







MULTIMODAL  
SAFETY  
PUBLIC TRANSPORTATION  
COMPLETE STREETS  
PUBLIC PARTICIPATION

# 2014-2018 Regional Transportation Improvement Program



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# CHAPTER 1: INTRODUCTION

## Overview of the Regional Transportation Improvement Program Process

The Fiscal Year (FY) 2014-2018 Regional Transportation Improvement Program (RTIP) is a five-year plan of major street and highway, transit, bicycle and pedestrian projects for Washoe County and is based on the federal fiscal year. The RTIP includes a summary of projects by fiscal year and shows the agency responsible for implementing the project, funding source and other related information. The RTIP represents a prioritized program directed at meeting Washoe County's growing transportation needs while improving the region's air quality, transportation efficiency, safety and mobility. The RTIP is required by federal regulation and serves as a useful tool in planning and programming transportation system improvements.

The initial federal legislation that established overall federal transportation program direction and authorized funding levels to the Regional Transportation Commission (RTC) as the Metropolitan Planning Organization (MPO) for Washoe County was included in the 1990 Clean Air Act Amendment (CAAA) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA was reauthorized in June 1998 as the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). TEA-21 was reauthorized in August 2005 as the Safe, Accountable, Flexible, Efficient Transportation Equity Act—A Legacy for Users (SAFETEA-LU). SAFETEA-LU was reauthorized as Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) in 2012.

## Conformity with the Clean Air Act Amendment of 1990

The commitment of Congress to promote and continue major reforms in the transportation planning process is shown with CAAA and all transportation legislation since ISTEA in 1991. The conformity provisions of the CAAA established important new requirements that transportation plans, programs and projects conform to the "purpose" of the State Implementation Plan (SIP). The SIP is a formal submission of the region's air quality strategy to the federal government.

Because emissions from motor vehicles make a significant contribution to air pollution, the CAAA requires that transportation officials make a commitment to programs and projects that will help achieve air quality goals. Among these goals are providing for greater integration of the transportation and air quality process; ensuring that transportation plans, programs and projects conform with the Statewide Implementation Plan (SIP) and contribute to attainment of national standards; and reducing growth in vehicle miles traveled (VMT) and congestion in areas that have not attained the U.S. Environmental Protection Agency (EPA) air quality standards. The federal standards require that certain pollutants do not exceed specified levels more than one day a year. Areas that violate this standard for specified pollutants are designated as non-attainment areas.

The core area of the Truckee Meadows is designated as Hydrographic Area #87 (HA #87) and is fully incorporated within the metropolitan planning area boundary. The hydrographic area is

designated as in "maintenance" for carbon monoxide (CO) and "serious" non-attainment for particulate matter of less than 10 microns (PM<sub>10</sub>). A regional emissions analysis must be performed for each pollutant the area is determined to be in maintenance or non-attainment. The results from this analysis are shown in Chapter 9.

Another requirement of the 1990 CAAA is the expeditious implementation of transportation control measures (TCM) in the air quality implementation plan. The status of these control measures is documented in this RTIP. The following TCMs are included in this RTIP:

- Bicycle/Pedestrian Facilities
- Traffic Flow Improvements
- Intersection Geometric Improvements
- Annual Traffic Signal Operations Review
- Trip Reduction Program

### **Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21)**

MAP-21 was signed into law on July 6, 2012. It is the first long-term highway authorization enacted since 2005 and funds transportation programs at over \$105 billion for fiscal years 2013 and 2014. MAP-21 is a milestone for the nation’s economy and surface transportation program. It creates a streamlined, performance-based, multi-modal and safety-focused surface transportation program. It builds on many of the highway, transit, bike and pedestrian programs and policies established in 1991 under ISTEA and subsequent transportation legislation.

### **FY 2014-2018 Regional Transportation Improvement Program Summary**

The following table is a summary of the highway, transit capital and operating, bikeway and other projects in the RTIP. The 5 year program has a total cost of approximately \$847 million.

**Table 1-1  
FY 2014-2018 RTIP Summary**

<u>Transportation Mode</u>	<u>Total Cost</u>	<u>Percent of Total Program</u>
Interstate/Freeway Projects	\$ 167.2 million	20%
Local Projects—Capacity	\$ 258.2 million	31%
Local Projects—Major Maintenance	\$ 26.7 million	3%
Bridge	\$ 21.2 million	2%
Transit—Operating	\$ 167.4 million	21%
Transit—Capital	\$ 37.5 million	5%
Transportation Management	\$ 121.2 million	15%
Other	\$ 22.1 million	3%
<b>TOTAL</b>	<b>\$ 823.9 million</b>	<b>100%</b>

The complete RTIP project listing is contained in Chapter 7. The list is divided by funding category and shows the project description, the project limits where applicable, the project phase (engineering/design, right-of-way, construction, operations or equipment purchases), the year programmed, the project costs and the federal, state or local contributions to the project cost. The individual projects were developed by the RTC, the Nevada Department of Transportation (NDOT), Washoe County and the cities of Reno and Sparks and based on the 2035 Regional Transportation Plan (RTP). The RTC Technical Advisory Committee and Citizens Advisory Committee provided input on the RTIP.

The project listing includes \$330 million in bond repayments for three projects statewide including the US 395 extension, US 95 in Las Vegas and the Carson City Freeway. This amount has not been included in the summary for this RTIP as the allocation of the bond repayments to each project has not been determined.

### **Major State Highway Projects**

The RTIP includes funding for environmental analysis and design for widening of US 395 between I-80 and Parr Boulevard. In addition, three privately funded projects for interchange improvements on I-80 at Patrick, Tracy/Clark and Garson Road are included. Typically funding for major state highway projects come from federal, state and local money.

### **Major Local Projects**

Local projects include those funded with federal MAP-21 programs, RTC Fuel Tax, Regional Road Impact Fee (RRIF) funds and local jurisdiction funds. Approximately \$258.2 million is for local major capacity projects (including studies, environmental review and preliminary design) and \$26.7 million for major maintenance or reconstruction projects. Major capacity projects include the SouthEast Connector (\$223.2 million), the widening of McCarran Boulevard from Mira Loma to Greg Street (\$29.9 million) and intersection improvements to Pyramid/McCarran (\$71 million). The replacement of the Virginia Street Bridge over the Truckee River is also included (\$21.2 million).

### **Transit Programs**

The RTIP programs approximately \$207 million on public transportation projects during the five-year period. This includes the RTC RIDE fixed-route transit system (including RTC INTERCITY and SIERRA SPIRIT) and the RTC ACCESS paratransit services system. Capital expenditures total \$37.5 million while operating costs are \$167.4 million. Under MAP-21, all operating costs are locally-funded except operating expenses related to nonfixed-route paratransit Americans with Disabilities Act (ADA) and RTC RIDE preventive maintenance, which may include federal funds. Most capital outlays are federal funds from FTA Section 5307, Section 5339 and the Congestion Mitigation Air Quality (CMAQ) program. Section 5339 was previously titled Section 5309 and was discretionary and as such its availability was not guaranteed. This is no longer the case as

Section 5339 is now a formula based funding source. The primary capital expenditures call for the replacement of 22 RTC RIDE coaches and 60 RTC ACCESS vans. RTC is planning the next phase of RAPID implementation which includes a connection to the University of Nevada, Reno on Virginia Street. A demonstration service to provide a summer weekend service from Reno to Lake Tahoe is included in this program.

### **Transportation Systems Management (TSM), Transportation Demand Management (TDM) and Other Projects**

Transportation system operations improvements maximize the capacity of existing roadways in a highly cost effective way. RTC conducts a traffic operations program cooperatively with Washoe County, the City of Reno and the City of Sparks. Over the next five years, approximately \$121.2 million is to be used for the traffic management program, geometric improvements, intersection capacity improvements, bicycle and pedestrian improvements and trip reduction programs.

### **Other RTIP Conformities and Certifications**

#### **Conformity with the Regional Transportation Plan (RTP)**

The projects in the RTIP must conform to the Regional Transportation Plan (RTP). The projects and policies included in the RTP are used in developing the RTIP. The RTIP is the principal mechanism for implementing the long-range transportation plans contained in the RTP.

#### **Financial Capacity**

With FTA programs, the RTC is required to evaluate the financial capacity of the agency to conduct and carry forward the financial requirements related to the public transportation operation. The financial capacity analysis is prepared annually by the RTC Finance Department with the budget process. The RTC has the financial capacity to continue the public transportation program through the five-year operating and capital financial model.

#### **Public Involvement Plan**

Federal legislation requires that each MPO formally adopt a proactive public involvement process. The intent of the process is an early and continuing involvement of the public in developing transportation plans and programs. The RTC adopted a Public Participation Plan in September 2008 that was compliant with federal regulations and was a comprehensive plan outlining the public involvement and education process. The plan was amended in August 2009. The plan will be revised during 2013.

## **Conformity Determination**

The air quality and regulatory conformity determination associated with the RTIP is included as part of this document. A finding of conformity by the Regional Transportation Commission (RTC) is required before approval of federal program funding for individual projects included in the RTIP. The RTIP will be reviewed and updated every two to four years, allowing consideration and revision of project priorities. The resolution adopting this RTIP incorporates the required findings of conformance. Chapter 9 provides specific detail on the air quality and regulatory conformity analysis and determination. RTC works closely with the Washoe County Air Quality Management Division and other partner agencies involved in air quality analysis through quarterly interagency consultation meetings.



## CHAPTER 2: RTIP PLANNING PROCESS

The FY 2013-2017 Regional Transportation Improvement Program (RTIP) is a five-year plan of major street and highway, transit, bicycle and pedestrian projects for Washoe County. The RTIP includes a summary of projects by fiscal year and shows the agency responsible for implementing the project, funding source and other related information. The RTIP represents a prioritized program directed at meeting Washoe County's growing transportation needs while improving the region's air quality, transportation efficiency, safety and mobility. The RTIP is required by federal regulation and serves as a useful tool in planning and programming transportation system improvements.

The RTIP is developed with the assistance and cooperation of state and local governments, including public works and planning officials, who develop project proposals and review the project listing developed by RTC staff.

### **Regional Planning Process**

The State Legislature created the Regional Transportation Commission (RTC) in 1979, combining the previous statutory authority of the Regional Street and Highway Commission, the Regional Transit Commission and the Washoe County Area Transportation Study Policy Committee. The responsibilities of the RTC include design and construction of major streets and highways and administration of public transportation systems serving Washoe County.

The Governor of Nevada designated the Regional Transportation Commission (RTC) of Washoe County as the Metropolitan Planning Organization (MPO) for the Reno-Sparks urbanized area pursuant to federal law (23 USC 134). In this capacity, RTC is responsible under the Code of Federal Regulations (23 CFR Part 450) for carrying out a "continuing, cooperative, comprehensive" transportation planning process that results in plans and programs consistent with the planned development of the urbanized area. The RTC prepares short- and long-range transportation plans for the region, programs highway and public transportation improvements through the RTIP process and develops and carries out the Unified Planning Work Program (UPWP).

RTC develops the RTP, RTIP and other planning documents in close cooperation with several federal, state and local transportation and environmental agencies described on the following pages.

**Truckee Meadows Regional Planning Agency (TMRPA).** The Truckee Meadows Regional Planning Agency (TMRPA), created by state legislation in 1989, is responsible for preparation and implementation of the Truckee Meadows Regional Plan (referred to as the Regional Plan). The TMRPA is comprised of the Regional Planning Governing Board (RPGB), the Regional Planning Commission (RPC), and staff. The Regional Plan addresses regional urban form,

natural resource management, infrastructure, and service provision within Washoe County. The agency implements the Regional Plan by ensuring that master plans of local governments and affected entities conform to adopted policies. The RTC is considered an affected entity and as such the RTP must be in conformance with the Regional Plan.

**Nevada Department of Transportation (NDOT).** NDOT is responsible for planning, programming, construction and maintenance activities involving federal aid and state gas tax funding. Planning and programming of these projects are coordinated with RTC through the RTIP and RTP processes. NDOT also provides funds to RTC for transportation planning and transit operations and provides technical data and analysis to support the regional transportation planning process.

**Washoe County District Health Department (WCDHD).** The WCDHD has statutory responsibility for developing and implementing air quality plans and programs in Washoe County. The District is a strong partner with RTC in promoting a healthy community. The Air Quality Management Division (AQMD) and Chronic Disease Prevention Program actively support transportation investments that improve community health.

**Reno-Tahoe Airport Authority (RTAA).** The Reno-Tahoe Airport Authority, created in 1977 by the State Legislature, has responsibility for county-wide airport operations and planning.

## **RTC Planning Process**

The RTC planning process is intended to provide decision makers with implementable plans and projects that effectively meet community needs. The measure of any planning program is the extent to which planned projects are implemented and the extent to which the desired objectives are achieved. Transportation planning in Washoe County has been successful due in large part to the unique structure of RTC as both a planning and an implementing agency.

**Regional Transportation Plan (RTP).** The central component or foundation of the RTC planning process is the Regional Transportation Plan (RTP). The RTP includes transportation policies encompassing travel by autos, bicycles, transit, pedestrian and transportation management. The RTP identifies the facilities, services and programs necessary to meet the increasing travel demands through the year 2035.

The 2035 RTP includes guiding principles that are the overarching themes that recur throughout the RTP and on which the goals and selection of transportation investments are based. The principles are:

- Safe and Healthy Communities
- Economic Development and Diversification
- Sustainability
- Increased Travel Choices

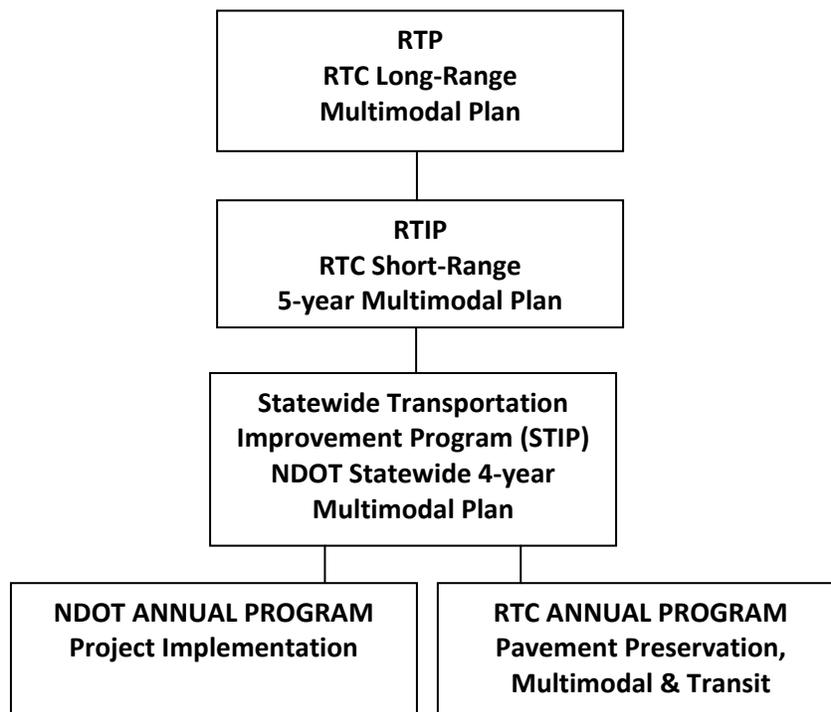
The goals that were developed to support the guiding principles include:

- Improve Safety
- Integrate Land Use and Economic Development
- Promote Healthy Communities and Sustainability
- Manage Existing Systems Efficiently
- Integrate All Types of Transportation
- Focus on Regional Connectivity
- Promote Equity and Environmental Justice
- Improve Freight and Goods Movement
- Invest Strategically

The guiding principles and goals are discussed at length in Chapter 1 of the 2035 Regional Transportation Plan.

**Regional Transportation Improvement Program (RTIP).** The RTIP is a five-year, multimodal transportation plan for Washoe County. It includes transit, paratransit, major street and highway capital projects and transportation system and demand management programs. The RTIP is the RTC's principal means of implementing long-term transportation planning objectives through annual programming of specific projects. Public transportation projects are incorporated into the RTIP. The implementation of the RTP guiding principles and goals occurs mainly through the RTIP, as shown in **Figure 2-1**.

**Figure 2-1  
Regional Transportation Commission  
Planning Process**



## **RTC Advisory Committees**

RTC has established three standing advisory committees that participate actively in the transportation planning process. The Citizens Advisory Committee (CAC) is a self-governing committee that meets once a month and has responsibility for reviewing goals and objectives, evaluating plan conclusions and recommendations and interjecting general public attitudes and concerns into the planning process. The CAC consists of citizens from various jurisdictions of Washoe County appointed by the RTC Board to provide public input to RTC staff in the conduct of transportation planning activities. CAC membership is geographically diverse, thus providing another forum for discussion of regional transportation issues.

The Technical Advisory Committee (TAC) is composed of planning and public works personnel from each of the local governmental entities including the cities of Reno and Sparks and Washoe County. In addition, representatives from the Nevada Department of Transportation (NDOT), Federal Highway Administration (FHWA), Truckee Meadows Regional Planning Agency (TMRPA), the Reno-Tahoe Airport Authority (RTAA) and the Washoe County District Health Department, Air Quality Management Division (WCDHD—AQMD) provide input on transportation and air quality planning issues. It is the responsibility of this committee to review and comment on plans developed by RTC from a technical standpoint. It also advises and assists the RTC planning staff with methods and procedures and recommends technical standards.

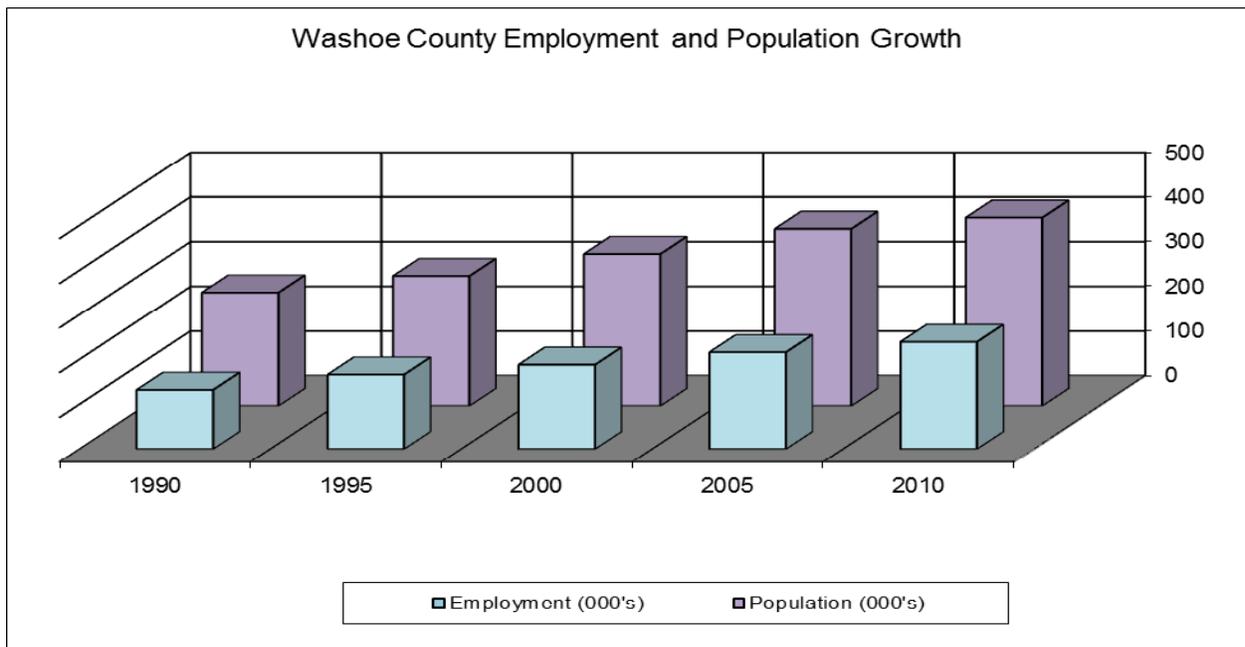
The Bicycle/Pedestrian Advisory Committee (BPAC) meets once a month and was created to encourage public participation on regional bicycle and pedestrian transportation issues. This committee is responsible for reviewing and commenting on bicycle/pedestrian issues. The BPAC membership is also geographically diverse and provides a forum for discussion of regional transportation issues with a focus on bicycle/pedestrian issues.

## CHAPTER 3: CURRENT AND FUTURE TRENDS

### Socioeconomic Trends

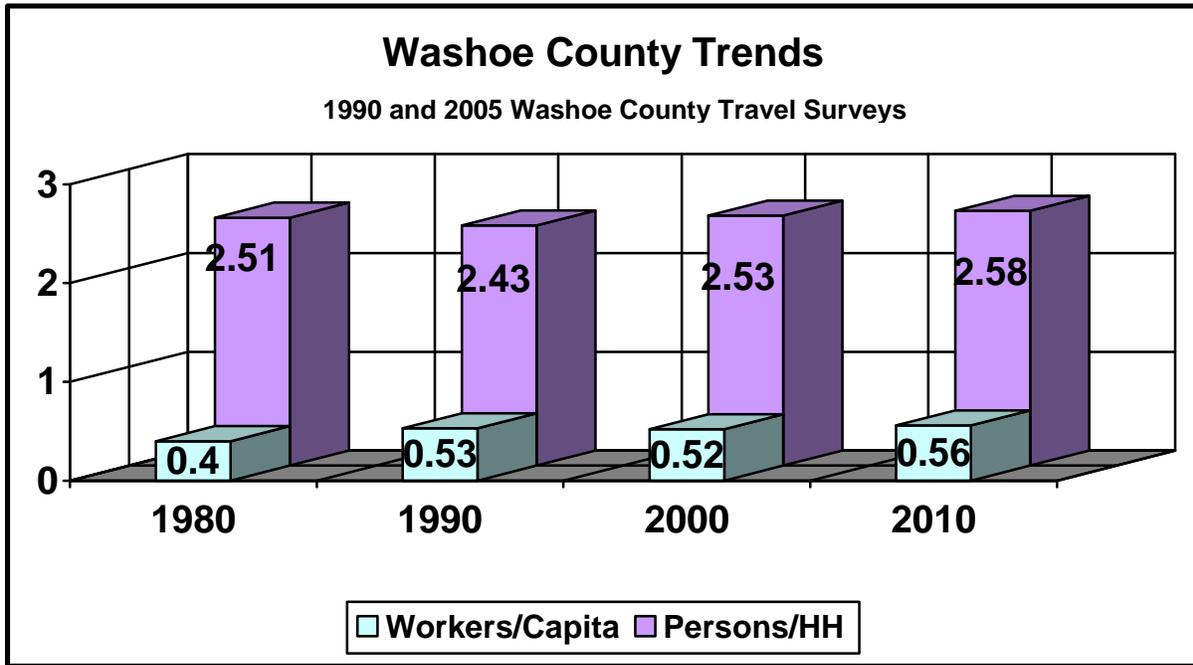
Between 1990 and 2010, the U. S. census showed the county population increased from 254,000 to 421,407. During this same time, employment increased from 132,000 to 239,455 (2010 employment source Washoe County Consensus Forecast Final 2010-2030). While population growth slowed during the national recession, long term projections indicate a 2035 population of about 550,000. Other socioeconomic trends also affect the amount and type of travel in Washoe County, including the aging of the population.

Figure 3-1



Most travel originates from the residence; thus, the rate of household formation also affects the amount of travel by residents. While persons per household remained somewhat constant between 1980 and 2010, there was an increase in the number of two-worker households. The number of workers per capita in Washoe County increased from 0.4 to 0.56 between 1980 and 2010. **Figure 3-2** shows these trends during 1980-2010.

Figure 3-2



Source: 1980-2010 Census Data and Washoe County Consensus Forecast Final 2010-2030.

### Travel Trends

A goal of the RTC is to increase the share of trips made by walking, biking, and riding transit. A comprehensive program to document alternative mode use and track changes over time was initiated in 2013.

Annually, NDOT has tracked the growth in motor vehicle travel in Washoe County as part of the Highway Performance Monitoring System (HPMS). While population increased from 191,000 in 1980 to 421,401 in 2010, the HPMS estimate of annual vehicle miles of travel (VMT) increased from 1.3 billion in 1980 to more than 3.2 billion in 2011.

### Population and Employment Forecasts

The Truckee Meadows Regional Planning Agency (TMRPA) developed the population and employment forecasts used in the regional travel demand model in partnership with RTC, NDOT, Washoe County, Reno, and Sparks. TMRPA developed an allocation based model to visually display a variety of population growth scenarios. The Washoe County Consensus Forecasts were developed in 2012 and established the long range total population projections for Reno, Sparks, and unincorporated Washoe County. Full documentation of the Consensus Forecasts is available on the TMRPA website at [www.tmrpa.org/publication\\_4.html](http://www.tmrpa.org/publication_4.html). In 2011

RTC funded the purchase of employment data which identifies the name, type of business, and number of employees by street address, which was refined by TMRPA.

The 2012 Washoe County Forecasts were released during the spring of 2012 and TMRPA incorporated this more current data into the population and employment model. The 2012 forecasts reflected the continued deepening of the economic recession and further lowered the long term population growth for the region.

A joint meeting of the RTC Board and Regional Planning Governing Board (RPGGB) was held on June 14, 2012 to review and approve the population and employment forecasts and geographic distribution. TMRPA worked with each jurisdiction to reach consensus on the allocation of 25 percent of future growth to the TODs, which is consistent with the adopted TOD zoning designations. The 2012 Consensus Forecast totals are provided in Table 3-1. The RPGGB and the RTC Board approved the Consensus Forecasts and geographic distribution by traffic analysis zone (TAZ) for use in the regional travel demand model update at the June 2012 meeting.

**Table 3-1  
2012 Consensus Forecast Totals**

<b>Households, Population and Employment</b>						
<b>Model Year</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
<b>Households</b>	158,489	168,882	182,695	194,576	208,280	221,420
<b>Population</b>	409,723	434,494	466,996	495,425	525,740	556,345
<b>Employees</b>	232,681	255,448	279,429	304,857	331,941	360,932



## CHAPTER 4: FEDERAL TRANSPORTATION PROGRAMS

### Introduction

The federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 established overall federal transportation program direction and, through the reauthorizations of the bill, a major portion of the FY 2014-2018 Regional Transportation Improvement Program (RTIP) funding is provided. These programs were, for the most part, continued under TEA-21 and SAFETEA-LU transportation legislation. When MAP-21 was enacted, some of the core highway formula programs were restructured. A brief summary of the programs is provided below.

**National Highway Performance Program (NHPP).** The NHPP combines SAFETEA-LU programs National Highway System, Interstate Maintenance and Bridge Programs. The NHPP provides support to the condition and performance of the National Highway System (NHS) for the construction of new facilities on the NHS and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets to be established in the states asset management plan.

**Surface Transportation Program (STP).** The STP provides flexible funding that may be used for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for nonmotorized transportation, transit capital and public bus terminals and facilities. These funds provide NDOT and RTC with the opportunity to program funds for new construction, maintenance, transit, ridesharing/employer trip reduction (ETR), centralized traffic signal control systems and traffic management programs. The STP is divided into STP-Statewide and STP Washoe County Urbanized Area (STP-Local) funding categories.

**Congestion Mitigation Air Quality (CMAQ).** The CMAQ funding category is available to air quality non-attainment/maintenance areas which our region is considered. CMAQ can be used only for projects that will have substantial air quality benefits or projects included in the State Implementation Plan (SIP). CMAQ cannot be used to fund projects that will result in the construction of new capacity available to single-occupancy vehicles (SOVs). Programs and projects that CMAQ can fund include programs to improve public transit, HOV facilities, ETR programs, traffic flow improvements that reduce emissions, bicycle/pedestrian facilities, park-and-ride facilities and programs to restrict vehicle use in areas of emission concentration.

### MAP-21 Planning Provisions

The passage of MAP-21 made no significant regulatory changes pertaining to transportation planning. The most important planning requirements that are included in the RTC planning process are summarized below.

**Long-Range Plan.** The MPO must prepare a long-range transportation plan that identifies transportation facilities for all modes necessary to serve a 20-year forecast period at a

minimum. The long-range plan must include a financial plan that demonstrates how the long-range plan can be implemented, including all public and private revenue sources that are "reasonably expected to be made available to carry out the plan, and recommends any innovative financing techniques to finance needed projects and programs."

**Transportation Management Area (TMA) Designation and Requirement for Congestion Management Process (CMP).** The Secretary of the Department of Transportation is required to designate as TMAs all urbanized areas with more than 200,000 population. Within a TMA, it is necessary to develop a Congestion Management Process (CMP) that provides for effective management of new and existing transportation facilities eligible for federal funding. The RTC developed a CMP that was adopted in September 1997 and was updated in the 2035 RTP.

**MPO-State Coordination in RTIP Development.** The MPO, in cooperation with the state, is required to develop the RTIP. Federal regulation specifies RTIP project selection responsibility within Washoe County, as a TMA, as follows:

"All projects carried out within the boundaries of a TMA with Federal participation pursuant to this title (excluding projects undertaken on the National Highway System and pursuant to the bridge and Interstate maintenance programs) or pursuant to the Federal Transit Act **shall be selected by the MPO designated for such area in consultation with the State** and in conformance with the RTIP for such area and priorities established therein. Projects undertaken within the boundaries of a TMA on the National Highway System or pursuant to the bridge and Interstate maintenance programs **shall be selected by the State in cooperation with the MPO designated for such area** and in conformance with the RTIP" **(emphasis added)**.

Federal regulations also require that the RTIP prioritize all projects and have a financial plan that demonstrates that funding is available for the projects listed. These requirements are discussed in Chapter 6—Project Prioritization and Chapter 8-Financial Plan.

**Functional Classification.** NDOT is required to develop a new functional classification "in cooperation with local and regional officials." Functional classification identifies and groups roadways by the character of the service they provide. The RTC approved a functional classification in December 1992. In addition, it was necessary to designate the National Highway System (NHS) segments within Nevada by 1993. The NHS in Washoe County was updated in early 2013 through a cooperative effort with NDOT and the RTC.

**Certification.** The Secretary of the Department of Transportation is required to certify that each MPO is carrying out its responsibilities under the law. The first certification deadline was September 30, 1993. Recertification under ISTEA and TEA-21 occurred at least every three years; SAFETEA-LU has changed that requirement to recertification occurring every four years. The RTC received recertifications in April 1996, June 1999, November 2003, September 2007 and May 2012. Federal funding may be withheld if the MPO is not certified.

## CHAPTER 5: PUBLIC TRANSPORTATION CAPITAL AND OPERATING PLAN

### Introduction

The FY 2014-2018 Public Transportation Capital and Operating Plan provides an overview of the current status of public transportation and, more importantly, is a plan for future service delivery. Public transportation is a valuable community asset that helps reduce traffic congestion, improve air quality, and provide essential mobility. This service allows local residents to access jobs, education, and commercial activities. By providing transit service to Transit Oriented Development (TOD) districts, public transportation also helps promote the higher density, mixed use, and walkable communities envisioned in the *Truckee Meadows Regional Plan*.

### RTC Public Transportation Services

The RTC provides the following public transportation services to the residents of Washoe County:

- RTC RIDE
- RTC RAPID
- RTC INTERCITY
- RTC SIERRA SPIRIT
- RTC ACCESS
- TART (Tahoe Area Regional Transit)

**RTC RIDE** – RTC RIDE began operating public transportation services on September 18, 1978 and is RTC's primary fixed-route public transportation system. RTC owns RTC RIDE facilities and equipment. RTC RIDE is operated by a private contractor, MV Transportation under a turn-key contract.

RTC RIDE is a public fixed-route transit service owned by RTC. Passage of a ¼% sales tax referendum by the voters of Washoe County on September 14, 1982, provided the financial resources necessary to expand fixed-route and paratransit service. As federal transit funding steadily declined over the past several years, the sales tax funding has been critical to continued improvement in public transportation. As a part of a larger transportation funding package, transit funding was increased by the adoption of an additional 1/16% sales tax effective July 1, 2003.

The RTC owns all RTC RIDE facilities and equipment. The RTC RIDE system encompasses the cities of Reno and Sparks and areas of Washoe County, using a fleet of 70 buses on 26 fixed routes. The system operates in a 90 square-mile service area based on a 0.75 mile distance

from each fixed route (excluding RTC INTERCITY). Approximately 2% of the total trips in our region are being made using fixed-route transit (3.5% of all work trips).

**RTC RAPID** – On October 11, 2009, RTC RAPID was introduced. RTC RAPID is a Bus Rapid Transit (BRT) express service that serves the Virginia Street corridor from downtown Reno to Meadowood Mall. The RAPID has 7 stops between 4<sup>th</sup> Street Station and Meadowood Mall. Route 1 operates in the same corridor with more stops. Both services run 24-hours a day, seven days a week.

**RTC INTERCITY** – RTC INTERCITY provides a commuter service between Reno and Carson City. The service operates Monday through Friday.

**RTC SIERRA SPIRIT** – RTC SIERRA SPIRIT provides service from downtown Reno to the University of Nevada, Reno. This service runs every 15 minutes, seven days a week from 7 am to 7 pm.

**Table 5-1**

<b>2012 RTC RIDE System Performance Indicators</b>	
Total Number of Rides in 2012	8.4 million
Average Number of Rides per Day	21,845
Highest Single-Day Ridership (June 21, 2012)	32,794
Total Service Hours (Revenue Vehicle Hours)	252,827
Average Passengers per Service Hour	31.5
Route with the Highest Passengers per Service Hour	45.2 (Route 5, Sutro/Sun Valley)
Total RTC RAPID & Route 1 Ridership	1,798,639
Total RTC INTERCITY Ridership	42,861
Total RTC SIERRA SPIRIT Ridership	228,623

**RTC ACCESS** – Under Nevada Revised Statutes (NRS) 377A.080 and NRS 377A.130, the RTC is authorized to fund and administer public transportation for senior citizens and persons with disabilities. In 1988, RTC established RTC ACCESS and assumed direct responsibility for providing door-to-door transportation for people with disabilities in the Reno/Sparks urbanized area. Since July 1, 1992, RTC ACCESS has operated 24 hours a day, 7 days a week, in compliance with Americans with Disabilities Act (ADA) regulations. RTC ACCESS services include vans, flexible-route shopper service routes, taxis and night taxis. In FY 2012, 222,593 ADA rides were provided, with an average of 2.69 rides per service hour. Approximately 3,400 individuals are certified as ADA paratransit eligible.

The service is currently operated by a private contractor, First Transit of FirstGroup America, with offices in Cincinnati, Ohio, under contract to RTC. RTC also contracts with a local taxi company, Reno-Sparks Cab, to transport ACCESS customers at night, during the day when ridership is low and for overload trips to maintain ADA compliance. All RTC ACCESS facilities and equipment are owned by RTC.

The RTC ACCESS van fleet uses compressed natural gas (CNG), a cleaner burning fuel, for better air quality and lower emissions.

**Tahoe Area Regional Transit (TART)** – Tahoe Area Regional Transit (TART) began operation in February 1975 and is operated by Placer County, California. In 1985, RTC signed an interlocal cooperative agreement (ICA) with Placer County to fund the extension of the TART system into the Incline Village/Crystal Bay area. TART provides fixed-route service to people living in the communities of Tahoma, Homewood, Tahoe City, Kings Beach, Truckee and Incline Village with four fixed routes daily.

### **Prioritization of Public Transportation Improvements**

Federal legislation requires prioritization of projects in the RTIP. This requirement is consistent with existing RTC practices to evaluate the overall benefit of any public transportation project. The criteria used to measure the benefit of each public transportation project are as follows:

1. What is the intent of the project and why is it needed?
2. What are the anticipated benefits?
  - a. What user groups or area of the community will benefit from the project?
  - b. What existing services or facilities are available to that group or area?
  - c. Will the project improve productivity?
  - d. Is the project self-sustaining after the initial funding?
3. How will the project improve the availability of public transportation?
  - a. Does the project enhance service level?
4. Does the project improve overall level of service performance standards?
5. Does the project provide air quality benefits?
6. What is the overall cost effectiveness of the project?
7. Does the project leverage other funding sources?

The analysis of new or expanded service addresses current and future demand as well as the cost effectiveness of each service. Capital improvements are prioritized by the RTC for inclusion in the RTIP.

### **Service and Capital Strategies**

Transit is recognized as an essential part of the local economy that helps thousands of Washoe County residents get to work each day. Transit helps shape development patterns and is an economic development tool that supports local TOD zoning and land use policies. Transit also

provides a critical public service to residents and visitors that do not drive. The environmental benefits of transit service are also well recognized – reducing the number of cars on the road reduces traffic congestion and air pollution.

Attracting new riders and encouraging current riders to take more trips on public transportation requires improving the customers' total transportation experience. It is important not only to expand service to new areas of the community and to make existing service more frequent where passenger loads warrant, but also to consider other factors including:

- How do passengers get to and from their bus stop?
- What is the waiting environment like?
- Do the buses run on-time?
- Are the vehicles and passenger amenities clean?
- Is sufficient information about bus stops, routes and schedules readily available to the public?
- How long does it take to travel from origin to destination?

RTC must formulate service and capital strategies based on these factors to attract new riders and encourage existing riders to take more trips while balancing the grim financial projections for the system in the future. Because of this, the fiscally constrained transit program maintains the existing service with the following modifications:

- Extension of RTC RAPID to the University of Nevada, Reno (demonstration service)
- Reallocation of service hours to achieve greater efficiency
- Summer weekend service to Lake Tahoe (demonstration service)
- Upgrades to RTC bus maintenance facilities to accommodate more fuel efficient vehicles

The public transportation improvements for FY 2014-2018 are contained in the project listing in Chapter 7.

## CHAPTER 6: RTIP PROJECT PRIORITIZATION

The RTP process incorporated several project selection criteria, including safety, land use compatibility, level of multimodal connectivity and operational improvement, travel demand, and community input. Projects were identified for consideration in the RTP through a variety of ways:

- Existing RTP developed in 2008
- Corridor studies
- Road Safety Audits
- Alternatives Development Workshop
- 2035 RTP smart phone application
- Call for projects that was made to the 2035 RTP Working Groups, the RTC Citizens Advisory Committee, RTC Technical Advisory Committee, RTC Board, City Councils of Reno and Sparks, Washoe County Commission, Regional Planning Governing Board, Regional Planning Commission, and Planning Commissions for Reno, Sparks, and Washoe County.

All of the projects suggested for consideration in the RTP were evaluated based on the following factors:

- 1. Safety:** Because safety is a guiding principle and goal of the RTP, projects that addressed safety issues at high crash locations or deficiencies identified through Road Safety Audits were identified. All RTC projects are designed to appropriate safety design standards. For programmatic investments that include multiple projects, such as traffic signal upgrades and pavement preservation, some of these projects are located in high crash locations while others are not.
- 2. Land Use Compatibility:** The next level of screening was for land use compatibility. The Regional Plan and land use plans of Reno and Sparks identify Transit Oriented Development Districts (TODs) and Regional Centers as locations where the streetscape should be walkable and focus on pedestrian amenities rather than accommodating high speed auto traffic. Locations with school crossings or other areas of high transit and pedestrian activity were noted as being less suitable for roadway widenings.
- 3. Multimodal Connectivity (Pedestrian & Bicycle):** Because improving travel choices through multimodal connectivity is another guiding principle of the RTP, projects were scored on the level of non-motorized capacity they would bring. The evaluation process identified which projects include bicycle or pedestrian components.

- 4. Multimodal Connectivity (Transit):** Because improving travel choices through multimodal connectivity is another guiding principle of the RTP, projects were scored on the level of transit capacity and amenities they would bring. The evaluation process identified which projects include transit components.
- 5. ITS/Operational Improvement:** Operational improvements, such as traffic signal or fiberoptic communication systems upgrades, are also important investments to improve traffic flow while minimizing the need for new vehicle capacity. The evaluation process identified which projects include an ITS or operational improvement component.
- 6. Community Input:** The RTP process provided an opportunity for local residents to identify their top transportation priorities. A series of surveys was made available at public outreach events and on the RTP website to allow participants to select the projects in each of the time horizon periods that reflected their top three priorities. The results of the surveys were tabulated and included in the project selection process. The most popular projects included the implementation of the ADA Transition Plan, Bicycle and Pedestrian Master Plan, ITS Master Plan, and Pavement Preservation Program.
- 7. Traffic Congestion:** Results of the regional travel demand model were used to identify which projects address areas of high traffic congestion. The evaluation process identified which projects are located in areas with existing or forecast traffic congestion, defined as either Level of Service (LOS) E or F in the travel demand model.

Following the project screening, RTC staff developed a draft fiscally constrained project listing for review by the RTC Working Groups and the RTC advisory committees. After incorporating feedback from these groups, the draft project listing was presented to the RTC Board for feedback in December 2012. All of the projects receiving more than one percent of the survey responses as a high priority project were included in the final project listing which is contained in Appendix B of the 2035 RTP.

CMAQ is a federal funding program that requires specific analysis related to project selection. Only projects for which air quality benefits are demonstrated are eligible. All of the new RTP projects considered for CMAQ funding are identified in the 2035 RTP for the first five year planning horizon of the plan. The RTP also identifies transit projects as a priority for CMAQ funding. The conversion of diesel buses to diesel-electric hybrids or electric vehicles generates a proven reduction in air pollutants. CMAQ will be a source for funding the conversion of the RTC bus fleet to cleaner fuels. In addition, transit demonstration services that will attract new transit customers and reduce the number of auto trips also provide air quality benefits are high priorities for CMAQ funding. Bicycle and pedestrian projects that provide facilities or programs that reduce the number of auto trips by increasing bicycle and pedestrian activity are also priorities for CMAQ funding. Projects that increase capacity for single-occupant vehicles are not eligible for CMAQ.

## CHAPTER 7: RTIP PROJECT LISTING

### **FY 2014-2018 Project Listing**

**Table 7-1** (pages 7-3 to 7-18) provides a list of the FY 2014-2018 program of projects. The list is divided by funding category and shows the project description, the project limits (where applicable), the project phase (engineering/design, right-of-way, construction, operations or equipment purchases), the year programmed, the project costs and the federal, state or local contributions to the project cost. The RTC, Nevada Department of Transportation (NDOT), Washoe County and the cities of Reno and Sparks developed the individual projects. RTC transportation committees (Technical Advisory Committee and Citizens Advisory Committee) provided input on the RTIP.

### **Project Cost Estimates**

Project cost estimates were derived from the 2035 Regional Transportation Plan (RTP) or the FY2015 RTC Street and Highway Program of Projects. The estimates were developed for each project based on generalized cost estimates for the various types of improvements, e.g., new two-lane roadway, geometric improvement. As a project progresses into the design phase, a more detailed cost estimate is prepared to ensure adequate funding is available to construct the project.

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FUND SOURCE: SURFACE TRANSPORTATION PROGRAM STATEWIDE (STP-STATEWIDE) FEDERAL-CONGESTION, MAINTENANCE, TRANSIT- PRIORITIZED BY NDOT

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
Bond Repayment - US 395 <i>Additional funding sources: STP-Statewide - \$50,000,000 NHPP - \$220,000,000 Other - \$60,000,000 RTIP project funding - \$330,000,000</i>	Bowers Mansion to Mt Rose Hwy (SR 431)		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000 <sup>1</sup>	\$50,000	\$0	\$0
<b>Pavement Rehabilitation Projects - Washoe County</b>											
Eastlake Blvd	750' w of Duck Hill Rd to 100' s of 5375 Eastlake	E,R,C	\$3,000					\$3,000	\$2,850	\$0	\$150 <sup>2</sup>
Ventana Pkwy	430' w of Thomas Creek Rd to 30' w of Marble Canyon	E,R,C	\$1,213					\$1,213	\$1,152	\$0	\$61 <sup>2</sup>
Village Pkwy	65' n of Cold Spring Rd to 55' sw of Diamond Pk	E,R,C	\$542					\$542	\$515	\$0	\$27 <sup>2</sup>
<b>Total Project Costs</b>			\$14,755	\$10,000	\$10,000	\$10,000	\$10,000	\$54,755	\$54,517	\$0	\$238
STP Statewide Funds Scheduled for Washoe County Programming			\$14,517	\$10,000	\$10,000	\$10,000	\$10,000				
State Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$0				
Local Funds Scheduled for Programming			\$238	\$0	\$0	\$0	\$0				

<sup>1</sup> Amount indicates federal portion of costs only and includes bond repayment for US 95 from I-15 to Craig Rd and the Carson City Freeway

<sup>2</sup> Local match is from Washoe County

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

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FUND SOURCE: SURFACE TRANSPORTATION PROGRAM WASHOE COUNTY URBANIZED AREA (STP-LOCAL) FEDERAL-CONGESTION, MAINTENANCE, TRANSIT-PRIORITIZED BY RTC

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
Trip Reduction Program Administrative Activities		O	\$500	\$500	\$500	\$500	\$500	\$2,500	\$2,375	\$0	\$125 <sup>1</sup>
Pyramid Highway Intersection Improvements	@McCarran Blvd	E,R,C	\$5,491	\$3,958				\$9,449	\$8,977	\$0	\$472 <sup>2</sup>
Funding sources: STP-Local - \$9,449,000 CMAQ - \$14,684,000 NHPP - \$6,000,000 Other - PLHD - \$2,509,000 Other - State Gas Tax - \$7,000,000 Other - High Priority Projects - \$8,200,000 Total project cost/RTIP funding - \$47,842,000											
Pyramid Highway Intersection Improvements	@McCarran Blvd	R	\$6,842					\$6,842	\$6,500	\$0	\$342 <sup>2</sup>
Right-of-way purchase and relocation costs Funding sources: STP-Local - \$6,842,000 CMAQ - \$4,850,000 Total project cost - \$23,158,000/RTIP funding - \$11,692,000											
4th Street/Prater Way Corridor Multimodal Improvements	Evans to Pyramid	E,R,C		\$1,500	\$5,500	\$9,000		\$16,000	\$15,200	\$0	\$800 <sup>2</sup>
Funding sources: STP-Local - \$16,000,000 RTC Fuel Tax - \$2,000,000 Total project cost - \$30,700,000/RTIP funding - \$18,000,000											
Oddie Blvd/Wells Ave Corridor - Phase 1 Multimodal Improvements	US 395 to Pyramid	E,R,C					\$7,000	\$7,000	\$6,650	\$0	\$350 <sup>2</sup>
<b>Total Project Costs</b>			\$12,833	\$5,958	\$6,000	\$9,500	\$7,500	\$41,791	\$39,701	\$0	\$2,090
STP-Local Balance Forward			\$6,428	\$937	\$1,977	\$2,977	\$652				
STP-Local Fund Allocation			\$6,700	\$6,700	\$6,700	\$6,700	\$6,700				
Available STP-Local Funds			\$13,128	\$7,637	\$8,677	\$9,677	\$7,352				
STP-Local Funds Scheduled for Programming			\$12,191	\$5,660	\$5,700	\$9,025	\$7,125				
STP-Local Carryover			\$937	\$1,977	\$2,977	\$652	\$227				
State Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$0				
Local Funds Scheduled for Programming			\$642	\$298	\$300	\$475	\$375				

<sup>1</sup> Local Match is RTC Sales Tax

<sup>2</sup> Local Match is RTC Fuel Tax

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

Approval Date 9/20/13

Adm Mod Date 1/10/14

REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM - FY 2014-2018  
 WASHOE COUNTY, NEVADA

Administrative Modification #2

FUND SOURCE: NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP) FEDERAL-NHS DESIGNATED FACILITIES, CAPACITY-PRIORITIZED BY NDOT  
 New Program - Combines SAFETEA-LU National Highway System (NHS), Interstate Maintenance and Bridge Programs

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
Bond Repayment - US 395 <i>Funding sources:</i> NHPP - \$220,000,000 STP Statewide - \$50,000,000 Other - \$60,000,000 RTIP project funding - \$330,000,000	Bowers Mansion to Mt Rose Hwy (SR 431)		\$40,000	\$45,000	\$45,000	\$45,000	\$45,000	\$220,000	\$220,000	\$0	\$0
US 395/I-580/I-80 Freeway management ITS project <i>Funding sources:</i> NHPP - \$1,250,000 Other - \$3,750,000 RTIP project funding - \$5,000,000		E,C	\$250	\$250	\$250	\$250	\$250	\$1,250	\$1,188	\$63	\$0 <sup>2</sup>
US 395/I-580/I-80 Freeway Service Patrol		O	\$384	\$384	\$384	\$384	\$384	\$1,920	\$1,824	\$96	\$0 <sup>2</sup>
Pyramid Highway Intersection Improvements <i>Funding sources:</i> NHPP - \$6,000,000 STP-Local - \$9,449,000 CMAQ - \$14,684,000 Other - PLHD - \$2,509,000 Other - State Gas Tax - \$7,000,000 Other - High Priority Projects - \$8,200,000 Total project cost/RTIP funding - \$47,842,000	@McCarran Blvd	E,R,C	\$6,000					\$6,000	\$5,700	\$0	\$300 <sup>3</sup>
Virginia Street Bridge Bridge Replacement <i>Funding sources:</i> NHPP - \$10,526,000 RTC Fuel Tax - \$2,000,000 Other - Truckee River Flood Management Authority - \$7,250,000 and City of Reno Street Funds - \$1,973,000 Total project cost/RTIP funding - \$21,223,000	@ Truckee River	E,C	\$10,526					\$10,526	\$10,000	\$0	\$526 <sup>4</sup>
<b>Total Project Costs</b>			\$57,160	\$45,634	\$45,634	\$45,634	\$45,634	\$239,696	\$238,711	\$159	\$826
NHPP Funds Scheduled for Washoe County Programming			\$56,302	\$45,602	\$45,602	\$45,602	\$45,602				
State Funds Scheduled for Programming			\$32	\$32	\$32	\$32	\$32				
Local Funds Scheduled for Programming			\$826	\$0	\$0	\$0	\$0				

<sup>1</sup> Amount indicates Federal portion of costs only and includes bond repayment for US 95 from I-15 to Craig Rd and the Carson City Freeway

<sup>2</sup> Match is from State funds

<sup>3</sup> Local Match is RTC Fuel Tax

<sup>4</sup> Local Match is City of Reno Street Funds

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

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FUND SOURCE: TRANSPORTATION ALTERNATIVES PROGRAM (TAP) FEDERAL-NON CAPACITY, NON MAINTENANCE-PRIORITIZED BY RTC  
 New Program - Combines SAFETEA-LU Transportation Enhancement, Recreational Trails and Safe Routes to School (SRTS)

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECTS COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
<b>Former SAFETEA-LU Enhancement Projects</b>											
Lemmon Valley School and Park Pedestrian Project Federal Portion Funded with former SRTS	Lemmon @ Patrician	E,R,C	\$411					\$411	\$390	\$0	\$21 <sup>1</sup>
West End Prater Way Pedestrian Improvement Project Phase 4 Federal Portion Funded with SAFETEA-LU SRTS (\$235,000) Enhancement (\$54,529) and 2013 TAP Statewide Flex (\$360,471) <i>Funding sources: TAP/Enhancement/SRTS - \$650,000 RTC Fuel Tax - \$850,000 (includes TAP/Enhancement local match) Total project cost/RTIP funding - \$1,500,000</i>	20th to 22nd	E,R,C	\$684					\$684	\$650	\$0	\$34 <sup>2</sup>
<b>TAP Projects</b> To be determined at a later date											
<b>Total Project Costs</b>			\$1,095	\$0	\$0	\$0	\$0	\$1,095	\$1,040	\$0	\$55
Anticipated TAP Fund Allocation			\$696	\$348	\$348	\$348	\$348				
Local Funds Scheduled for Programming			\$55	\$0	\$0	\$0	\$0				
Other Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$0				

<sup>1</sup> Local match is from Washoe County

<sup>2</sup> Local Match is RTC Fuel Tax

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

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FUND SOURCE: CONGESTION MITIGATION/AIR QUALITY (Page 1 of 2) FEDERAL-NON CAPACITY, AIR QUALITY BENEFIT PROJECTS-PRIORITIZED BY RTC

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
Trip Reduction Program			\$100	\$100	\$100	\$100	\$100	\$500	\$475	\$0	\$25
RIDE Replacement Vehicles <sup>1</sup> Number		V			\$5,000 8	\$5,000 8		\$10,000	\$9,500	\$0	\$500
ACCESS Replacement Vehicles <sup>1</sup> Number		V	\$420 3		\$2,000 15	\$2,000 15		\$4,420	\$4,199	\$0	\$221
Alternative Fuels Project	Region-wide				\$1,500	\$1,500		\$3,000	\$2,850	\$0	\$150
Traffic Management Program Annual Traffic Signal Operations Review, Regional ITS Network Master Plan, Regional ITS Network Pilot Project, Regional ITS Network - Phase 1, Regional ITS Network - Phase 2	Region-wide	E,R,C	\$2,279	\$2,741	\$1,500	\$1,500	\$1,500	\$9,520	\$9,044	\$0	\$476
Pyramid Highway Intersection Improvements Funding sources: CMAQ - \$14,684,000 STP-Local - \$9,449,000 NHPP - \$6,000,000 Other - PLHD - \$2,509,000 Other - State Gas Tax - \$7,000,000 Other - High Priority Projects - \$8,200,000 Total project cost/RTIP funding - \$47,842,000	@ McCarran Blvd	E,R,C	\$3,000	\$11,684				\$14,684	\$13,950	\$0	\$734
Pyramid Highway Intersection Improvements Right-of-way purchase and relocation costs Funding sources: STP-Local - \$6,842,000 CMAQ - \$4,850,000 Total project cost - \$23,158,000/RTIP funding - \$11,692,000	@McCarran Blvd	R	\$4,850					\$4,850	\$4,608	\$0	\$243
							Totals On Page 6				

<sup>1</sup> To be transferred to Section 5307

<sup>2</sup> Local Match is RTC Sales Tax

<sup>3</sup> Local Match is RTC Fuel Tax

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

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FUND SOURCE: CONGESTION MITIGATION/AIR QUALITY (Page 2 of 2) FEDERAL-NON CAPACITY, AIR QUALITY BENEFIT PROJECTS-PRIORITIZED BY RTC

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
Intersection Improvements	Region-wide						\$3,000	\$3,000	\$2,850	\$0	\$150 <sup>2</sup>
RTC RAPID Extension <sup>1</sup> Demonstration Service	Downtown Reno to UNR	O,V	\$1,000	\$1,000				\$2,000	\$1,900	\$0	\$100 <sup>3</sup>
Lake Tahoe Summer Weekend Service <sup>1</sup> Demonstration Service	Reno to Lake Tahoe	O,V	\$55	\$55	\$55			\$165	\$157	\$0	\$8 <sup>3</sup>
RTC RAPID <sup>1</sup> Route Enhancements	Downtown Reno to UNR	E,R,C					\$6,000	\$6,000	\$5,700	\$0	\$300 <sup>3</sup>
<u>Bicycle/Pedestrian Improvements</u> Sandpiper Drive Install sidewalks on east of street	Cold Springs to Egret Ln	E,R,C	\$506					\$506	\$481	\$0	\$25 <sup>4</sup>
Bicycle/Pedestrian Improvements Projects from Bicycle/Pedestrian Master Plan	Region-wide	E,R,C	\$1,200	\$1,000	\$1,000	\$1,000	\$1,000	\$5,200	\$4,940	\$0	\$260 <sup>2</sup>
Bike Share Program Develop Region-Wide Program	Region-wide	E,R,C	\$150					\$150	\$143	\$0	\$8 <sup>2</sup>
<b>Total Project Costs</b>			<b>\$13,560</b>	<b>\$16,580</b>	<b>\$11,155</b>	<b>\$11,100</b>	<b>\$11,600</b>	<b>\$63,995</b>	<b>\$60,795</b>	<b>\$0</b>	<b>\$3,200</b>
CMAQ Fund Balance Forward Estimate			\$6,307	\$4,689	\$202	\$869	\$1,588				
CMAQ Allocation			\$11,264	\$11,264	\$11,264	\$11,264	\$11,264				
Available CMAQ Funds			\$17,571	\$15,953	\$11,466	\$12,133	\$12,852				
CMAQ Funds Scheduled for Programming in Washoe County			\$12,882	\$15,751	\$10,597	\$10,545	\$11,020				
CMAQ Fund Carryover			\$4,689	\$202	\$869	\$1,588	\$1,832				
State Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$0				
Local Funds Scheduled for Programming			\$678	\$829	\$558	\$555	\$580				

<sup>1</sup> To be transferred to Section 5307

<sup>2</sup> Local Match is RTC Fuel Tax

<sup>3</sup> Local Match is RTC Sales Tax

<sup>4</sup> Local match is from Washoe County

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

Approval Date 9/20/13

Adm Mod Date 1/10/14

FUND SOURCE: RTC FUNDING (Page 1 of 3) LOCAL-RECONSTRUCTION, NEW CONSTRUCTION, AND PREVENTIVE MAINTENANCE-PRIORITIZED BY RTC  
 Includes Local Fuel Tax, Sales Tax, Regional Road Impact Fee and RTC Bond Funding

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
<u>Pavement Preservation Projects</u>											
Avenida de Landa	Beaumont to 865 feet north of Valley Wood	E,C	\$59	\$703				\$762 <sup>1</sup>	\$0	\$0	\$762
Gentry Way/Second Street	Brinkby to Virginia and Giroux to Kietzke	E,C		\$958				\$958 <sup>1</sup>	\$0	\$0	\$958
Golden Valley Road/Carlyle Drive	Yorkshire to N. Virginia and Montgomery to Yorkshire	E,C		\$93		\$912		\$1,005 <sup>1</sup>	\$0	\$0	\$1,005
Mayberry Drive	Hunter Lake to California	E,C		\$1,135				\$1,135 <sup>1</sup>	\$0	\$0	\$1,135
Prater Way/El Rancho Drive	Stanford to Sparks and Victorian to Prater	E,C		\$219	\$2,246			\$2,465 <sup>1</sup>	\$0	\$0	\$2,465
Virginia Street	Arroyo to Liberty	E			\$598			\$598 <sup>1</sup>	\$0	\$0	\$598
<u>Corridor Improvement Projects</u>											
Plumas Street Sidewalks	Moana to Plumb	E,C	\$300	\$70				\$370 <sup>1</sup>	\$0	\$0	\$370
Prater Way Enhancements Phase 4	22nd to 20th	E,C	\$209	\$641				\$850 <sup>1</sup>	\$0	\$0	\$850
Funding sources: RTC Fuel Tax - \$850,000 (includes TAP/Enhancement local match) TAP/Enhancement/SRTS - \$650,000 Total project cost/RTIP funding - \$1,500,000											
4th Street/Prater Way Corridor Multimodal Improvements	Evans to Pyramid	E,R,C				\$2,000		\$2,000 <sup>1</sup>	\$0	\$0	\$2,000
Funding sources: RTC Fuel Tax - \$2,000,000 STP-Local - \$16,000,000 Total project cost - \$30,700,000/RTIP funding - \$18,000,000											
								See Totals On Page 9			

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

<sup>1</sup> Project is funded by RTC Fuel Tax

Totals may vary slightly due to rounding

Approval Date 9/20/13

Adm Mod Date 1/10/14

FUND SOURCE: RTC FUNDING (Page 2 of 3) LOCAL-RECONSTRUCTION, NEW CONSTRUCTION, AND PREVENTIVE MAINTENANCE-PRIORITIZED BY RTC  
 Includes Local Fuel Tax, Sales Tax, Regional Road Impact Fee and RTC Bond Funding

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)				
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL	
<u>Corridor Improvement Projects - Continued</u>												
Virginia Street Bridge Bridge Replacement <i>Funding sources:</i> RTC Fuel Tax - \$2,000,000 NHPP - \$10,000,000 (Match is RTC Local Funding) Other - Truckee River Flood Management Authority - \$7,250,000 and City of Reno Street Funds - \$1,973,000 Total project cost/RTIP funding - \$21,223,000	@ Truckee River	C		\$2,000					\$2,000 <sup>1</sup>	\$0	\$0	\$2,000
<u>Intersection Improvements/Capacity Projects</u>												
N McCarran Blvd Intersection Improvement	@ N Virginia	E,R,C	\$4,000						\$4,000 <sup>2</sup>	\$0	\$0	\$4,000
Southeast Connector Permitting and Preliminary Design Phase 1	S Meadows to Greg Clean Water to Greg	E E,R,C	\$3,200 \$80,000						\$3,200 <sup>3</sup> \$80,000 <sup>3</sup>	\$0	\$0	\$3,200 \$80,000
Phase 2 Total RRIF/RTC Bond Funding - \$223,200,000	S Meadows to Clean Water	E,R,C	\$29,000	\$111,000				\$140,000 <sup>3</sup>	\$0	\$0	\$140,000	
McCarran Blvd - Phase II Widen to 6 lanes <i>Funding sources:</i> RTC Fuel Tax - \$23,900,000 State Gas Tax - \$6,000,000 RTIP project funding - \$29,900,000	Mira Loma to Greg	E,R,C	\$23,900					\$23,900 <sup>1</sup>	\$0	\$0	\$23,900	
Pyramid Highway Intersection Improvements - NB right turn	@ Ironwood Rd	E,R,C		\$130				\$130 <sup>1</sup>	\$0	\$0	\$130	
Pyramid Highway Intersection Improvements - Local Match	@ McCarran Blvd	E,R,C		\$948				\$948 <sup>1</sup>	\$0	\$0	\$948	
									See Totals On Page 9			

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

<sup>1</sup> Project funded by RTC Fuel Tax

<sup>2</sup> Project funded by Regional Road Impact Fee Program

<sup>3</sup> Project funded by RTC Bonds

Totals may vary slightly due to rounding

Approval Date 9/20/13

Adm Mod Date 1/10/14

FUND SOURCE: RTC FUNDING (Page 3 of 3) LOCAL-RECONSTRUCTION, NEW CONSTRUCTION, AND PREVENTIVE MAINTENANCE-PRIORITIZED BY RTC  
 Includes Local Fuel Tax, Sales Tax, Regional Road Impact Fee and RTC Bond Funding

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
<u>Intersection Improvements/Capacity Projects - Continued</u>											
Geiger Grade Realignment	Virginia to Toll	E,R,C		\$1,000		\$1,728		\$2,728 <sup>3</sup>	\$0	\$0	\$2,728
US 395 NEPA and Design Funding sources: RTC Fuel Tax - \$500,000 State Gas Tax - \$1,500,000 RTIP funding - \$2,000,000	I-80 to Parr	E				\$500		\$500 <sup>1</sup>	\$0	\$0	\$500
<u>Group Categories</u>											
Bike/Ped Improvements 3-CMAQ Match	Various Locations	E,R,C	\$28					\$28 <sup>2</sup>	\$0	\$0	\$28
Bike/Ped Improvements 4-CMAQ Match	Various Locations	E,R,C	\$20					\$20 <sup>2</sup>	\$0	\$0	\$20
Bike/Ped Improvements 5-CMAQ Match	Various Locations	E,R,C	\$20					\$20 <sup>2</sup>	\$0	\$0	\$20
Traffic Engineering Spot Intersection Improvements 3	Area wide	E,R,C	\$500					\$500 <sup>2</sup>	\$0	\$0	\$500
Traffic Engineering Spot Intersection Improvements 4	Region-wide	E,R,C	\$100					\$100 <sup>2</sup>	\$0	\$0	\$100
Traffic Management 1 - CMAQ Match	Region-wide	E,R,C	\$146					\$146 <sup>2</sup>	\$0	\$0	\$146
Traffic Management 2 - CMAQ Match	Region-wide	E,R,C	\$73					\$73 <sup>2</sup>	\$0	\$0	\$73
ADA Pedestrian Transition Improvements Preventive Maintenance <sup>4</sup>	Various Regional Roads	E,C	\$500	\$500	\$600			\$1,600 <sup>1</sup>	\$0	\$0	\$1,600
Corrective Maintenance Project	Region-wide	E,C	\$5,000	\$6,000				\$11,000 <sup>1</sup>	\$0	\$0	\$11,000
	Various regional roads	E,C	\$2,000	\$2,000				\$4,000 <sup>1</sup>	\$0	\$0	\$4,000
<b>Total Project Costs</b>			\$149,055	\$127,397	\$3,444	\$5,140	\$0	\$285,036	\$0	\$0	\$285,036
<b>Total RTC Funding</b>			\$149,055	\$127,397	\$3,444	\$5,140	\$0				

<sup>1</sup> Project funded by RTC Fuel Tax

<sup>2</sup> Project funded by Regional Road Impact Fee Program

<sup>3</sup> Project funded by RTC Bonds

<sup>4</sup> Preventive Maintenance includes Sales Tax Funding as follows: FY14 \$3,472,000

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

Approval Date 9/20/13

Adm Mod Date 1/10/14

FUND SOURCE: PRIVATE/DEVELOPER

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
I-80 Construct new interchange	West of Tracy-Clark Interchange	E,R,C					\$78,300	\$78,300	\$0	\$0	\$78,300
I-80 Interchange improvements	@ Garson Road	E,R,C					\$78,300	\$78,300	\$0	\$0	\$78,300
I-80 Interchange improvements	@ Patrick	E,R,C					\$9,100	\$9,100	\$0	\$0	\$9,100
<b>Total Project Costs</b>			\$0	\$0	\$0	\$0	\$165,700	\$165,700	\$0	\$0	\$165,700
Local Projects Scheduled for Washoe County Programming			\$0	\$0	\$0	\$0	\$165,700				
Federal Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$0				
State Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$0				
Local Funds Scheduled for Programming			\$0	\$0	\$0	\$0	\$165,700				

<sup>1</sup> Anticipated local funding sources: Developer

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

FUND SOURCE: OTHER (Page 1 of 3)

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
<b>State Gas Tax</b>											
US 395/I-580/I-80 Freeway management ITS project <i>Funding sources:</i> State Gas Tax - \$3,750,000 NHPP - \$1,250,000 RTIP project funding - \$5,000,000		E,C	\$750	\$750	\$750	\$750	\$750	\$3,750	\$0	\$3,750	\$0
Bond Repayment - US 395 <i>Funding sources:</i> State Gas Tax - \$60,000,000 STP Statewide - \$50,000,000 NHPP - \$220,000,000 RTIP project funding - \$330,000,000	Bowers Mansion to Mt Rose Hwy (SR 431)	E	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$60,000 <sup>1</sup>	\$0	\$60,000	\$0
McCarran Blvd - Phase II Widen to 6 lanes <i>Funding sources:</i> State Gas Tax - \$6,000,000 RTC Fuel Tax - \$23,900,000 RTIP project funding - \$29,900,000	Mira Loma to Greg	C	\$6,000					\$6,000	\$0	\$6,000	\$0
Pyramid Hwy & U.S. 395 Connection EIS (NEPA)		E	\$400					\$400	\$0	\$400	\$0
Pyramid Highway Intersection Improvements <i>Funding sources:</i> Other - State Gas Tax - \$7,000,000 STP-Local - \$9,449,000 NHPP - \$6,000,000 CMAQ - \$14,684,000 Other - PLHD - \$2,509,000 Other - High Priority Projects - \$8,200,000 Total project cost/RTIP funding - \$47,842,000	@ McCarran Blvd	E,R,C	\$7,000					\$7,000	\$0	\$7,000	\$0
								See Totals On Page 13			

<sup>1</sup> Amount includes bond repayment for US 95 from I-15 to Craig Rd and the Carson City Freeway

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)  
 Totals may vary slightly due to rounding

Approval Date 9/20/13  
 Adm Mod Date 1/10/14

FUND SOURCE: OTHER (Page 2 of 3)

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
<b>State Gas Tax - Continued</b>											
US 395 NEPA and Design <i>Funding sources:</i> State Gas Tax - \$1,500,000 RTC Fuel Tax - \$500,000 RTIP project funding - \$2,000,000	I-80 to Parr	E				\$1,500		\$1,500	\$0	\$1,500	\$0
<b>State Gas Tax Total</b>			\$26,150	\$12,750	\$12,750	\$14,250	\$12,750				
<b>Truckee River Flood Management Authority</b>											
Virginia Street Bridge Bridge Replacement <i>Funding sources:</i> Other - Truckee River Flood Management Authority - \$7,250,000 and City of Reno Street Funds - \$1,973,000 NHPP - \$10,526,000 RTC Fuel Tax - \$2,000,000 Total project cost/RTIP funding - \$21,223,000	@ Truckee River	E		\$7,250				\$7,250	\$0	\$0	\$7,250
<b>SAFETEA LU Section 1702 High Priority Projects</b>											
Pyramid Highway Corridor Transportation Improvements	Pyramid Highway La Posada to McCarran US 395 Connection - Sparks to US 395	E	\$1,500					\$1,500	\$1,425	\$0	\$75
Pyramid Highway Intersection Improvements <i>Funding sources:</i> Other - High Priority Projects - \$8,200,000 STP-Local - \$9,449,000 NHPP - \$6,000,000 CMAQ - \$14,684,000 Other - State Gas Tax - \$7,000,000 Other - PLHD - \$2,509,000 Total project cost/RTIP funding - \$47,842,000	@ McCarran Blvd	E,R,C	\$8,200					\$8,200	\$7,790	\$0	\$410
								See Totals On Page 13			

Local Match is RTC Fuel Tax

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)  
 Totals may vary slightly due to rounding

Approval Date 9/20/13  
 Adm Mod Date 1/10/14

FUND SOURCE: OTHER (Page 3 of 3)

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL
<b>Public Lands Highway Discretionary Program</b>											
Pyramid Highway Intersection Improvements <i>Funding sources:</i> <i>Other - PLHD - \$2,509,000</i> <i>STP-Local - \$9,449,000</i> <i>NHPP - \$6,000,000</i> <i>CMAQ - \$14,684,000</i> <i>Other - State Gas Tax - \$7,000,000</i> <i>Other -High Priority Projects - \$8,200,000</i> <i>Total project cost/RTIP funding - \$47,842,000</i>	@ McCarran Blvd	E,R,C	\$2,509					\$2,509	\$2,384	\$0	\$125
<b>City of Reno Street Funds</b>											
Virginia Street Bridge Bridge Replacement <i>Funding sources:</i> <i>Other - Truckee River Flood Management Authority - \$7,250,000 and City of Reno Street Funds - \$1,973,000</i> <i>NHPP - \$10,526,000</i> <i>RTC Fuel Tax - \$2,000,000</i> <i>Total project cost/RTIP funding - \$21,223,000</i>	@ Truckee River	E		\$1,973				\$1,973	\$0	\$0	\$1,973
<b>Total Project Costs</b>			\$38,359	\$21,973	\$12,750	\$14,250	\$12,750	\$100,082	\$11,599	\$78,650	\$9,833
Federal Funds Scheduled for Programming			\$11,599	\$0	\$0	\$0	\$0				
State Funds Scheduled for Programming			\$26,150	\$12,750	\$12,750	\$14,250	\$12,750				
Local Funds Scheduled for Programming			\$610	\$9,223	\$0	\$0	\$0				

\* Local Match is RTC Fuel Tax

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)  
 Totals may vary slightly due to rounding

Approval Date 9/20/13  
 Adm Mod Date 1/10/14

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000's)					PROJECT CONTRIBUTIONS (\$000's)				
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL <sup>1</sup>	
<b>FTA Section 5307<sup>2</sup></b>												
RIDE/ACCESS Preventative Mntce- Mechanical	Systemwide	O	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$21,000	\$16,800	\$0	\$4,200	
<b>RIDE Capital</b>												
Transit Enhancements	Systemwide	V, C	\$75	\$75	\$75	\$75	\$75	\$375	\$300	\$0	\$75	
Support Vehicles	Systemwide	V	\$60	\$60	\$60	\$60	\$60	\$300	\$240	\$0	\$60	
Shop Equipment	Systemwide	V	\$50	\$50	\$50	\$50	\$50	\$250	\$200	\$0	\$50	
Replacement Vehicles Number	Systemwide	V		\$1,700 3	\$2,000 3			\$3,700	\$2,960	\$0	\$740	
Vehicle/Communication/Computer Equipment	Systemwide	V	\$100	\$100	\$100	\$100	\$100	\$500	\$400	\$0	\$100	
ITS	Systemwide	V	\$50	\$50	\$50	\$50	\$50	\$250	\$200	\$0	\$50	
Building Renovations and Upgrades	Systemwide	C	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	\$4,000	\$0	\$1,000	
<b>Total Section 5307 - RIDE</b>			\$5,535	\$7,235	\$7,535	\$5,535	\$5,535	\$31,375	\$25,100	\$0	\$6,275	
<b>ACCESS Operations (10% formula allocation for ADA related expenses)</b>	Systemwide	O	\$690	\$690	\$690	\$690	\$690	\$3,450	\$2,760	\$0	\$690	
<b>ACCESS Capital</b>												
Facilities (Operations & Maintenance)	ACCESS Bldg @ Sutro	V	\$75	\$75	\$75	\$75	\$75	\$375	\$300	\$0	\$75	
Replacement Vehicles (CNG Vans) Number	Systemwide	V	\$800	\$500				\$1,300	\$1,040	\$0	\$260	
		V	6	4								
<b>Total Section 5307 ACCESS</b>			\$1,565	\$1,265	\$765	\$765	\$765	\$5,125	\$4,100	\$0	\$1,025	
<b>Total Section 5307</b>			\$7,100	\$8,500	\$8,300	\$6,300	\$6,300	\$36,500	\$29,200	\$0	\$7,300	
								See Totals On Page 16				

<sup>1</sup> Local contributions for transit projects are from a 5/16 cent sales tax revenue, contribution could vary

<sup>2</sup> Capital project costs shown for year of grant application, not necessarily year of expenditure

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000'S)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL <sup>1</sup>
<b>FTA Section 5339<sup>2</sup></b>											
<b>Formerly Section 5309 no longer discretionary but formula based</b>											
<u>RIDE Capital</u>											
Replacement Vehicles	Systemwide	V	\$400					\$400	\$320	\$0	\$80
Building Renovations and Upgrades	Systemwide	C	\$200	\$300	\$300	\$300	\$300	\$1,400	\$1,120	\$0	\$280
<u>ACCESS Capital</u>											
Replacement Vehicles Includes Statewide Grant Number	Systemwide	V	\$1,500 10	\$800 6	\$200 1			\$2,500	\$2,000	\$0	\$500
<b>Total Section 5339</b>			\$2,100	\$1,100	\$500	\$300	\$300	\$4,300	\$3,440	\$0	\$860
<b>FTA Section 5316 - JARC<sup>2</sup></b>											
<u>The Ridge House</u>											
Operations	Systemwide	O	\$112					\$112	\$56	\$0	\$56
<b>Total Section 5316</b>			\$112					\$112	\$56	\$0	\$56
<b>FTA Section 5317 - New Freedom<sup>2</sup></b>											
<u>CITICARE</u>											
Operations	Systemwide	O	\$227					\$227	\$114	\$0	\$114
<b>Total Section 5317</b>			\$227					\$227	\$114	\$0	\$114
<b>Total FTA</b>			<b>\$9,539</b>	<b>\$9,600</b>	<b>\$8,800</b>	<b>\$6,600</b>	<b>\$6,600</b>	<b>\$41,139</b>	<b>\$32,810</b>	<b>\$0</b>	<b>\$8,330</b>
								See Totals On Page 16			

<sup>1</sup> Local contributions for transit projects are from a 5/16 cent sales tax revenue, contribution could vary

<sup>2</sup> Capital project costs shown for year of grant application, not necessarily year of expenditure

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)

Totals may vary slightly due to rounding

PROJECT DESCRIPTION	LIMITS	PHASE	PROJECT COSTS (\$000'S)					PROJECT CONTRIBUTIONS (\$000's)			
			FY 14	FY 15	FY 16	FY 17	FY 18	TOTAL	FEDERAL	STATE	LOCAL <sup>1</sup>
<b><u>RTC Sales Tax</u></b>											
RIDE Operations	Systemwide	O	\$22,100	\$22,200	\$22,500	\$22,500	\$22,500	\$111,800	\$0	\$0	\$111,800
ACCESS Operations	Systemwide	O	\$5,910	\$6,310	\$6,310	\$6,310	\$6,310	\$31,150	\$0	\$0	\$31,150
<b>Total RTC Sales Tax</b>			<b>\$28,010</b>	<b>\$28,510</b>	<b>\$28,810</b>	<b>\$28,810</b>	<b>\$28,810</b>	<b>\$142,950</b>	<b>\$0</b>	<b>\$0</b>	<b>\$142,950</b>
<b><u>TIGGER GRANT</u></b>											
Purchase 3 electric buses and related equipment		V	\$5,167					\$5,167	\$4,650	\$0	\$517
<b><u>State of Good Repair Grants</u></b>											
Fuel Island	RTC RIDE Villanova Facility	V	\$419					\$419	\$335	\$0	\$84
Digital Radio System	RTC RIDE and ACCESS	V	\$1,147					\$1,147	\$918	\$0	\$229
<b>Total Public Transportation Funding</b>			<b>\$44,282</b>	<b>\$38,110</b>	<b>\$37,610</b>	<b>\$35,410</b>	<b>\$35,410</b>	<b>\$190,822</b>	<b>\$38,713</b>	<b>\$0</b>	<b>\$152,109</b>

<sup>1</sup> Local contributions for transit projects are from a 5/16 cent sales tax revenue, contribution could vary

<sup>2</sup> Capital project costs shown for year of grant application, not necessarily year of expenditure

Phases: E(Engineering/Design); R(Right-of-Way); C(Construction); O(Operations); V(Vehicles/Equipment)  
 Totals may vary slightly due to rounding

Approval Date 9/20/13  
 Adm Mod Date 1/10/14

## CHAPTER 8: FINANCIAL PLAN

### MAP-21 Requirements

Federal transportation legislation (MAP-21) requires that the RTIP include a financial plan that demonstrates how the RTIP can be implemented and indicates the different sources that are reasonably expected to be made available over the term of the document. The program includes all modes of transportation, including transit (both operations and maintenance), street widenings, new streets, operations, maintenance of the street network, and bicycle and pedestrian facilities.

In the development of the 2035 RTP, financial assumptions were developed in a coordinated effort with the local jurisdictions, state and federal agencies and the other Metropolitan Planning Organizations (MPOs) in the state. Partners in the effort included:

- Federal Highway Administration
- Federal Transit Administration
- Nevada Department of Transportation
- Nevada Department of Motor Vehicles
- City of Reno
- City of Sparks
- Washoe County
- Carson Area MPO
- Tahoe Regional Planning Agency
- Regional Transportation Commission of Southern Nevada

### Financial Assumptions Summary

To comply with both MAP-21 requirements, RTC has prepared the following FY 2014-2018 RTIP financial assumptions summary. This summary is intended to establish and document the levels of funding anticipated to be made available for the implementation of this improvement program with each fund source addressed separately.

### Local Fund Sources

There were two initiatives that made additional local funding available to the RTC. In 2003 with the approval of Washoe County ballot question WC-2, a 1/8% sales tax was added to implement road and transit projects and fuel tax indexing was implemented based on the Consumer Price Index (CPI). In 2008 with the approval of Washoe County ballot question RTC-5 froze the CPI indexing and implemented new indexing provisions calculated on the Producer Price Index (PPI).

Fuel Tax – In 2008, the indexing of fuel tax to CPI was implemented. Following passage of RTC-5, legislation was approved in 2009 to index fuel to PPI and additional bases were added including Federal, State, Diesel and alternative fuels. Additional revenue from three bond sales was made available to accelerate projects in the road program. Eligible uses for fuel tax include overlays, reconstruction and new construction for regional streets included in the Regional Road System. Over the last several years, the RTC has dedicated this funding source to maintaining the existing regional network. A significant portion of fuel tax funds will continue to be directed toward addressing the preservation of the existing system of the region.

Transit Sales Tax – The single most important funding source for transit in Washoe County continues to be the dedicated 5/16 cent sales tax. The revenue generated by this tax provided more than half the funds necessary for RTC to operate RTC RIDE and RTC ACCESS and to contribute to the TART service. There has been a sharp reduction of sales tax revenues between 2007 and 2010 due to the national economic recession. The amount of available sales tax revenue will greatly affect the level of public transit service RTC can provide.

Road Sales Tax – This funding source has been used exclusively for preventive maintenance.

Regional Road Impact Fees (RRIF) – Impact fees are imposed on new development to offset the cost of providing specific infrastructure improvements necessary to serve new development. New development can be required to improve and add facilities necessary to maintain an established policy level of service (LOS). Impact fees are calculated and levied on the new development based on the degree that they contribute to the need for identified improvement. The Regional Road Impact Fee (RRIF) was implemented in October 1995. An evaluation of the program is currently being conducted to evaluate the current practices and to identify potential changes that could improve the system. Given the downturn in the construction industry the revenue generated by this program is minimal and until further direction regarding this program is determined, minimal revenue is anticipated.

## **State Funding Sources**

State funding sources include gas tax, special fuel (diesel) tax, vehicle registration fees, motor carrier fees, driver's license fees and petroleum cleanup funds. For the purposes of this document, funding is generally from State Gas Tax and is approximately \$79 million with \$60 million being allocated to the bond repayment that includes the US 395 extension (Bowers Mansion to Mt. Rose Highway), US 95 in southern Nevada (I-15 to Craig Road) and the Carson City Freeway.

## **Federal Fund Sources**

Federal funds for transportation are collected nationally and allocated back to the states through a series of formulas and grants under the existing transportation legislation (MAP-21). MAP-21 was enacted in July 2012 and although several funding categories were modified or repealed, funding nationally was maintained at virtually the same levels established in the

previous surface transportation program. Federal funding programs require a state or local contribution of funds toward the cost of a project which is referred to as matching funds. The typical match for street and highway programs is five percent and for transit programs it is twenty percent.

MAP-21 programs generally available to the RTC and assumed in this document include:

National Highway Performance Program (NHPP) – funds are to support the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHA and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets to be established in the state asset management plan.

Within the Truckee Meadows, NDOT has directed NHS funding to major projects through the I-80 and I-580/US Highway 395 corridors. For TIP planning and programming purposes, the RTIP shows projects totaling \$239.2 million in NHS funding for FY 2014-2018, although the majority of that amount (\$220 million) is being allocated to the bond repayment that includes the US 395 extension (Bowers Mansion to Mt. Rose Highway), US 95 in southern Nevada (I-15 to Craig Road) and the Carson City Freeway.

Surface Transportation Program (STP) – flexible funding that may be used for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for nonmotorized transportation, transit capital and public bus terminals and facilities. These funds provide NDOT and RTC with the opportunity to program funds for new construction, maintenance, transit, ridesharing/employer trip reduction (ETR), centralized traffic signal control systems and traffic management programs. The RTIP includes STP-Statewide and STP Washoe County Urbanized Area (STP-Local) funding categories.

Much of the STP-Statewide funding being allocated to the bond repayment discussed under NHPP (\$50 million).

STP-Local is assumed at \$7.4 million per year and is mainly be allocated to the Pyramid/McCarran intersection improvement project.

Congestion Mitigation Air Quality Program (CMAQ) – flexible funding for transportation projects and programs to help meet the requirements of the Clean Air Act; to reduce congestion and improve air quality for the region. To support those requirements the following projects are being funded in the RTIP:

1. Traffic Management Program
2. Replacement of the public transit (RTC RIDE, RTC ACCESS) fleets
3. Intersection Improvement Program
4. Trip Reduction Programs
5. RTC RIDE Operating Assistance – Demonstration Services

CMAQ funds can only be expended in areas identified by the U.S. Environmental Protection Agency (U.S. EPA) as in non-attainment of a national air quality standard or in maintenance areas, which subsequently receive an attainment designation from EPA. Within Nevada, these funds are divided between Clark County and Washoe County based upon an approved formula that considers population and the severity of the area's carbon monoxide and ozone air pollution problems. CMAQ funding cannot be used for projects that result in new capacity for single-occupant vehicles. For programming purposes, it has been assumed that CMAQ funding of approximately \$10 million per year.

Transportation Alternatives Program (TAP) – funds are for a variety of alternative transportation projects such as bicycle or pedestrian improvements and safe routes to schools programs. This RTIP assumes \$348,000 per year for the local program.

Federal Transit Administration (FTA) Section 5307 – provides grants to urbanized areas with a population of 50,000 or more to support public transportation. The program remained largely unchanged with the enactment of MAP-21. The funds projected to be available each year for urbanized areas with populations more than 200,000 are based on a formula that considers the population and density of the region as well as revenue vehicle miles of service. The federal contribution is up to 80% in capital expenditures with a required local match of at least 20%.

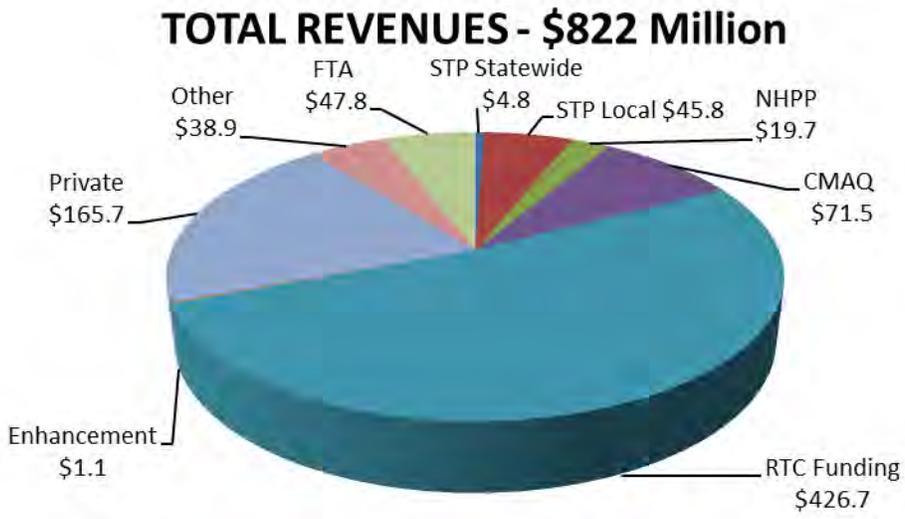
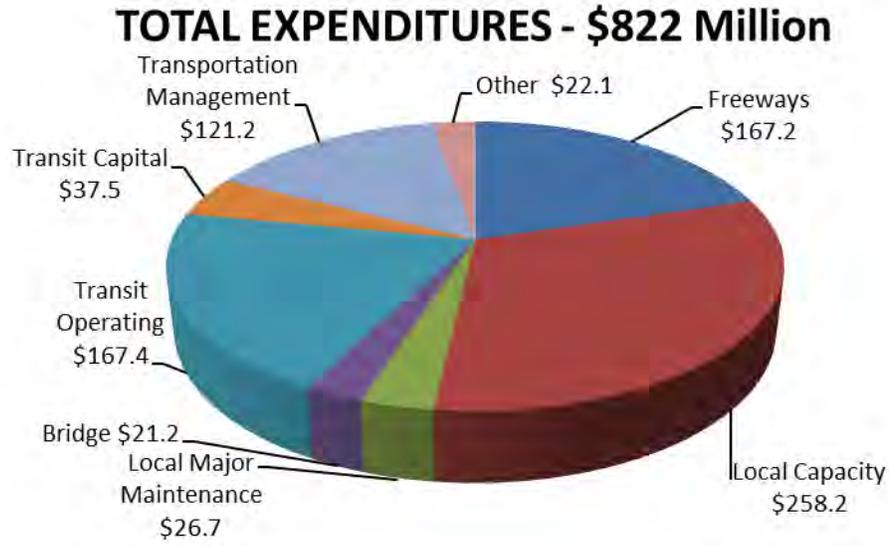
FTA Section 5339 – prior to the enactment of MAP-21, Section 5339 was known as Section 5309, Discretionary Capital Grants and Loan Program. The funding was discretionary and the availability was not guaranteed. With the passage of MAP-21, Section 5339 is now a formula based program providing funding to replace, rehabilitate and purchase buses and related equipment, and to construct bus-related facilities.

## **Financial Summary**

**Figure 8-1** represents a summary of revenues and expenditures for the FY 2014-2018 RTIP. Expenditures are divided into the transportation mode in which the funds are to be expended. Revenues are categorized by the funding source including STP-Local, CMAQ, NHPP, RTC Fuel Tax, RRIF, FTA, bonds and Transportation Alternatives Program funding.

The project listing for this RTIP includes \$330 million in bond repayments (under STP-Statewide, NHPP and State Gas Tax) for three projects statewide including the US 395 extension, US 95 in Las Vegas and the Carson City Freeway. This amount has not been included in the financial summary for this RTIP as the allocation of the bond repayments to each project has not been determined.

**Figure 8-1**  
**FY 2014—2018 RTIP**  
**EXPENDITURES & REVENUES**  
(\$ Millions)



NOTE: The total revenues do not include the FY 2018 carry forward amounts for STP – Local (\$533,000), CMAQ (\$752,000) or the anticipated TAP funding (\$2.1 million).



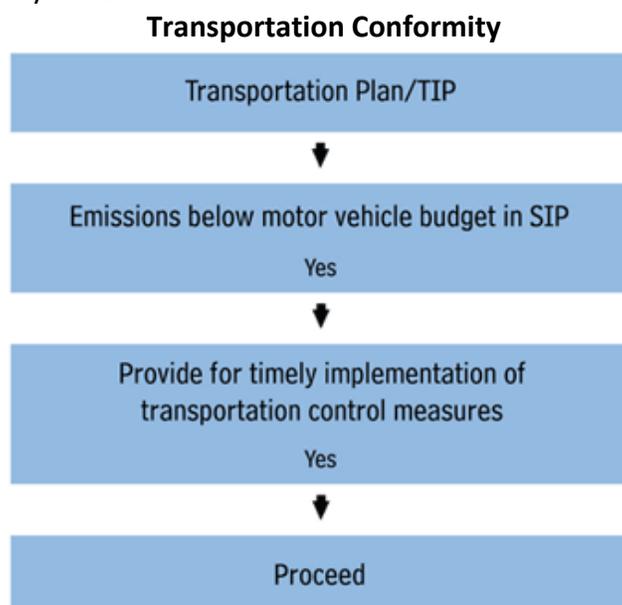
## Chapter 9: AIR QUALITY ANALYSIS AND CONFORMITY DETERMINATION

The Clean Air Act Amendments (CAAA) of 1990 require that each state environmental agency develop a State Implementation Plan (SIP). The SIP shows how the state will implement measures designed to improve air quality to meet National Ambient Air Quality Standards (NAAQS) for each criteria air pollutant, according to the schedules included in the CAAA.

Since emissions from motor vehicles make a significant contribution to air pollution, the CAAA also requires that transportation officials make a commitment to programs and projects that will help achieve air quality goals including:

- Providing for greater integration of the transportation and air quality process
- Ensuring that transportation plans, programs and projects conform with the SIP
- Reduction in the growth in vehicle miles traveled (VMT) and congestion in areas that have not attained the Environmental Protection Agency's (EPA) air quality standards.

Conformity for both the 2035 Regional Transportation Plan (RTP) and this RTIP is demonstrated when projected regional emissions generated by the plan and RTIP do not exceed the region's motor vehicle emissions budgets as established by the SIP. While the MPO is ultimately responsible for making sure a conformity determination is made, the conformity process depends on federal, state and local transportation and air quality agencies working together to meet the transportation conformity requirements. The roles and responsibilities of the partner agencies involved in the air quality conformity analysis are defined in the Washoe County Transportation Conformity Plan. The plan was adopted by RTC and the Washoe County District Board of Health in January 2013.



## Status of Air Quality Pollutants

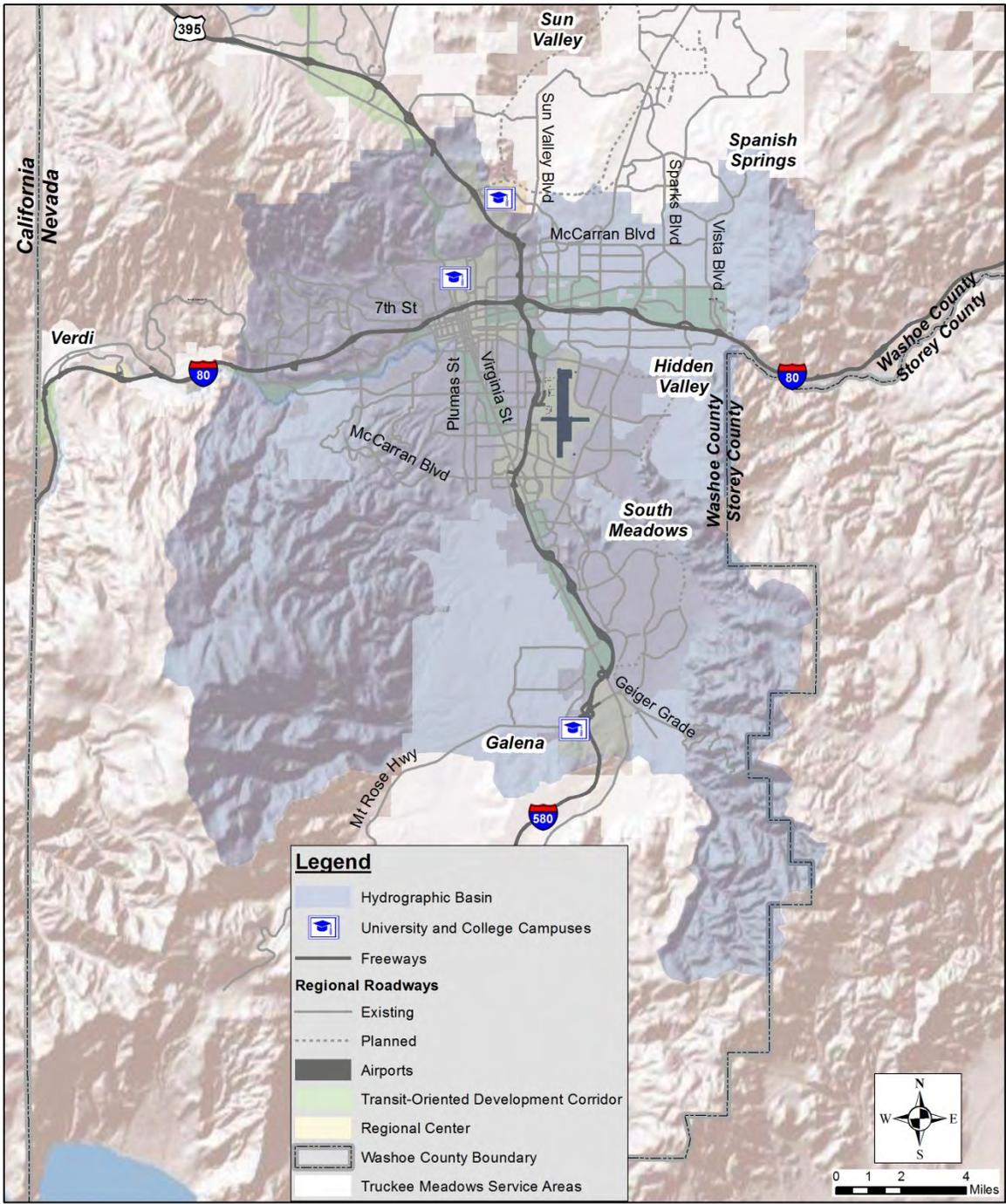
Criteria pollutants are considered on a county-wide basis if actual pollutant levels are exceeded outside of the core area of the Truckee Meadows. The core area of the Truckee Meadows is designated as the Hydrographic Area #87 as shown in Figure 9-1. The current status of the various pollutants in Washoe County is listed below:

CO (8-hr):            Attainment/Maintenance for Hydrographic Area #87  
                          Attainment/Unclassifiable for the rest of Washoe County  
PM10 (24-hr)\*:    Serious non-attainment for Hydrographic Area #87  
                          Attainment/Unclassifiable for the rest of Washoe County

Regional emissions analyses were performed for each pollutant to document conformity with the CAAA as part of the RTP. The Regional Transportation Commission, in collaboration with the local agencies, has also been implementing programs that reduce motor vehicle emissions in the region.

\*On April 19, 2011, EPA published a final rule (76 FR 21807) finding that the Truckee Meadows: 1) failed to attain the NAAQS by the applicable date; and 2) is currently attaining the NAAQS based on recent monitoring data (2007-2009). The rule does not change the “serious” nonattainment designation.

**Figure 9-1**  
**Reno/Sparks Hydrographic Area #87**



## **Travel Forecasting Model and MOVES Emission Model**

The Regional Transportation Commission uses the travel forecasting model software TransCAD. RTC converted to the TransCAD platform in 2012. The model is calibrated to 2012 population and employment. Washoe County Health District-Air Quality Management Division (WCHD-AQMD) converted to the MOVES emission model in 2012.

## **Air Quality Analysis Plan Requirements**

Federal regulations are specific in defining the level of air quality analysis necessary for incorporation into the RTP. Section 93, Title 40 of Code of Federal Regulations (CFR) dated August 15, 1997 (effective September 15, 1997), pertains to the criteria and procedures necessary to analyze the air quality impacts of the RTP for carbon monoxide non-attainment areas such as Washoe County. For the purposes of an air quality determination, the analysis years are 2015, 2016, 2018, 2020, 2025, 2030, 2035. No air quality analysis is required for the street and highway unfunded needs (beyond 2035). A summary of requirements is listed below:

- A. The RTP must contribute to emission reductions in CO non-attainment/maintenance areas.
- B. Air quality analysis years must be no more than 10 years apart.
- C. In PM<sub>10</sub> and CO non-attainment/maintenance areas, analysis must be performed for both pollutants.
- D. The last year of the RTP (2035) shall also be an analysis year.
- E. An analysis must be performed for each year contained in the motor vehicle emission budget (MVEB) for the Hydrographic Area #87 for both CO and PM<sub>10</sub>, as budgets have been established for these pollutants.
- F. For both CO and PM<sub>10</sub>, the analysis of emissions for the required years cannot exceed the MVEB.

This RTIP utilizes the air quality analysis performed for the 2035 RTP. In order to use that analysis, criteria from 40 CFR 93.122(g) must be met. This RTIP includes the first five years of projects from the RTP that were included in the transportation modeling for the conformity determination received on the RTP. None of the projects have been changed with regard to start date nor have they been altered in scope.

## **Air Quality Analysis Crediting Provisions**

Federal regulations also allow for crediting procedures over the life of the RTP for the implementation of Transportation Control Measures (TCMs) in which emissions reductions can be quantified. These TCMs are critical to areas such as Washoe County that have and are expected to continue growth in population and VMT. Several specific TCM measures are in progress or planned in Washoe County that will have quantifiable emissions reductions. These include:

- A. Traffic signal optimization program.
- B. Conversion of public transit and paratransit fleets to CNG or cleaner burning diesel fuels.
- C. Implementation of trip reduction programs.

These TCMs have been the focus of studies to quantify the air quality benefit of each. The TCMs are described below. The RTC is not taking any credit for reduced emissions associated with these TCMs but may choose to take credit in the future, if conditions warrant.

#### **A. Traffic Signal Optimization/Timing Upgrade Program**

Traffic signal coordination and improvements seek to achieve two primary objectives: 1) improved traffic flow resulting in improved level of service and 2) mobile source emission reductions through decreased delay, fewer accelerations/decelerations and a decreased number of stops. The RTC has reviewed several studies and federally accepted models to quantify the reduction of mobile emissions from signal coordination programs. These include signal coordination studies conducted by several cities in southern California and the California Department of Transportation (CALTRANS). A comparison of before and after field studies was conducted and the improvements in all three peak periods were noted. Examples included a statewide average reduction of 14 seconds in stop delay and a 12% reduction in the number of stops per mile in the afternoon peak period. Several methodologies were used to take the results of studies to quantify the emission reductions from signal coordination programs.

The pollution reduction results (tons/per day or percentage reduction) from each model vary as some models focus on corridor specific reductions while the others are more of an area-wide reduction projection. Pollutant reductions ranged from 11% along specific corridors to 3% to 4% on a regional level.

The RTC has initiated a region-wide traffic signal optimization and improvements program to enhance the capacity of the existing system and reduce traffic congestion in the region. This is an ongoing program that will allow nearly 400 intersections in the Truckee Meadows to be coordinated.

#### **B. Conversion of RTC ACCESS and RTC RIDE Fleets to Alternative or Cleaner Burning Fuels**

Over 7 million annual miles are driven by the RTC RIDE public transit and RTC ACCESS paratransit service. While this is a small percentage of total daily travel, it is important in terms of air quality. Present and future conversions of these fleets to compressed natural gas (CNG) or cleaner burning fuels can reduce mobile emission totals. Estimates by the Southern California Air Resources Board between standard urban diesel and biodiesel or CNG determined that NO<sub>x</sub> emissions from vehicles with CNG or cleaner burning diesels were reduced approximately 60%. This relationship was augmented from a study entitled *Public Transportation Alternative Fuels* done in June of 1992 by Booz-Allen and Hamilton.

All RTC ACCESS vehicles have been converted to CNG or cleaner burning diesels. RTC also received a \$5.1 million TIGGER grant for zero emissions (electric) buses and 3 charging stations. The addition of these buses in the fleet will help to reduce emissions and provide infrastructure for the fueling stations.

### C. Trip Reduction Programs

The RTC’s trip reduction program include bus pass subsidies, RTC VANPOOL program, RTC RIDESHARE, guaranteed ride home program and park and ride program. The goals of these programs are to promote trip reduction on a region wide level, improve air quality and reduce VMT. In 2012 the air quality benefits of the program were substantial. Over 100,000 pounds of carbon monoxide were reduced and over 4 million pounds of carbon dioxide were reduced due to participation in the vanpool program.

In calculating these emission reductions, monthly data for each of the RTC’s existing vanpools were collected. The data included the number of people in each vanpool and the average daily trip mileage. The air pollution calculation was obtained by multiplying the number of passenger trips for each vanpool per month by the average daily trip mileage for each vanpool per month and totaling those results to estimate the total VMT eliminated through the program due to the vanpool passengers not driving alone to work. The reduction in VMT was then multiplied by the pollutant factors per mile with those results outlined in the chart below. The emissions factors per mile for each pollutant were provided by WCHD-AQMD.

**Table 9-1**

<b>RTC VANPOOL Air Pollution Reductions</b>	
Volatile organic compounds (VOC)	13,608 lbs
Nitrogen Oxide (NO <sub>x</sub> )	7,645 lbs
Carbon Monoxide (CO)	101,292 lbs
Particulate Matter (PM <sub>10</sub> )	54 lbs
Particulate Matter (PM <sub>2.5</sub> )	51 lbs
Carbon Dioxide (CO <sub>2</sub> )	4,080,346 lbs

RTC SMART TRIPS program continues to grow and add more participants. In FY 2012 RTC TRIP MATCH, a web-based carpool, bike, bus and walking buddy matching service increased by 19.5% to 1,056 individuals and the RTC VANPOOL program saw a 14% increase. Shared rides through the program eliminated 4,334,459 vehicle miles of travel.

### RTC Traffic Model Modifications

The last air quality conformity determination was made June 19, 2013. To meet the requirements of 40 CFR Section 93 of the air quality conformity regulations, 2015, 2016, 2018, 2020, 2025, 2030, 2035 networks were established for the 2035 RTP air quality analysis. The

2015 network consists of the current roadway network, the current transit network and the projects contained in the first timeframe of the RTP. Each of the remaining networks is comprised of the previous horizon year network and the capacity projects included in the RTP. It should be noted that due to land use considerations and fiscal constraints, there will still be roadways that fail to meet policy Level of Service by 2035.

### **Air Quality Analysis**

An emission test on both CO and PM<sub>10</sub> must be successfully completed to make a finding of conformity. The area of analysis for these pollutants is the Hydrographic Area #87. As stated previously, the CO and PM<sub>10</sub> emissions for the required analysis years cannot exceed the established motor vehicle emission budget. Analysis is performed for 2015, 2020, 2025, 2030 and 2035 for both pollutants.

To initiate the air quality conformity determination, the emission levels for the pollutants in each analysis year are generated. The VMT for each facility type is derived from the RTC's traffic model. The assumption of VMT for local streets is a percentage of the total VMT for collector and major and minor arterials on the Regional Road System (RRS) taken from the traffic model. Average speed by vehicle type is also provided as an input to the MOVES model. Totals of emissions for each facility type are then added to get a daily emission total for the roadway system in the analysis area. Emission totals are shown in pounds per day (lb/day). The Interagency Air Quality Consultation Team recommended approval of the air quality analysis March 29, 2013 and a joint FHWA/FTA letter of conformity was issued on June 19, 2013.

### **CO Analysis**

The Motor Vehicle Emissions Budget (MVEB) for carbon monoxide (CO), effective March 30, 2006, is shown in Table 9-2, which also includes the CO emissions for all analysis years of the RTP. All RTP analysis years are within the MVEB. The tables supporting this analysis are contained at the end of this chapter.

**Table 9-2  
CO Emissions Analysis  
(lbs/day)**

<b>Analysis Year</b>	<b>MVEB</b>	<b>RTP Analysis</b>
2015	330,678	119,376
2016	321,319	121,153
2020	321,319	134,111
2025	321,319	136,355
2030	321,319	143,001
2035	321,319	148,607

## PM<sub>10</sub> Analysis

The MVEB for PM<sub>10</sub>, effective June 2, 2010, is shown in Table 9-3, which also includes the PM<sub>10</sub> emissions for all analysis years of the RTP. All RTP analysis years are within the MVEB. The tables supporting this analysis are contained at the end of this chapter.

**Table 9-3**  
**PM<sub>10</sub> Total Emissions**  
**(lbs/day)**

Analysis Year	MVEB	RTP Analysis
2015	20,871	12,563
2018	20,836	13,127
2020	20,836	13,505
2025	20,816	14,348
2030	20,816	15,671
2035	20,816	15,546

## Summary

A strong commitment to fund and implement feasible TCM measures must be made if acceptable air quality standards are to be sustained. The local jurisdictions and NDOT, through the RTP process, have made the commitment to fund TCMs such as ridesharing, traffic flow improvements, signal coordination and conversion of public transit and paratransit fleets to cleaner burning fuels. Based on existing and planned commitments, the air quality analysis conducted in this chapter demonstrates that the required air quality conformity determination can be made and the RTP shown to be in conformance with federal air quality regulations.

## Air Quality Analysis Support Documentation

**Table 9-4**

Emission Factor (lbs/vmt)	
Facility Type	Paved Road Fugitives PM <sub>10</sub>
Local	0.00080
Collector	0.00080
Minor	0.00080
Major	0.00061
Freeway	0.00061
Ramps	0.00080

**NOTES:**

- Emission factors for Paved Roads PM<sub>10</sub> are calculated from an equation in EPA's AP42, Section 13.2.1, 1/11.
- Emission factors for CO and On-Road PM<sub>10</sub> are not available, they are calculated in MOVES and the output is generated as emissions.

**Table 9-5**

VMT by Facility Type by Analysis Year							
Facility Type	VMT						
	2015	2016*	2018*	2020	2025	2030	2035
Local	716,410	736,203	755,996	782,387	835,151	918,744	889,230
Collector	307,199	312,017	321,654	331,290	349,288	372,006	383,423
Minor	1,157,176	1,174,821	1,210,111	1,245,401	1,339,177	1,483,833	1,480,372
Major	2,117,676	2,161,190	2,248,217	2,335,244	2,487,292	2,737,879	2,582,355
Freeway	2,394,401	2,446,781	2,551,541	2,656,301	2,849,072	3,053,879	3,436,659
Ramps	312,722	319,247	332,296	345,346	370,329	398,253	407,484
Totals	7,005,584	7,150,259	7,419,815	7,695,969	8,230,309	8,964,594	9,179,523

\*2016 and 2018 VMT are interpolated

**Table 9-6**

Emissions (lbs/day)							
Analysis Year	CO	On-Road Vehicles PM <sub>10</sub>	Paved Road Fugitive PM <sub>10</sub>	Road Construction PM <sub>10</sub>	Unpaved Road Fugitives PM <sub>10</sub>	Diesel Idling PM <sub>10</sub>	Total PM <sub>10</sub> Emissions
2015	119,376	1,106	4,765	186	6,451	55	12,563
2016*	121,153						
2018**		1,039	5,042	181	6,807	58	13,127
2020	134,111	994	5,228	178	7,045	60	13,505
2025	136,355	988	5,591	184	7,520	65	14,348
2030	143,001	1,051	6,094	183	8,272	71	15,671
2035	148,607	1,058	6,223	182	8,007	76	15,546

\*2016 is not an analysis year for PM<sub>10</sub>

\*\*2018 is not an analysis year for CO



## **APPENDIX A**

### **RTIP AMENDMENTS/ADMINISTRATIVE MODIFICATIONS**

The RTIP is required to be updated at least every four years. There are changes that occur during the course of the document such as adjustments in project schedules, funding amounts/sources or project descriptions. These changes require either an amendment or an administrative modification. Any changes in the RTIP must be included in the RTP.

#### **Amendments**

Amendments are major or substantive changes to the RTIP and must follow the requirements contained in the RTC's Public Participation Plan and the Washoe County Transportation Conformity Plan (for air quality analysis if necessary). Amendments are applicable when:

- There is a significant change in the design or scope of an existing project
- A project is added or deleted
- There is a significant change in a funding category that alters the overall financial reasonableness of the RTIP
- When there is an increase in the estimated cost of a project by more than \$5 million and greater than 20% of the total estimated project cost

#### **Administrative Modifications**

Administrative Modifications are non-substantive changes to the RTIP and include the following:

- Moving a project in the document to an earlier or later year
- Increasing the estimated cost of a project by less than \$5 million or by more than \$5 million if the amount is less than 20% of the total estimated project cost

Administrative modifications are typically processed through letter or email between the Nevada Department of Transportation and RTC.



## **APPENDIX B**

### **ACRONYMS**

**AADT**—Annual Average Daily Traffic

**ADA**—Americans with Disabilities Act of 1990

**ADT**—Average daily trips

**AQMD**—Air Quality Management Division

**BLM**—Bureau of Land Management

**BPAC**—Bicycle/Pedestrian Advisory Committee

**BRT**—Bus rapid transit

**CAC**—Citizens Advisory Committee

**CALTRANS**—California Department of Transportation

**CAMPO**—Carson Area Metropolitan Planning Organization

**CCRTC**—Carson City Regional Transportation Commission

**CEA**—Critical Emphasis Areas

**CFR**—Code of Federal Regulations

**CMAQ**—Congestion Mitigation/Air Quality

**CMP**—Congestion Management Process

**CNG**—Compressed natural gas

**CO**—Carbon monoxide

**CPI**—Consumer Price Index

**EPA**—Environmental Protection Agency

**ETR**—Employer Trip Reduction

**FAA**—Federal Aviation Administration

**FHWA**—Federal Highway Administration

**FRR**—Farebox Recovery Ratio

**FTA**—Federal Transit Administration

**HA #87**—Hydrographic Area #87

**HOV**—High occupancy vehicle

**HSIP**—Highway Safety Improvement Program

**ITS**—Intelligent Transportation Systems

**LOS**—Level of service

**MAP-21**—Moving Ahead for Progress in the 21<sup>st</sup> Century Act

**MOVES**—Air quality model

**MPO**—Metropolitan Planning Organization

**MUTCD**—Manual of Uniform Traffic Control Devices

**MVEB**—Motor vehicle emission budget

**NAAQS**—National Ambient Air Quality Standards

**NDOT**—Nevada Department of Transportation

**NEPA**—National Environmental Policy Act

**NHPP**—National Highway Performance Program

**NHS**—National Highway System

**NO<sub>x</sub>**—Nitrogen oxides

**NRS**—Nevada Revised Statutes

**PCI**—Pavement condition index

**PD&E**—Project development and environmental activities

**PSAP**— Pedestrian Safety Action Plan

**PM<sub>2.5</sub>**—Particulate matter of less than 2.5 microns

**PM<sub>10</sub>**—Particulate matter of less than 10 microns

**PMS**—Pavement management system

**POP**—Program of projects

**PPP**—Public Participation Plan

**PTN**—Primary transit network

**ROW**—Right-of-way

**RRIF**—Regional Road Impact Fee

**RRIF CIP**—Regional Road Impact Fee Capital Improvements Plan

**RRS**—Regional Road System

**RSA**—Road Safety Audit

**RSBPMP**—Reno Sparks Bicycle and Pedestrian Master Plan

**RTAA**—Reno-Tahoe Airport Authority

**RTC**—Regional Transportation Commission of Washoe County

**RTIP**—Regional Transportation Improvement Program

**RTP**—Regional Transportation Plan

**SAFETEA-LU**—Safe, Accountable, Flexible, Efficient Transportation Equity Act—A Legacy for Users

**SEC**—SouthEast Connector

**SGR**—State of Good Repair

**SHSP**—Strategic Highway Safety Plan

**SIP**—State Implementation Plan

**SOV**—Single occupancy vehicle

**SRTP**—Short Range Transit Plan

**SRTS**—Safe Routes to School

**STB**—State Transportation Board

**STIP**—State Transportation Improvement Program

**STP**—Surface Transportation Program

**STTAC**—Statewide Transportation Technical Advisory Committee

**TA**—Transportation Alternatives

**TAC**—RTC Technical Advisory Committee

**TART**—Tahoe Area Regional Transit

**TAZ**—Traffic Analysis Zone

**TCM**—Transportation Control Measure

**TDM**—Transportation Demand Management

**TIP**—Transportation Improvement Program

**TMA**—Transportation Management Association

**TMC**—Traffic/transportation management center

**TMRP**—Truckee Meadows Regional Plan

**TMRPA**—Truckee Meadows Regional Planning Agency

**TMWA**—Truckee Meadows Water Authority

**TOD**—Transit-oriented development

**TransCAD**—RTC travel demand model

**TRIC**—Tahoe Reno Industrial Center

**TRPA**—Tahoe Regional Planning Agency

**TSM**—Transportation System Management

**TSP**—Transit signal priority

**TTD**—Tahoe Transportation District

**UNR**—University of Nevada, Reno

**UPRR**—Union Pacific Railroad

**UPWP**—Unified Planning Work Program

**USDA**—U.S. Department of Agriculture

**USDOT**—U.S. Department of Transportation

**V/C Ratio**—Volume to Capacity Ratio

**VHD**—Vehicle hours of delay

**VHT**—Vehicle hours of travel

**VMT**—Vehicle Miles Traveled

**VOC**—Volatile organic compounds

**WCDHD-AQMD**—Washoe County District Health Department—Air Quality Management Division

**YOE**—Year of Expenditure

