Knoxville Energy and Sustainability Task Force

Infrastructure Working Group Notes– 05/05/10

Started With the following outline for discussion:

Objective: evaluate impacts of current City government practices, research, and recommend affordable and practical ways to incorporate sustainability into elements of street design, public parking facilities, and public park lands.

Working Group Scope – within the areas elaborated below, the working group will:

- evaluate environmental and economic impacts of current practices;
- identify and prioritize most effective areas for improvements;
- Analyze and propose strategic and viable methods for incorporating sustainable design and/or operation standards into engineering practices.

I. ROW/Streetscape Design Standardization related to:
   a. Storm-water/Drainage/Filtering (new regulations)
   b. Lighting
   c. Paving
   d. Landscaping/Street trees
   e. Utility placement coordination
      - Maintenance within ROW
      - New construction
   f. Accommodation for bike/walk-ways
   g. Connectivity

II. Design and Operation of Parking Facilities
   a. evaluate means of reducing the energy and environmental impacts of existing structures and surface lots
   b. propose methods for incorporating best practice sustainable design standards into new design / construction
   c. explore the possibilities for gray water use

III. Water consumption/irrigation for Parks
   a. analyze water use;
   b. recommend improvements to plantings (e.g. drought resistant species) to reduce irrigation needs
   c. develop design guidelines for new development or major renovations.

Notes from Discussion:

OLD Proposed Outline Organization:

I. ROW/Streetscape Design
II. Design/Operation of Parking Facilities
III. Water Consumption

NEW Proposed Outline Organization:

I. Lighting
   a.) energy consumption

b.) light pollution
c.) life-cycle cost
d.) lighting performance

II. Water Quality Management
a.) run off
b.) paving
c.) consumption (ball fields, golf courses)
d.) new regulations

Connectivity of Streets - Transportation and/or Sustainable Growth Groups to handle this.

Re: Spending our time on things that can make a substantial difference, areas of infrastructure that have the largest environmental impact, and which can we best do something about?

Appears we need to focus on **Water Quality** (II.) because:

1.) Streetlighting is one of the biggest energy users; however, just in the last 6 months, that ball really started rolling. Per Steve King's update, the City & KUB are moving forward with LEDs in ROW for new and retrofit construction; KUB is currently developing a new rate structure. The Energy group met on 05/20 and wants to look at recommending dark sky compliance, parking garage and street light LED retrofit, etc., so it appears that realm is covered.

2.) Engineering is open to our help with right of way issues as they relate to water, in preparation for the new stormwater permit slated for July of this year. The group has the chance for greatest impact here (BMP manual) because of a.) good City reception and b.) good water quality practices lead directly to addressing the issues in our original outline's ROW section (landscaping, pavement widths, trees, etc.)

3.) No other group is really digging into this issue at all, so the chance of overlap is small not only within the Task Force but with in the groups below (need to confirm their scopes).

Other existing efforts we need to coordinate with to avoid re-inventing wheels:

Tree Board
Steep Slope / Ridgetop Task Force
Sidewalk Committee
Storm Water Ordinance
City Streets Committee (Chris Cherry, chrmn. Steve is on it; Wayne used to be)

Next Steps:

- BMP manual identified by Engineering as group focus for recommending changes: http://www.cityofknoxville.org/engineering/bmp_manual/knoxvilleBMP.pdf
- Identify BMPs (generic design standards) that need to change or improve from a water quality perspective.
- Land Development Manual identified by Engineering as a possible group focus for recommending changes: http://www.cityofknoxville.org/engineering/ldmanual/KnoxvilleLDM.pdf
- No landscaping specs currently – recommend native water holding plants in ROW.