

PRIORITY PROJECTS – STOPLIGHT REPORT
Engineering (November 2016)

Project & Key Information	Time ₂	\$\$\$ ³	Other ₄	% Complete	Comments/Notes/Key Lessons Learned To Date
<p><u>Waterstone Elevated Water Tank Project</u> Current Phase¹: Construction Original/Preliminary Estimated Cost (pre-design): \$1,300,000 Revised Cost (post-design): \$1,960,127 Revised Cost (actual): \$2,029,398 Original Completion Date: Fall 2015 Revised Completion Date: Spring 2016</p> <p><i>Original cost based on rough estimate with various assumptions. Revised costs based on actual design output, actual cost on bids received/construction contract and contingency.</i></p>				100%	<ul style="list-style-type: none"> • All work is complete. Final payment is being negotiated (due to contractor delays and liquidated damages), and close-out paperwork is being prepared. • An official opening ceremony was held on June 29, 2016. • Disinfection and initial filling occurred in late June, with the tank officially being placed into service on June 25, 2016. • A jurisdictional conflict between Orange County and the State Construction Office delayed the electrical inspection. SCO approved the project and completed the final inspection in May 2016. • Landscaping, driveway paving, curb and storm water drain construction, fencing, and other site work were completed in early Spring. Quality testing of the evenness of the tank structure was completed in February with positive results. • An additional 1-month delay occurred due to the discovery of the incorrect pipe size being installed for the tank during the UNC Hospital project. The incorrect pipe was a short (about 30 feet long) extension from the 12” main toward the tank site. The pipe was replaced with the correct size on November 27, 2015 by the UNC Health Care utility sub-contractor. • Piping work was completed in December 2015. Contractor left project during July & August 2015, resulting in the initial construction delay. • The interior and top painting was finished in September 2015, and the steel tank structure ground fabrication, painting, and jacking was completed in early June 2015. • Tank riser (concrete support column) was completed in early May 2015, foundation in February 2015. • Actual tank construction began on October 27, 2014 (site preparation). • The Notice to Proceed was issued on September 15, 2014. The substantial completion date is October 10, 2015, and final completion by November 9, 2015. • The Town awarded the construction contract on 6/9/14 to Caldwell Tanks for the <i>Composite</i> tank option. The alternates for a mixer, FAA lighting, and 2 text logos were also awarded. • SRF loan is being used for all project costs, \$2,029,398 at 0% for 20 years. The \$500,000 contribution from Waterstone will be used to make loan payments until it is exhausted. • In April 2014, the Town Board approved a UDO amendment to allow painting of a text logo (“Hillsborough”) on the tank. • Revised cost estimate increased from original estimates due to preliminary quotes received from tank contractors and more detailed estimating.
<p><u>New South Zone Transmission Main Project</u> Current Phase¹: Construction Original Cost: \$200,000 (entire project) Revised Cost: \$240,000 Original Completion Date: Dec. 2015</p>				26%	<ul style="list-style-type: none"> • The overall completion date has been pushed back to Winter 2016 due to staff workload. • The North Zone loops are under construction (Walgreens to OHS Rd is complete as of March 5th & NC 86 adjacent to BP station <i>is under construction, hopefully complete in November</i>). • Project delays due to easement acquisition & crew workload are not problematic. • <i>The meter site easement has been attained as of September 28th.</i>

<p>Revised Completion Date: Winter 2016</p> <p><i>Delays due to meter easement acquisition and line crew workload. Added costs due to North Zone work which expanded project scope.</i></p>					<ul style="list-style-type: none"> • Construction of new meter vault will begin later this year, then remainder of South Zone construction work (tie-ins & OWASA PS demo). • Design of new meter vault near Davis Drive, pump connections near New Hope Creek, and various interconnections to existing Hillsborough distribution system began in early 2014. • Some additional water line was included along US70 between NC86 and OHS Road. This will create additional loops in the North Zone to improve water flow & quality. • Transfer of 16" water line through Hillsborough from OWASA was completed Sept. 2013.
<p><u>WFER Phase 2 Road Design & Permitting</u></p> <p>Current Phase¹: Design Original Cost: \$458,019 1st Revised Cost: \$483,799 2nd Revised Cost: \$602,575 Original Completion Date: June 2015 1st Revised Completion Date: Fall 2015 2nd Rev. Completion Date: June 2016 3rd Rev. Completion Date: Dec. 2016 (for design & permitting only)</p> <p><i>Revisions due to NCDOT delays and contract addendums to continue work to final completion for all 3 roads that require modifications.</i></p>				90%	<ul style="list-style-type: none"> • <i>Draft municipal agreement with NCDOT received and is under negotiations for Efland-Cedar Grove Road project.</i> A budget amendment will be needed to make funding available for project from Capital Reserve funds prior to the loan funding of the rest of the Phase 2 project in early to mid-2017. • Right-of-way is being acquired by NCDOT for Efland-Cedar Grove Road project. • 404 permit revisions were approved in June 2016, which covers the entire Phase 2 project. Timing was driven by need to proceed with Efland-Cedar Grove Road realignment project. • Final right-of-way plans for the Efland-Cedar Grove Road realignment project were submitted in late January 2016, with revisions made in May 2016. • Preliminary bridge design plans for Carr Store Road were submitted for NCDOT review in mid-October 2015. • A contract amendment was approved on July 13, 2015 for roadway & hydraulic design completion, bridge design, ROW staking, and 404 permit modification. • Discussions with NCDOT are ongoing regarding cost sharing. The Efland-Cedar Grove Road project bid was scheduled for June 2016 (NCDOT delays). Town's cost share will have to be made available to NCDOT at bid time (currently estimated around \$500K). • Surveying and concrete & soils testing at the dam were done in April & May 2015. • Environmental studies and the eagle survey are complete (see Facebook page for eagle photos). A follow-up eagle study will be completed in 2016. • Design is proceeding in accordance with the schedule NCDOT has set. Town schedule has been revised to match NCDOT postponement of construction (previously was scheduled for Summer 2015). • A contract amendment with Atkins, NA was approved on November 10, 2014 for the hydrologic model and flood mapping for the Phase 2 improvements. • We are partnering with NCDOT for improvements on Efland-Cedar Grove Road, which will benefit both parties. Atkins is leading this effort for Hillsborough.
<p><u>WFER Phase 2 Dam & Clearing Design</u></p> <p>Current Phase¹: Design Original Cost: \$633,500 Revised Cost: Original Completion Date: Dec. 2016 Revised Completion Date:</p>				47%	<ul style="list-style-type: none"> • 65% design drawings complete and reviewed with engineer on September 26, 2016. • Clearing access plan was completed in late June. • Geotechnical design of the dam area began in April. • Site visits for development of the clearing plan began in February, with help of a forestry consultant. Timber values and clearing costs are being determined. • Civil design work began in mid-September 2015. • The final design contract with Schnabel Engineering South, PC for dam & clearing design, contractor prequalification, and bidding services was approved on September 14, 2015.

Notes: ¹ Current project phase is basis for "stoplights." Current project phases may be in study, design, implementation, or construction.
² Time: **Green** = on schedule or ahead of time; **Yellow** = behind schedule but not problematic; **Red** = behind schedule/urgent/problematic.
³ \$\$\$: **Green** = w/in 5% of current phase budget; **Yellow** = w/in 5% to 15% of budget; **Red** = more than 15% & contingency likely exhausted.
⁴ Other: **Green** = no issues current phase; **Yellow** = minor issues; **Red** = major issues/concerns