

Reviewed by William Wright

County Adair  
Type WLR & Elevated Water Tank

Name Phase 11-2 replacement and WST

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Miles or Ft of Line 21,000, 14,000, 10,200, 1,900 feet  
Diameter 8, 4, 4, 3 inch  
Material PVC, PVC, DI, PVC

Projected Demand (GPD) \_\_\_\_\_ gpd

Projected Cost (\$) \$2,000,000.00

Proposed Customers: \_\_\_\_\_ 14 New

Site Location:  
Latitude: 37 11 06  
Longitude: 83 18 18  
HUC#: 5110001070

**Hydraulic Modeling**      **Water Line Extension**  
External Demand      Boyd Road Acree/White Church (14,900' PVC&DI)      Providence Road (2,020' 4")      Knifley Conn/Green F  
Minimum Pressure      17      33 Loop Connection. No Hydraulics. Loop Connection. No  
79.9      119.73

**Flushing Modeling**      Boyd Road Acree/White Church (14,900' PVC&DI)      Providence Road (2,020' 4")      Knifley Conn/Green F  
Demand      55      98      98      69  
Minimum Pressure      60.68      55.23      143.6      20.1  
Flushing Velocity      2.51      2.52      1.12      0.44

Connection between new and existing line: 3" Gate Valve      4" Tapping Sleeve and Valve      3" Tapping Sleeve and Valve      8" Blowoff

Type of valve at end of proposed line: 3" Blowoff Assembly      4" Tapping Sleeve and Valve      8" Blowoff

**Storage Tank:**  
Type: Composite  
Material: Steel  
Diameter: 43 feet  
Height: 120 feet  
Ground Elevation: 1050  
Overflow Elevation: 1170  
Bottom of Bowl: 1140  
Head Range: 30 feet  
Outlet Elevation: 1043  
Inlet Elevation: 1170  
Roof Vent: 24"  
Water Storage Time: 52 hrs

**Booster Pump Station**  
Number of Pumps: 2  
Type: Multistage Centrifugal  
Capacity: 250 gpm  
Horsepower: 30 hp  
Operating Speed: 3520 rpm  
Check Valve: Yes  
Heat/AC: Yes