



## Triangle Transit Sustainable Choices and Green Initiatives\*

### Regional Transit Center

#### To the Board of Trustees - April 22, 2009:

The principles of sustainability have been gaining ground in the public transportation industry. Sustainability, at its core, is a way to make our communities more livable by integrating and balancing economic, social and environmental needs.

What is Sustainability? Sustainability is about practices that make good business sense and good environmental sense. It is balancing the economic, social and environment needs of a community and, in particular, Triangle Transit.

**Location & Site Selection:** In choosing the Imperial Center location for its new Transit Center, Triangle Transit combined the Regional Transit Center with its Administrative Offices and the Transit Information Center to improve access to transit for its staff and increase transit access for the 60 plus businesses centrally located within the Imperial Center Business Park.

Now over 3,000 employees working within the Imperial Center have bike / pedestrian access to transit via lighted sidewalks and trails. And, instead of driving, Triangle Transit staff can also use this network to walk to nearby restaurants; a copy center, coffee shop, sundries store, shopping center and gym.

**Design & Construction:** In keeping with sustainability concepts, the Regional Transit Center was constructed on an old parking lot site, thereby minimizing land disturbance and the use of undeveloped land property and open space. By using an infill site limited expansion of public and private utilities was required; current law enforcement and emergency service travel distances were not increased; and development costs were reduced.

Throughout the Regional Transit Center LED light fixtures were installed to increase energy efficiency, and trash and recycling bins are provided. Bicycle racks and lockers will also be installed giving additional commute options for people living or working within biking distance. The plant material selected for the site is drought tolerant; typically not susceptible to pests and their natural growth habits will preclude the need for pruning.

**Ticket Building** - Triangle Transit staff met with representatives of the NCSU Solar Center to explore conservation and sustainable opportunities presented by the use of a modular building. As a result the Ticker Building includes:

- Solar tubes in all areas to avoid artificial lighting during the day reduces energy consumption;
- Zero VOC (volatile organic compound) interior and exterior paint;
- Thermo-ply sheathing on all exterior walls is formaldehyde free and has no VOCs. It provides a better air-tight seal than plywood or OSB board. It is 100% recycled material made from cardboard and aluminum foil.
- South facing windows in the waiting room and a canopy protect windows from direct summer sun, reducing air conditioning requirements.
- Low-flow toilets and faucets to reduce water usage are installed in the restrooms.
- Vinyl composition tile (VCT) which is a green product, has been used in the waiting room and bathrooms.
- Reflective white roof membrane deflects the summer heat, reducing air conditioning requirements.
- Prefabricated modular buildings minimize construction waste by using less materials and minimizing construction-related waste. In addition modular buildings can be reused at other locations.

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**Energy, Maintenance & Operations in the Administrative Office Building:** Our new offices were renovated to include motion sensor controlled lighting and the use of florescent lighting, reducing energy consumption 10% to 30%. Staff is encouraged to turning lights off when motion sensors are not present, and employees are encouraged to turn off monitors and table lamps when not in use. Energy Star appliances have also been chosen for energy efficiency.

### **Agency Policies & Practices**

**Work/Life Balance** - Triangle Transit's Work/Life Balance Policy offers options for that will allow employees to reduce their costs and other impacts of commuting by using compressed work schedules, telecommuting, and supporting the reduction of peak hour trips by allowing Flextime (staggered work hours).

**DBE** - Triangle Transit's Disadvantaged Business Enterprise (DBE) Program helps to promote economic sustainability by diversifying the agency's procurement and purchasing practices.

### **Materials and Resources:**

Internal sustainability initiatives include:

- **Recycling:** Centrally located recycling bins are available in both the administrative offices and the Regional Transit Center for office paper, envelopes, cardboard, obsolete bus schedules, and publications. Recycling containers for cans, glass, cardboard, and plastic are also located in common areas. Triangle Transit also recycles printer ink cartridges, electronic equipment, used tires and oil (Bus Operations) and bus washer water.
- **Procurement:** Triangle Transit uses copy paper with recycled content; paper cups/plates vs. Styrofoam in; limited amounts of plastic utensils; rebuilt transmissions, rear ends, engines, fuel pumps, water pumps, recapped tires and refurbished radiators in our transit vehicles, environmentally safe soap and cleaning products in the bus washer and Bus Operations and Maintenance Facility; and bus parts purchased from local, regional, and in-state vendors.

We are also considering other environmentally sound products and procedures such as a diesel additive that will burn diesel fuel cleaner and increase Triangle Transit bus mileage; environmentally preferred products in bus garage that are safer for our environment and create a safer, cleaner and healthier facility for our employees; and purchasing more office supplies with recycled content and smaller sheeted paper towels.

**Conservation:** In addition to using and purchasing environmentally sound products, purchasing from sustainable product vendors and implementing safe and sustainable practices, conserving resources is also a critical part of the sustainability initiative. Triangle Transit's conservation efforts seek to focus on:

- encouraging double sided printing and smaller font use to conserve paper
- providing storage and dish washing supplies to encourage staff to reuse ceramic mugs, plates and cutlery
- using particulate filters in the new Gillig buses (required) to burn fuel cleaner
- new software tools in Bus Operations and Maintenance to improve tracking of fuel usage and consumption on a per vehicle basis and identifying opportunities for potential savings.
- Cleaning and reusing existing carpet, glass partitions and cabinets in our new facility; retrofitting office partitions and furniture from the TW Alexander and 6 Park offices in lieu of new purchases.

**Long Term Opportunities for Additional Sustainable Initiatives:** Triangle Transit hopes to eventually invest in hybrid electric agency vehicles. Investment in and more frequent use of teleconference equipment would also reduce vehicle miles traveled and fuel consumption to get to and from group meetings away from the office.

Students from the Duke University Terry Sanford Institute of Public Policy are currently completing an analysis of Triangle Transit's use of energy and developing tracking mechanisms that will identify opportunities for additional sustainable choices and further conservation.

\*Originally discussed at the Triangle Transit Board of Trustees Worksession - January 15, 2009