ORANGE WATER AND SEWER AUTHORITY

A public, non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community.

MEMORANDUM

TO: **Natural Resources and Technical Systems (NRTS) Committee**
Dave Moreau (Chair)
Terri Buckner
Ruchir Vora
John Young (*ex officio*)

THROUGH: Ed Kerwin

FROM: Ruth Rouse

DATE: October 16, 2015

SUBJECT: October 20, 2015 NRTS Committee Meeting

The NRTS Committee will meet on Tuesday, October 20, 2015 from 5:30 to 7:00 PM in the OWASA Boardroom to receive and discuss a brief on the project to provide sewer for the Historic Rogers Road Area (HRRA). All Board members are encouraged to participate in this meeting.

Agenda

1.	Welcome and meeting purpose	Dave Moreau
2.	Overview of OWASA's policies and practices for developing new water and sewer service – see Attachment 1	Todd Spencer, P.E., Engineering Manager for System Development
3.	Background information about the project to provide sewer service to the HRRA – see Attachment 2	Mary Darr, P.E., Director of Engineering and Planning
4.	Overview of the current project to design a sewer system for the HRRA - see Attachment 3	Jeremy Fireline, P.E., Utilities Engineer / Project Manager
5.	Open discussion about the project *Note: Our briefing will not include things out of OWASA's control such as the County and Town Managers' Utility District proposal; who/how the improvements are being funded and how the 86 HRRA properties were identified. We*	Dave Moreau

recognize these are important matters that may be the subject of future OWASA meetings with Town and County officials, if desired.

6. Discuss future NRTS Committee meetings — Dave Moreau

We look forward to seeing you on October 20, 2015.

Ruth C. Rouse

Ruth Rouse, AICP
Planning and Development Manager

c: OWASA Board of Directors
Robert Epting, OWASA General Counsel

Attachments
Attachment 1: System Development: Policies and Practices
Attachment 2: HRRA Background Information
Attachment 3: HRRA Sewer: Overview of Current Project

Attachment 1
System Development – Policies and Practices
Natural Resources and Technical Systems Committee Meeting
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The 1976 Agreements of Sale and Purchase with the Town of Carrboro, the Town of Chapel Hill, and the State of North Carolina on behalf of The University of North Carolina at Chapel Hill states that to the extent possible the ultimate costs of extension of public water and sewer mains will be borne by those primarily benefitting from such extension.

OWASA's role in the design and construction of these water and sewer line extensions for new development is to ensure that they are designed and installed in accordance with OWASA's standards and specifications, procedures, and policies. For this to occur, the owner or applicant must hire a licensed professional engineer to prepare the design and a licensed utility contractor to construct the public main extensions. Design of public water and sewer mains are to follow sound engineering principles and meet minimum OWASA regulatory requirements. Construction plans are submitted to OWASA for review and comment. Plans are ultimately approved by OWASA and permitted for construction by both OWASA and the Department of Environmental Quality's Public Water Supply (water) and Division of Water Resources (sewer).

OWASA policy requires that public sewer mains must be constructed to a point where they are adjacent to the lot that will be served and located within public rights of way or easement dedicated to OWASA. Similarly, policy requires that water mains must be constructed within public rights of way or easements dedicated to OWASA and extend across the frontage of the lot that will be served.

Public sewer mains are ideally designed to take advantage of topography and allow for gravity flow of wastewater. This provides for the orderly extension of sewers and is preferable to pumped systems in our service area. Further, OWASA policy also requires that extensions be made in a manner that promotes the orderly expansion of our system to benefit adjacent properties. Where prudent to do so, we require utility easements to be reserved on a development property to allow for future extensions of mains to properties that do not have access to public water or sewer mains.

Public water mains are generally designed and built to follow the most practical and logical route for providing water service to properties. These layouts usually follow paved roadway (valves and line more easily accessed) that are preferable to off road locations.

During the construction phase, OWASA staff provides onsite observation to ensure that installation of water and sewer mains by the contractor complies with our construction standards and specifications. Once construction is completed, OWASA assumes responsibility for ownership and maintenance subject to a one year warranty period.

Following construction, certain final documents are also provided to OWASA such as letter of dedication of facilities to OWASA, Engineer's Certification and Record Drawings, Asset Value form, easement documents, and digital information for inclusion in our water and sewer GIS mapping system.

Permitting and inspection of the private water and sewer plumbing system that connects to OWASA's system are under jurisdiction and responsibility of Town or County plumbing inspectors.

Attachment 2
Historic Rogers Road Area Background Information
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At Orange County's request, the County and OWASA entered into an interlocal agreement on June 28, 2001for OWASA to manage the design, permitting, bidding, and construction of the water system to serve the Rogers Road area. The project was completed in 2002 and was funded from solid waste funds.

As requested by the County and Towns, OWASA staff has been providing technical support (answering questions, providing rough cost estimates, etc.) for sewer related issues in the Historic Rogers Road Area (HRRA) since 2007. In 2012, OWASA provided conceptual tabletop layouts for the sewer system (referenced herein as 2012 OWASA Sewer Concept Plan).

In February 2012, the Orange County Board of Commissioners authorized the creation of a new Historic Rogers Road Neighborhood Task Force to address sewer service and a community center. The Task Force was comprised of two representatives each from the Towns, County and the Rogers Road neighborhood. The Task Force issued their Final Report in September 2013 and recommended the 2012 OWASA Sewer Concept Plan as the preferred approach for sewer service.

At the County's request, OWASA and Orange County entered into an interlocal agreement to conduct a preliminary engineering study in June 2014 to conduct limited field investigations in the project area to inform the sewer alignment and provide a budget level cost estimate.

OWASA used a qualification based selection process to hire URS Corporation (now AECOM) as the consulting engineer for the project.

AECOM's recommended sewer alignment in the preliminary engineering study was a gravity sewer system. The proposed alignment was based on the 2012 OWASA Sewer Concept Plan, but was shifted in some locations based on the field investigations.

AECOM's preliminary engineering study was completed in March 2015 and estimated the project costs to install about 3.5 miles of gravity sewer lines at $5.7 million. This estimate included engineering but excluded any costs for private plumbing installation, septic tank abandonment, easement acquisition, and service availability fees.

Attachment 3
Historic Rogers Road Area Sewer: Overview of Current Project
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After completion of a March 2015 preliminary engineering study by AECOM and at the County's request, OWASA and Orange County executed an interlocal agreement on May 19, 2015 for OWASA to proceed with the design and permitting phase of the project to provide sewer service for the 86 properties in the Historic Rogers Road Area (HRRA).

In June 2015, the County authorized the scope of work for initial field services including environmental assessment, environmental impacts (buffers and wetlands), surveying, geotechnical investigations and subsurface utility exploration. The County also hired the Marian Cheek Jackson Center (Jackson Center) to facilitate communication regarding the sewer project with the Rogers Road community.

On July 28, 2015, the Rogers-Eubanks Neighborhood Alliance (RENA), the Jackson Center, Orange County, the Towns of Chapel Hill and Carrboro and OWASA sponsored a community meeting at the Rogers Road Community Center. The meeting sponsors provided information and answered questions about the detailed design of sewer to serve the HRRA, project timeframe, and opportunities to stay informed and involved.

Field work started in early August 2015 with consultants actively working in HRRA. The Jackson Center has been assisting OWASA with coordination and communication with the community as the crews are working in the project area.

In September 2015, the County authorized the scope of work for construction drawing preparation and specification development, permitting, easement plat development and cultural resources survey.

The consulting fee for field work, design, permitting and easement plat preparation is about $490,000. The design will take about one year to complete and will be done in accordance with OWASA standards and specifications. The consultant will provide revised construction cost and time estimates as the design is finalized. The easement acquisition process, which will be managed by the County, can impact the schedule for design and permitting.

The steps that take place after design, permitting and easement acquisition are bidding and construction. We estimate that it will take about four months to prequalify contractors and formally bid and award the project and about a year to construct. Weather, unforeseen conditions and other factors can impact the schedule.