



DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DEVELOPMENT SERVICES BUILDING

150 BEAVERCREEK ROAD | OREGON CITY, OR 97045

MEMORANDUM

TO: City of Oregon City, Planning Division
FROM: Deana Mulder, Clackamas County Engineering, Development Review Coordinator
DATE: May 3, 2018, revised from the May 3, 2018 memo
RE: Land Use Case File HR18-03, 15831 Harley Ave
22-unit Townhome development project with frontage on Forsythe Road.
22E20DD00601

This office has the following comments pertaining to this proposal:

This office has no comment for the historical review in relation to the proposal; however, when the site plan and design review applications are proposed we have the following comments:

Facts and Findings:

1. The Townhome project site has frontage on Forsythe Road which is a minor arterial roadway under the jurisdiction of Clackamas County. *Clackamas County's Roadway Standards* indicate that minor arterial roadways shall have a right-of-way width that ranges from 60 to 134 feet, depending on the planned road section. The minimum urban minor arterial roadway section calls for a 36-foot paved width, typically requiring 60 feet of right-of-way. The existing one half right-of-way width along the project frontage appears to be 25 feet. The applicant will be required to dedicate at least 5 feet of right-of-way on Forsythe Road and shall verify by survey that a 30-foot wide, one-half right-of-way width will be provided along the entire site frontage. If the city's planned street section for Forsythe Road is wider than the county's minimum, the city section is acceptable.
2. Minimum improvements on the Forsythe Road frontage consistent with Clackamas County's Roadway Standards include, but are not limited to, a half-street improvement, pavement widening, curb, landscape strip and sidewalk or a shared use path with ADA access and drainage facilities. The existing condition SE Forsythe Road is not in good or better condition. A condition is warranted for a full half street improvement and any necessary dig out and replacement of failed road sections.
3. The existing utility facilities, stop sign at Harley and the stop sign ahead warning sign will likely need to be relocated to provide for the half street improvements.

4. There could be steep slopes behind the sidewalk, a condition is warranted to not exceed the maximum 2:1 slope and to vegetate it for permanent erosion control.
5. Clackamas County standards restrict access to arterial roadways, requiring access to be taken from lower functional classification roads when available. The proposed site has frontage on Harley Avenue which is a lower classification local roadways. If a second access is required by the fire department, the proposed Forsythe Road access is acceptable for emergency access only. A condition is warranted to restrict use of the access to Forsythe road with a gate or other acceptable means to prohibit all vehicular access except for fire access.
6. It would be great if the applicant provided more detailed and dimensioned plans indicating the proposed improvements. This application was not clear about the 12' wide shared use path that would reduce the road pavement width to 12' wide. I believe they are shown but not dimensioned or labeled.

Given the current proposal and discussion in pre-application meeting notes this office will recommend the following conditions of approval for the site plan and design review application but they may change with the application if the application is different than proposed for the pre-application and meeting notes.

1. The applicant shall have their surveyor verify the existing right of way width of Forsythe Road and provide the additional right of way dedication to provide a minimum 30 feet wide from centerline of the right of way. If the right of way is not currently monumented, the applicant shall have their surveyor monument the centerline in compliance with the County Surveyor's requirements. Include a radius in the right of way dedication at the corner of Forsythe Road and Harley Avenue to encompass all roadway improvements plus 6".
 - a. All dedications or easements for Forsythe Road shall be by separate document unless provided on a recorded plat. The applicant will need to have their surveyor prepare the required exhibits to provide to Sharan Hamms-LaDuca in DTD Engineering for review. They can be emailed to Shams-LaDuca@clackamas.us. Examples of the exhibits are available from Sharan.
 - b. Grant public utility easement as necessary for relocation of utilities. The easement will be processed through the County with necessary exhibits prepared by a surveyor. The engineer will need to work with each utility separately to determine where to relocate facilities and if an easement is necessary.
2. Prior to commencement of any work within the right of way of Forsythe Road, a Development Permit and a Utility Placement Permit are required to be obtained from Clackamas County for all work performed in the road right-of-way. The plans will need to require CDF or CDF Alternate backfill for all utility trenches within Forsythe Road.
3. The applicant shall have the Forsythe Road half street improvements designed and constructed per Clackamas County Standards. The improvements shall consist of:
 - a. Full half street to centerline of the right of way to include:
 - i. Dig out and repair any isolated road failure along the property frontage;

- ii. A 2" pavement overlay of the existing pavement to include minimum 50' taper grinds at both ends to provide a butt joint and a minimum 2" overlay of the half street along the entire frontage.
- iii. Roadway widening to provide;
 - 1. 18' of paved road section from centerline of the right of way to a new standard curb per Standard Drawing C100 for arterial road structural section and S100 for standard curb or 12' if a 12' wide shared concrete path is constructed behind the landscape strip. The shared use path design needs to meet City of Oregon City's shared use path requirements.
<http://www.clackamas.us/engineering/documents/roadway/c1002013.pdf>
http://www.clackamas.us/engineering/documents/roadway/s100_2013.pdf
 - 2. Consistent cross slopes from centerline between 2% and 4% across the entire frontage with off-site blended transitions at both ends with 1" in 50 feet or longer to blend back to existing cross slopes.
 - 3. Five foot wide planter strip, excluding the curb width, with top soil, street trees and ground cover. The street trees and ground cover shall be on the County approved street tree and ground cover list. The lists can be provided upon request to Deana Mulder – deanam@clackamas.us
 - a. The street trees and ground cover are required to be maintained by the adjacent property owner. Street trees shall maintain a 13.5' vertical clearance over Forsythe Road and an 8' vertical clearance over the sidewalk.
 - 4. Five foot wide unobstructed sidewalk per Standard Drawing S900 set back of the 5' landscape strip.
 - 5. Construct maximum 2:1 cut slopes within the right of way of Forsythe Road. Cut slopes shall be vegetated for permanent erosion control. Same with fill slopes if they are created.
 - 6. The westerly end of the sidewalk or shared use path shall have ADA access with either a concrete transition back down to a paved road shoulder or a mid-block ramp constructed with concrete. The engineer shall provide all elevations and dimensions necessary to review for ADA compliance. It is noted that the existing road grade is 12% in this location and that a transition would exceed that; however, the engineer will need to work with the elevations and design for the best possible transition grade or a mid-block ramp with a landing.
 - 7. Provide an end of path or sidewalk signage acceptable to Clackamas County DTD Engineering.
 - 8. The end of the path or sidewalk will need to be designed and constructed to the satisfaction of Clackamas County.
 - a. Review the end of the path to determine if a curb or other barrier would add any protection from path users falling off the end if a transition is not possible due to lack of right of way.

9. Design and construct Dual ADA ramps at Forsythe Road and Harley Avenue. The designer shall use ODOT Detail 1720 for a guideline and include maximum grade and slopes of:

<i>Feature</i>	<i>Design Standard</i>	<i>Construction Standard</i>
Ramp Slope	7.5%	8.33%
Ramp Cross Slope	1.5%	2.0%
Landing (turning space) Cross Slope	1.5%	2.0%

- a. The designer shall use Clackamas County ADA check sheets for ramps, crosswalks and sidewalks. <http://www.clackamas.us/engineering/roadway.html>
 - i. Note that the unmarked crosswalk across Harley is at a stop controlled intersection and requires maximum cross slopes of 2% and maximum running grade of 5%.
10. For any ramp, sidewalk or crosswalk that cannot be designed per ADA requirements the engineer shall submit a design exception form to Clackamas County, DTD Engineering for consideration.
11. Relocate all utilities that are in the right of way and conflict with the required half street improvements. It appears that PGE poles, guy wires, fire hydrant and gas are all existing and likely to need relocated. There is also an underground vault that may need to be adjusted for the half street. The plans shall show the location of all utility facilities within the right of way.
12. Trim or remove all intersection sight obscuring vegetation along Forsythe Road. Maintain all vegetation along the frontage of Forsythe Road to provide intersection sight distance from Harley Avenue and the driveway to the west of the property.
13. Provide a striping plan to replace the double yellow centerline and the white fog line.
14. Relocate the existing stop sign ahead warning sign with the frontage improvements. The contractor will need to coordinate with Clackamas County Sign Department in order to get the location of the sign approved. The sign shall not obstruct the sidewalk and shall provide a minimum 18" clearance to the face of the curb. Sign Shop phone: 503-650-3357
15. Design and construct drainage facilities that manage the existing roadside ditch water and road runoff in accordance with the requirements Tri-City/Oregon City regulations and Clackamas County Roadway Standards, Chapter 4. If the planter strip is needed to manage storm runoff from Forsythe Road the street trees can be planted behind the sidewalk. The minimum storm pipe allowed in Forsythe Road is 12" diameter. Clackamas County does not allow PVC pipe for storm.
 - a. Note that if the planter strip is necessary for a swale or other means to treat and or infiltrate road water runoff the facilities will need to be approved by Clackamas County and a maintenance agreement will be required from the property owner/HOA/ or Oregon City/Tri-City for facilities within the right of way.

- b. The cross culvert under Harley Avenue at Forsythe Road shall be cleaned and inspected by the applicant's contractor to verify that its current condition is good or better and is minimum 12" diameter and is capable of carrying the 25 year design storm for the drainage basin at build out. If it is determined that the culvert is deficient in any way required, the applicant shall have a replacement culvert designed and installed.
- 4. If a second access to Forsythe Road is required by the fire department, provide a gate design or other design that is acceptable to the fire department and Clackamas County Engineering that restricts access to all vehicles except Fire department apparatus.
 - b. If the access is required the driveway approach shall designed and constructed per Standard Drawing D650 for separated sidewalk with a landscape strip.
- 5. The contractor shall provide to Clackamas County their certificate of liability insurance naming Clackamas County additionally insured. Please have the agent reference the land use number and County Development Permit number and include the additional insured endorsement.
- 6. Prior to initiating any construction that disrupts the normal flow of traffic on Forsythe Road the contractor shall submit a Traffic Control plan to Clackamas County, DTD Engineering for approval.
- 7. Provide the engineer's cost estimate for the related half street improvements, drainage facilities in the right of way and the driveway approach. The development permit fee will be calculated based on the estimate.
- 8. For any questions or concerns related to these conditions contact Deana Mulder, Development Review Coordinator at 503-742-4710 or email at deanam@clackamas.us.