

Reece \& associates, inc.
To: Bob Galati, P.E.
Through: Craig Christensen, P.E.
City of Sherwood
22560 SW Pine Street
Sherwood, Oregon 97140

| Subject: | Design Modification Request |
| :--- | :--- |
| Reference: | OBC2001 - Brookman Place Subdivision (Olivia Beach, LLC) |
| Location: | 17687 SW Brookman Road |
|  | Washington County Assessor's Map No. 3s-1-06B, Lot 101 |

Dear Bob,

## Location of Requested Design Modification

Soon to be located on the above-cited property, the street subject to this design modification request is an extension of SW Wapato Lake Drive, which will be necessary to serve the eventual Brookman Place Subdivision. Please see Exhibit \#1, attached, for the exact location of the proposed street improvements.

## Current Standards

Section 120.5.A of the City of Sherwood Engineering Manual states, "Design speed shall be as follows: Locals - 25 miles per hour."

Section 210.3.A. 3 of the City of Sherwood Engineering Manual states, "Horizontal curves in alignments shall meet the minimum radius requirements as shown in Table II-a." Table II-a provides the following centerline radii for a 25 miles per hour street:

| Design Speed |  <br>  | Friction Factor (F) | Minimum Curve Radius (ft) for Various Cross Slopes |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (e) $0 \%$ | (e) $2.5 \%$ | (e) $4 \%$ | (e) $6 \%$ |  |
| 25 | 0.252 | 185 | 165 | 150 | 145 | 135 |

## Design Modification Being Requested

Reece \& Associates, Inc., is requesting that a minimum horizontal curve radius of 125 feet be used for a street with a -2.5 percent cross slope, instead of the 185 -foot minimum standard.

## Existing Conditions

SW Wapato Lake Drive, constructed to serve the Middlebrook Subdivision, terminates on the subject property's eastern boundary. The SW Wapato Lake Drive is approximately 98 feet south of Olivia Beach's property's northern boundary.

One single-family dwelling is located on the property. It is the developer's intention to preserve this home during development of the proposed Brookman Place Subdivision. The dwelling's easternmost corner is approximately 121 feet south of the property's northern boundary and 86 feet west of the eastern boundary.

## Result of Meeting Standards

If the proposed street extension complies with the 185 -foot minimum horizontal curve radius, it would be constructed approximately 2.4 feet from the existing dwelling. As a result, the dwelling would not comply with the applicable front yard setback for the Medium Density Residential High zoning district and an eight-foot-wide public utility easement could not be provided along the north side of the street extension.

Additionally, compliance with this standard will complicate future street extension. If the road is continued using the 185 -foot radius, it is unlikely the adjacent property could extend the street without demolishing the existing home. Please see Exhibit \#2, attached, for an illustration of a potential street design that complies with this standard.

## Proposed Design Modification

The proposed minimum horizontal curve radius will be modified to 125 feet for a street with a -2.5 percent cross slope. This design modification request will affect approximately 153 feet of the eastern portion of the street extension.

## Reason Why Design Request Should be Approved

Due to the location of the existing dwelling, reducing the minimum horizontal curve radius to 125 feet would ensure compliance with the front setback and public utility easement requirements. It would also allow for the preservation of the adjacent dwelling when SW Wapato Lake Drive is extended through the abutting property.

Sincerely,
Reece \& Associates, Inc.


David J. Reece
Principal
Attachments:

> Exhibit \#1 - Proposed Design
> Exhibit \#2 - Design Meeting Standards

Approved with Conditions:


The 125-foot centerline requested exceeds a 20 mph roadway speed.

Conditions: Curve and speed signage shall be installed in advance of the reduced speed curves. No parking will be allowed on either side of the street in the location of a substandard street curve.

Note: Approval of this design exception is for reducing the curve radius only and does not guarantee approval of the layout attached.




