

TRANSPORTATION



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TRANSPORTATION

The Transportation Element outlines current conditions of the street network in Eureka and policies for the safe and efficient movement of people and goods throughout the City. Transportation policies significantly impact effective land use and transportation planning, and should be considered with policies found in other elements of this general plan.

The Transportation Element is designed to accommodate current needs and the future growth of Eureka. Transportation needs must consider both local population growth and economic growth rates in addition to increased regional transportation needs. Demographic analysis shows a projected population growth of approximately one percent per year

for the next ten years. In addition, massive population growth in Utah County, Tooele County, and Juab County will put increased pressures on US Highway 6, the major regional arterial and Main Street through Eureka. Any economic development should be closely aligned with transportation plans to accommodate anticipated growth in traffic volumes along the City's roads.

The City should follow the transportation guidelines found in Appendix A to ensure that plans and capital improvement programs accurately reflect the needs of residents.



Road in Eureka

7.1 Introduction

In order to meet the mobility needs of current and future residents, employees, and visitors, Eureka City will need to maintain, improve, and expand the existing transportation system. Movement within the City needs to be a workable

balance between the movement of people and goods with automobiles, OHVs/ATVs, pedestrian facilities, bicycles, and other non-motorized means while being sensitive to the existing infrastructure and natural environment.

All future expansions should be planned to be within the fiscal capacity of the City to both build and maintain transportation infrastructure. New transportation facilities should have a vision for the future by having sustainable designs that also provide maximum durability while minimizing maintenance costs. These expansions should also maintain enough flexibility to evolve as the city's needs and technology change. The location and design of any new facility should be integrated into the surrounding neighborhood and larger community while protecting the character of the City.

7.2 Community Input

The goals and strategies in this section were a direct result of input from the local citizens of Eureka as well as City officials. Such involvement was crucial in order to fully understand the current conditions of recreation facilities and opportunities. During two public meetings, maps of the city were laid out and citizens were given the opportunity to highlight areas and topics of concern and to also point out improvements that could be made. These comments helped to direct the planning staff in determining what key opportunities should be focused on in this section.

Based on information gathered from both surveys and citizen involvement meetings, many citizens believe that transportation related topics are important to the overall improvement of Eureka. Some of the key improvement items that were brought forth from the survey include sidewalk improvements, designated ATV lanes, and on-street parking restrictions. Additional residential priorities include the maintenance of existing roadways, installation of proper water runoff facilities, and repairing existing roads.

2017 Survey Results Improvement Ideas

sidewalk modifications

designated ATV lanes

on-street parking restrictions

maintenance of roadways

water runoff facilities

repairing roadways





7.3 New Transportation Facility Review Criteria

As new transportation facilities are planned or constructed within Eureka, they should be reviewed for compatibility with the following key criteria. In addition to addressing these issues, all new transportation facilities must satisfy the requirements found in all relevant laws and standards of City and State code.

7.3.1 Compatibility with Built Form

The transportation system of Eureka is strongly affected by the existing land use, street pattern, and environment. Likewise, the future development pattern of the City is strongly affected by the development of the transportation system. As plans for transportation facilities are developed, efforts should be made to ensure that the facility and the desired future land use pattern are mutually supportive. The facility should reflect the desired future development pattern in scale, function, and intensity.

Appropriate transportation facilities should service development patterns. Retail and commercial areas should be

convenient not only for automobiles, but also for bicyclists and pedestrians by including designs for ample off-street parking and safe unloading zones. Transportation facilities should seek to accommodate local transportation priorities and needs, such as OHV and ATV access to regional OHV/ATV trail systems and neighborhoods. Residential areas should have facilities designed with safety, rather than cost or volume, as the key concern. In addition to accommodating automobiles, parks, and other recreational areas should be well served by trails for non-motorized modes of transportation.

7.3.2 Integration into Neighborhoods

New transportation facilities should be designed to improve mobility and circulation in neighborhoods. Smooth transitions, functional intersections, and safety should be given special consideration. All facilities should be completed with desired development patterns in mind so they can adequately handle the increased demand when additional developments are approved. A grid pattern should also be considered with the approval of these new developments in order to improve connectivity.

7.3.3 Protection of Natural Environment

While construction of any transportation facility will inevitably impact the surrounding natural environment, Eureka City seeks to minimize these impacts. Noise and air pollution, cuts and fills, runoff oils, and other pollutants are all concerns related to the protection of the natural environment.

The City can reduce the impacts of noise pollution by planning for appropriate speed limits, noise barricades and barriers, vegetation and berms, enforcement of local, state, and federal vehicular noise reduction methods, and appropriate facilities in heavy traffic areas for large trucks.

The preservation of air quality within and around Eureka was a major priority identified by residents. Enforcement of local, state, and federal air quality standards, including reducing vehicular trips and promoting non-motorized means of travel will aid in the reduction of air pollution.

Cuts and fills should be minimized as much as possible without jeopardizing the safety of the facility. All cuts and fills should be properly repaired through the use of vegetation, retaining walls, decorative riprap, or other appropriate methods in accordance with the City standards and specifications.

Drainage facilities—which serve to filter out oils and other pollutants prior to their deposit into any watercourse, ditch, or canal—should be designed on all new transportation facilities. Sumps, grease traps, and other means of cleaning runoff pollutants should be included in all projects.

7.3.4 Safety

Transportation facilities should enhance safety in the community; new projects and maintenance on existing facilities should be completed with safety and simplicity in mind. The transportation system should provide each neighborhood with adequate access to police, fire, and medical services. It should also be designed so that visitors and other users unfamiliar with the City can easily find their desired locations.

All new and existing facilities should be properly maintained to minimize the possibility of accidents and injuries. Pedestrian facilities should have sufficient lighting so as to reduce the possibility of personal crimes or injury. Proper signage should be placed throughout the community to control traffic and guide users.

7.3.5 Planning and Priority of Facilities

All major construction and maintenance of transportation facilities should be included in a Capital Facilities Program of Eureka and planned to increase the effectiveness of each transportation dollar. This chapter of the General Plan, including the attached maps, should be regularly updated to reflect current development patterns, changes in transportation needs, and projected funding levels. If the City is required to prioritize transportation facility projects, the criteria should include safety, number of citizens that will receive benefits, and linkages between facilities.

7.3.6 Maintenance Responsibilities

The portion of US-6 in Eureka, known as Main Street, is under the jurisdiction of the State of Utah. The City should collaborate with the Utah Department of Transportation (UDOT) for the ongoing maintenance of this facility. All other roads and paths within the city fall under the ownership and responsibility of the City of Eureka.

7.3.7 Transportation Corridors and Circulation

Important to the success of the transportation system is the need for an effective and complete hierarchy of roadways. This hierarchy includes transportation corridors and nodes which reflect access management strategies and alternatives to corridor access. As expansion happens in and around the

City of Eureka the roads should be updated and constructed in a manner that matches the hierarchical system outlined in Section 7.4.

7.4 Roadway Classification

Each road, street, and non-motorized facility in Eureka City has been classified according to its intended use and capacity. Each of the following classifications represent a different type of roadway, street, or nonmotorized facility and include a short description of typical characteristics. The classifications represent a local definition and description and are not intended to reflect any county, state, or federal definitions, but rather to provide an effective method for designing a transportation system. Developments should indicate all transportation facilities on final plats and assign each facility a proper classification for review purposes.

The hierarchy of facility classification is designed for safety purposes, allowing for the separation of vehicles that are traveling through the City from vehicles that will stop at a destination within the City. As a facility increases in its mobility, or ability to move vehicles, it decreases in access, or the ability for vehicles to access areas of the City. The hierarchy shown in Figure 7.1 is provided as a reference, but not all classifications currently apply to Eureka City roadways. Map 7.1 on page 58 shows the roads in Eureka and the functional classifications to which they are currently assigned.

Roadway classifications, as identified by the Transportation Research Board (TRB) and the Institute of Transportation Engineers (ITE), are described below. The following roadway classifications are what currently exist in Eureka City.

Principal Arterial. Intended to accommodate large amounts of intercity traffic (e.g. residents of Goshen passing through Eureka) while also servicing local residents. Accordingly, principal arterials are designed to limit access and maximize mobility. Commercial projects along principal arterials

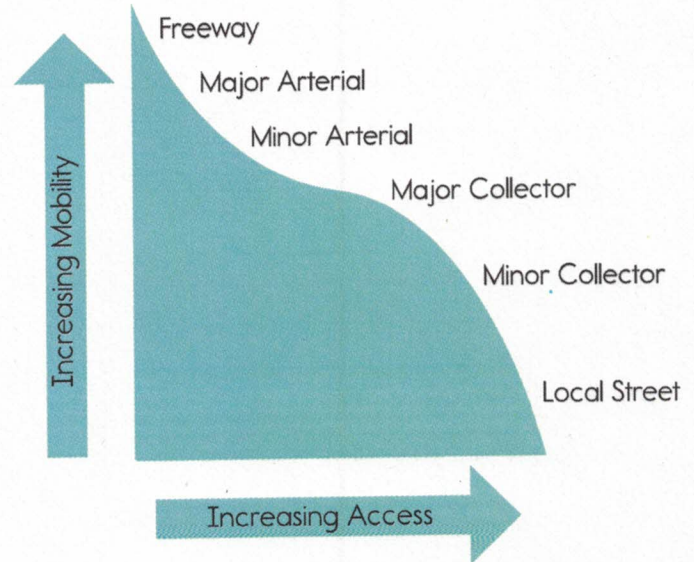


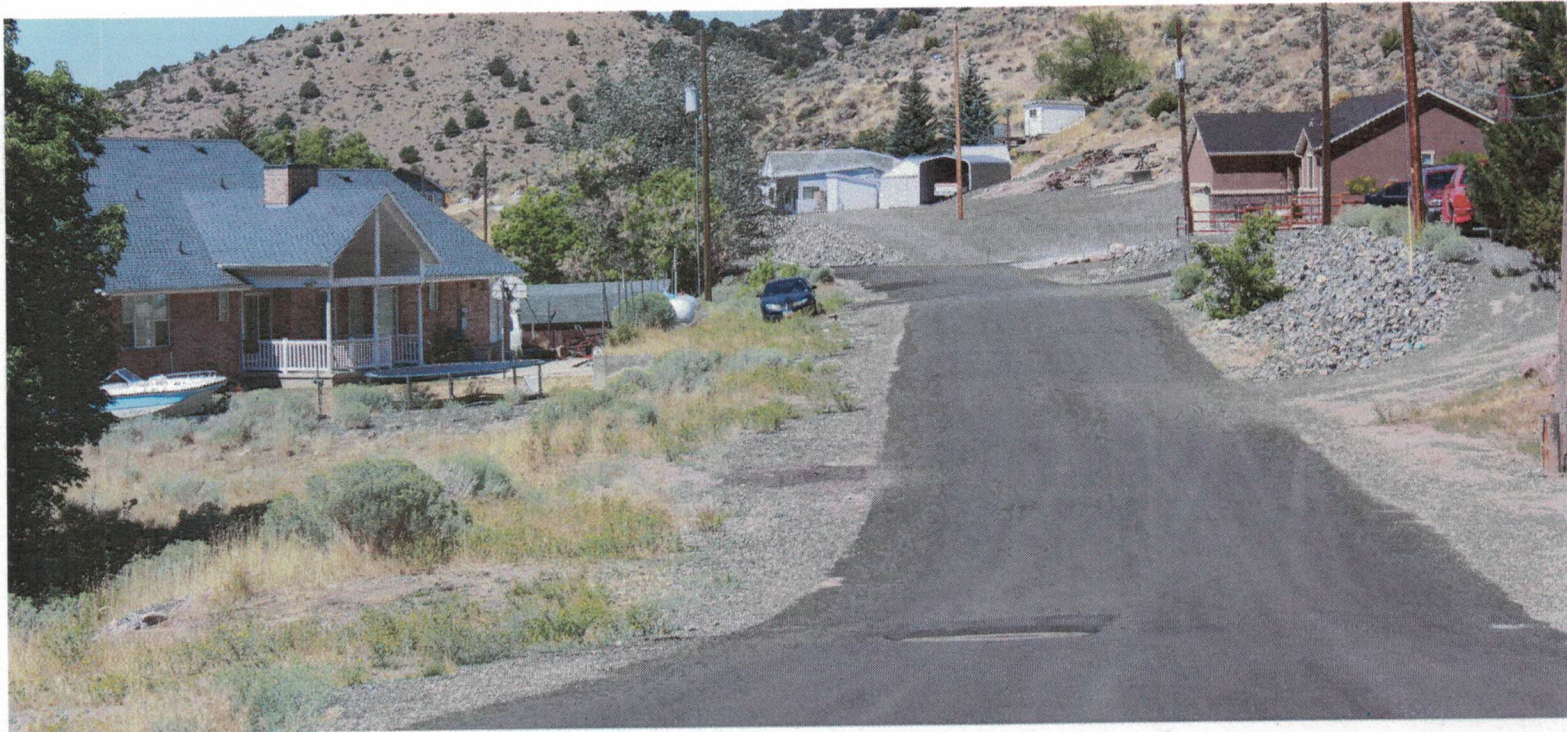
Figure 7.1 Functional Hierarchy of Roads

should be planned with safety in mind; loading and unloading areas should not take place directly on the arterial road. Because these facilities are designed for traffic with higher speeds, pedestrian facilities should be separated from the traffic flow through the use of planter strips, detached sidewalks, and landscaping. Currently, US-6, otherwise known as Main Street, is the sole principal arterial in Eureka.

Local Collectors. Typically serve the transportation needs of residents in a particular area of the City, such as a neighborhood. A local collector is the backbone of the local street pattern. Although local collectors are meant to service mainly residential developments, they also provide transportation to complementary uses such as parks, churches, and schools. Access is not limited on local collectors, but traffic flow and safety are important considerations.

7.4.1 Trail or Path - Motorized

A motorized trail or path is a facility designed for motorized vehicles other than typical automobiles and trucks, such as ATVs. Usually recreational in nature, these trails or paths will vary in size and materials. Because these facilities are intended



for motorized vehicles, their location in relation to residential and recreational uses should be considered. It may be appropriate for the City to establish ATV and/or snowmobile routes on some existing roadways where there are higher volumes of such vehicles. These routes could be established near and around public park facilities, especially if they are in close proximity to existing environmental trails.

Eureka City is relatively unique in that its residents use these types of motorized vehicles for more than recreation (i.e. intra-community travel). An Eureka city ordinance was passed recently that allows ATVs to legally use local roads for travel. Special consideration should be given to this type of use when reviewing future transportation facility improvements.

7.4.2 Trail or Path - Non-motorized

A non-motorized trail or path is a facility designed for use by pedestrians, bicyclists, horses, and other non-motorized

modes of transportation. Usually these facilities are a part of a citywide non-motorized transportation system. The system is designed to provide non-motorized access to all areas of the community and linkages to local, regional, state, and national non-motorized facilities. Each facility may be different and should be incorporated into all new subdivision designs. For more information about the current conditions and trail development, please see the Recreation and Trails section.

7.5 Current Roadway Conditions

Each roadway, street, and non-motorized transportation facility functions as a part of a larger network designed to create a logical and safe pattern for moving people and goods through Eureka City. Each segment, or facility, in the network is highly dependent on many other segments. For this reason, it is important to review each development proposal and facility proposal from a larger point of view. As each

new facility is planned or constructed, the City should consider how the facility will affect the transportation system as a whole. If the proposed facility will have a negative impact on the system as a whole, the applicant should be required to address the impact by upgrading existing facilities to meet new demand. One of the best ways to complete this is to hire an engineering firm to complete a traffic impact study of the proposed new facility.

7.5.1 Existing Roadway and Street Pavement Conditions

All paved roads throughout the City of Eureka are constructed with asphalt paving material. Pavement condition was rated using the State of New York's rating system to determine road quality. The rating system has been adapted for the sake of simplicity and clarity into three categories: Good, Fair, and Functionally Outmoded. Map 7.2 on page 59 shows the existing condition of roadways in Eureka based on these categories.

Good. Smooth and has no untreated damage which would allow water to seep into and damage the roadway. This may include minor faulting or small longitudinal cracks that have been sealed to keep it watertight. This may also include a complete sealer coat. Patch repairs are acceptable if they do not affect the smoothness for passengers traveling along the road.

Fair. May have some wear or damaged sections, but it is not imperative that it be repaired immediately. Roads labeled as fair are not a priority in improvement but may need some improvement in the years that follow.

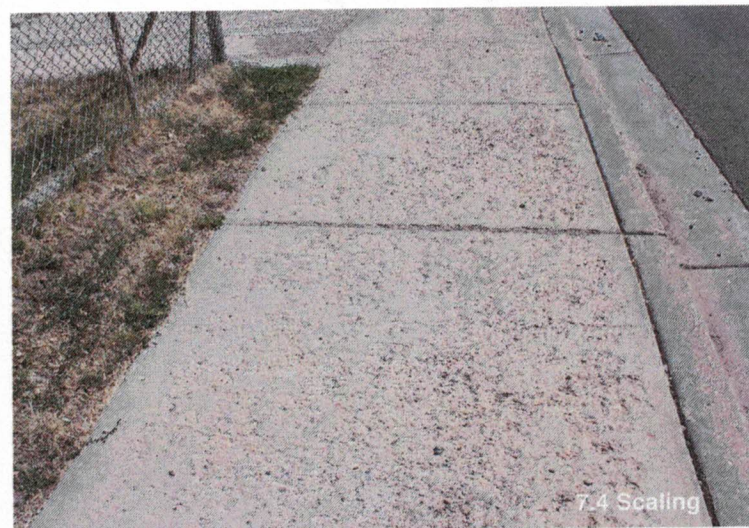
Functionally Outmoded. Roadway/walkway is damaged with faulting, longitudinal cracks (see Figure 7.2), alligator cracking (see Figure 7.3), or scaling (See Figure 7.4). Alternatively, the roadway has not been sealed or is damaged to a point where the surface cannot be repaired without substantial resurfacing. Substantial patching or damages create an uncomfortable experience for passengers travel-



7.2 Longitudinal Cracks



7.3 Alligator Cracking

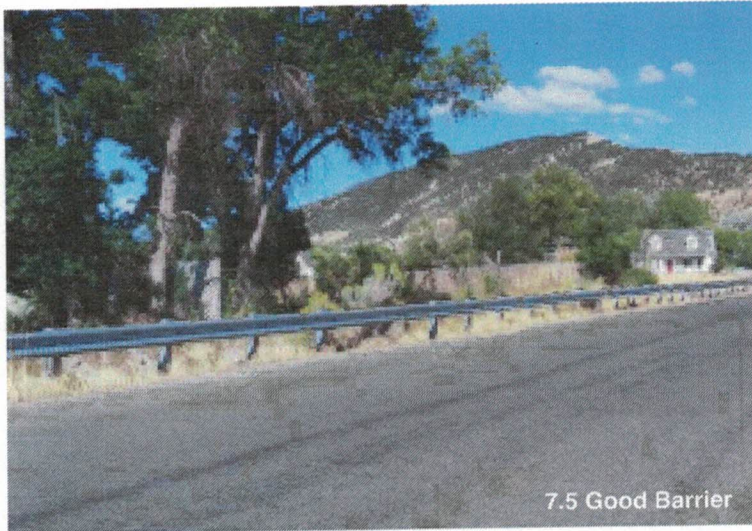


7.4 Scaling

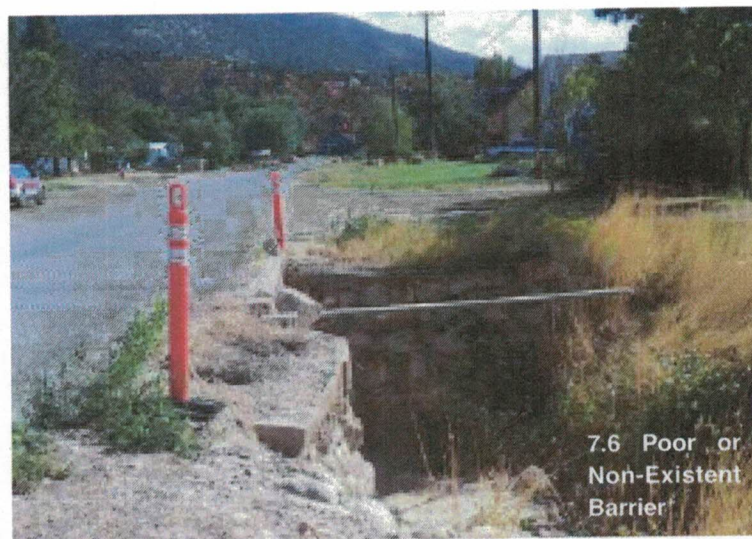
ing along the roadway.

7.5.2 Existing Roadway Barrier Conditions

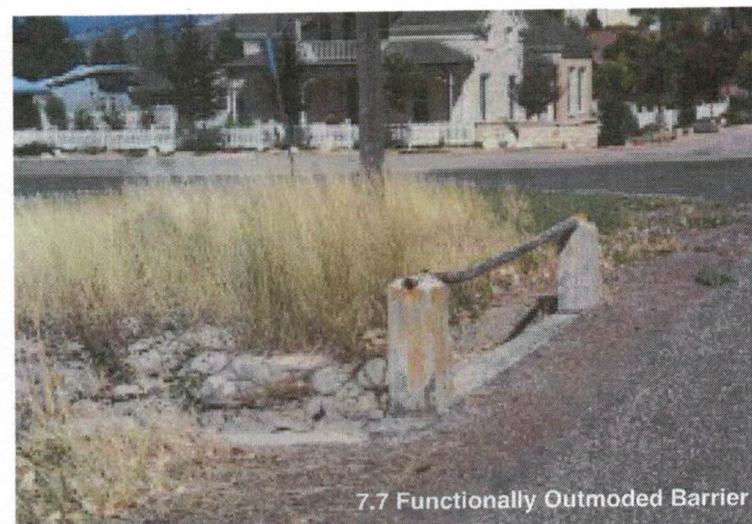
Along with maintaining the condition of the road pavement, ensuring that proper signs and protective barriers are appropriately installed and maintained is important to the safety of motorists and pedestrians throughout Eureka. Barriers are described as good (Figure 7.5), poor or non-existent (Figure 7.6), or functionally outmoded (Figure 7.7). A good barrier succeeds in safely separating vehicles from the edge of a steep hill or mountain. A poor or nonexistent barrier (1) has deteriorated over time and may not provide a safe barrier for vehicles or (2) was never constructed where it was needed. A functionally outmoded barrier was constructed to prior standards but is now insufficient to provide protection for vehicles. Due to the lack of roadway barriers in the City of Eureka, a map was created to present areas of Eureka that could potentially have barriers installed. Map 7.3 on page 60 shows the potential locations for roadway barrier installation.



7.5 Good Barrier



7.6 Poor or Non-Existent Barrier



7.7 Functionally Outmoded Barrier

7.6 Non-motorized Transportation

Equally important to motorized transportation facilities are the non-motorized transportation systems of the city, including sidewalks, trails, and paths. The non-motorized transportation system should not only allow for access to all major retail and recreational facilities in the City, but also provide linkages to regional and state non-motorized transportation systems.

7.6.1 Pedestrian Facilities

All new developments should address pedestrian needs. The pedestrian facilities in each development should be installed by the developer in a manner agreeable to the Planning Commission and City Council, and compatible with the



Figure 7.9 Example of a “school zone” sign



surrounding pedestrian system. Safety of pedestrians should always be the primary concern of the City in approving pedestrian facilities in a new development. Map 7.4 on page 61 shows the existing sidewalks in the City of Eureka. Map 7.5 on page 62 shows the existing locations of curbs and gutters in the City of Eureka.

7.6.2 Bicycle Lanes

While bicycles are allowed to travel along roads, it is safer for both vehicles and bicyclists if a dedicated travel lane is designated for bicycles. This is a priority along roads where there are higher volumes of bicycle and vehicular travel. Discussions with the public as to which roads should include a bicycle lane will help in installing them at the proper locations.

7.6.3 Safe Routes to School

There are two schools within the City that belong to the Tintic School District. Many students within the community walk to school. Due to the lack of sidewalk systems through-

out the City, many of these students have to walk on the sides of the road. This increases the potential for traffic accidents and potentially fatalities. These risks can be reduced by following the recommendations detailed below.

Existing and future schools should build and sustain a Safe Routes to School (SRTS) program. Established by the National Center for Safe Routes to School, this program is designed to improve and maintain walking and biking conditions for children traveling to school. A working SRTS program enables schools to apply for UDOT funding, which comes through SRTS and the Student Neighborhood Access Program (SNAP). The City could sponsor the school and pay the 6.77% local match to receive the remaining funding from UDOT for the construction of safe routes to school for children. However, applying for funding is limited to construction, not maintenance, of safe walkways.

7.6.4 Crosswalks

Crosswalks provide pedestrians with safe places to cross the street, where they are visible to approaching vehicles. An example of existing crosswalks is shown in Figure 7.8. Through

the SRTS program, other high pedestrian areas should be analyzed as potential locations for future crosswalks. A tool available to Eureka is a flashing speed-reduction “school zone” sign (see Figure 7.9). This sign would allow a crossing guard to activate flashing yellow lights during times when children are crossing the street. The lights alert drivers to slow down within the school zone near the crosswalk. Eureka could install these signs on Center Street, C Street, Leadville Row, or Main Street, but would need approval from UDOT to install a sign on Main Street since it is part of a state highway.

7.7 Alternative Modes of Transportation

Designing and planning for transportation goes beyond passenger cars and trucks and includes alternate modes of transportation. This may include buses, taxis, shuttles, or other options available to those in the City who do not own a vehicle, cannot drive, or choose not to drive. As the City of Eureka grows in the future, alternate modes of transportation should be considered in order to alleviate traffic on the exist-

ing roadways as well as provide transportation to those who do not own a vehicle, cannot drive, or choose not to drive.

7.8 Right-of-way Protection & Acquisition

Eureka City is a growing community with undeveloped land on all sides. As the community continues to expand in population and size, new transportation facilities will need to be constructed in order to maintain an efficient motorized and nonmotorized transportation system. Once a development, or a structure (e.g. a house or fence), is approved and erected, it can negatively affect the transportation system. This causes a need for the transportation system to be adjusted. Development approval without considering long-term effects can prove costly to the City. The Transportation Chapter and its attached maps should be reviewed prior to any development approval, including the issuance of a building permit. The transportation maps found at the end of this chapter identify existing transportation corridors and determine the functional class of each facility, as well as other relevant facilities

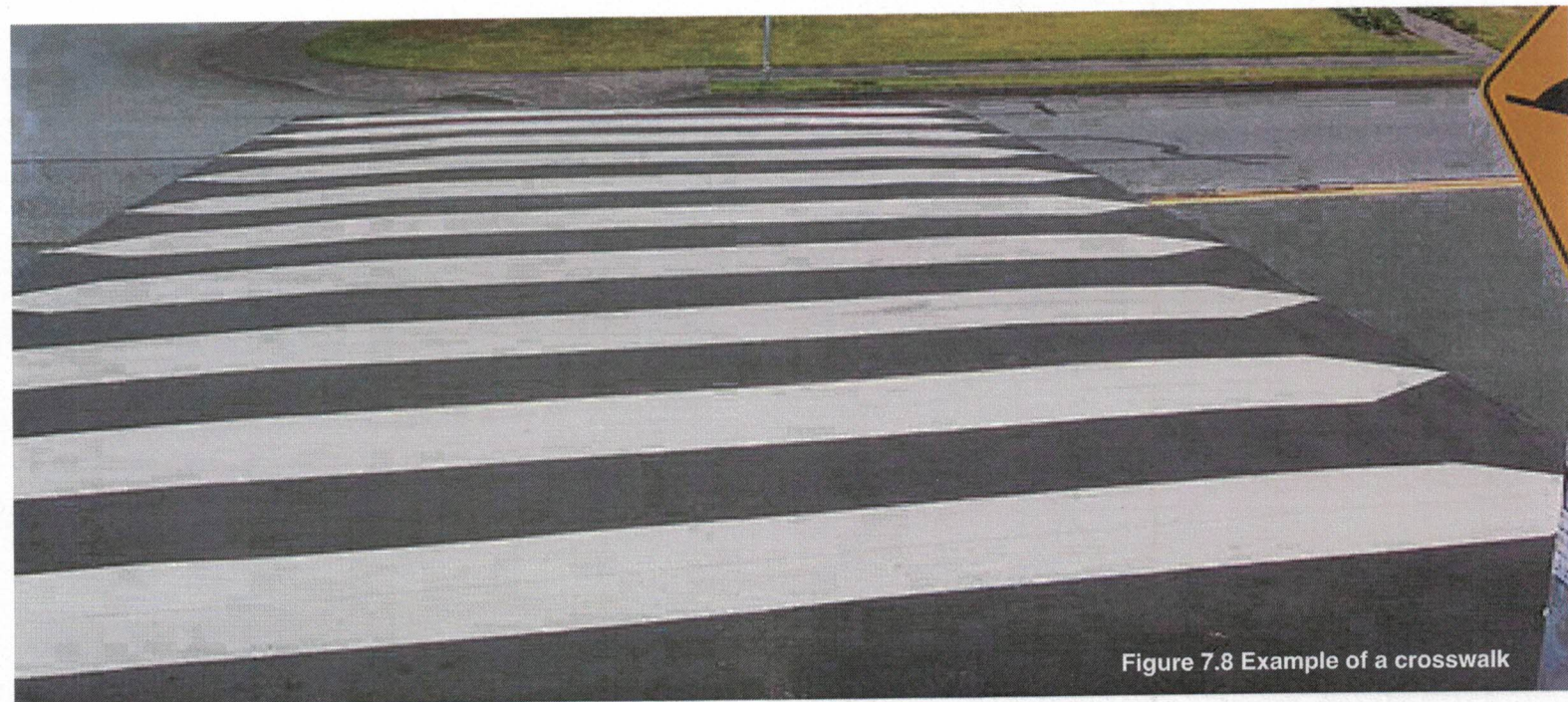


Figure 7.8 Example of a crosswalk

Table 7.1 Levels of service for each function class of each transportation facility

LOS	Traffic Flow	Service Description
A	Free Flow	Posted speeds attainable with very little or no interference between vehicles.
B	Stable Flow	Posted speeds attainable with minor amounts of delay and interference. Smooth traffic flow.
C	Less-Stable Flow	Posted speeds attainable with periods of delay during peak hours. Congested flow during peak periods of traffic.
D	Approaching Unstable Flow	Posted speeds not attainable during peak periods of traffic. Significant congestion during peak periods of traffic.
E	Unstable Flow	Posted speeds not attainable during peak periods of traffic. Intersection failure and heavy congestion in peak periods.
F	Forced Flow	Heavy congestion even during non-peak periods of traffic. Intersection failure most of the time.

Facility Functional Class	Adopted Acceptable Levels of Service
Local Street	Level of Service A and B
Local Collector	Level of Service A through C
Minor Arterial	Level of Service A through C
Principal Arterial	Level of Service A through D

Table 7.2 Potential levels of service for each transportation functional class defined by UDOT

and conditions. With maps and other relevant information, the City can effectively plan for the preservation or acquisition of critical transportation corridors. Once corridors have been identified, the City can use a number of methods for the future financing and construction of facilities including impact fees, capital improvements programming, and co-operation with other appropriate government entities such as the Utah Department of Transportation (UDOT), Utah County, and Juab County.

7.9 Levels of Service

When a roadway reaches its intended capacity, the facility either needs to be expanded or a new facility needs to be constructed. In order to determine when roadways have reached capacity, a level of service for the functional class of each facility in the community can be used. Table 7.1 describes these levels of service. Table 7.2 represents potential levels

of service for each transportation functional class defined by UDOT. When upgrading a roadway facility, the City should design the road to be able to accommodate anticipated future growth. In the instance that a facility performs more poorly than the adopted level of service, a detailed analysis should be completed to determine a proper solution. In some cases, modifying the road cross section or intersection layout may be necessary (e.g. adding additional travel lanes). In other instances the addition of a left- or right-turn lane, re-striping, or other design features may adequately bring the facility back into compliance with the adopted level of service. When a facility owned and maintained by another entity (i.e. UDOT) fails to meet the adopted level of service, Eureka City should contact the appropriate entity in order to explain why the facility fails to meet the adopted standard and the negative impact it will have on the transportation system.

Goals & Strategies:

Provide safe, well maintained streets throughout the City

Improve the overall design, appearance, and safety of roadways within the community.

Mayor, City Council, Planning Commission

Ensure all roadways in the City have been designed with an appropriate crown to allow for proper water drainage and that the drainage facilities are in adequate condition.

Mayor, City Council, Planning Commission

Where proper drainage facilities do not exist (ie. sidewalk, curb and gutter), install properly designed facilities to accommodate the flow of water expected throughout the year due to both rain and snowmelt.

Mayor, City Council, Planning Commission

Improve the walkability of the City by installing sidewalks as roadway improvement projects are made.

Mayor, City Council, Planning Commission

Ensure adequate free flow of traffic is provided in developing areas both during and after construction.

Mayor, City Council, Planning Commission

Ensure proper engineering inspection of transportation facilities both during and after construction of new facilities.

Mayor, City Council, Planning Commission

Ensure transportation facilities are designed and developed in harmony with the natural environment and adjacent land uses.

Mayor, City Council, Planning Commission

Provide safe, well maintained streets throughout the City

Ensure all roadways are properly maintained and inspected regularly in order to extend the service life and quality of the roadway.

Mayor, City Council, Planning Commission

Require private developments/developers to assist in funding street system improvements through traffic impact fee assessments, dedication of land, and construction of new transportation facilities.

Mayor, City Council, Planning Commission

Inventory and maintain safe guardrails and roadway barriers throughout the city.

Mayor, City Council, Planning Commission

During roadway improvement projects, ensure roadway shoulders are rebuilt and maintained.

Mayor, City Council, Planning Commission

Install street lighting as needed to improve aesthetics and public safety throughout the City.

Mayor, City Council, Planning Commission

Ensure street lighting matches intensity and frequency needed by the surrounding land uses.

Mayor, City Council, Planning Commission

Ensure all transportation facilities are regularly inspected and maintained.

Mayor, City Council, Planning Commission

Improve the design of Main Street to incorporate new lighting, signage, and striping.

Mayor, City Council, Planning Commission

Maintain and regularly repaint the school zone crosswalks and other pedestrian facilities.

Mayor, City Council, Planning Commission