	780	78	37	41
Auto Sales	841	5,000	162	13	5	8
Gross New Trips *Internal Trips* *Pass-by Trips*			9,912 (1,135) (3,315)	*901* *(101)* *(298)*	*443* *(51)* *(149)*	*458* *(51)* *(149)*
Net New Trips			**5,461**	**502**	**243**	**258**

The trip generation assumptions for draft Town Center Plan scenario are shown Table 3. As shown in Table 3, the draft Town Center Plan is estimated to generate approximately 3,400 net new daily trips and 300 net new weekday p.m. peak hour trips.

Table 3 Trip Generation Estimate – Draft Town Center Plan

Land Use	ITE Code	Size (sq. ft. or units)	Daily Trips	PM Peak Hour		
				Total	In	Out
Senior Adult Housing - Attached	252	165	568	41	22	19
Residential Condos/Townhouse	230	160	930	83	56	27
Shopping Center *Pass-by Trips Weekday & PM (34%)*	820	8,600	367 (125)	32 *(11)*	15 *(6)*	17 *(6)*
Quality Restaurant *Pass-by Trips (44%)*	931	4,300	387 (170)	32 *(14)*	21 *(7)*	11 *(7)*
Quality Restaurant *Pass-by Trips (44%)*	931	4,300	387 (170)	32 *(14)*	21 *(7)*	11 *(7)*
Hotel (w/ conference space)	310	100	817	60	31	29
General Office Space	710	15,000	165	22	4	18
Medical Office Space	720	15,000	542	54	15	39
Gross New Trips *Internal Trips* *Pass-by Trips*			4,162 (322) (465)	*356* *(26)* *(39)*	*185* *(13)* *(20)*	*171* *(13)* *(20)*
Net New Trips			**3,375**	**291**	**152**	**139**

As shown in Table 4, the draft Town Center Plan scenario is anticipated to generate fewer daily and weekday p.m. peak hour trips than could be generated by develop within the Town Center Plan area under existing zoning based on both a low-density or high-density development plan allowed by the existing zoning code.

Table 4 Trip Generation Scenario Summary

Land Use Scenario	Daily Trips	PM Peak Hour		
		Total	In	Out
Existing Zoning (Low Density)	4,188	387	192	195
Existing Zoning (High Density)	5,461	502	243	258
Draft Town Center Plan	3,375	291	152	139

If you have any additional questions related to this analysis, please call me at (503) 228-5230.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Susan Wright, P.E.
Associate Engineer