

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

February 10, 2015

Mr. Pete Walter
City of Oregon City
PO Box 3040
Oregon City, OR 97045

**SUBJECT: REVIEW OF TRANSPORTATION IMPACTS – APPEAL OF
 BEAVERCREEK MIXED-USE DEVELOPMENT – AP14-01**

Dear Mr. Walter:

In response to your request, I have reviewed various materials related to the appeal of the Beavercreek Mixed-Use Development under SP14-01. Materials I reviewed included materials supplied by the appellant, the Traffic Impact Analysis (TIA) in support of the proposed mixed-use development and materials prepared in support of the rezoning of the property in 2010 under ZC10-01.

In this letter, I am clarifying and expanding upon my November 12, 2014 letter in which I summarized my conclusions relating to my review of the proposal under SP14-01 to develop the 9.73-acre site is adjacent to Beavercreek Road in the vicinity of Meyers Road.

Trip Generation. In my November 12, 2014 comment letter, I took exception to the specific category of land use used by the applicant's engineer to estimate trips generated by the development. In my letter, I proposed an alternative category and developed a new estimate of trip generation. I stated that "Using this category [ITE land use category 220], the trip generation estimates are approximately 50 percent higher. Using category 220 the calculated trip generation is 100 AM peak hour trips; 127 PM peak hour trips; and 1248 weekday trips. I do not think the effect would be significant in the operations at any intersection."

This comment about the trip generation may have been misinterpreted to suggest that traffic impacts from the development will be much more severe than analyzed by the applicant. In fact, the difference between what was analyzed by the applicant and what I think is more appropriate is fairly modest. In any case, the number of trips generated by the proposed mixed use development, under either my calculations or that of the applicant, is less than used to support the rezoning of the property in 2010.

Because of the appeal, I have also reviewed the impact of a change in trip generation. I have definitively concluded there is no significant effect on the traffic operations due to the modest change in trip generation resulting from the use of my proposed land use category

for calculating trips generated by the development. The difference in trip generation that I think is most appropriate for the calculation of trips and that used by the applicant is too small to have any significant effect on the intersections analyzed for impacts.

Intersection Performance. The appellant raised questions about the adequacy of Beaver Creek Road so I again reviewed the TIA to verify my original conclusions about the performance of the intersections on Beaver Creek Road. In the TIA, the following intersections along Beaver Creek Road were analyzed:

- Highway 213/Beaver Creek Road
- Beaver Creek Road/Maple Lane Road
- Beaver Creek Road/Clairmont Drive
- Beaver Creek Road/Loder Road
- Beaver Creek Road/Meyers Road
- Beaver Creek Road/Glen Oak Road

As indicated in my November 12, 2014 comment letter, special rules apply to the intersection of Highway 213 and Beaver Creek Road. Under OCMC 12.04.205 D, this intersection is exempt from the normal mobility standard of 0.99.

Even with the additional traffic associated with the proposed development, the other five intersections are shown to meet the city's adopted performance standard. The predicted performance of these intersections is shown in Table 1, below:

Table 1. Intersection Performance with Development (2016)

Intersection	Performance Standard (v/c)	AM Peak Hour v/c	PM Peak Hour v/c
Beaver Creek Road/Maple Lane Road	0.99	0.67	0.65
Beaver Creek Road/Clairmont Drive	0.99	0.83	0.82
Beaver Creek Road/Loder Road	0.99	0.57	0.10
Beaver Creek Road/Meyers Road	0.99	0.87	0.87
Beaver Creek Road/Glen Oak Road	0.99	0.60	0.48

Source: December 13, 2013 TIA, Figure 7

As indicated in Table 1, the performance of these intersections easily meets the adopted performance standard of 0.99.

Beaver Creek Road Corridor. Some road users object to frequent stops in a corridor due to traffic signals or slowing of traffic during peak periods and believe this represents an unsatisfactory condition. Following the lead of Metro, the region's lead transportation planning agency, the city adopted a performance standard based on *intersection* operations, specifically the volume-to-capacity ratio or v/c. The standards adopted by the

city were thoroughly vetted during the public review process undertaken in connection with the Transportation System Plan (TSP). The v/c standard was adopted in the TSP and further memorialized in the Oregon City Municipal Code in section 12.04.205.

The appellant notes that "Beavercreek Rd, despite being crowded already, isn't getting a new lane to handle the new traffic volumes." As I describe above, the performance standard is predicted to be met at key intersections along Beavercreek Road so no increase in capacity, such as a new lane, is warranted. In addition, it is also worth noting that the TSP does not include widening of Beavercreek Road. TSP Projects D81 specifies upgrading of Beavercreek Road between Clairmont Drive and Meyers Road to an "industrial major arterial cross-section." TSP Projects D82 specifies upgrading of Beavercreek Road between Meyers Road and the urban growth boundary to a "residential major arterial cross-section." Note that in the TSP the term "upgrading" is different from the use of "widening" to describe a project. The term "widening" is only used in connection with TSP projects such as D77, a project on OR 213 which specifies "widen to five lanes (two travel lanes in each direction with a center turn lane/median) with bike lanes and sidewalks." The TSP does not include widening Beavercreek Road to a five-lane cross-section.

Accounting for Future Development. In the TIA prepared for application SP14-01, the applicant's engineer accounted for regional traffic growth by applying a one-percent annual growth rate for each year prior to the project's completion. This approach is consistent with the requirements of the city's *Guidelines for Traffic Impact Analysis*. In the prior study undertaken for the rezoning of the property in 2010 (ZC10-01), the applicant's engineer used a "planning horizon year" of 2027 to analyze the impact of the proposed rezoning of the property. This analysis was also determined to be consistent with the city's *Guidelines for Traffic Impact Analysis* and satisfied ODOT and the city with respect to the Transportation Planning Rule, OAR 660-12. In summary, the applicant did account for planned growth in the region when analyzing the transportation impacts.

Access, Site Circulation and Intersection Spacing. As I noted in my November 12, 2014, the TIA and conceptual sight plan indicate Meyers Road will be extended east of Beavercreek Road through this site consistent with adopted plans. The conceptual site plan indicates local streets will be extended to the property boundaries allowing further extension when adjoining properties are developed. I also noted that Intersection spacing along Meyers Road to the east of Beavercreek Road appears appropriate given the configuration of the parcel and the opportunities for further connections with adjoining parcels.

Conclusion

As I indicated in my November 12, 2014 comment letter, I find the TIA meets city requirements. The TIA indicates that development will cause modest increases in traffic.

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With the exception of Highway 213/Beavercreek Road, mobility standards will be met at all locations with the development in year 2016. This intersection is, however, allowed under the special provisions of OCMC 12.04.205 D to exceed v/c 0.99.

I found nothing in the appellant's materials that leads me to alter my conclusion that the transportation system is adequate to accommodate the development or that it will be made adequate with the conditions of approval that I recommended and that were adopted by the city in the approvals associated with ZC10-01 and SP14-01.

If you have any questions or need any further information concerning this review, please contact me at replinger-associates@comcast.net.

Sincerely,



John Replinger, PE
Principal

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