

ACTION ELEMENT - ANALYSIS

The second major component required in the RTP/SCS is the “Action Element”. The Action Element of the RTP/SCS consists of short-term and long-term activities that address regional transportation issues and needs. All transportation modes (highways, railroad, bicycle, aviation, maritime, local streets and roads) are addressed.

Fundamental to the Action Element is the establishment of assumptions which form the definition of what is acceptable based upon adopted goals, policies and objectives and are part of the projection equation.

The Action Element is divided into two sections. The first section includes a discussion of regional issues, mandated transportation services, air quality, forecasting, regionally significant roads, alternatives, social impacts, and RTP analysis. The concluding section involves a discussion of each mode of transportation.

REGIONAL ISSUES

Transportation Funding

A continued dismal economic outlook, sagging revenues, and rising costs have created bleak prospects for BCAG to meet its infrastructure needs. The existing funding mechanisms are not sufficient to address existing needs. Projects identified in the RTP/SCS primarily address existing operational and safety issues. The lack of stable revenue stream funding for transportation results in a continued backlog of transportation projects.

BCAG’s primary funding for major infrastructure improvement is the State Transportation Improvement Program (STIP). As part of the 2016 STIP cycle, in January 2016, the California Transportation Commission approved a revised STIP estimate of -\$754 million. A negative STIP fund estimate required BCAG to delete STIP funds from a state highway project.

In addition, at the federal level, the continued delay of a longer term federal authorization bill continues to challenge BCAG in its ability to adequately financially plan for transportation. Fortunately, the federal government recently enacted the Fixing America’s Surface Transportation Act (FAST Act), or Public Law (P.L.) 114-94. The FAST Act was signed into law on December 4, 2015 and will expire on September 30, 2020. The FAST Act is the **first federal law in over ten years** to provide long-term funding certainty for surface transportation, after multiple extensions of the Moving Ahead for Progress in the 21st Century Act (MAP-21) which began on October 1, 2012 and originally was set to expire on September 31, 2014. The FAST Act built on the initiatives established in MAP-21, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the Transportation Equity Act for the 21st Century (TEA-21), and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

State Highway Responsibility

At the local level, funding for a continuous four lane facility to Chico is Butte County's top priority. The focus for the region is the SR 70 Corridor south of Oroville. BCAG will look to Caltrans and the CTC for assistance in jointly funding incremental passing lanes south of Oroville to the county line. However, the escalation factor is a major concern with three project segments that cost approximately \$30+ million each.

As a result of SB 45, regional agencies were given control of 75% of the STIP for "regional" improvements on the state highway system. The remaining 25% of the STIP was given to Caltrans to address the "interregional system". As such, BCAG is responsible for making improvements to the state highway system in Butte County. The reality of Caltrans programming any of its ITIP funds is not likely. However, on the interregional road system such as the SR 70 Corridor, Caltrans will continue to be a key participant in contributing ITIP funds, traditionally at 50%.

Local Roads

A backlog of local roadway improvements, in particular roadway rehabilitation, continues to be a major concern in Butte County. The cities and county will continue to be required to make the most of other resources available such as the Regional Surface Transportation Program, the Transportation Enhancement Activity Program, Congestion Mitigation and Air Quality Program, gas tax revenues, as well as other funds, in order to address the rehabilitation needs of the county for operations and maintenance. A statewide "local needs assessment" has been prepared at the state level to heighten attention to the policy decision makers.

Increased Demand for Transit

Since the 2008 RTP was prepared, gas prices have remained relatively high, at times reaching four dollars a gallon. As a result, the demand for transit service has increased. Most local agencies are utilizing all of their TDA apportionments towards fulfilling their respective transit obligations. While the County is not, they are fulfilling their entire required transit obligations. The balance of funds is being utilized for local streets and road maintenance as they are allowed to do so under TDA law. Since the recent installation of AVL/GPS system and electronic fare box system, BCAG is able to more closely monitor ridership and system performance in efforts to achieve the optimal performance on the transit system. In addition, BCAG has modified the fixed route transit system based on an in depth market based transit study completed in the fall of 2010. Changes to the system were implemented in the spring of 2011. In addition, BCAG has completed a Transit and Non-Motorized Transportation Plan to evaluate the transit system and assist in planning for the future.

MANDATED TRANSPORTATION SERVICES

The Americans with Disabilities Act (ADA) is civil rights legislation requiring, among other things, that persons with disabilities have equal access to transportation services. In

terms of transit, this means that all fixed route transit services must provide complementary paratransit services for those within a ¼ mile radius of a fixed route stop. In addition, transit providers must have wheelchair accessible vehicles, provide schedules and other information in accessible formats for people with hearing and sight impairments, allow attendants and companions, and meet specific requirements for comparability of fares.

Paratransit services, such as those mandated by the Americans with Disabilities Act, are significantly more expensive to provide than fixed route transit services. The Act does not provide any funding for these required service improvements. However, BCAG is exploring “premium” service areas for paratransit in efforts to service a greater area above and beyond that which is required. Potential customers have indicated they are willing to pay a little extra for paratransit service, so long as they are able to make their required trips.

During the period of this RTP/SCS, BCAG will continue to work to address transit planning and funding issues relative to meeting ADA requirements. Butte Regional Transit (B-Line) is currently in full compliance with the existing ADA requirements and has previously developed a Human Services Transportation Coordinated Plan for Butte County. BCAG will continue to monitor the regulations as applicable to Butte County.

AIR QUALITY CONFORMITY

With each update and amendment of the RTP, BCAG is required to demonstrate transportation air quality conformity under the Federal Clean Air Act (section 176(c) (42 U.S.C. 7506 (c))). The purpose of this demonstration is to ensure that BCAG’s plans and programs “conform” to all applicable federal air quality requirements and that the projects contained within the RTP do not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS).

Transportation conformity currently applies under EPA’s rules to areas that are designated non-attainment, and those re-designated to attainment after 1990 (“maintenance areas”). Currently, the Butte County region is designated marginal non-attainment for the 2008 federal 8-hour ozone standard and the western portion of Butte County is designated as moderate non-attainment under the 2006 federal 24-hour fine particulate matter (PM 2.5) standard. The Chico urbanized area was re-designated from non-attainment to attainment with a maintenance area classification for carbon monoxide (CO) in 1998. As maintenance area for CO, BCAG continues to demonstrate conformity.

The complete Air Quality Conformity Analysis and Determination is included as Appendix 1. The 2016 RTP has successfully demonstrated conformity for each of the required designations.

REGIONAL MODELING

In each RTP/SCS update cycle, BCAG is required under federal and state regulations to utilize the latest available estimates and assumptions of population, housing, employment, land use, and travel. BCAG utilizes both a regional travel demand forecasting model and regional land use model, in conjunction with regional growth forecasts, to meet these requirements.

Regional Travel Demand Forecasting (TDF) Model

BCAG maintains the regional TDF model to support long-range transportation planning efforts and to provide a mechanism for evaluating the potential effects of future land development and transportation improvement projects. In 2010, the model received extensive updates to support the development of the new sustainable communities strategy required under Senate Bill 375. For development and analysis of the 2016 RTP/SCS, BCAG's TDF model underwent a minor update in which the latest socio-economic data was incorporated, land use forecasts were revised, and the base was re-validation to year 2014 traffic counts.

Appendix 6-6B includes the complete documentation for the regional TDF model.

Regional Land Use Model

In 2010 BCAG worked with California State University, Chico and the University of California Davis to develop a regional land use allocation model to assist in preparing the 2012 RTP/SCS. The model is rule based, and allocates future residential and employment growth while considering the region's existing land use plans, growth forecasts, and development attractions (e.g. transportation and infrastructure) and discouragements (e.g. resource areas, farmland, and floodplains). Outputs of the model are used to inform the regional travel demand forecasting model.

In preparing the 2016 RTP/SCS, the land use allocation model base year was updated to 2014, to coincide with the latest validated travel model and existing land use datasets. Future year land use were then developed for the years 2020, 2035 and 2040. The forecasted allocation years of 2020, 2035, and 2040 are based on minor revisions of the adopted 2012 RTP/SCS allocations with adjustments made for the revised regional growth forecasts.

All future year allocations were developed in coordination with local jurisdictions planning staff and are based on land use information from the areas local land use plans, planned development projects, reasonable assumptions regarding infill and redevelopment, regional growth forecasts, and a review of development attractions (i.e., motorized and non-motorized transportation networks, existing development, service areas, etc.) and discouragements (i.e., resource areas and farmland, public lands, areas exceeding 25% slope, etc.). The general plan and specific plan development activities occurring in the county by the local jurisdictions are reflected in the future year land use assumptions,

which are generally representative of the best available information as of January 1st, 2015.

Appendix 6-6A includes the complete documentation for the regional land use allocation model and associated forecasted land uses by analysis year.

REGIONAL ROAD NETWORK

One of the most important components of the overall transportation system in Butte County is the network of roadways that facilitates the movement of people and goods in and through the county.

Appendix 7 identifies specific roadways in Butte County that are of regional significance. Regionally significant roadways include the entire state highway system and all roads designated as either arterial or collector as classified by each local jurisdiction. In addition, roadways which meet one or more of the following criteria have been added and identified as other roads of regional significance:

- Principal roadways connecting Butte County with other regions or counties
- Principal roadways connecting urban areas
- Roadways which provide access to significant recreational, commercial, industrial, or institutional activities
- Roadways which are primary emergency evacuation routes for urban areas

The regionally significant roads in the RTP/SCS are evaluated within the regional traffic model. These roadways are analyzed based on current and future travel demand, and provide a basis to identify potential impacts of growth on the regional transportation system.

REGIONAL PERFORMANCE MEASURES

Performance measures are used to evaluate and analyze the performance and effectiveness of the transportation system, government policies, programs, and strategies presented in the Regional Transportation Plan.

Recent legislation such as the Moving Ahead for Progress in the 21st Century Act (MAP-21) and SB 375 have placed an emphasis on performance based planning. In response, several efforts have been funded at the state and regional level to identify key factors and measures to better evaluate transportation plans.

In 2013, the Strategic Growth Council funded an effort to develop a common set of measures which could be utilized by each of California's MPOs. In October of 2014, the California Transportation Commission released the draft 2016 State Transportation Improvement Program (STIP) Guidelines which includes a complete revise of measures to better align with the state transportation goals. In consideration of these efforts, BCAG has updated measures for the 2016 RTP/SCS while continuing with the factors established in previous RTP's.

The updated performance measures have been categorized into the following seven (7) factors: safety and health, mobility/accessibility, reliability, productivity, system preservation, environmental stewardship, and social equity. The Caltrans guidebook *Performance Measures for Rural Transportation Systems, June 2006*, and Caltrans *Smart Mobility 2010: A Call to Action for the New Decade, February 2010*, describe and define the following seven (7) indicators:

- Safety - The safety of the regional transportation system is a key measure used to evaluate fatalities, injury, and property loss of system users.
- Mobility/Accessibility - Mobility refers to the ease or difficulty of traveling from an origin to a destination. Accessibility is defined as the opportunity and ease of reaching desired locations. As mobility increases, accessibility tends to improve.
- Reliability – Reliability refers to the consistency or dependability of travel times and is a measure that compares expectations with experience.
- Productivity - Productivity is defined as the utilization of transportation system capacity. For roadways, capacity is defined as the maximum number of vehicles that a roadway can accommodate.
- System Preservation - System preservation refers to maintaining the roadway network and transit fleet at a desired or agreed upon level.
- Environmental Stewardship – Environmental stewardship strives to protect and enhance the built and natural environments of the region.

- Social Equity – Equitable distribution of the benefits and burdens of the plan on the economically and socially disadvantaged.

In evaluating the performance of the transportation plan, BCAG utilizes multiple tools and datasets to quantify information for each of the measures listed above:

- BCAG’s regional transportation model
- BCAG’s regional geographic information system (GIS) database
- BCAG’s regional land use allocation model
- B-Line ridership data
- California Highway Patrol Statewide Integrated Traffic Records System (SWITRS)

Table 3-1 contains the factors and measures for the 2016 RTP.

Table 3-1
BCAG 2016 RTP - Performance Measures

| Factor | Measure | Current Performance | Projected Impact of Constrained Plan | Data Source* |
|----------------------------|--|-----------------------------------|--------------------------------------|--------------------|
| | | Base Year (2014) | Year 2040 | |
| Safety and Public Health | Fatalities per Vehicle Miles Traveled (VMT) | 1 per 204,000 VMT | decrease | SWITRS / TDF Model |
| | Fatalities per Passenger Mile by Transit Mode Share | 0 per 8.5 million Passenger Miles | maintain | SWITRS / NTD |
| | Percentage of Trips by Pedestrian and Bicycle Mode Share | Bike 2.13% | Bike 2.93% | TDF Model |
| Ped 5.63% | | Ped 7.76% | | |
| Mobility and Accessibility | Average Peak Period Travel Time (minutes) | 12.87 | 14.43 | TDF Model |
| | Percentage of Housing and Jobs within 2 miles of State Highway | 82% Housing and 94% Jobs | 83% Housing and 94% Jobs | LU Model / GIS |
| | Percentage of Population within 1/2 mile of Transit Route | 74% | 66% | LU Model / GIS |
| Reliability | Percentage of Congested Highway VMT | 0% | 19% | TDF Model |
| Productivity | Average Peak Period Vehicle Trips | AM 94,038 | AM 135,219 | TDF Model |
| | | PM 152,007 | PM 217,882 | |
| | Transit Passenger Trips per Vehicle Hour (Fixed Route) | 19.2 | 21.8 | NTD / TNMP |

BCAG 2016 RTP - Performance Measures (Cont.)

| Factor | Measure | Current Performance | Projected Impact of Constrained Plan | Data Source* |
|---------------------------|--|--------------------------|--------------------------------------|--------------------------------------|
| | | Base Year (2014) | Year 2040 | |
| System Preservation | Percentage of Distressed Lane Miles – State Highways (District 3) | 10% | N/A | Caltrans Pave |
| | Percentage of Distressed Lane Miles – Local Streets and Roads | 66% | N/A | Caltrans SR |
| | Percentage of Highway Bridge Lane Miles in need of Replacement or Rehabilitation ⁴ | 46% | N/A | HBP |
| | Percentage of Transit Assets exceeding FTA “Useful Life” | 22% | 0% | B-Line |
| Environmental Stewardship | Air Quality Conformity (non-attainment pollutants) | See Appendix 1 | See Appendix 1 | Air Quality Conformity Determination |
| | Per Capita Vehicle Miles of Travel ² | 22.1 | 21.5 | TDF Model |
| | Per Capita Acres of Developed Land | 0.32 | 0.29 | LU Model / GIS |
| | Acres of Important Farmland Avoided ⁵ | 236,386 | 230,760 | LU Model / GIS |
| | Percentage of Development Occurring within Butte Regional Conservation Plan - Urban Permit Areas | 70% Housing and 86% Jobs | 75% Housing and 87% Jobs | LU Model / GIS |
| Social Equity | Percentage of Higher Density Low Income Housing ¹ within 1/4 mile of Transit Route | 88% | 75% | LU Model / GIS |
| | Percentage of Higher Density Low Income Housing ¹ | 26% | 27% | LU Model / GIS |
| | Percentage of Minority Area ³ Population within 1/4 mile of Transit Route | 100% | 100% | LU Model / GIS |

Footnotes:

¹ multi-family housing is used in determining percentage of higher density low income housing

² VMT includes all trips within county from all vehicle types

³ Minority Areas are defined as 2010 Census Block Groups where 40 percent or more of the population is Asian Pacific Islander, African American, Hispanic, Native American or other Non-White ethnic group, based on 2010 Census data

⁴ Highway Bridge Lane Miles with a Sufficiency Rating (SR) of 80 or below

⁵ Important Farmland includes farmlands classified as Prime, Unique, and of Statewide Importance by the California Department of Conservation (2012).

Data Source

SWITRS - California Highway Patrol Statewide Integrated Traffic Records System

TDF Model - BCAG's Regional Transportation Model

LU Model - BCAG's Regional Land Use Allocation Model

B-Line - Butte Regional Transit

TNMP – BCAG's Transit & Non-Motorized Plan

GIS - BCAG's Regional Geographical Information System

HBP - Caltrans Local Highway Bridge Program – Local Agency Bridge List (2014)

NTD – National Transit Database (2013)

Caltrans SR - California Statewide Local Streets and Roads Needs Assessment (2014)

Caltrans Pave - Caltrans 2013 State of the Pavement Report

ALTERNATIVES

Transportation improvement alternatives are developed from the data analysis for each project that is ultimately funded. The location of sensitive environmental resources and the requirement to consider projects and strategies that protect and enhance the environment are factored into the analysis.

A requirement to the identification of projects in the RTP is that they be specifically identified or be consistent with the goals, policies and objectives of their respective jurisdiction's general plan. As part of the project development process, each project is required to undergo its own environmental clearance. Through the environmental process, each project must stand on its own and satisfy applicable requirements for NEPA and/or CEQA, as well as be consistent with adjacent and or overall environmental goals.

BCAG's top "regional" priority is the SR 70 Corridor to bring a continuous four lane facility reaching Chico. The remaining gap to accomplish this is approximately 20 miles between Oroville and Marysville.

In addition, as part of the RTP EIR process, four alternatives have been considered including:

1. No Project (2012 MTP/SCS)
2. Financially Unconstrained Build Alternative
3. Transit / Pedestrian Investment Alternative
4. Transit / Pedestrian Investment Plus Energy Efficiency Alternative

SOCIAL IMPACTS

The RTP is required to consider and reflect in the transportation planning process the effects of housing, employment, community development, and the effectiveness of the transportation system performance and related impacts on the community/central city goals regarding social and economic development.

The "social" effects are considered in this RTP via the BCAG traffic model. The BCAG traffic model incorporates population, housing, and employment growth. The impacts of the socioeconomic considerations are evaluated in terms of potential level of service impacts to the regional road system. The comprehensive update to the socioeconomic data files was the result of a multi-year project in consultation with each of the Planning and Public Works departments and the Transportation Advisory Committee, which includes representation from Caltrans and the public.

ENVIRONMENTAL ISSUES

BCAG recognizes the importance of addressing environmental issues early in the planning process. As a result, BCAG embarked on developing the Sustainable Communities Strategy planning effort as described in Chapter 4.

In addition, each project is required to undergo its own environmental review and clearance process as part of the project development process and prior to the allocation of any right-of-way or construction dollars. A program level EIR is included with the 2016 RTP as well.

With regard to air quality, based on the analysis provided in the air quality conformity section of the RTP, Butte County continues to demonstrate conformity. In addition, once a project is programmed in the Federal TIP, each project must demonstrate conformity again as required. Each project essentially demonstrates conformity twice, once for the RTP and once for the FTIP. In addition, once programming occurs, each project is required to comply with NEPA and CEQA as appropriate. This process ensures that the transportation projects moving forward have been adequately analyzed.