

5 MOBILITY



5.1 INTRODUCTION

This Mobility Policy Paper focuses on exploring the transportation issues in the City of Eureka and flushing out the major circulation barriers in the City. Many of the issues are focused on the US 101 corridor, and the implications that continued growth in traffic volumes will have as well as goods movement through the City (i.e., truck traffic), diverted trips through adjacent neighborhoods, pedestrian activity in the Downtown, and overall operations on Broadway and the 4th and 5th Streets couplet. In addressing such issues, consideration was given to balancing the sometimes opposing goals of operations and safety. This Policy Paper also generally identifies other issues of interest or concern such as gaps in trails, neighborhood traffic calming, and safety concerns.

Issues that are not presented here may nevertheless be addressed during the process of updating the General Plan.

5.2 ISSUES

Congestion

US 101

Congestion is one of the primary concerns regarding US 101 for many of the City of Eureka's residents. Aligned along Broadway with two-way operation and as a one-way couplet on 4th and 5th Streets, this highway is the most significant transportation facility in the City, though as a State highway it is operated and maintained by the California Department of Transportation (Caltrans).

Carrying volumes of 33,500 to 37,500 vehicles on a daily basis, the two through lanes in each direction on Broadway are inadequate to serve the demand, resulting in congestion during periods of peak flow. As a



primary truck route, US 101 has about five percent truck trips, which is a higher percentage of its total traffic compared to other streets in Eureka that typically carry two to three percent trucks. Due to both their size and longer deceleration and acceleration times, the capacity needed for one truck is about the same as that for three passenger vehicles. The higher percentage of truck traffic therefore also contributes to the inadequacy of the existing capacity of US 101.

In addition to the frustration experienced by drivers caught in congestion, associated impacts include diversion to alternative routes, and behaviors that result in crashes. Traffic diverted to parallel routes can degrade the neighborhood character of routes that are not intended for such volumes, impacting the quality of life for residents on these streets. The safety impacts due to congestion can be seen in the fact that there are more intersections identified as being “high incidence” locations along the US 101 corridor than any other in the City (Transportation Safety Action Plan 2014, which currently has not been adopted). Of the 28 locations identified as having nine or more collisions resulting in an injury or fatality, 13 were along US 101.

City Streets

Congestion is not just an issue along US 101, but also along surface streets throughout the City, especially those that serve to relieve the congestion along Broadway. One corridor that is especially impacted is Harris Street, the primary east-west corridor serving the southern part of the City. Schools have a big impact on traffic flows on city streets, with traffic at dismissal time creating a separate peak period. Many neighborhood schools have been closed, making it so that very few students can reasonably walk to school so they are instead driven by their parents.

System Preservation

Like many other public agencies, the City of Eureka has seen its infrastructure begin to deteriorate as it ages amidst a lack of funding for maintenance. Since the boom of freeway building that occurred in the mid-1900’s, the public investment in transportation facilities has been insufficient to fund the new facilities that are needed, much less the maintenance needed to keep our existing roadways from further crumbling. Funds from gas taxes have increased very slowly at about one percent per year for the past 25 years, while the cost of maintaining roads has increased by about 10 percent per year during the same period. The City’s streets require more than \$47.7 million in maintenance to achieve good conditions; this obligation is currently unfunded.

The constant deterioration of infrastructure is the kind of issue that is routinely overlooked until there is a failure, and sometimes one as catastrophic as the gas line explosion in San Bruno, California. The cost of repairing infrastructure that has failed is typically considerably more than the cost of maintenance, so by allocating more resources to maintaining the system, the long-term costs are lower. In the short term, however, the reallocation of budgets could result in shortfalls for new construction projects.

Safety

The *City of Eureka Transportation Safety Action Plan*, June 2014, has the stated purpose of improving safety for all modes of travel in the City. Two goals are stated, including reducing the incidence of collisions and preserving the quality of life for Eureka residents. While the collision reduction goal has an obvious safety implication, the reason for making quality of life preservation a goal in a safety plan is not as readily apparent. However, as stated in the Safety Action Plan, the objective of this second goal is to calm traffic in residential neighborhoods, and the safety benefits of this are clear.

Standards of Significance

The City’s existing standards of significance in regard to traffic impacts are based on vehicular level of service (LOS), with LOS C generally being the minimum level that is acceptable. This is consistent with Caltrans

standards that call for operation to be maintained at the threshold between LOS C and LOS D, with LOS D operation specifically allowed for US 101 (General Plan Policy 3.A.2). Vehicular LOS has long been used as a means of establishing operational adequacy, and current methodologies provide results based on average delay – a measure that is readily understood by the driving public. However, this standard is auto-centric; it does not include any consideration of alternative transportation modes, and does not consider the adequacy of the transportation system’s operation except as it relates to drivers. Designing roadways to achieve LOS C operation for vehicles during peak hours typically requires more lanes to provide the necessary capacity, which encourages higher driving speeds and often results in a roadway system with excess available capacity during off-peak periods. Such roadways can detract from the character of a neighborhood street such as a collector that serves higher volumes, but still has abutting driveways, is heavily used by pedestrians and bicyclists, and is considered by residents as part of their neighborhood.

Further, it is likely that operation on Broadway will drop below LOS D at one or more intersections in the near future as traffic volumes continue to increase due to development both in and around Eureka. For those intersections that are already operating near the threshold for LOS E operation, even a relatively small project could potentially add sufficient traffic to cause this deterioration. Without a policy addressing the potential for lower service levels, or any feasible improvements that would be reasonable mitigation for a small project, such projects may be found inconsistent with the City’s General Plan and could be found to have a significant impact pursuant to CEQA despite having relatively minor traffic impacts, potentially forcing the preparation of an Environmental Impact Report (EIR). Complete Streets

The demand for facilities that meet the needs of pedestrians, bicyclists, and transit users is growing and has emerged as communities shift their focus away from auto-centric circulation networks to a transportation system that supports safe and efficient use of roadways for everyone. These facilities are known as Complete Streets.

Assembly Bill 1358 (AB 1358), The California Complete Streets Act of 2008, states, “This bill would require, commencing January 1, 2011, that the legislative body of a city or county, upon any substantive revision of the circulation element of the general plan, modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan. By requiring new duties of local officials, this bill would impose a state-mandated local program.”

AB 1358 requires the Governor’s Office of Planning and Research (OPR) to amend the *General Plan Guidelines* to assist city and counties in integrating multimodal transportation network policies into the circulation elements of their general plans. The December 15, 2010 OPR *Update to the General Plan Guidelines: Complete Streets and the Circulation Element* provides statutory requirements for a general plan circulation element, specifically stating “the circulation element shall contain objectives, policies, principles, plan proposals, and/or standards for planning the infrastructure to support the circulation of people, goods, energy, water, sewage, storm drainage, and communications.” The updated Guidelines note that AB 1358 “requires the circulation element be modified to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways. The statute defines ‘all users of streets, roads, and highways’ as ‘bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.’ The OPR Guidelines state that transportation networks should additionally consider pedestrian, bicycle, and transit routes, which may not always be located on or along streets, roads, and highways.” These Guidelines also includes many sample policies for agencies to use in updating their Circulation Element.



Alternative Mode Access

Bicycle/Pedestrian/Transit Access

Highways have long been the arena of motor vehicles, with little consideration given to serving alternative transportation modes. In recent years there has been a shift in focus, with a greater demand to provide adequate facilities that meet the needs of pedestrians and bicyclists, including on highways, in accord with the *Humboldt Regional Bicycle Plan – Update 2012*. Along Broadway south of Wabash Avenue, US 101 is designated as part of the Pacific Coast Bike Route which provides bicycle access between the California/Oregon border and Mexico.¹ The route diverts to Wabash Avenue, Railroad Avenue, Waterfront Drive and V Street, among others, as it traverses Eureka. The lack of dedicated facilities on US 101 has led to cyclists either sharing the parking lane and sidewalks, or using the same lane as motor vehicle traffic. With vehicles traveling along the route at significantly faster speeds than bicyclists, there is the potential for unsafe conditions.

Pedestrian facilities along the corridor include discontinuous sidewalks as well as many marked crosswalks along the 4th and 5th Street couplet. Marked crosswalks along Broadway are limited to signalized intersections, with long segments between that do not have any marked or controlled crossing facilities. Pedestrians experience long delays while waiting for their turn at signalized intersections or sufficient gaps in traffic at unsignalized locations, in addition to long crossing distances, ultimately discouraging pedestrian activity.

While facilities for pedestrians are relatively continuous within the grid-system that covers most of the City, connectivity is lacking in some areas that are more rural in nature, like the southerly part of Walnut Drive, or that are only partially developed, such as on Cedar Street west of Broadway. The system of sidewalks, paths, trails, crosswalks, and other pedestrian amenities should provide continuous access for all users, including children as well as those who are blind and/or disabled. Facilities for bicycles tend to be less continuous, with numerous gaps in the system where extensions of bike routes, bike lanes, and bike paths or trails are planned to be built in the future.

Existing transit routes loop around the City, resulting in long headways and substantial out of the way travel for the passenger. Further, many locations lack adequate facilities for passengers to wait, board or alight. There are also limited options for drivers to park and ride transit.

Other Modes

Other modes of transport that must be considered in providing mobility to the citizens of Eureka include travel by rail, air and sea.

RAIL

There are currently no active rail facilities in Eureka or Humboldt County. Some members of the community are exploring the possibility of an east-west rail connection between Humboldt Bay and the national rail system. Currently, goods moving in and out of Humboldt County must travel by truck or air.

AIR

Commercial air transport is provided by the Arcata-Eureka Airport, which is Humboldt County's regional airport and the only airport in the county offering scheduled passenger service. The airport is located

¹ Caltrans, 2012. *The Pacific Coast Bike Route in District I*. District I System Planning. Available at: http://www.dot.ca.gov/dist1/d1transplan/bikeped/bikeguide/pacific_coast_bike_route.pdf

approximately 20 miles north of Eureka on the outskirts of McKinleyville. The airport is currently served by only one commercial airline, United. There are a limited number of flights offered with no direct flights anywhere except San Francisco, and the airport experiences flight diversions due to fog. Air travel is generally considered unreliable and expensive, and has limited attractiveness due to the limited number of commercial flights and destinations, making it difficult for residents and others to get in and out of Humboldt County.

Murray Field is a county-owned public-use airport located in the easterly portion of Eureka, on Jacobs Avenue. This airport provides charter flights as well as air transport for freight.

Samoa Field Airport

Samoa Field Airport is a city-owned public-use airport located on the Samoa Peninsula that is open for day use only. The Airport has two runways, and aircraft operations averaged 48 flights per week in 2012. It has limited facilities or services, and likely has limited potential for increased use.

PORT

The City has an existing port that could provide capacity for moving people and freight.

5.3 ALTERNATIVES

Congestion

US 101

The alternatives for addressing congestion and other operational issues associated with US 101, which passes through the City and serves as a major cross-town arterial, include various capacity enhancements, such as added lanes or improved coordination (e.g. signal timing); freeing up capacity by converting trips from vehicles to other modes; and diverting trips to alternative routes, potentially including a bypass. Adding lanes to US 101 is generally infeasible as the route runs through areas that are fully built out, leaving little available space to create new lanes without taking land from adjacent properties. While limited relief could be achieved through optimized signal timing, changes in traffic patterns occur routinely and timing should therefore be modified as necessary to reflect such changes. Caltrans is continuing their efforts to improve operation along Broadway, having recently initiated work on an updated Route Concept Report, the purpose of which is to evaluate current and projected future conditions along the route and set forth the vision for development along the corridor for 20 to 25 years.

While the City works cooperatively with Caltrans to implement improvements to increase capacity and improve operation, only a portion of the improvements needed to achieve adequate capacity to alleviate the congestion are currently funded.

SIGNAL OPERATIONS

The *Broadway Engineered Feasibility Study* (Caltrans, June 2014) includes numerous recommendations for changes to signal operations as a means of increasing capacity and reducing congestion. In addition to timing changes such as re-timing the corridor and/or implementing adaptive signal control, the following physical changes are being considered under one or more of the six scenarios presented in the feasibility study to improve signal operations:

- Closure of northbound Fairfield Street at Wabash Avenue
- Implementation of protected left-turn phasing at various locations



- A new traffic signal at Hawthorne Street
- A new traffic signal at Clark Street
- Peak period turn restrictions at various locations
- Addition of a right-turn lane at Henderson Street

All of these options should be considered in evaluating the future circulation system needs of the City, particularly as they affect operation on City streets. Further, any changes made to improve operations need to be balanced against the safety needs of all users, including drivers, bicyclists, and pedestrians.

BYPASS

There are limited options for increasing capacity along US 101, but if a new road were constructed around the south and east sides of the city, regional through traffic could be diverted away from Eureka, and Broadway, 4th and 5th Streets would serve local traffic. This long-term alternative would provide the greatest relief and also create the most additional capacity, but there are many obstacles that would need to be overcome to achieve such a solution, including developing a feasible alignment, addressing the environmental impacts associated with construction of the bypass, accumulating the funds needed for the bypass and acquiring the land along the route. Because of the severity of these obstacles, the alternative of constructing a bypass is not under consideration as a feasible option at this point in time. If there is a desire to consider a bypass, it will be necessary to identify a feasible alignment as well as a source for funding.

LOCAL BYPASS OR COUPLET ROUTES

An extension of Waterfront Drive has also previously been considered as a means of reducing congestion on US 101, but this project to provide a two-lane extension of Waterfront Drive from Del Norte Street to Hilfiker Lane was shelved. The City was working through the project's environmental review process when the City Council made the decision to halt the project in 2010 due to opposition from the California Coastal Commission, an agency that would eventually need to issue a coastal development permit for the project. Coastal Commission staff believed the project to be inconsistent with the California Coastal Act wetland fill and environmentally sensitive habitat area protection policies, and therefore indicated they would be unable to issue a coastal development permit for the project.

Renewed consideration of the Waterfront Drive Extension with revisions to address Coastal Commission concerns, or development of an alternative alignment as a means of developing a second route to form a couplet with Broadway and increase capacity along this critical corridor, could be explored.

GOODS MOVEMENT

Trucks currently make up a substantial amount of the traffic stream on US 101. Options for reducing the volume of truck traffic include diverting such trips to rail, air, or water. The City may wish to further explore the opportunities for an east-west rail system to connect Eureka to existing rail corridors to the east, as well as supporting efforts to repair the rail line to the south. This is particularly important as it relates to port activities and the potential for increasing activity at the deep water Port of Humboldt Bay, which is currently limited due to the lack of rail facilities.

While truck routes must be accommodated on major routes, consideration could also be given to establishing truck routes in other areas. Such routes should consider the properties being served and their associated need for truck access as well as the impacts on connecting streets that may not be appropriate for truck traffic.

The use of rail as a means of transporting goods has long been one of the most efficient and cost-effective modes available. However, rail is currently underutilized, declining, and presents a missed opportunity for economic development because this transportation option could improve the movement of goods and services.

The City could evaluate the establishment of an east-west rail connection. As noted in the Economic Development Policy Paper, such a connection may not be feasible, and could require the identification of a single large-scale user who can ensure consistent and high-volume shipments. If a route is selected that passes through the City of Eureka, it could have significant impacts on land use, transportation, and quality of life. If the selected route passes farther to the north, and down the Samoa Peninsula, the railroad would have fewer impacts on the city, but might also generate fewer benefits in terms of the co-location of businesses that rely heavily on rail transportation. In addition to east-west rail, the City may also consider reestablishment of the historic north-south rail line.

Another mode of goods movement identified in the Economic Development Policy Paper is shipping. If there is insufficient activity at the port to finance ongoing dredging of the channel and assorted port facilities, it may limit the ability for certain types of ships to enter and exit the harbor. This could, as a result, impact the ability to ship certain types of goods, such as petroleum, into the region via the port. Some of this goods movement would likely be shifted to trucks traveling on US 101, further increasing congestion.

Participation in America's Marine Highway Program could be considered by the City as an option to improve goods movement where shipping is involved. The Program, led by the Department of Transportation, was established by Section 1121 of the Energy Independence and Security Act of 2007 to reduce landside congestion through the designation of Marine Highway Routes. Section 405 of the Coast Guard and Maritime Transportation Act of 2012 further expanded the scope of the program beyond reducing landside congestion to efforts that generate public benefits (e.g. reduce air emissions) by increasing the utilization or efficiency of domestic freight or passenger transportation on Marine Highway Routes between U.S. ports. The Program is intended to expand the use of our nation's navigable waterways by increasing the efficiency of the surface transportation system through the integration of the commercially operated Marine Highway services into the nation's surface transportation system. Once integrated, these Marine Highway services would connect seamlessly with all modes of transportation for freight and passengers, thus providing a convenient transportation alternative alongside congested landside transportation corridors.

The movement of freight can also be made by air. Air transport is served the regional commercial airport in McKinleyville, and by Murray Field. Expansion of services to accommodate air freight could provide some relief to the congestion on US 101.

City Streets

One option for relieving congestion in the southern part of the City is the creation of a one-way couplet using Harris Street and Henderson Street. Harris Street would serve eastbound traffic while westbound trips would be made on Henderson Street. The advantage to a one-way couplet is that it eliminates many of the conflicting movements at intersections along the route, allowing more time to be allocated to through traffic. Another option for local congestion relief includes the installation of a two-way left-turn lane on Harrison Avenue from Harris Street to Myrtle Avenue as illustrated in the City's CIP.

To address the peak periods caused by school traffic, the City should work with schools to ensure that start and end times are staggered to the extent possible, especially where there are multiple schools in the same traffic area. Also, the City is a member of the Safe Routes to Schools Eureka Task Force, which includes representatives from the County, Eureka City Schools, the Office of Education, and Public Health. Through this task force students should be encouraged to increase use of carpooling, walking school buses, etc.



System Preservation

Allocating more resources to maintaining the system will lower long-term costs as compared to repairing failed infrastructure. Therefore, funding ongoing maintenance is the key to controlling long-term costs and ensuring safe and operable infrastructure.

While there is some talk at the State level of increasing gas taxes, which would result in increased revenue to the City of Eureka, such taxes are always a tough sell to taxpayers and may not come to pass for many years. The City may wish to join the county in urging the state to increase the gas tax or set it to index automatically as prices change if this avenue of increased funding is desirable. Barring such an increase, there is unlikely to be more funding for infrastructure maintenance unless the City either assigns a higher priority to such work so that a greater percent of transportation spending is apportioned to it, or else develops a new source of funding.

In regard to existing transportation funding, the City may wish to approach the Humboldt County Association of Governments (HCAOG) to initiate a discussion about the formulas used and the potential for additional funding being made available for maintenance of existing transportation infrastructure.

Many communities have passed sales tax initiatives to fund transportation projects. These monies typically do not need to be sufficient to fund projects 100 percent; rather, they are used as a local match to make applications for grant funding more successful. The City and the county are currently working on a traffic impact fee to address impacts from traffic enabled by the Martin Slough Interceptor project pursuant to a CEQA mitigation measure adopted as part of project approval. Consideration could be given to working in concert with the County to establish a traffic impact fee to be applied to all new development within the Greater Eureka Area to help fund not only any new facilities needed, but also to fund maintenance functions needed to accommodate the increased traffic volumes and resulting wear on City (and County) streets.

Safety

The *Transportation Safety Action Plan* presents collision records for the City of Eureka from 2008 through 2012. For all categories of crashes (vehicles, bicyclist-involved and pedestrian-involved), the greatest number of collisions occurred along the US 101 corridor, on both Broadway and the 4th/5th Streets couplet, and on Harris Street. Areas that are identified in the Plan as needing emphasis include aggressive driving, distracted driving, impaired driving, non-motorized road users (pedestrians and bicyclists) as both the victims as well as the cause of collisions, and quality of life issues associated with feeling safe when using the City's street system. The goals of the Safety Action Plan can be supported by including relevant goals, objectives, and policies in the updated General Plan.

The *Transportation Safety Action Plan* includes tactics for improving safety, including implementing collision reduction strategies and sustaining the results with a target reduction goal, and calming neighborhood traffic. Tools that will be used in this program include collision records to help identify areas of concern, and the many traffic control devices that are used to achieve slower vehicle speeds, as set forth in the Neighborhood Traffic Calming Toolbox.

Caltrans has also identified the need for safety improvements in their *Broadway Engineered Feasibility Study*. One of the measures included in all six of the scenarios presented in the report is a raised median, though the limits of the median vary from the entire corridor to specific portions.

Standards of Significance

Adequacy of Existing LOS Policy

The City has the option of retaining the existing vehicular Level of Service (LOS) standard as is, modifying it to include parameters for corridor operation in addition to the current standard for intersections, or revising it to address any shortcomings, including the need to strengthen language regarding alternative modes, lack of clear operational standards for unsignalized intersections, and provision of thresholds indicating when a project has a significant impact at an intersection already operating unacceptably. Because of the congestion experienced along US 101, the City may wish to establish exceptions to the LOS standard for specific areas or corridors where congestion is essentially unavoidable, and/or where there is a desire to emphasize alternative modes and de-emphasize vehicular traffic.

Another operational issue that could be included in the City's policies is related to left-turn queuing. When vehicles stack up beyond the capacity of a left-turn lane, the capacity of the through lane is impacted, and this sometimes leads to theoretical operational results that are not consistent with actual field conditions. The City may wish to include a policy establishing a threshold for queuing such that if queuing will extend beyond the capacity of the turn lane, this would be an unacceptable condition and represent a significant impact.

APPLICABILITY TO ALTERNATIVE MODES

The recognition that transportation systems must serve all users, and not just drivers, has led to a need for revisions of existing policies to place a higher emphasis on pedestrian, bicycle and transit modes. Consideration should also be given to reducing or even eliminating the emphasis on vehicular traffic in areas where the highest priority is alternative modes, even if it is at the expense of motor vehicle traffic operation. While methodologies currently available to measure pedestrian and bicycle operation quantitatively are still in their infancy, the City's policy framework should provide guidelines for qualitative measures as well as for future changes at such time as such methodologies improve.

New policies to strengthen the priority given to alternative modes should be considered. For example, the City of Alameda uses a threshold for alternative modes wherein a 10-percent degradation in the applicable level of service measure of effectiveness is considered a significant impact to transit, bicyclists and pedestrians.

USE OF VMT AS A STANDARD

On August 6, 2014, the Governor's Office of Planning and Research released for public review a preliminary discussion draft of changes to the CEQA *Guidelines* that will change the way that transportation impacts are analyzed under CEQA. It is anticipated that once the new transportation guidelines are adopted, automobile delay will no longer be considered an environmental impact under CEQA. While the City may retain the delay-based standard for purposes of ensuring ongoing adequate operation of the transportation system, during the environmental review process it is likely that all proposed future projects (including infrastructure improvements) will also need to be evaluated based on the Vehicle Miles Traveled (VMT) that they would generate. The VMT metric favors infill projects within proximity to urban centers, where non-automobile use including walking, bicycling, and transit are more viable.

In explaining the methodology to be used to establish VMT, the draft text for CEQA Guidelines Section 15064.3, says "The lead agency's evaluation of the vehicle miles traveled associated with a project is subject to a rule of reason; however, a lead agency generally should not confine its evaluation to its own political boundary. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence." Transportation professionals have expressed concerns about the difficulty in obtaining a quantitative assessment of the VMT associated with any particular land use in a specific location, and further input to the proposed changes is still being sought. This issue is one that will need to be followed as the City proceeds through the General Plan Update process.



While CEQA will be shifting from an LOS metric to one that relies on VMT, jurisdictions have the choice of continuing to use LOS when evaluating performance of the circulation network and assessing development impacts (such LOS assessment would, however, occur outside of the CEQA environmental review process). Because LOS has historically been used in the City of Eureka and is generally understood by members of the community, and because LOS can remain a valuable tool in analyzing circulation conditions, the City should consider retaining its use in one form or another.

MAINTAINING RESIDENTIAL ENVIRONMENTS

Maintaining traffic flow through Eureka's well-developed "grid" street network will be especially important to the City's residents, allowing connectivity among homes, schools, employment, and shopping areas without necessarily requiring the use of Broadway. This connectivity must, however, be balanced with the need and desire to maintain traffic volumes that are appropriate for residential streets. Mechanisms such as mini-roundabouts may be appropriate solutions for busier residential intersections, accommodating traffic while simultaneously promoting a safe, low-speed environment that is compatible with neighborhoods.

Some communities have developed a way to measure how added traffic affects the livability of residential neighborhoods. Additional traffic is nearly always perceived as having a negative impact on residents, particularly those with children or senior citizens, who fear for their safety as the volume of traffic through their neighborhood increases. The methodologies available for evaluating traffic operation do not address the potential for added traffic to change the character of a neighborhood, and what would be considered a fairly minor increase in traffic in one location may be seen as a significant increase in another due to the amount of traffic that already exists on the street.

Some cities, such as Campbell and Palo Alto, use an index called the TIRE, or Traffic Intrusion on Residential Environments. The TIRE index is based on studies that show that, in general, residents do not perceive an increase in traffic of 25 percent or less. Developed by researchers in the United States and England, the index allows an agency to determine the potential effect of added street traffic on activities such as walking, bicycling, accessing a driveway, etc.

If there is interest in establishing a similar policy, a scale of volumes that makes sense for the City of Eureka could be established, such as an increase of 25 percent or 500 vehicles per day, whichever is less.

FEE PAYMENT TO MITIGATE IMPACTS

Many agencies, including Caltrans, have established policies that allow payment of an equitable or proportional share of costs to construct improvements needed to offset project impacts. In such cases the ratio of project-generated trips to the anticipated total future increase in traffic is used to estimate the development project's share of the increase in traffic, which is in turn used as the share of costs for the public improvement to be allocated to the development project. The proportional share fee would be collected by the City and applied to the improvement project at such time as it goes forward.

Another avenue for mitigating project impacts incrementally is payment of a traffic impact fee. A traffic impact fee is typically based on a list of specific projects needed to maintain acceptable operation upon adding trips associated with future development, and assigning the appropriate share of the cost of each project to the fee. Typically the overall cost of the improvement program is divided among potential future development on a per-trip basis using standard trip generation rates to determine the fee for various types of developments. In the case where a traffic impact fee is in place, any project found to have a significant impact that would be addressed through future improvements that are included in the traffic impact fee program would be reduced to less-than-significant by paying the fee, which is considered their equitable share of the cost of that project (as well as others throughout the City). As previously mentioned, the City is working with the County to develop a traffic impact fee program for the Martin Slough Interceptor project to address impacts from traffic that would be enabled by the Martin Slough Interceptor Project.

Complete Streets

Policy Language

The mandates on the establishment of Complete Streets policies are already in place at the state level, and regional agencies encourage complete streets by offering incentives to communities that adopt and implement complete streets policies and programs. This guidance by the state and regional agencies has been established to encourage and guide jurisdictions, such as the City of Eureka, to incorporate Complete Streets into their General Plans and design requirements. Specifically, the Complete Streets state legislation requires any substantive revision of the circulation element of a city or county general plan to identify how all users of a jurisdiction's roadways, including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists, will be safely accommodated. During the preparation of the General Plan, new policies will need to be developed that meet both the requirements and the intent of the Complete Streets Act. In addition, Complete Street Act requirements will need to be considered during development of the land use alternatives and supporting Mobility Diagram to serve all users.

Alternative Mode Access

Missing Pedestrian/Bicycle Connections

There are numerous opportunities for improving pedestrian and bicycle access along the US 101 corridor, including adding bike lanes and/or a parallel bike path or trail; installing bulb-outs to reduce pedestrian crossing times or overpasses to provide a separated facility; providing additional protected crossings where appropriate; and "calming" traffic to promote an environment that is more conducive to pedestrians and bicyclists. The *Broadway Engineered Feasibility Study* completed by Caltrans includes the provision of bike lanes along part or all of Broadway between K-Mart and the 4th/5th Street couplet in all six of the scenarios presented in the report.

Areas where improvements are needed to create connected and attractive pedestrian facilities should be identified and programs developed to address such inadequacies. Priority can be given to providing those pieces that fill in the gaps between existing bicycle facilities as a way of ensuring adequate bicycle access and encouraging use by City residents as well as those brought in by bicycle tourism.

The traffic impact fee discussed in relation to other issues could also be considered as a potential future source of funding for pedestrian and bicycle facilities. There are limited options for increasing capacity on some of the major corridors throughout the City. It may, however, be possible to create capacity by diverting existing vehicle trips to pedestrian or bicycle trips if adequate facilities exist to make such travel more attractive.

Specific recommendations could be included in the General Plan that prioritize projects that will help the City achieve connectivity of pedestrian and bicycle facilities. The City may even wish to develop a list of projects designed to achieve the desired connectivity, with a ranking or at least a ranking system.

POLICY TO ESTABLISH PEDESTRIAN DISTRICTS

A "Pedestrian District" is typically a compact, walkable area that has intense pedestrian use with a dense mix of land uses and good transit service, where walking is intended to be the primary mode for trips within the district. In their Pedestrian Master Plan, the City of Portland identifies land uses that are appropriate in a pedestrian district, including various commercial, office and residential uses. One example of an area in Eureka that already functions as a pedestrian district is 2nd Street in Old Town. The potential for establishing pedestrian districts, such as already exists on 2nd Street in Old Town, should be investigated. The City may wish to expand this existing pedestrian district by promoting specific zoning in the area, emphasizing land use mixes that increase walkability. Additional blocks adjacent to the existing district and other sites could be



identified where emphasis is to be given to pedestrian mobility over motor vehicles. If feasible areas are identified that could become pedestrian districts, policies could be included in the general plan to identify, define, and promote such districts.

POTENTIAL FOR CYCLE TRACKS

According to the National Association of City Transportation Officials, “a cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Cycle tracks have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed, cycle tracks are located to the curb-side of the parking (in contrast to bike lanes).”

Cycle tracks can provide a reasonable alternative to a Class I path where there is insufficient right-of-way for such a path, and create connectivity within the bicycling system while also creating a space where less experienced riders can feel comfortable.

If there is interest in establishing cycle tracks, potential locations would need to be identified using existing bike planning documents and supporting policies added to the general plan. Cycle tracks and could also be further investigated during the next Regional Bike Plan update.

RAIL WITH TRAIL

There may be potential for future bike trails to be constructed along existing railroad rights-of-way, including providing a connection to the north toward Arcata. Rail with Trail projects have successfully converted unused rights-of-way to create direct connections that are easy riding due to the fairly straight, flat alignments.

Improvements to Transit Access

As currently configured, transit routes in Eureka make a loop, passing any single point only one time along their route. As a result, passengers must travel the entire circuit regardless of whether their destination is in the direction the bus is traveling or not. Eureka Transit Service is currently collecting data to help them determine if ridership could be improved by modifying their routes to retrace part or all of the same streets going in both directions.

Many existing stop locations are along roadways that are rural in nature, so they do not have sidewalks or other hardscape outside the travelway. Similarly, the park-and-ride lots do not have such facilities for transit passengers. Such locations would benefit from additional pavement, benches, and other amenities to increase rider comfort.

Potential may exist for partnering with Greyhound and Amtrak bus service to connect additional routes outside and through the City and/or increase the number of daily buses traveling through Eureka to improve regional access.

Other Modes

RAIL

The City currently has no passenger rail service. As discussed for Goods Movement, new rail connections could provide not only increased opportunities for freight, but for passenger service as well.

In its past Eureka had a system of streetcars, the rails for which still exist in some places well below the current finish grade of the roadway. While it may not be possible to resurrect the streetcar system using rail, there may be potential for providing a similar type of service using trolley buses that look like old-fashioned looking streetcars.

AIR

Existing commercial airport service is generally considered unreliable, expensive, and poses difficulties for travel in and out of the county as previously discussed. The City should work with the county to improve passenger and freight service by adding connections and making flights more frequent, and also adding additional carriers.

PORT

The City should pursue increased use of the port in order to both maintain and expand it, including accommodation of short sea shipping. Consideration could also be given to developing facilities needed to accommodate cruise ships.

5.4 RECOMMENDATIONS

Following are policy recommendations to address the issues identified above.

Congestion

- The City should continue to work with Caltrans to optimize operation of US 101 through both signal timing projects as well as construction projects, such as the closure of northbound Fairfield Street at Wabash Avenue.
- The City should work with Caltrans to implement construction of new signals at Hawthorne Street.
- A US 101 bypass should not be considered as a long-term solution to congestion in Eureka as such has been deemed infeasible.
- The City should continue to investigate options for providing capacity parallel to Broadway.
- The City should consider establishing truck routes to guide drivers to appropriate streets for such trips.
- The City should continue to pursue rail connections, improved port operations and increased air freight facilities to reduce truck traffic on US 101.
- The City should consider creating a one-way couplet on Harris and Henderson Streets.
- The City should encourage alternative modes with incentives such as on-site facilities like covered bike parking and showers by large employers, discount bus passes, etc.

System Preservation

- The City should consider joining with the County in supporting an increase in the state gas tax.
- The City should consider working with HCAOG to modify the current allocation of transportation related funding.
- The City may wish to consider a sales tax initiative to fund system preservation.
- The City should establish policies assigning priority to maintaining existing infrastructure.



Safety

- The City should establish policies supporting the program set forth in the *Transportation Safety Action Plan*.
- The City should work with Caltrans to implement improvements developed to address safety concerns along Broadway as presented in the *Broadway Engineered Feasibility Study*.

Standards of Significance

- The City should update the existing LOS policy to maintain use of intersection LOS, but also to address corridor service levels and queuing impacts.
- The City's LOS policy should include exclusions where operation is reasonably expected to be below the standard, but options for achieving acceptable operation are limited or non-existent.
- The City should establish a VMT policy in accordance with forthcoming updates to the statewide CEQA guidelines. Such a policy should provide guidance on estimating VMT and thresholds of significance in the applied VMT-based metrics.
- The City should establish an index to be used in evaluating intrusion of traffic in existing residential environments.
- The City should establish a traffic impact fee to provide a means for small projects to mitigate their cumulative impacts.
- The City should develop and formally adopt a Traffic Study Guideline standard for future development site impact analysis.

Complete Streets

- The City should establish policies supporting the goals of the California Complete Streets Act.
- General Plan circulation policies must emphasize the need to consider the needs of all users equally, including pedestrians, bicyclists, transit riders, auto drivers, movers of goods, children, the elderly, and the physically challenged.

Alternative Mode Access

- The City should establish policies that promote pedestrian and bicycle access, and support the provision of facilities to improve connectivity and safety for bicyclists and pedestrians, especially along or parallel to US 101.
- Policies should be established that elevate the need for enhanced pedestrian, bicyclist, and transit facilities and help to make these modes viable and attractive options for travel within Eureka.
- The City should include pedestrian and bicycle facilities in their traffic impact fee.
- The City should consider establishing "Pedestrian Districts" wherein vehicular needs would be subordinate.
- The City may wish to consider establishing plan-lines for cycle tracks.
- The City should support efforts for a Rail with Trail project providing a bicycle connection to Arcata.
- The City should support Eureka Transit's efforts to increase the efficiency of transit operations from a rider's perspective, including reductions in the time required for a rider to travel between origins and

destinations. The City should coordinate with Eureka Transit in identifying appropriate locations for bus pullouts to improve accessibility and improve operation.

- The City should consider prioritizing the construction of sidewalks or hardscapes near unimproved bus stops and park-and-ride lots in order to increase pedestrian connectivity to transit, as well as amenities such as benches and shelters to improve the attractiveness and comfort of using transit.
- The City should support efforts to improve transit accessibility, including coordinating with Amtrak service to enhance regional access.
- The City should investigate the potential for implementing streetcar service.
- The City should work towards enhancing passenger access via rail, air and sea.