

Chapter Two Guiding Principles

The Roanoke Valley Area Metropolitan Planning Organization *Constrained Long-Range Transportation Plan 2035* (CL RTP 2035) consists of three fundamental elements:

- Guiding Principles,
- Financially Constrained List of Transportation Projects, and
- Vision List of Transportation Projects

The “Guiding Principles” set a policy tone that defines the spirit in which the Financially Constrained and Vision Lists of Projects define expected future project costs and future funding allocations. In this way the “Guiding Principles” set a leadership vision for the plan as a whole. The “Guiding Principles” make use of a “Vision Statement,” SAFETEA-LU Planning Factors, Goals, Objectives and Strategies to articulate a leadership vision for the CL RTP 2035.

Vision Statement: By the year 2035 the Roanoke Valley Area Metropolitan Planning Organization (RVAMPO) will have made the most opportunity of limited federal surface transportation funds by acting upon opportunities to manage the existing system using technology, to extend public transportation in a targeted manner, to provide opportunities for non-interstate ridesharing, to complement and complete existing transportation corridors, and to provide safer transportation for all users.

Context of the Goals and Objectives: The time horizon for the CL RTP extends until the year 2035. Within that timeframe there are major societal and demographic forces that are both difficult to forecast with accuracy and profoundly important in their impact on future travel patterns, transportation demand and transportation safety. These forces represent major variables affecting tradeoffs and decisions necessary in the planning process and set a context for the plan. The summaries below will be supplement by more detailed information at appropriate places throughout the plan.

Retirement of the “Baby Boom” Generation: The “Baby Boom” generation represents those born after World War II until 1964. If current retirement ages and trends continue, all members of this sizeable cohort will retire within the time horizon of this plan. Most past plans relied on extrapolations of trends that occurred in preceding decades to the plan. In almost all cases this meant extrapolating travel trends of the “Baby Boom” generation as they reached employment age, raised families and achieved their highest earning potential and employment responsibilities. In retirement, these past transportation trends, based on work and family, will change to trends based on leisure, volunteering, medical appointments and shopping/retail. In addition, as the “Baby Boom” generation ages transportation safety and accessibility issues will come to the forefront.

Air Quality, Global Warming and Climate Change: The RVAMPO was successful in attaining the previous federal 8-hour Ozone Standards under the Ozone Early Action Plan

protocol. In March 2008 the federal EPA adopted new 8-hour Ozone standards. As of the writing of this document, the RVAMPO is at one part per billion (ppb) above the new standards. RVAMPO localities will likely have a small window of time to attain compliance before final designations are made by the EPA. Similarly, RVAMPO localities are barely in attainment with the Fine Particulate Matter (PM 2.5) standard. It is likely that both standards will be further revised during the timeframe of this plan. On a similar note, global warming is occurring and recent indications are that it is happening faster than projected and its consequences are more widespread and more severe than forecasted. Will the expected changes (heat, drought, floods, and sea level rise) cause major agricultural, economic, social and geo-political changes as well? Could the results be catastrophic? There is no way to predict the timeline, scale or severity of these changes in the LRTP. For both of these reasons, projects selected in this plan should seek to maximize air quality improvement in balance with other tradeoffs.

Energy Resources: Oil and gasoline prices continue to trend upward. In the term of this plan, global oil supplies may not reflect previous price/quantity supplied relationships, driving prices up. As fundamental resource costs increase, technology improvements can provide cheaper alternatives. One example is the rise of hybrid gas/electrical engine cars today – obtaining higher mpg efficiency, requiring less gasoline, and reducing air pollution. This trend is expected to continue expanding up into the next level of automobile fuel technology – the hydrogen battery cell. This represents a cleaner fuel sources, but the technology needed for its use and delivery are still 10 to 15 years away. During this period, if gas prices go beyond four to six dollars per gallon, will more drivers consider using mass transit? Will carpooling, van sharing and/or bicycling to work become more prevalent alternatives? Will supply of alternative transportation amenities be able to service penned up demand?

Funding Trends: At present, transportation funds for construction and maintenance are on a declining trend line. The LRTP 2025, originally adopted in February 2004, was amended April 24, 2008 to account for updated projected financial revenue and project costs. In many cases locality, urban and secondary, systems saw a reduction in nominal (without accounting for reductions due to inflation) dollars. Some secondary systems almost saw a 50% reduction of projected “nominal” transportation revenues until 2025. If these trends continue in this plan’s timeframe, non-traditional and relatively less expensive projects such as Intelligent Transportation Systems (ITS), Travel Demand Management (TDM) and Operations Management will have to be given the most serious consideration.

The federal government through the current transportation law: Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users – SAFETEA-LU further defies the context of MPO long-range transportation plans through planning factors. The federal planning factors are listed below (in quotes), with possible regional project selection criteria added underneath (indented):

- **“Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.”**
 - Select projects which provide congestion relief.

- Select cost-effective projects (e.g. lowest cost per new user).
- **Increase the safety of the transportation system for motorized and non-motorized users.”**
 - Select projects with potential to improve safety.
- **Increase the ability of the transportation system to support *homeland security* and to safeguard the personal security of all motorized and non-motorized users;**
- **“Increase the accessibility and mobility options available to people and for freight.”**
 - Set aside funding for mass transit projects.
 - Select cost-effective projects (e.g. lowest cost per new user).
- **“Protect and enhance the environment, promote energy conservation, and improve quality of life, and promote consistency between transportation improvements and State and local *planned growth and economic development patterns*;**
 - Select projects which promote efficient growth patterns identified in local Comprehensive Plans.
- **“Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.”**
- **“Promote efficient system management and operation.”**
 - Set aside funding for cost-effective ITS projects.
- **“Emphasize the preservation of the existing transportation system.**
 - In selection process, consider long term operations and maintenance costs.

This section describes goals, objectives, and strategies that have been developed as part of the Roanoke Valley Area Metropolitan Planning Organization *Constrained Long-Range Transportation Plan 2035* (CL RTP 2035) update. For the purposes of this plan the following definitions are used for goal, objective and strategy.

Goal: A long-term end toward which efforts are directed

Objective: A specific, intermediate program or activity that marks progress toward a goal

Strategy: A measurable plan of action or way in which programs and activities are coordinated to achieve an identified goal and objective.

Goal: Improve transportation system performance, air quality and reduce growth in energy use related to transportation by reducing the growth rate of **Vehicle Miles Traveled (VMT)**

Objective: Plan for non-interstate park and ride lots by including construction costs or private sector partnership costs in the financially constrained list of transportation projects.

Strategy: Develop a program, focused on key regional arterial corridors, to approach businesses, churches and other organizations with pre-existing excess parking capacity to officially section off portions of the existing parking lot as a park and ride section. Progress on this objective can be measured by the number of such partnerships by a certain date.

Strategy: Add the estimated construction cost of one non-interstate 20 space park and ride lot to the project costs of major arterial construction projects over one mile in length in the Constrained List of Projects.



Photo simulation of excess parking capacity Park and Ride designation

Objective: Increase performance and awareness of Travel Demand Management (TDM) Program.

Strategy: Flex sufficient transportation funds from construction revenues to conduct professional target market analysis and campaign to commuters near major regional corridors.

Strategy: Flex sufficient transportation funds from construction revenues to develop VMT reduction awareness campaign using a wide variety of communication products possibly including: public service announcements, advertising, social networking and other appropriate channels. Measure results of awareness campaign.

Strategy: Investigate public private partnerships to implement a car sharing system focused on downtown, village centers and mixed use residential areas.

Goal: Complete existing right-of-way (ROW) and travel corridors by adding elements that adapt existing ROW for safe use by multiple transportation modes (“complete streets”).

Objective: Provide bicycle accommodations on key commute corridors.

Strategy: At least 2% of total “Constrained List” funds applied to bicycle enhancements.

Strategy: Install or provide installation incentives for an additional 50 bicycle racks by the time horizon of this plan.

Objective: Increase pedestrian access and safety on collector and arterial roads.

Strategy: Include sidewalk costs in “Constrained List” project cost estimates for roadways that function at the collector or arterial level and currently lack sidewalks.

Strategy: Include costs for crosswalks and pedestrian crossing signals to connect sidewalks already present or to be constructed in project cost estimates.

Objective: Reconfigure, restripe and/or resurface urban collectors and arterials to include bicycle lanes, sidewalks or pedestrian paths in accordance with local comprehensive plans and local design guidelines.

Strategy: Include “stand alone” bicycle or pedestrian accommodations that are attached to existing collectors or arterials in constrained list where appropriate.

Goal: Assure that transportation improvements are compatible with local comprehensive plans and regional economic development activities.

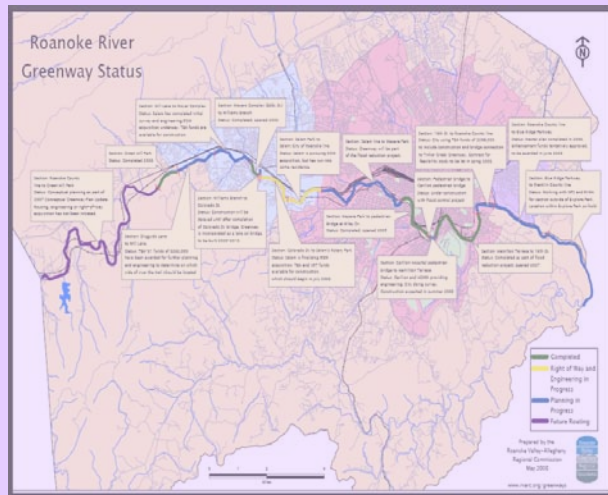
Objective: Consult local government design guidelines and neighborhood plans to more accurately develop project cost estimates for candidate LRTP 2035 projects.

Objective: Construct “Roanoke River Greenway” as defined in “2007 Update to the Roanoke Valley Conceptual Greenway Plan” by the end of CL RTP 2035 time horizon.

Strategy: Periodically monitor Roanoke River Greenway implementation and schedule.

Strategy: Apply surface transportation funds, as appropriate, to “Roanoke River Greenway” construction.

Objective: Assure adequate transportation connectivity between Downtown Roanoke and Biomedical Center Complex on Reserve Avenue.



Example of Greenway Status Monitoring

Objective: Plan for freight needs on applicable corridors.

Strategy: Review candidate CL RTP 2035 projects for inclusion in the 2002-03 “Roanoke Valley – Alleghany Regional Freight Study” and give special consideration for included projects.

Strategy: Consider extra costs needed to accommodate vehicles with long wheel bases in appropriate candidate CL RTP 2035 projects.

Objective: Develop telework as a complement to existing commuting patterns and as an inter-regional transportation option for those living in the RVAMPO area and teleworking to larger metropolitan areas.

Strategy: Continue to work with City of Roanoke Economic Development and Telework VA program to expand telework options both inter and intra – regional. Report number of registered telework participants on an annual basis

Objective: Continue to investigate an increased role for rail both intermodal freight and a possible re-establishment of passenger rail service.

Strategy: Investigate under analyzed niche markets for passenger rail service and cross reference with existing economic development and tourism planning initiatives.

Strategy: Assess intermodal freight aspect of candidate CL RTP 2035 projects.

Goal: Maximize limited transportation funds by focusing on bottleneck improvements, series of spot improvement and/or technology improvements to be applied to the transportation system at a lower cost than traditional construction costs.

Objective: Provide funds for a signal timing coordination and synchronization plans and studies on key regional corridors.

Objective: Consider corridor improvements as a combination of a series of intersection or bottleneck improvements coupled with appropriate safety and accessibility.

Strategy: Program costs for roundabouts where feasible and track number of roundabouts implemented.

Strategy: Program costs for signal timing, reversible lane or other operations systems designed to get extra capacity out of existing infrastructure.

Goal: Enhance transportation safety for all users and bystanders.

Objective: Develop at least 10 active or completed Safe Routes to Schools (SRTS) plans or projects by the end of the CL RTP 2035 time horizon.

Strategy: Develop at least one SRTS plan in each RVAMPO locality within the next 10 years.

Objective: Use data analysis to identify top regional accident locations on a vehicle miles travel, entering volume or other standard measure.

Objective: Identify regionally significant right of way or human factors that have a potential to lead to accidents in anticipated projects listed in this plan.

Strategy: Investigate whether public policies such as limiting mobile phone use in operating vehicles can be implemented at the local or regional level.

Goal: Anticipate transportation needs of retiring “Baby Boom” population cohort in projects selected for CLRTP 2035.

Objective: Target future areas that are projected to have a concentration of “carless households” in retirement age ranges.

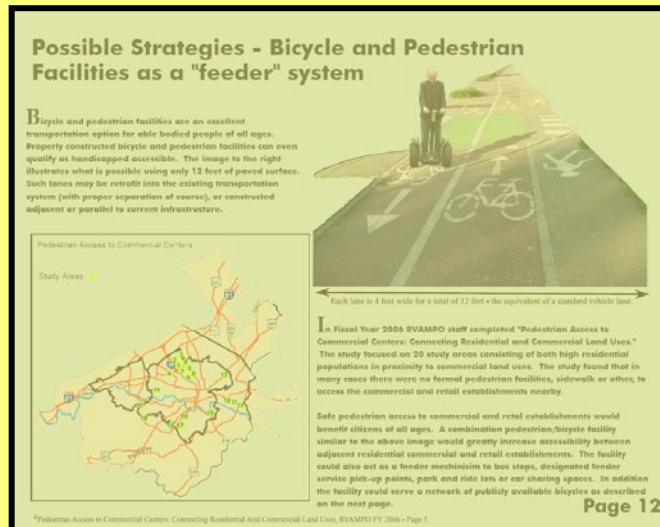
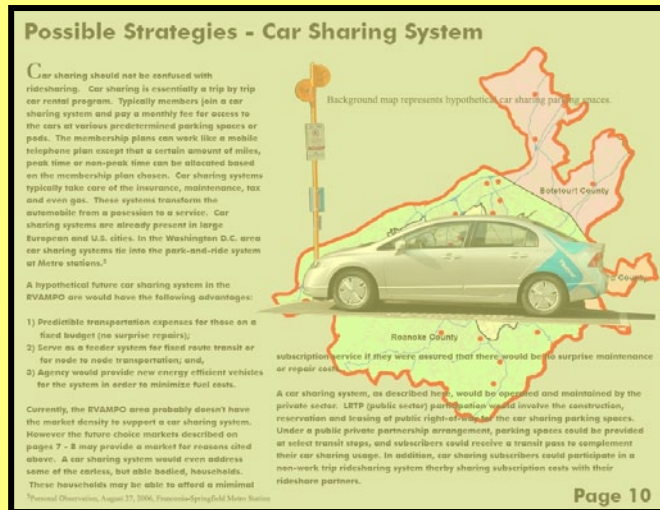
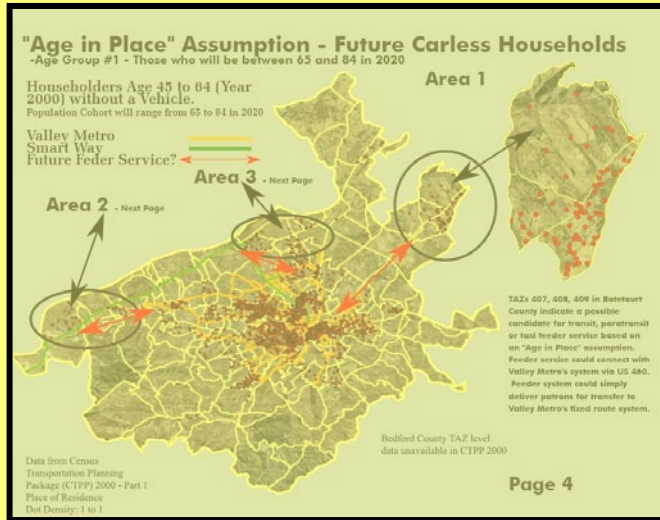
Strategy: Develop regional “non-commute trip” ridesharing system for non-emergency medical, shopping and social trips. Have such as program in operation by 2012.

Strategy: Investigate a regional car sharing system designed to appeal to households who desire to own one vehicle or less on a permanent basis. Report feasibility by 2012.

Strategy: Investigate a taxi or paratransit feeder system that targets concentrations of “future carless households” to the current fixed route

transit system. Integrate concept into regional transit development plan by 2012.

Strategy: Investigate bicycle sharing/renting systems that could serve as a transit feeder system. Integrate concept into regional bicycle plan by 2010.



Objective: Investigate daily bus service between Roanoke Valley and Smith Mountain Lake to connect retired lake residents with regional airport and other transportation connections.