Stormwater Management System Single-Family Residential Zoning 2828 Doaks Ferry Rd. NW, Salem, OR Three Parcel Partition

Parcel #1. Parcel one includes the existing single-family home that sits on and accesses Doaks Ferry Rd NW. This parcel accesses the already constructed stormwater facilities. Rainwater falling on the impervious areas flows west to Doaks Ferry Road with any remaining water flowing into garden and lawn areas.

Parcel #2. This parcel is tentatively platted at 9,292 square feet and currently consists of grass and trees. The northern border of the lot is lined by nine firs, 1 Pine and 1 Port Orford Cedar measuring approximately 2 feet plus in diameter. An area in the SE corner is covered by a thicket of various tress, brush and blackberries.

Parcel #2 slopes east at approximately 5% beginning on the west border and ending approximately 115 feet to the east. The North to South slope is slight at the east end of the property and more nominal from the midway to east border of this parcel. There are no current eroding banks or slopes on the proposed lot or any adjacent sensitive areas. As it sits, the development of the lot using a future extension of Ferguson St. NW would have no need for migration due to the availability of stormwater facilities along the extended Ferguson Street NW's infrastructure. Any development that proposes to connect to city infrastructure available on Doaks Ferry Rd. NW would need to provide some surface mitigation. Any development accessing the Doaks Ferry Rd. infrastructure would need to build along the western third of the property which sits high enough to provide for a gravity sewage connection to Doaks Ferry Rd. NW. This scenario, given the width of this lot, approximately 62 feet, and current tree locations, the footprint would need to remain around 1,200 square feet. Assuming another 300 square feet of sidewalk with a Trex type deck that allows for drainage to the pervious ground cover cloth below, there would be an approximate total of 1,500 square feet of impervious surface. Considering the 5 mature fir trees with drip lines within 10 feet of the house the total could be reduced by 10%, or 150 square feet.

To mitigate the impervious parking surface for this home the owner could provide pervious pavement or pavers for parking outside the garage along with a combination of the GSI stormwater facilities chosen from the simplified Method list. The area to the east of the house described here, approximately 4,500 square feet, would consist of mostly lawn, trees and gardens along with a possible use of the already present natural thicket in the SE area as a natural filter strip or sheet flow dispersion area. This area east of the new home could easily incorporate the GSI with a couple of infiltration planters or rain gardens located at the northeast and southeast corners of the new home along with the possible inclusion of the existing natural thicket as noted above.

Parcel #3. This parcel is tentatively platted at 32,414 square feet and currently consists of grass and three small thickets containing various trees, brush and blackberries. It is assumed the lower sections will not be developed until the Ferguson Street NW extension is completed at some future date. The property has one mature fir and 2-3 thickets.

Parcel #3 consists of a flat area in the SW corner of the tentative plan plat. This was created by dirt work done in 1963/4 when the existing home was built with a daylight basement. The property slopes off to the east at about 5% from the base of the fill to the fence line along the eastern border. The North to South slope runs south/southeast at about a 5% drop along the length of this parcel. There are no currently eroding banks or slopes on the proposed lot or any adjacent sensitive areas. As it sits, the development of the lot using a future extension of Ferguson St. NW would have no need for migration due to the availability of stormwater facilities along the extended city street's infrastructure. Any development that proposes to connect to city infrastructure available on Doaks Ferry Rd. NW could pump some stormwater runoff from roofs to Doaks Ferry Road NW and mitigate the rest on-site and provide some surface mitigation or GSI or provide all stormwater mitigation on-site. Any development accessing the Doaks Ferry Rd. NW infrastructure would need to build along the SW quarter of the property which sits high enough to provide for gravity sewage connection to Doaks Ferry Rd. NW. This scenario, given the width of this lot, could allow for a footprint in the 2000 square feet range but certainly that would be the future owner's personal decision. Assuming another 500 square feet of sidewalk with a Trex type deck that allows for drainage to the pervious ground cover cloth below, we could have up to a total of 2,500 square feet of impervious surface. If the rainwater runoff from the roof is directed to the Doaks Ferry Rd NW stormwater facilities or a green roof area is incorporated into the design of the home the GSI requirements become minimal and easily handled.

To mitigate the impervious parking surface for this home the owner could provide pervious pavement or pavers for the parking area outside the garage along with a combination of GSI stormwater facilities chosen from the simplified Method list. In this scenario, assuming the lowest infiltration rate, a couple of 140 square foot (10' x 14') Infiltration Rain Garden's and Planter's located at NE and SE corner of the home would handle the GSI facility requirements. The remaining area to the east and northeast of the house described here would consist of mostly lawn, trees, gardens and a natural thicket. There would be plenty of room to mitigate any of the impervious areas created using GSI facilities to protect the environment.