

**DENVER UNION STATION**





# MASTER PLAN SUPPLEMENT

Sustainability as an Overarching Principle



### SUSTAINABILITY AS AN OVERARCHING PRINCIPLE

In the few years since the adoption of 2004 Master Plan, global events have focused significant attention on sustainability. The partner agencies anticipate that technology in this area will continue to improve at a rapid pace in the near future. This plan documents the current goals and policies of each of the partner agencies as aspirations for the design and construction of the Transit District Plan. Though sustainability has many definitions, here are a few common understandings of the term as reported by staff to the RTD Board of Directors:

- Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs
- Sustainable development is the achievement of continued economic development without detriment to the environmental and natural resources
- The goal of sustainable transportation is to ensure that environmental social and economic considerations are factored into decisions affecting transportation activity.

Each of the partner agencies has recently updated their sustainability goals. Though these goals are not requirements, they will serve as aspirations for the design and construction of the Transit District Plan.

#### Colorado Department of Transportation

In April 2007, Governor Ritter signed Executive Order D0011-07 “to provide clear guidance and directive to all state agencies and offices in the greening of state government in the State of Colorado.” These goals will apply to any Union Station work directly accounted to CDOT or other state initiated actions as part of the Transit District Plan.

#### Energy management

- By fiscal year 2011-2012, achieve at least a 20% reduction in energy consumption of state facilities below fiscal year 2005-2006 levels;
- By January of 2008 develop or update an energy management plan and ensure development of a study determining feasibility of energy performance contracting for all state owned facilities;
- On an ongoing basis, assess and implement where effective, the development of state renewable energy projects with the support of GEO.

#### Materials and resource management:

- By fiscal year 2008-2009, develop purchasing policies to reduce the state’s environmental impact as a consumer of products and services;
- Adopt a goal of “zero waste” from construction of new buildings and operation and renovation of existing facilities;
- Achieve a paper use reduction goal of 20% by fiscal year 2011-2012 using fiscal year 2005-2006 as a baseline;
- Achieve a reduction of water consumption goal of 10% by fiscal year 2011-2012, using fiscal year 2005-2006 as a baseline;
- DPA, in cooperation with DPHE, shall develop purchasing policies for selecting environmentally preferable products.

#### Vehicle petroleum consumption

- By June 30, 2012, achieve a 25% volumetric reduction in petroleum consumption by state vehicles measured against a fiscal year 2005-2006 baseline, while increasing energy efficiency of the fleet (excluding vehicles used for law enforcement, emergency response, road maintenance, and highway construction).
- By December 1, 2007, complete a transportation

efficiency audit addressing methods for improving the environmental efficiency of the state fleet.

#### City and County of Denver

(excerpted from [www.denvergov.org](http://www.denvergov.org))

In October 2007, Mayor Hickenlooper signed Executive Order 123 to officially create the Greenprint Denver Office and establish the city’s sustainability policy. The Executive Order includes several measures to promote sustainability throughout city operations. A primary goal was to establish a Greenprint Denver Office to position Denver as a national leader in sustainability by developing and implementing solutions to resource challenges and working with city agencies to ensure that all city policy and program decisions incorporate “triple bottom line” analysis, balancing short- and long-term economic, social, and environmental considerations. Goals include:

#### Green Building and Energy Conservation

All applicable new city building construction and major renovations will be built and certified to the U.S. Green Building Council’s Leadership in Energy and Environmental Design LEED®-NC (New Construction) Silver standard, and achieve Energy Star® status. All capital improvement projects, existing, and future city-owned and operated facilities shall incorporate all appropriate LEED® standards.

#### Vehicle Replacement and Operation

Replace light-duty vehicles with hybrids, alternative fuel vehicles, or the most fuel-efficient and least-polluting vehicles available as older vehicles are phased out. Diesel-powered vehicles will use at least 20 percent B20 biodiesel. A Green Fleet Committee will be established to ensure that that the city procures and operates a fleet of vehicles that minimizes environmental impact, enhances domestic energy security, and maximizes fuel efficiency and

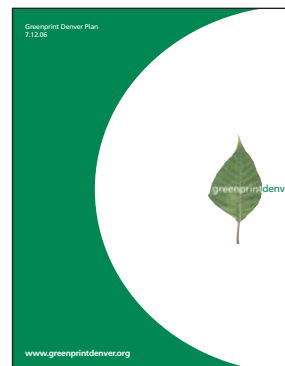
diversification.

#### *Materials and Waste Management*

All agencies shall direct efforts to utilize recycling services and pursue integrated waste management strategies that include reducing consumption, collecting used materials for reuse or recycling, and purchasing cost-competitive recycled and recyclable products. Construction projects will use concrete consisting of at least 20 percent fly ash, and construction and demolition waste will be recycled. All city employees shall take measures to reduce waste and reuse resources whenever possible, such as using electronic media in place of paper, dual-sided printing and copying, reducing font sizes and margins in documents, purchasing paper with at least 35 percent post-consumer content, and other steps.

#### *Water Conservation*

The city will demonstrate wise water use in city facilities, buildings, and parks through identification of water inefficiencies and implementation of



water conservation projects to improve plumbing fixtures, irrigation systems, cooling towers, kitchen operations, swimming pool operations, laundries, and other water uses.

#### *Environmental Public Health Policy*

All city employees and contractors must be familiar with and follow the city's Environmental Public Health Policy, included with the Executive Order as Memorandum 123-F.

#### **Regional Transportation District**

In October 2006, the Regional Transportation District board adopted a sustainability policy to propose that agency's goals towards more sustainable practices including.

- Developing and adopting best practices for sustainable design, construction, operations and maintenance;
- Training RTD staff in sustainable design practices and sponsoring a select group of RTD personnel to become LEED™ Accredited Professionals;
- Hiring FasTracks corridor consultants that have experience with sustainability and the LEED™ program;
- Evaluating adoption of LEED™ as a standard for new RTD transit buildings and major additions/renovations;
- Incorporating LEED™ guidelines into design standards and/or require LEED™ certification. (The three new FasTracks maintenance facilities are candidates for LEED™ certification.)
- Investigating the use of many sources of electrical energy including renewable sources to power its trains.
- Evaluating the incorporation of energy saving features in maintenance facilities including using solar space heating and new