## **Elevated Storage**

- 1. New ESTs constructed to match the existing overflow elevation.
  - a. North and South Water Plant ESTs in service
  - b. Both existing ESTs in service



## 2. New ESTs constructed to a raised overflow elevation of 160 ft.

- a. North and South Water Plant ESTs in service
- b. Smaller existing EST not in service
- c. Larger existing EST raised to same overflow elevation.



## 3. New ESTs constructed to a raised overflow elevation of 160 ft

- a. North and South Water Plant ESTs in service
- b. Both existing ESTs out of service



Considering Option 2, the raised overflow elevation does improve pressures, but the Timbercreek Apartments (yellow node) is still shown to be just above 35psi. Because 3 or 4 ESTs is a lot for the size of the City of Richwood, we also considered what would happen if both the existing tanks were taken out of service and the 2 new tanks were put in service at the higher overflow elevation (Option 3). This option is a step down from having two new ESTs and raising the larger existing EST, as the pressures decrease again at the apartments.

In summary, constructing a new EST at the South Water Plant, regardless of the overflow elevation, is not considered to be a cost-effective alternative to increase pressures at the apartment complexes. The City would be spending \$4-\$5MM for Option 2, which provides the highest pressures to the three story apartments, with minimal benefits to others in the City. A more cost-effective option would be to have the apartments install their own booster pumps.