



## B-20 – SITE UTILITIES INTRODUCTION

### Site Utilities

All campus electrical, steam, chilled water, storm drainage and non-potable water systems are owned and operated by UNC Energy Services. The Communications Technology office of UNC's Information Technology Services is responsible for telephone and computer network connections. Water (potable and reclaimed) and sanitary sewer mains on campus are owned and maintained by the Orange Water and Sewer Authority (OWASA: [www.owasa.org](http://www.owasa.org)), with some segments of the mains owned by the University. Water (potable and non-potable) and sanitary sewer laterals are owned by the University. Gas is provided by PSNC Energy and all gas mains are owned by PSNC Energy. The University generates its own steam at its Cogeneration Facility on West Cameron Avenue. The University generates electricity at the Cogeneration Plant and purchases electricity from Duke Energy Company distributed through the University's three substations and distribution system. Chilled water is produced at several Chilled Water plants and distributed across campus.

Obtaining site utility information: UNC Facilities Planning or Energy Services will provide the Designer with existing site utility information for construction and renovation projects. This information is schematic only. The Designer is responsible for obtaining more detailed and accurate information required for the project. The Designer should engage a utility locating service during design development or the early construction document phase and work closely with the utility locating service and the owner of each utility, including the University utilities operating groups to ensure all utilities are located accurately on the drawings used for the design of the building. The designer is also responsible for reviewing existing record drawings for prior work in area of project to determine location of existing utilities, including building subsurface utility connections, supplies and storm and foundation drainage connections. UNC Electric Distribution Systems coordinates all underground utility locating for Energy Services utilities; contact them at 919-962-8394 to schedule the locates. Locates for public utilities can be requested through NC One Call at 800-632-4949.

Contracting utility locating services: At the Designer's request, the University's Project Manager will send a letter asking the Designer to hire a utility locator. The Designer together with engineering consultants will outline the required scope of this work.

Utility Kick-off Meeting: UNC-CH utility personnel and Designers will meet in the initial phases of the design process to identify utility issues. Representatives from all campus utilities (steam, chilled water, electric distribution, telecommunications, water, wastewater, and stormwater) as well as OWASA (if required) and PSNC (if required) will attend the meeting. Additionally, a representative of the UNC-CH Public Safety Department will attend regarding issues of road closings and construction scheduling.



Coordination with UNC utility providers:

The Designer is responsible for coordinating with UNC utility providers. Click the links below for more information:

- a. [Electrical Distribution](#)
- b. [Communications Infrastructure Guidelines](#)
- c. [Steam Distribution Guidelines](#)
- d. [Chilled Water Design Guidelines](#)
- e. [Stormwater Guidelines](#)
- f. [Water & Wastewater](#)
- g. [Non-Potable Water Guidelines](#)
- h. Utility System Master Plans: contact Energy Services for more information. <http://www.energy.unc.edu/>
  - a. *Energy Systems Infrastructure Improvements, Final Report, January 27, 2006*
  - b. *Electric Distribution Master Plan & Distribution Modeling, December 15, 2006*
  - c. *Water & Sewer Master Plan, October 2002, and Critical Facilities Plan*
  - d. *Stormwater Capital Improvement Plan, Fall 2010*

Coordination with off-campus utility providers:

The Designer is responsible for coordinating with utility providers (including OWASA, PSNG and any others) and Energy Services. Tasks include:

- a. Obtaining and using OWASA's design guidelines at:  
([http://www.owasa.org/client\\_resources/whatwedo/spec/table%20of%20contents%202011%20pdf%207-18-2012%20reduced.pdf](http://www.owasa.org/client_resources/whatwedo/spec/table%20of%20contents%202011%20pdf%207-18-2012%20reduced.pdf)) for all design work involving water and/or sewer connections; main replacements and/or extensions; and any work in the area of OWASA water and sewer mains, and coordinating with additional University requirements.
- b. Scheduling a meeting with UNC Energy Services Water, Wastewater and Stormwater and OWASA officials early in the design process to identify issues related to water, reclaimed water, sewer and fire protection
- c. Note: If sprinklers are being added to the building, a fire flow test will be necessary. To obtain a fire flow test, contact OWASA. Added sprinklers will require a RPZ.
- d. Note: RPZ will require above grade installation. The University standard is to install inside building on an exterior wall to discharge above grade.
- e. Note: All food handling facilities will need to meet OWASA grease interceptor requirements, including coffee bars and coffee shops.



- f. The Designer is responsible for ascertaining that the capacity of the water, non-potable, and sewer system is sufficient for the intended use.
- g. The Designer must submit drawings to OWASA for review and approval at all design phases. Written sign-off from OWASA is required before the start of construction.
- h. If design necessitates tapping lines in roads, additional approvals may be required from the UNC-CH Department of Public Safety and the Town of Chapel Hill ([www.ci.Chapel-Hill.nc.us](http://www.ci.Chapel-Hill.nc.us)) and/or the NC Department of Transportation (<http://www.ncdot.gov/>). DOT roads require a 3-party encroachment agreement among UNC-CH, OWASA and DOT. The Designer should arrange this during the project design, to avoid construction delays.
- i. The Designer is responsible for coordinating with PSNC for the Natural Gas Utility (<http://www.psnenergy.com/en/builder-developer-services/>)

#### Electric Metering

All electrical installations are typically metered for KWH/KWD for utilities billing purposes at the transformer. Electric Distribution Systems will furnish and install all pad mounted transformer metering equipment including meter, meter base, current transformers, potential transformers and wiring. Cost of this installation will be included in the project cost.

Submit all electrical installations requiring special metering to Electric Distribution Systems for approval.