



Town of Hillsborough

Hasell Street Tank & US-70A Water Main Replacement

Board Update | October 2025

CH1



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Background

- Town of Hillsborough received an Asset Inventory and Assessment (AIA) grant which is funding the preliminary engineering and planning for:
 - Hasell Street Tank replacement
 - US-70A Water Main replacement
- This grant requires board updates on evaluation and recommendations.




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CH1 Edit depending on date chosen
Caitlyn Haponik, 2025-09-03T15:23:35.832

Consultant Selection



- Freese and Nichols, Inc. (FNI) was selected as the consultant for this project by a Request for Qualifications (RFQ) process.
- FNI provided preliminary recommendations, on Hasell Water Tank and US-70A Water Main replacements.

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Hasell Street Tank

- Existing steel riveted tank was constructed in 1936 and is the smallest and oldest in the system (200,000 gallons).
- Tank is undersized leading to frequent cycling and operational inefficiency.
- Upsizing the tank to **500,000 gallons** is recommended based on predicted 2025 average day demand and maximum day demand.



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Hasell Street Tank Recommendations

- Two tank sites were evaluated:
 - Site 1: on the corner of N Hasell St. and W Orange St.
 - Smaller site, roadway accessibility, high visibility, less space for tank setback, shorter water line connections (60 feet)
 - Site 2: on a larger parcel of land set back from the road.
 - Larger site, access easement required, low visibility, more space for tank setback, longer water line connections (230 feet)
 - **Site 2** is recommended due to its adequate size. Site 2 also more closely meets the Town's required tank setbacks.
- Life cycle analysis:
 - Conducted to recommend tank type.
 - **Spheroid tank** type determined to have lowest life-cycle cost.
- Estimated project cost: **\$4.25 million**

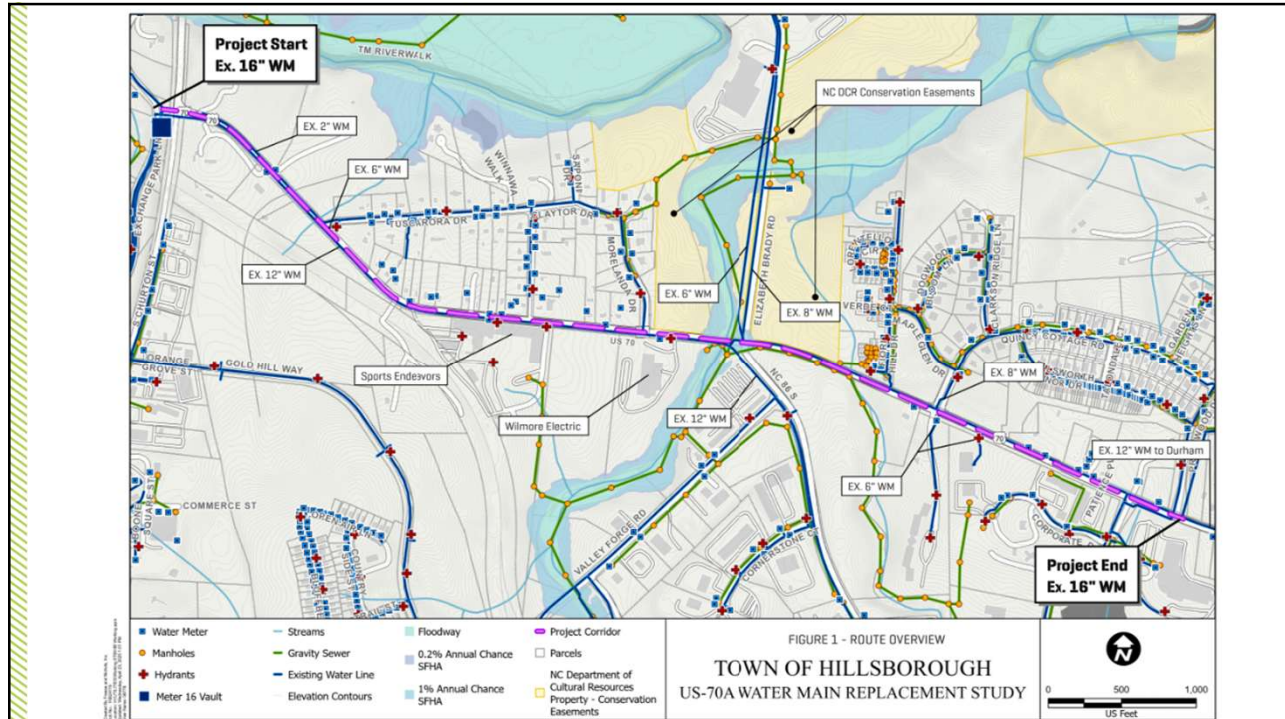
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US-70A Water Main

- Existing water main is 1.5 miles of 12" asbestos cement pipe (ACP) which is prone to breaks.
- Serves as the trunk line for Town's connection to City of Durham.
- Modeling reveals need for upsizing.
- Existing ACP has failed repeatedly causing traffic and public health concerns.



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US-70A Water Main Recommendations

- Upsizing the water main to **16-inch ductile iron pipe (DIP)** is recommended to provide the required 2 MGD capacity.
 - DIP is a more reliable pipe material than ACP.
- Two water main routes were evaluated:
 - Route 1 on the north side of US-70A impacts 9 road crossings, 36 land parcels, and 24 driveways.
 - Route 2 on the south side of US-70A impacts 7 road crossings, 24 land parcels, and 10 driveways.
 - Route 2** is recommended since it poses less disruption to property owners, requires fewer road crossings, and is of comparable cost to Route 1.
- Estimated project cost: **\$5.16 million**

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Coordination and Next Steps

- The Town of Hillsborough will utilize these recommendations for:
 - Future CIP planning
 - Coordinating with NCDOT improvement projects.

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Thank you

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