



November 25, 2019

TO: Jamie Cosson, Camp Weaver
FROM: Jana Stewart, PE, Water Resources Engineering Department
SUBJECT: Water and Sewer Feasibility for 4924 Tapawingo Trail and 4922 Millpoint Road-
Camp Weaver

Per your request the City has reviewed the above property to determine the feasibility of providing water and sewer service. This property is within the Tier 3 Growth Area (2013-2019) on the Growth Strategy Map in the Comprehensive Plan. Prior to extending or connecting to City water and/or sewer lines the site must be annexed into the City of Greensboro. The rezoning application and annexation petition can be obtained by contacting Luke Carter (373-4342) in the Planning Department. Once Planning receives the annexation petition and rezoning form it will be processed through Planning Board, Zoning Commission and City Council. In accordance with the Council-Adopted policy, the connections or extensions cannot occur until after Council approves the annexation, which will take approximately 90 days.

It is the understanding of the City at this time that the 4924 Tapawingo Trail and 4922 Millpoint Road will be under the same ownership. The City also understands that extensions of water and sewer to this property are scheduled to be constructed after the City's capital improvements projects are completed. Furthermore, the City does not have anticipated sewer flows or water demands for the property and sizing is based on general practices.

Water is not currently available to the property.

- The closest water line is located north and west of I-85 along Youngs Mill Road. Water extensions would be required for this property. The attached map shows the locations of extensions.
- The City has a planned capital improvement project to extend water south along Youngs Mill Rd to Millpoint Road. The project's construction is anticipated to begin in the Summer of 2020 and last approximately one year.
- Water extensions are required to extend across a property's frontage, therefore the addition of the 4922 Millpoint Road to the original 4924 Tapawingo Trail property would trigger additional water line extensions
- The property would be eligible for reimbursements of oversizing of the water line from an 8" to a 12" line required by the City.
- Easements for any water main that crosses private properties will have to be obtained and dedicated exclusive to the City of Greensboro for service.
- The engineer will have to demonstrate to Water Resources staff that the existing water main can provide adequate pressure and flow for both domestic service and fire protection for the proposed development.

Sewer is not currently available to this property.

- The closest sewer line, Youngs Mill Outfall, is currently under construction and will be located north of the property near 1704 Brookhaven Mill Rd. Construction for the Youngs Mill Outfall is currently taking place and is scheduled for completion by Fall 2020. Once construction is complete, additional sewer extensions will be required to serve this property.
- The attached map show the locations of the gravity extension and the location of a possible private lift station and forcemain. According to City standards, a private lift station and forcemain are approved to service a single parcel, not multiple parcels.
- Easements for any sewer outfall that crosses private properties will have to be obtained and dedicated exclusive to the City of Greensboro for service.
- The engineer will have to demonstrate to Water Resources staff that the existing downstream sewers have adequate capacity to handle the projected flows from the proposed development.

Please see the attachments for line routing, quantities, and cost estimates. The alignment and cost estimate provided do not represent an actual engineered alignment or construction costs. In addition, a general cost for easements along the alignment have been included in the estimate.

Note that if the project moves forward then the engineer will need to start the Fire flow tracking and Sewer flow allocation processes with Water Resources staff. This study is only valid for a period of one year from the date of this letter. A revised study will be required if flow conditions or development plans change other than what was originally stated in this study. We will recommend approval of these extensions at the owner / developer's expense, subject to funding availability (if applicable), approval by the City of Greensboro Planning Department for compliance with the Comprehensive Plan and final approval by the City of Greensboro City Council.

Camp Weaver

4924 Tapawingo Trail and 4922 Millpoint Road

November 25, 2019 Revision

Estimated Total Preliminary Construction Cost

Sewer Extension Route along Brookhaven Mill Road to MillPoint Road

| Category | Item Description | Quantity | Units | Unit Cost | Subtotal |
|---------------------|--|-----------------|--------------|------------------|-----------------|
| Force Mains | 4'' Sanitary Force Main | 2,301 | LF | \$22 | \$50,622 |
| Sewer Pump Stations | Small Sewer Pump Station (200 GPM) | 1 | EACH | \$250,000 | \$250,000 |
| Sewer Main | 8'' Sanitary Sewer Main | 3,037 | LF | \$72 | \$218,664 |
| Sewer Manholes | 4' Sewer Manhole | 9 | EA | \$2,600 | \$23,400 |
| Utility Crossings | 16'' Bore & Encasement | 70 | LF | \$200 | \$14,000 |
| Easements | 20' easement along 25% of alignment | 15,185 | SF | \$2 | \$30,370 |

| | |
|-------------------------------|------------------|
| Subtotal | \$587,056 |
| 20% Engineering & Contingency | \$117,411 |
| 10% Regulatory Contingency | \$58,706 |
| Total Sewer | \$763,173 |

To extend water from Youngs Mill Rd intersection with Millpoint Road across 4922 MillPoint Rd

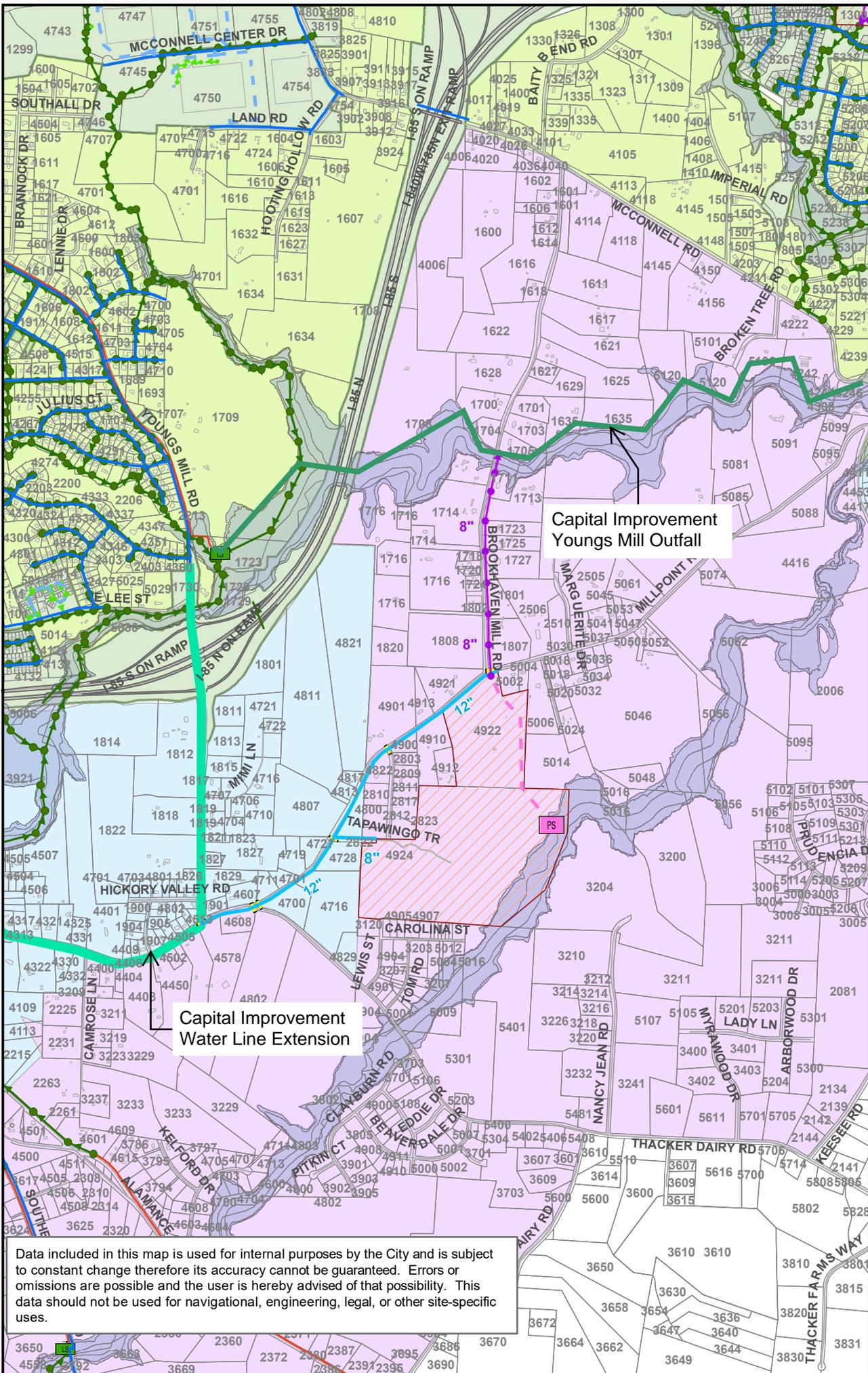
| Category | Item Description | Quantity | Units | Unit Cost | Subtotal |
|------------------------|--|-----------------|--------------|------------------|-----------------|
| Water Utility Crossing | 24" Bore & Encasement | 80 | LF | \$250 | \$19,930 |
| Water Mains | 8" Water Main | 567 | LF | \$52 | \$29,484 |
| Water Mains | 12" Water Main | 5,513 | LF | \$78 | \$430,014 |
| Easements | 20' easement along 25% of alignment | 30,400 | SF | \$2 | \$60,800 |

| | |
|---------------------------------|------------------|
| Subtotal: | \$540,228 |
| 20% Engineering & Contingency: | \$108,046 |
| 10% Regulatory Contingency: | \$54,023 |
| Total Water: | \$702,296 |
| <i>Reimbursable (8" to 12")</i> | <i>\$147,268</i> |



1 inch = 1,750 feet

Water & Sewer Feasibility 4924 Tapawingo Trail 4922 Millpoint Road



LEGEND

- PS** Proposed Lift Stations
- Proposed Manholes**
 - Proposed Manholes
- Proposed Force Main**
 - Proposed Force Main
- Proposed Sewer Mains**
 - Proposed Gravity
 - Proposed Water Mains
- Utility Crossing**
- Project Areas**
- Proposed CIP Waterline**
- Pressurized Mains**
 - Private
 - Public
- Lift Stations**
 - Private
 - Public
- Sewer Manholes**
 - Private
 - Public
- Gravity Mains**
 - Private
 - Public
- Force Mains**
 - Private
 - Public
- Railroads
- Flood Hazard
- City Limit
- Growth Tiers**
 - 1: 2013-2019
 - 2: 2019-2025
 - 3: 2025+

Data included in this map is used for internal purposes by the City and is subject to constant change therefore its accuracy cannot be guaranteed. Errors or omissions are possible and the user is hereby advised of that possibility. This data should not be used for navigational, engineering, legal, or other site-specific uses.