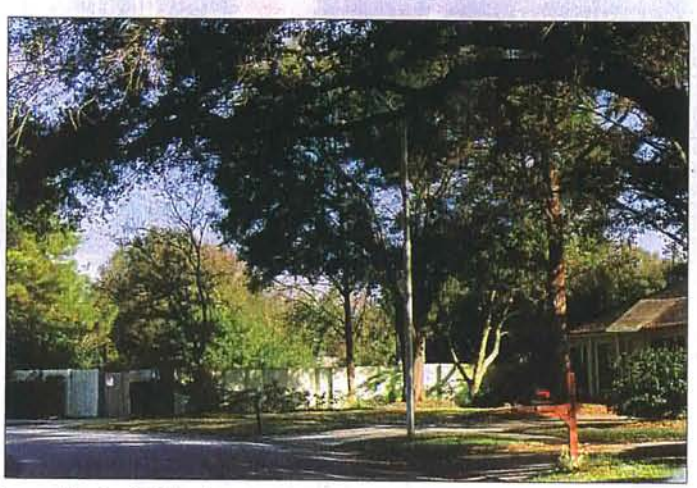
By Marc J. Rogoff, Ronald Messersmith, Michael McCarthy, and Joe Michler

Funding street lighting

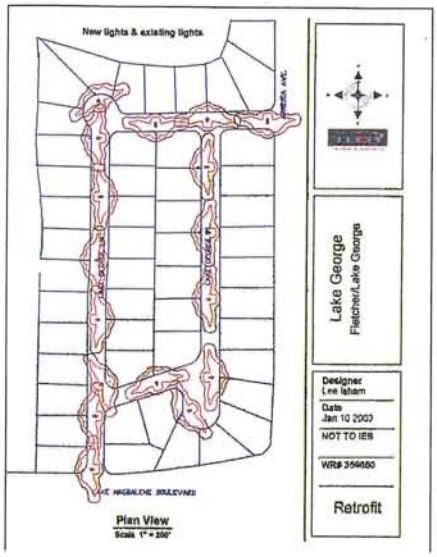
One county works to implement its street lighting program

Over the past few decades, Hillsborough County, Fla., has experienced a rapid increase in population and urban growth. This growth has resulted in a demand for traditional public works services in the county's unincorporated areas, which are populated with more than 700,000 people. In 1974, the county enacted its first ordinance to allow the creation of special districts for residential street lighting. This ordinance also defined the procedures to pay for the cost of the new street lighting system through special assessments.



By the end of the last fiscal year, a total of 800 lighting districts had been established, with a total annual budget of roughly $6.5 million. More than 100,000 property owners within the county's unincorporated areas are billed annually for street lighting on their property tax bill. Tampa Electric Co. (TECO) installs and maintains all residential street lighting equipment for the county under a 1924 agreement. They provide several styles of utility luminaries, fixtures, poles, and wiring equipment under their Bright Choices program. There are currently more than 24,000 light poles and 28,000 street lights in this program.

TECO charges the county on a monthly basis for the equipment installed in each lighting district: each pole and light has a fixed maintenance charge plus fuel, conservation, and capacity charges are made for the electricity used by the program. More than 93% of the annual charges for the program are for fixed maintenance charges, not for electricity. All of these charges are



Above: Residents now will be able to upgrade streetlights. Photo: Marc Rogoff. Left: Several lighting districts are considering street lighting upgrades. This schematic shows the Lake George area plan. Photo: Ron Messersmith

pursuant to a rate tariff, which was approved by the Florida Public Service Commission. Under the current policy, the county combines all lighting districts with similar equipment into one countywide classified group for special assessments.

PROGRAM ADMINISTRATION

In 1991, administration of the Hillsborough County street lighting program was transferred to the Public Works Department, which continues to operate it. To create the assessments, a three-person staff processes and updates the property appraiser's parcel and ownership information, mails public notices, approves engineering plans provided by TECO engineers, records changes to the lighting districts, processes petitions for new districts, and calculates new rates.

Over the years, the levels of service for district street lighting have not increased with changes in technology or with residents' and business' expectations for better lighting. The assessment also has not increased and the dollars collected have not kept up with the costs, due in part to the county's hesitancy to annually raise rates by incremental amounts. Projections made by county staff in 1999 raised concerns that without changes to the current rate system, the county would have to draw into reserves to pay for the system's cost. The county undertook an internal review of the program in 2000, and engaged the services of a consultant to analyze the program, evaluate the existing assessments, and make recommendations on possible improvements.

BENCHMARKING THE PROGRAM

One of the initial tasks was to identify possible improvements. The county felt that benchmarking the program's current procedures against the procedures of other lighting districts might help them establish current standard business practices for residential street lighting.

In some respects, the answers provided by the survey suggested possible areas for improvement, but also suggested that the county's program is managed similarly to other large street lighting systems. For example, most, if not all, street lighting programs are managed as a partnership between the local government entity and the power provider, which in most cases are investor-owned electric utilities. The exception is in areas where the community itself owns an electric utility or contracts with the local electric authority or electric cooperative.

In customer billing, capital budgeting, and methods of paying for residential lighting, there appears to be no state or national standard. In some areas, the cost of residential street lighting service is passed along to property owners through special assessments, similar to what's being done in Hillsborough County, while other local governments pay for this through their general fund. Some local governments develop annual capital improvement plans to guide their lighting programs, while other governments add new districts without such plans.

Those agencies that have a special assessment to fund their residential lighting program often add an administrative cost to manage the program. These vary over a wide range, suggesting that some governments are using highly inflated administrative fees to subsidize other public works programs—such as lighting on arterials and collector roads. Finally, those




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who are funding their lighting costs with general funds are doing so by imposing an assessment on the use of government-owned right-of-way by private contractors and public utilities. In essence, this is a tax on the use of public right-of-way to fund street lighting and other public works.

The overall result of the initial work, particularly in benchmarking and developing the standard operating procedures manual, identified needed technical improvements to the lighting district ordinance in a number of key areas. The county and the consultant suggested modifications to the ordinance, as well as needed policy changes. An initial list of changes was developed and the team worked with the county attorney's office on numerous drafts, gathering information from other county departments (for example, the Hillsborough County property appraiser) on such issues as wetland conservation and minimizing escaping light that would interfere with stargazing in rural areas. To gather additional information, the team met with stakeholders such as TECO, private developers, and community districts. This effort culminated in a series of revisions to the existing ordinance.

UPGRADING FOR THE FUTURE

Lighting districts date back to 1962 with the installation of the first residential lighting equipment. As one would expect, due to the age of some equipment and changes in lighting standards over the years, some districts require upgrades or additional street lights. Districts that were established in 1986, are designed by TECO to meet national standards.

Ordinance changes now allow residents in each district to upgrade lighting equipment by submitting a formal petition to the county that must be approved by 70% of the homeowners. Once the county receives a request for an upgrade, the staff requests a formal engineering study from TECO, which details all of the work (light poles to be added, those that will need to be relocated, and the number of trees, if any, that need to be removed or trimmed back). Once approved and installed, any upgrades must remain in place for seven years so TECO can depreciate the cost of the equipment.

County staff and consultants are continuing to study other improvements to the existing program. First on this list is meeting minimum lighting standards for new residential and commercial development as part of the county's code. Standardization of street lighting would provide consistency in equipment use and avoid problems if the program is requested to absorb "non-standard" lighting equipment into the program.

This program currently relies on special assessments of residential parcels to fund the entire cost of residential street lighting and related maintenance. Lighting of arterials and collector roads is funded through gas tax dollars provided by the Board of County Commissioners and grants provided by the Florida DOT. Unfortunately, these funds enable the county to provide roadway lighting on only a small percentage of their nearly 3000 miles of roads—additional methods of funding need to be found. **PW**

— Rogoff, PhD, is a project director with SCS Engineers, Tampa, Fla.; Messersmith, McCarthy, P.E., and Michler are senior engineer, director, and general manager III, respectively, of the Hillsborough County, Traffic Division, Public Works Department, Tampa, Fla.

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