

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

April 23, 2019

Ms. Kelly Reid
City of Oregon City
PO Box 3040
Oregon City, OR 97045

SUBJECT: REVIEW OF TRANSPORTATION IMPACT STUDY – OREGON CITY PUBLIC SAFETY BUILDING – GLUA19-11

Dear Ms. Reid:

In response to your request, I have reviewed the materials submitted in support of the proposed development of a new public safety building for the City of Oregon City. The relevant materials included the site plan and the Transportation Impact Study (TIS). The TIS is dated March 28, 2019 and was prepared under the direction of Christopher Brehmer, PE of Kittelson & Associates.

The proposed development is located west of Linn Avenue and north of Warner Parrott Road. The site was formerly occupied by the Mt. Pleasant Elementary School. A part of the site is currently occupied by city offices. The main building formerly used by the elementary school will be removed and replaced by a new city office building serving public safety functions.

A key factor related to the site is the trip cap that was established in connection with the rezoning of the entire property. The rezoning (PZ17-01) established a trip cap for the campus based on the prior elementary school use.

The TIS provides a basis upon which the development proposal can be evaluated for transportation impacts.

Comments

1. Study Area. The study addresses the appropriate intersections. The engineer evaluated traffic patterns and traffic volumes and evaluated five locations. The key locations were:

- Warner Parrot Road/Warner-Milne Road/Linn Avenue/Leland Road
- Warner Parrott Road/S Central Point Road
- Site driveway to Linn Avenue (new)
- Two site driveways to Warner Parrott Road (existing)

The study area is appropriate.

- 2. Traffic Counts.** The traffic counts were conducted in March 2019 at the intersections identified in #1, above. Traffic counts were conducted during the AM and PM peak periods. Schools, including the private school utilizing the former Mt. Pleasant Elementary School, were in session. The base year traffic volumes appear reasonable.
- 3. Trip Generation.** As described above, the entire property under city ownership is subject to a trip cap. The initial city office building utilizes part of that trip cap; the new public safety building adds additional trips. The TIS presents information on trip generation from the existing office building, the public safety building, and the trip cap. The trip generation rates for the public safety building were taken from studies of similar facilities in the metro region. These rates were documented in a report in June 2016. The combination of the existing city offices and the new public safety building were calculated to fall below the trip cap established for the AM and PM peak hours under the provisions of PZ17-01. The total predicted trip generation for the city development is 142 in the AM peak hour and 129 in the PM peak hour. These values are below the 238 AM peak hour and 143 PM peak hour trips established with the trip cap. The trip generation is within allowable limits.
- 4. Trip Distribution.** The engineer's trip distribution was based on an analysis of existing traffic patterns and likely origins and destinations throughout the city. The distribution shows 30 percent of traffic going to and from the east on Warner Milne Road; 20 percent to and from the west on Warner Parrot Road; 20 percent to and from the north on Linn Avenue; 20 percent to and from the south on Leland Road; and 10 percent to and from the southwest on S Central Point Road.

For access to and from the site, the engineer assigns most of the traffic to the access on Warner Parrott Road; the access on Linn Avenue is a gated access used by official vehicles only.

The distribution of trips at the site access points and the general distribution to major streets appear reasonable.
- 5. Traffic Growth.** To account for background traffic growth, the traffic counts were adjusted by two percent per year through 2020, the year associated with occupancy of the facility. The traffic growth assumptions and methodology appear reasonable.
- 6. Analysis.** Traffic volumes were calculated for the intersections described in #1, above. At each location, the level of service (LOS) and delay calculations and the volume-to-capacity (v/c) ratios were provided to assess traffic operations relative to the city's

operational standards. The analysis was undertaken for the AM and PM peak hours and included year 2019 existing conditions, 2020 background conditions, and year 2020 total traffic conditions.

According to the analysis, all study area intersections are predicted to meet city performance standards in 2020 under total traffic conditions with the new facility. The performance of the intersection of Warner Parrot/Warner Milne/Linn/Leland and the intersection of Warner Parrott/S Leland Road are expected to deteriorate slightly, but both will meet standards. The northbound left turn from S Central Point Road to westbound Warner Parrott Road will experience increased delays especially during the PM peak hour. However, adopted city code has no performance standards for movements from this approach to the intersection. The long-term plan is to eliminate left turns at this location in connection with a planned roundabout at the intersection of Warner Parrot/Warner Milne/Linn/Leland.

Site driveways are also predicted to operate acceptably with plenty of space for on-site queues, which are predicted to be minimal.

Each intersection will meet applicable operational standards. The engineer concluded no mitigation measures were necessary. I concur with his conclusions.

- 7. Turn Lanes at Site Entrance(s).** A center, left-turn lane is provided on Warner Parrott Road to provide access to the site. Turning movements at the access on Linn Avenue are so low that a turn lane is not warranted.
- 8. Crash Information.** The TIS provides crash information for the most recent five-year period for the locations identified in #1, above. There were no reported crashes at the site driveways on Warner Parrott Road. There were 15 reported crashes at the intersection of Warner Parrot/Warner Milne/Linn/Leland and 9 reported crashes at S Central Point/Warner Parrott Road. This produced a relatively high crash rate at the intersection of S Central Point/Warner Parrott Road. The engineer performed additional analysis of this intersection and determined that left turns from S Central Point Road to Warner Parrott Road accounted for a high proportion of crashes. The proposed development will add few vehicles to this problematic movement. As noted in the TIS, the solution identified in the Transportation System Plan to this problem is the elimination of this left-turn movement in connection with a roundabout at the intersection of Warner Parrot/Warner Milne/Linn/Leland. The engineer concludes there are no other trends or patterns that warrant additional analysis. I concur.
- 9. Pedestrian and Bicycle Facilities.** The TIS describes pedestrian and bicycle facilities in the area. The TIS notes the presence of crossings, signing, and school speed zones that

will not be appropriate with the discontinuation of school activities at the site. The engineer recommends the City consider removing the school speed zones and removing or reconfiguring the enhanced School Area pedestrian crossings associated with the former school in conjunction with the proposed site redevelopment. I concur with the engineer's recommendation.

10. Site Plan and Access. The two existing site access points on Warner Parrott Road will be retained for general traffic access to the public safety building and the existing city offices. A new access on Linn Avenue will be constructed to provide secure access via a gate to a restricted parking area. The access points are appropriate. Details about the gated access were not provided. The gate should be placed such that vehicles entering or exiting the secured parking area will not block the sidewalk along Linn Avenue while the gate is being operated.

On-site circulation, queue areas for exiting vehicles and site access locations appear appropriate. Site driveways should be constructed or reconstructed to city standards.

11. Intersection Spacing. No new intersections would be created by this development proposal.

12. Sight Distance. The engineer recommended site access points be developed to assure that adequate sight distance is maintained. Fencing, vegetation, signing and related structures should be located to avoid unnecessarily restricting sight distance. As noted in #10, above, gates and fencing at the new access on Linn Avenue should be placed to avoid interference with the sidewalk along Linn Avenue and visibility for exiting vehicles. There do not appear to be any impediments to providing adequate sight distance.

13. Consistency with the Transportation System Plan (TSP). The TIS notes the inclusion in the TSP of a roundabout at the intersection of Warner Parrot/Warner Milne/Linn/Leland. This is an unfunded project. The site frontage appears to meet applicable standards or will be improved in connection with the project.

14. Conclusions and Recommendations. The engineer concludes that traffic operations would be adequate at all analyzed intersections. He concludes no mitigation is needed for traffic operations. He concludes no safety mitigation is necessary. The engineer recommends that the City consider removing the school speed zones and removing or reconfiguring the enhanced School Area pedestrian crossings associated with the former school in conjunction with the proposed site redevelopment. I concur with the engineer's recommendation.

Conclusion and Recommendations

I find that the TIS provides an adequate basis upon which to assess the impacts of the proposed development. I agree that off-site mitigation for traffic impacts or safety issues is not required.

I recommend that the city remove the enhanced school area pedestrian crossing of Warner Parrott Road about 700 feet west of the Warner Parrot/Warner Milne/Linn/Leland intersection. This includes removal of pavement markings and signing along Warner Parrott Road. I recommend that the signing for the school pedestrian crossings on Linn Avenue be removed. Pavement markings for the crossings such as those at Williams Street can be retained to facilitate access to the bus stops in the area. I further recommend that the school speed zones on Warner Parrott Road and on Linn Avenue be discontinued.

For the new Linn Avenue access, I recommend that gate be placed such that vehicles entering or exiting the secured parking area will not block the sidewalk along Linn Avenue while the gate is being operated.

For all site access points, I recommend fencing, vegetation, signing and related structures be located and maintained to avoid unnecessarily restricting sight distance. I recommend that site driveways be constructed or reconstructed to meet city standards.

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

Sincerely,

A handwritten signature in black ink that reads "John Replinger". The signature is written in a cursive, flowing style.

John Replinger, PE
Principal