

## Obey Creek Environmental Considerations

### Executive Summary

The following is a summary of Environmental Guiding Principles.

- Preserve and enhance natural resources including stream water quality through appropriate stormwater management and design criteria
- Develop with conscious decision to save/protect existing tree canopy as appropriate.
- Maximize permanent preservation of open space.
- The development should embrace environmental factors such as air quality, noise and light pollution in the design.

### Potential Guiding Principles (•) and Objectives (o)

- Preserve and enhance natural resources including stream water quality through appropriate stormwater management and design criteria.
  - Evaluate and integrate potential climate change impacts on the development
    - Consider modified (due to climate change) 25 yr return period for stormwater flows and other impacted design criteria for entire development
    - Develop a stormwater management Master Plan
      - Demonstrate short and long range objectives to enhance/maintain Obey Creek water quality
      - Develop phasing plan as the development progresses
    - Consider site limitations that impact “conventional” stormwater management strategies and implement innovative stormwater management techniques
      - Limitations:
        - Soil conditions (types, depth to bedrock, erodability, permeability, etc
      - Opportunities:
        - Low impact design/infiltration
        - Green roofs
        - Permeable pavements
    - No stormwater management structures to cross Obey Creek
  - Work with utilities (OWASA, PSNC, and Duke Power) to assure that Obey Creek and its immediate flood plain not contain any utilities and that all utilities work to avoid any overhead wires, pipes, etc.
  - Implement designs that are consistent with existing legislation (RCD, Jordan Riparian Buffers, Jordan Stormwater Management and various Town ordinance requirements,
- Develop with conscious decision to save/protect existing tree canopy as appropriate
- Maximize permanent preservation of open space.
  - Protect/manage land on opposite side of Obey Creek
  - Maintain existing wetlands (or provide appropriate mitigation)

- Catalog upland habitat to establish a baseline
  - Catalog biological species of concern (if any)
  - Consider archeological aspects of both open space and built areas
- Embrace environmental factors such as air quality, noise and light pollution in the design.
  - Design considerations should minimize opportunity for idling vehicles to reduce impact on air quality
  - Create internal (and external) natural and constructed buffers to minimize noise impacts internal to and offsite of the development
  - Be respectful of internal and external neighbors when creating public and private lighting schemes