

## 4 CIRCULATION ELEMENT

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### 4.1 Introduction

The Circulation Element is authorized in Government Code Section 65302(b) that states that the General Plan is required to include:

*“A Circulation Element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the Land Use Element of the plan.”*

The statute specifically identifies public utilities and facilities as components of the Circulation Element, but permits jurisdictions to organize elements in a manner appropriate to the community. The Manteca General Plan addresses the public infrastructure, including sewer, water, energy and utilities, in the Public Facilities and Infrastructure Element.

The Circulation Element addresses all aspects of transportation including commuter and truck traffic, intra-city vehicle traffic, rail, buses, bicycles, and pedestrians. Circulation master planning typically focuses on automobiles and truck traffic by ensuring that the road system will be adequate to accommodate future traffic demands. Automobile and truck traffic will continue to be the dominant modes of transportation in the time horizon for this General Plan, but the future is not necessarily a simple continuation of past trends. Several factors suggest that the conventional use of automobiles will change in significant ways within the time frame of this plan. While these factors cannot be predicted with assurance, the General Plan should account for them and provide a circulation system that is flexible and can provide for a transition to alternative transportation demands.

### 4.2 Key Assumptions

The following assumptions guide the goals and policies of this Circulation Element.

- People will continue to demand the freedom of travel and mobility afforded by the private automobile. Therefore, any transportation system must match this autonomy.
- A significant percentage of the aging population will grow less capable of driving automobiles, but will demand the same level of independence in their daily lives.
- An aging population will result in a higher percentage of retired persons who have flexible schedules and will tend to travel more during off-peak hours.
- The actual cost of operating automobiles will continue to rise and become a significantly higher percentage of household expenditures. Higher costs for fuel, insurance, and maintenance may make it uneconomic to travel to jobs outside the area.
- An efficient circulation system will also help to reduce the expenditure of public funds for new construction through design that reduces the length and width of roads.
- The technology of individual vehicles will improve fuel mileage, safety, and durability of vehicles.
- Vehicular traffic is a primary source of air pollution precursors throughout the Central Valley. Measures designed to minimize reliance on internal combustion powered automobiles will reduce the potential for air pollution increases in the community.
- Home occupations and telecommuting will increase. The precise amount cannot be accurately projected; however, Manteca is an ideal location for such employment practices. A highly skilled work force commuting daily long distances provide a fertile setting for work sharing, telecommuting and home occupations.
- The Internet, satellite global positioning and other communication technologies could affect shopping and shipping of goods. This may significantly alter the physical character of retail centers in the community, and the traffic associated with them.

- A significant percentage of Manteca residents will continue to commute out of the community to work, but local employment opportunities will increase with a resulting increase in home-to-work commuting within the city and surrounding area.
- Personal safety, on the road and in public places, will become increasingly important to the general public. This will result in higher demands for safe street design for all kinds of vehicles including buses, trucks, and personal automobiles as well as pedestrians and cyclists. The railroad is an inherent safety concern because of the several at-grade street crossings and the potential for bicycle or pedestrian versus train accidents.

It is important to realize that there does not need to be a major shift in any of these factors to affect circulation needs. The circulation plan must be flexible enough to provide for a conventional circulation system but also accommodate new technologies or practices that do not exist now, but could be common within the time frame of this General Plan.

#### **4.3 Relationship to Other General Plan Elements**

Circulation and land use are closely linked elements that provide the framework for much of the General Plan. The policies and strategies should demonstrate a balance between land uses and the transportation facilities that serve them. The location and intensity of land uses determines the need for circulation system components and, in turn, the capacity of the circulation system often determines the location and feasibility of land use. Within the context of the General Plan, the circulation policies are also interwoven with economic, housing, open space, air quality, noise, and safety policies.

Coordination between the Land Use Element and the Circulation Element:

- encourages walking and bicycle trips by promoting a compact urban form with neighborhood destinations close to residents;
- makes public transit feasible through coordination of the intensity and location of land uses; and

- reduces the length and number of vehicle trips outside of the community by promoting mixed-use development and by providing employment centers, shopping, and services within the city.

#### **4.4 Relationship to Regional Transportation**

This Circulation Element is intended to be compatible with the Regional Transportation Plan, San Joaquin County, 2001 and to support local transportation linkages to the regional transportation network. These linkages include the Altamont Commuter Express (ACE) train and the regional bus systems as well as future opportunities for rail and bus transportation.

#### **4.5 Time Horizon for the Circulation element**

Perhaps more than other elements in the General Plan, the Circulation Element must take a very long-term view. Physical infrastructure, such as the road system, establishes a framework that is very difficult to alter. Land uses may change and buildings may be torn down and reconstructed, but the route of the public streets and utility corridors are typically fixed in place over time. Therefore, the circulation system components must be carefully considered for their long-term impacts on land use and community form. Moreover, many major infrastructure components, such as a major new road, are relatively expensive and must be planned long in advance in order to obtain sufficient funding. For these reasons, the Circulation Element, particularly that portion addressing major infrastructure improvements, must look beyond the twenty-year horizon typical of other elements in the General Plan.

#### **4.6 Circulation Goals**

The goals for the circulation system reflect the broader goals of this General Plan. These include improvement of the existing community, economic development, expanded tourism, aesthetic quality in the built environment, public and personal safety, and environmental protection.

**Goal C-1.** Provide for a circulation system that allows for the efficient movement of people, goods, and services within and through

Manteca, based on land use and current improvement standards in conformance with the Public Facilities Implementation Plan.

- Goal C-2.** Maintain a safe vehicular circulation system.
- Goal C-3.** Expand transportation alternatives within the City, including public transit, walking, and bicycling.
- Goal C-4.** Minimize traffic accidents and hazards.
- Goal C-5.** Ensure the adequate provision of both on-street and off-street parking.
- Goal C-6.** Provide a safe and secure bicycle route system.
- Goal C-7.** Maintain coordinated, efficient bus service that provides an effective alternative to private automobile use.
- Goal C-8.** Provide for safe and convenient pedestrian circulation.

#### **4.7 Circulation System Components**

The circulation system is composed of separate elements: the streets, bikeways, and pedestrian ways, the railroads and the public transit routes. Each of these operates independently, and serves a variety of needs. Typically, there is little overlap in the operation of these elements and little opportunity to link one or more elements together in a single trip. Underlying all other goals and policies expressed in this Circulation Element is the need to make efficient use of all circulation elements. The objective is to maximize the cost efficiency of public infrastructure and, by expanding the alternatives to use of single occupant vehicles, to reduce the volume of automobile trips.

#### **4.8 Street Network and Classification**

The street system in Manteca consists of three general classes of streets:

- larger collector and arterial streets;

- small collector streets that link the residential streets to the larger streets; and
- local, small scale streets that serve the residential neighborhoods.

Each classification of city street is designed to standards appropriate to the conditions and intended use. In general, the standards use the minimum level of street cross-section needed for traffic safety and emergency access and evacuation.

Beyond fundamental traffic safety concerns, street design should emphasize ease of maintenance, simplicity of construction, visual character, and pedestrian access.

The Circulation Element does not establish street standards that specify the widths of overall pavement, travel lanes, medians or corridors. Such standards may be adjusted over time to accommodate different needs and new conditions, and are therefore adopted as separate improvement standards. The Circulation Element establishes the general parameters and intent for each street classification.

### **Arterial Streets**

Manteca is built on a grid of arterial and collector streets typically spaced at intervals of 1 mile. This grid forms the backbone of the local street system and defines the boundaries of many residential neighborhoods. Arterial streets are designed to serve through traffic and major local traffic generators such as high intensity housing, commercial and institutional uses. Arterial streets shall not be routed through residential neighborhoods.

Arterial streets are typically six-lanes or four-lanes and are intended to interconnect with other arterials and distribute travel to smaller geographic areas. The streets shall have an aesthetic character expressed in curbside landscape corridors and median islands, where appropriate. The arterial streets shall provide pedestrian and bike corridors where space is available. All new arterial streets shall be designed to accommodate both bike and pedestrian facilities on both sides of the street while balancing concerns regarding traffic volumes, operations, and the safety of drivers, bicyclists, and pedestrians. Arterial streets shall also be designed to accommodate public transit routes by providing adequate lane widths and corner radii for safe operation of buses. The City of Manteca has existing cross-sections, developed

during the 1993 PFIP. Typical elements incorporated into the existing cross-sections include:

- 12 to 14 foot median
- 12 foot interior travel lane
- 14 foot outside travel lane
- 10 foot outside curb area (landscape buffer and sidewalk)

The 14 foot outside travel lane could be replaced with a 12 foot travel lane and a 5 foot bicycle lane where appropriate.

### **Collector Streets**

Collector streets supplement and provide access to arterial streets and provide access to neighborhoods. Collector streets will typically provide two travel lanes, a Class II bike path and pedestrian path on both sides. Median islands and turn lanes may be appropriate in certain conditions.

### **Minor Collector Streets**

Minor collector streets serve as the backbone circulation route within larger neighborhoods and as the link to larger collector streets. The minor collector street should be local, small scale streets that serve the residential neighborhoods but must be sufficiently wide to carry local traffic at relatively slow speeds (25 m.p.h. or less). The street should allow for on-street parking and a public sidewalk.

### **Residential Streets**

Narrow streets will tend to slow traffic, and may indirectly discourage vehicle use. Where combined with a convenient and safe pedestrian route, narrow streets will encourage residents to walk rather than drive.

### **Neighborhood Vehicles on Public Streets**

Light-weight, two or four-passenger vehicles designed for short range (6 miles) trips could provide a viable alternative to conventional automobiles for certain types of trips within the city. Such trips may include the in-town commute to catch the ACE train, or meet a carpool, trips to the park, or post office, or any other trips that involve short distances on local streets. Most major auto manufacturers now sell these “NEVs” (neighborhood electric vehicles) or “neighborhood vehicles” and State law recognizes them as a special class of vehicle that can legally travel on local streets.

The suitability of such vehicles for regular use depends on the local street system. The development of new residential areas in the City can provide access for these vehicles with the design of safe, direct routes to local destinations, such as schools, parks and neighborhood shopping centers.

## **4.9 Traffic Calming**

Traffic speed is a concern where local and collector streets are relatively straight and there are few intersections. Within the developed portions of the city, in residential and school areas, and where there are pedestrian crossings or sidewalks along the street, it is desirable to slow traffic to safe speeds. This may be accomplished through “traffic calming” measures. These may include signalized or signed intersections, roundabouts and traffic circles, and other physical improvements that cause drivers to slow and be more aware of other vehicles and pedestrian or bicycle traffic.

## **4.10 Level of Service Standards**

The effectiveness of the streets to carry traffic is measured by a standard evaluation criterion, the Level of Service (LOS), a quantitative measure to describe traffic conditions, and as a means of evaluating future traffic conditions. Level of Service is a measure of the existing or projected traffic compared to the theoretical capacity of the street or intersection to safely accommodate traffic. Factors taken into consideration include volume of traffic, street and intersection design, signal timing, and other variables. Each LOS is assigned a letter, ranging from “A” (less than a 5

second wait at intersections and no restrictions on speed along arterials) to “F” (delays of 60 seconds or more at a single intersection). LOS is normally applied to the morning or afternoon peak-hour conditions when traffic is the heaviest.

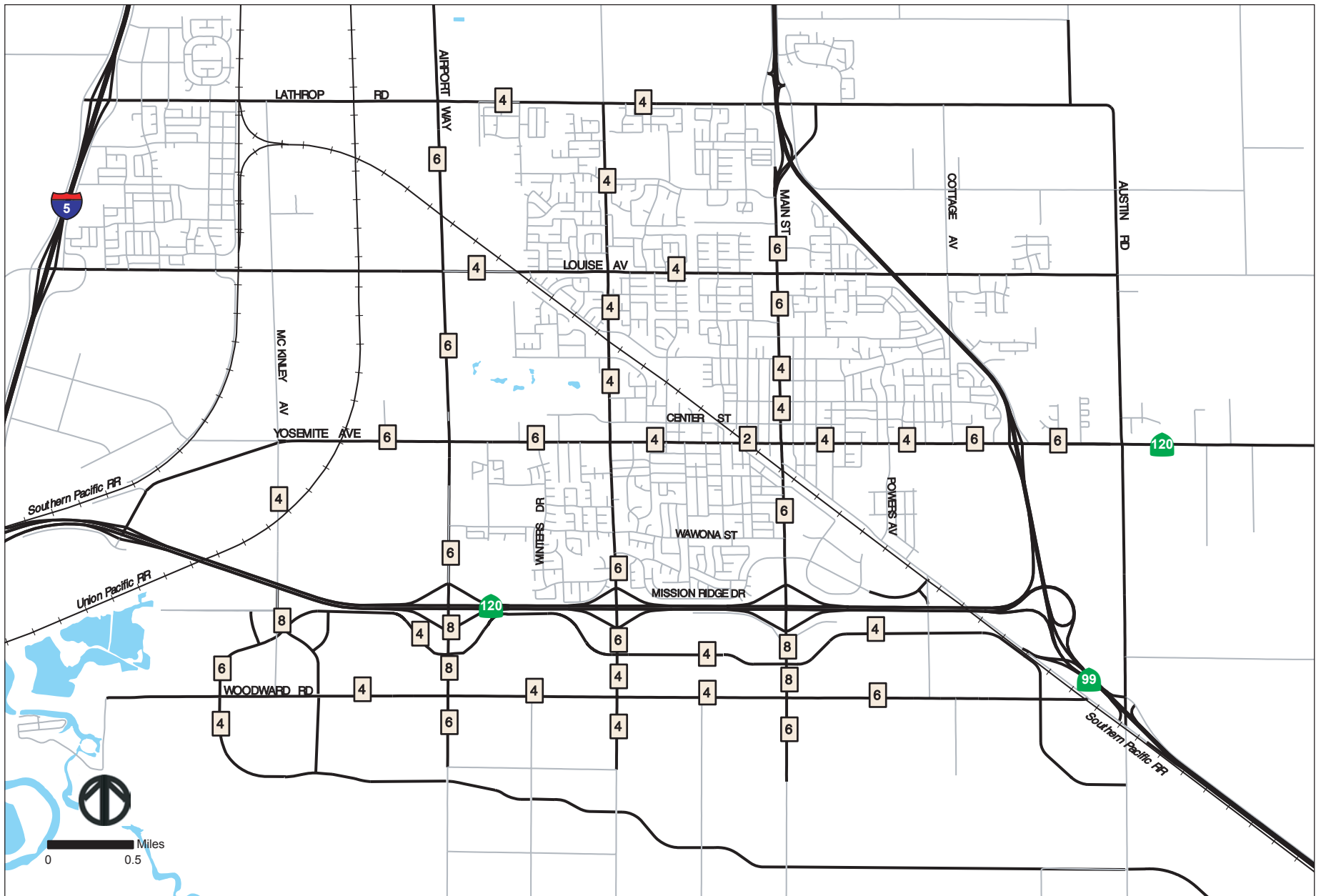
The Public Facilities Implementation Plan (PFIP) is one of the primary implementation programs under the General Plan. The 1993 PFIP established the Level of Service Standard that has guided street improvements in the City for a decade. The PFIP and the General Plan are to be consistent in the application of LOS standards.

#### **4.11 Major Streets Master Plan**

The Major Streets Master Plan defines the framework of major streets. It is intended that the City will retain the existing compact form, with development occurring in a concentric pattern. In-fill development is also encouraged in the Land Use Element as a means of accommodating new growth. Consequently, selected existing streets will continue to function as the major streets. Nonetheless, there are potential growth areas within and adjacent to the existing City boundary that will require new major roads and/or system improvements where development is permitted.

Figure 4-1 is a schematic diagram of the number of lanes required on the major streets to accommodate the anticipated traffic demand generated by growth through the year 2025. This street system is intended to comply with the Level of Service standard consistent with the Public Facilities Implementation Plan.

Figure 4-1 also illustrates the approximate alignment of a major new street south of and approximately parallel to SR 120. This street is intended to provide for east-west circulation connecting the major planned employment center located at the Tara Business Park near Woodward Avenue and McKinley Avenue, and the industrial park planned at Austin Road and SR 99. The Major Streets Master Plan indicates future interchange connections between this new road and SR 120 on the west and SR 99 on the east. The east interchange may involve the existing Austin Road interchange, or may involve a new interchange on SR 99 between Austin Road and Olive Avenue.



Manteca General Plan

**Policies: Street System**

- C-P-1: The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposals on LOS should be considered in the review process.
- C-P-2: Manteca's target for transportation LOS is to provide City-wide average LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D and the other Level of Service ratings as defined in current traffic engineering standards. This "C average, D minimum" shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances:
- a. Where constructing facilities with enough capacity to provide LOS C is found to be unreasonably expensive. This applies to facilities, for example, on which it would cost significantly more per dwelling unit equivalent (DUE) to provide LOS C than to provide LOS D.
  - b. Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.
  - c. Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.
  - d. Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.
- C-P-3: Streets shall be dedicated, widened, extended, and constructed according to the Street cross-section diagrams established in the City Improvement Standards. Dedication and improvement of full rights-of-way as shown in the Street Standards shall not be required in

existing developed areas where the City determines that such improvements are either infeasible or undesirable.

- C-P-4: Major circulation improvements shall be completed as abutting lands develop or re-develop, with dedication of right-of-way and construction of improvements, or participation in construction of such improvements, required as a condition of approval.
- C-P-5: Development which would necessitate roadway improvements prior to the development of lands abutting those roadway improvements shall be required to make such improvements, or participate in such improvements, as a condition of approval.
- C-P-6: New development will pay a fair share of the costs of street and other traffic and transportation improvements based on traffic generation and impacts on levels of service in conformance with the standards and policies established in the Public Facilities Implementation Plan.
- C-P-7: The street system shall be expanded in a contiguous and concentric manner to serve new development areas and to provide improved circulation for existing residents.
- C-P-8: Street improvements will be designed to provide multiple, direct and convenient traffic routes.
- C-P-9: Residential and collector street intersections with collector and arterial streets shall be aligned with other residential and collector streets, where feasible, to allow light electric vehicles (NEVs), bicyclists, and pedestrians to travel conveniently and safely from one neighborhood to another without using major streets.
- C-P-10: Signals, roundabouts, traffic circles and other traffic management techniques shall be applied at residential and collector street intersections with collector and arterial streets in order to allow light electric vehicles (NEVs), bicyclists, and pedestrians to travel conveniently and safely from one neighborhood to another.

- C-P-11: Major circulation improvements which are not tied to abutting development, such as new freeway interchanges or additional freeway ramps, should be implemented in advance of, or concurrent with, major new development within the City which would otherwise result in serious traffic impacts for some or all of the remaining circulation system.
- C-P-12: The City shall promote development of a perimeter road system along Lathrop Road, Austin Road, Woodward Avenue, and Airport Way.
- C-P-13: The City may allow development of private streets in new residential projects that demonstrate the ability to facilitate police patrol, emergency access, and solid waste collection and fund on-going maintenance to the satisfaction of the Community Development Director.
- C-P-14: The City shall promote in-fill development that completes gaps in the circulation system to facilitate north-south and east-west circulation.
- C-P-15: Residential subdivisions with lots fronting on an existing freeway or arterial street shall provide for a separate frontage road. Developers shall build frontage roads per City improvement standards.
- C-P-16: All single-family residential developments along the south side of the SR 120 shall be developed with a frontage road between the residential development and the freeway and provided with acceptable noise attenuation measures.
- C-P-17: Residential subdivisions backing onto a freeway are discouraged. Where subdivisions back on to an arterial street or collector street, the developer shall have the option to build a masonry wall or a combination wall and berm. The top of walls along freeways shall be at least eight-feet above the elevation of the freeway travel lanes. Walls and berms shall be attractive and developed for low

maintenance. All such berms and walls shall be approved by the City.

- C-P-18: In accord with the PFIP the City shall assess development fees for traffic signals and highway interchanges sufficient to fund system wide improvements. The development fee schedule for these traffic improvements shall be periodically reviewed, and revised as necessary.
- C-P-19: The City shall aggressively pursue state and federal funding to implement the City's Circulation Plan.
- C-P-20: The City shall promote the development of arterials parallel to the SR 120, a new McKinley Avenue and SR120 interchange, a new Austin Road and SR 99 interchange, and a Lathrop Road/ SR 99/ Main Street interchange.

**Policies: Traffic Safety**

- C-P-21: The creation or continuance of traffic hazards shall be discouraged in new development and other proposals requiring the City to exercise its discretionary authority.
- C-P-22: In the development of new projects, the City shall give special attention to maintaining adequate corner-sight distances at city street intersections and at intersections of city streets and private access drives and roadways.
- C-P-23: The City shall identify and remove, as feasible, obstacles limiting corner-sight distances at city street corners.
- C-P-24: The City shall maintain a program of identification and surveillance of high traffic accident locations, with emphasis on early detection and correction of conditions that could potentially constitute traffic hazards.

**Implementation: Street System**

- C-I-1. The City shall maintain a master list of the most recent available traffic counts. The master list shall be updated with traffic counts taken in connection with project traffic studies and by special counts conducted by the City as necessary.
- C-I-2. Perform periodic evaluation of the LOS on major streets to identify deterioration in LOS conditions.
- C-I-3. The City shall maintain a Street Master Plan showing the existing and proposed ultimate right-of-way and street width for each road segment within the Primary Urban Service Boundary. The Street Master Plan shall also indicate the necessary right-of-way to be acquired or dedicated and the expected method of financing roadway improvements (i.e., City-funded or property owner/developer-funded). The Street Master Plan shall be regularly updated.
- C-I-4. The City shall require new development to participate in the funding and construction of collector and arterial street improvements identified in the Street Master Plan.

**Implementation: Traffic Safety**

- C-I-5. Maintain a program of identification and surveillance of high traffic accident locations, with emphasis on early detection and correction of conditions which could potentially constitute traffic hazards.

**4.12 Parking**

Parking demand is generated by the existing businesses, new business, and residents, and is periodically increased significantly by the patrons of special events and activities. New business and residential development is a fundamental purpose in this General Plan. The success of the Economic Development Element will rely, in part, on the ability to accommodate the traffic and parking associated with new businesses and special events.

**Policies: Parking**

- C-P-25: If future growth in traffic volumes necessitates removal of on-street parking spaces to provide additional traffic lanes, the lost on-street spaces should be replaced with an equal number of off-street spaces within the same vicinity, where feasible.
- C-P-26: The City shall require all new development to provide an adequate number of off-street parking spaces to accommodate the typical parking demands of the type of development on the site. In the downtown area, the City is responsible for development of parking facilities and new development is not required to provide parking.
- C-P-27: The City shall allow parking variances only under the most unusual circumstances, and only after all other possible actions and conditions have been identified and studied. In such cases, the City may require provision of off-site parking, participation in a parking district or other compensation method sufficient to cover the current costs of land acquisition and construction of parking spaces.
- C-P-28: In the downtown area, the Redevelopment Agency shall assist in the provision of off-street parking.
- C-P-29: Ensure that there is adequate parking for normal commercial activities.
- C-P-30: Ensure that there is adequate parking for special events.
- C-P-31: Coordinate the parking area locations with the roadway, transit, pedestrian, and bikeway systems.
- C-P-32: Parking lots will be provided in the downtown area to provide small parking areas within easy walking distance of the businesses, rather than a single large parking lot.

**Implementation: Parking**

- C-I-6. The City shall review and revise, as necessary, off-street parking standards of the Zoning Ordinance. Such revision shall be based on a survey of the parking requirements of other northern California communities and an assessment of the adequacy of the City's current standards.
- C-I-7. Work with the local merchants to improve on-street parking conditions.

**4.13 Bikeway and Pedestrian Systems**

The relatively direct routes afforded by the existing street pattern throughout residential and commercial neighborhoods facilitate bicycle travel in Manteca. The Bicycle Route Master Plan shall define continuous bicycle routes through the residential neighborhoods.

Improving the facilities for bicycling is important for the convenience and enjoyment of Manteca residents and enhancing the quality of life.

The existing bikeway and pedestrian network should be enhanced to further encourage bicycling and walking in the City. This is accomplished in part by encouraging the continuity of the existing compact land use pattern in the Land Use Element, and by the creation of new bike routes and sidewalks wherever new streets are installed or existing streets are upgraded.

**Policies: Bikeways and Pedestrian Paths**

- C-P-33: The City shall establish a safe and convenient network of identified bicycle routes connecting residential areas with recreation, shopping, and employment areas within the city.
- C-P-34: Provide spur or branch walkways connecting to the residential neighborhoods and primary public destinations.

- C-P-35: Route sidewalks so that they connect to major public parking areas, transit stops, and intersections with the bikeway system.
- C-P-36: Provide adequate bicycle parking facilities at commercial, business/professional and light industrial uses.
- C-P-37: Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians. Provide shade and/or protection from wind and other weather conditions when possible.
- C-P-38: Wherever possible, bicycle facilities should be separate from roadways and walkways.
- C-P-39: The City shall limit on-street bicycle routes to those streets where the available roadway width and traffic volumes permit safe coexistence of bicycle and motor vehicle traffic.
- C-P-40: The City shall develop a “city-loop” Class I bike path that links Austin Road, Atherton Drive, (the proposed new road south of SR 120), Airport Way and a route along or near Lathrop Road to the Tidewater bike path and its extensions.
- C-P-41: The City shall extend the bicycle route north along the former Tidewater Southern Railway right-of-way, and any branch or connecting link.

**Implementation: Bikeways and Pedestrian Paths**

- C-I-8. The City shall maintain a Bicycle Route Master Plan and appropriate bicycle lane and street standards.
- C-I-9. Install prominent signs at the major entries to the City warning motorists of the presence of pedestrians and bicyclists.
- C-I-10. Utilize the standards set forth in the California Traffic Manual for improvement and re-striping of collector streets to accommodate, at a minimum, a Class II bike path in both directions.

- C-I-11. Increase bicycle safety by:
- Providing bicycle paths and lanes that promote bicycle travel.
  - Sweeping and repairing bicycle lanes and paths on a continuing, regular basis.
  - Ensuring that bikeways are delineated and signed in accordance with Caltrans standards and lighting is provided, where needed.
  - Ensuring that all new and improved streets have bicycle-safe drainage grates and are free of hazards such as uneven pavement and gravel.
- C-I-12. Add bike lanes whenever possible in conjunction with road reconstruction or re-striping projects and subdivision development and related off-site improvements.
- C-I-13. Encourage resident and visitor use of the bike trail system by preparing a map of the pedestrian and bike paths.
- C-I-14. Provide for pedestrian access in the downtown area, along Yosemite Avenue, and in other high-use areas by:
- Constructing wide sidewalks where feasible to accommodate increased pedestrian use.
  - Providing improvements that enhance pedestrian safety and convenience, such as pedestrian bulbs extending into intersections and at crosswalks to reduce walking distances and provide a safe peninsula for pedestrians.

#### **4.14 Public Transit**

Manteca is located at a major ground transportation hub in the state and has the opportunity to expand both rail service and bus service. The opportunities will grow with increasing population, and perhaps due to relatively higher costs of travel by automobile. The City can enhance these opportunities by encouraging the use of

public transit by Manteca residents and by implementing additional transit routes and services. But the most significant means of enhancing public transit opportunities is in planning land use and circulation networks.

By locating higher density housing, commercial, employment, recreational, education and institutional facilities along major thoroughfares, and by providing safe, convenient pedestrian routes to these facilities the City can make public transit more effective and viable. Sound land planning can produce benefits equal to a substantial investment in the labor and capital expenditures of a bus system.

In addition to locating major development along the existing major thoroughfares, the land plan anticipates the development of small concentrations of commercial, high-density housing and public uses in the new growth areas. These concentrations are located at logical intervals along potential public transit routes. At full development of the land uses in the new growth areas new transit routes would be within a one-quarter mile walk of a substantial percentage of the new households.

The City can further enhance the use of existing and future transit facilities by providing a local shuttle or small bus network linking residents to activity centers at or near the transit facility. Such transit facilities can provide connections to more than one form of transportation (a multi-modal center) or to a single transportation node.

#### **Policies: Public Transportation**

- C-P-42: The City shall work with San Joaquin Regional Transit District to determine the needs for additional bus service within the Manteca City limits.
- C-P-43: The City shall encourage the maintenance and expansion of interstate bus service in the Manteca area.
- C-P-44: The City shall consider alternatives to conventional bus systems, such as small, shuttle buses that connect neighborhood centers to local activity centers.

- C-P-45: The City should explore with the Manteca School District opportunities for joint-use public transit that would provide student transportation and local transit service.
- C-P-46: The City shall encourage Amtrak/ACE operations and commuter and passenger rail service that will benefit the businesses and residents of Manteca.
- C-P-47: The City shall identify and implement means of enhancing the opportunities for residents to commute from residential neighborhoods to the ACE station or other transit facilities that may develop in the City.
- C-P-48: The City shall encourage the provision of rail service into industrial development.
- C-P-49: The City shall encourage the use of local transportation services, such as jitneys, local shuttles and commuter buses.
- C-P-50: Establish a plan of primary locations where the transit systems will connect to the major bikeways and pedestrian ways and the primary public parking areas.
- C-P-51: Encourage programs that provide ridesharing and vanpool opportunities and other alternative modes of transportation for Manteca residents.
- C-P-52: The City shall promote the development of park-and-ride facilities near 1-5, SR 120, and SR 99.
- C-P-53: The City shall explore the opportunities for, and encourage the development of, a multi-modal bus/train/bike/auto facility in the downtown area.
- C-P-54: Establish and maintain a working relationship between the City administration and the local management of the Union Pacific Railroad regarding expansion of freight and passenger rail service and economic development of the region.

## 4.15 Transportation Demand Management

The increase in traffic congestion within Manteca and throughout the region has intensified the need to promote alternative transportation modes. Transportation Demand Management (TDM) refers to measures designed to reduce the number and length of automobile trips, particularly during peak commute hours. TDM measures typically include ridesharing, vanpools, and a variety of management techniques applied by larger employers in metropolitan areas. Typical TDM measures are most effective where they can be implemented by large employers.

In communities where there is a significant number of workers commuting out to a larger metropolitan area the TDM measures focus on ridesharing and vanpooling to reduce the number of single occupant vehicle trips. Reduced vehicle travel can help reduce peak hour traffic congestion, reduce future air pollution concentrations, and reduce consumption of energy for transportation uses. Moreover, it can help reduce individual transportation costs for Manteca residents, yielding potentially significant savings as the cost of fuel rises.

### **Policies: Transportation Demand Management**

- C-I-15. The City shall establish a requirement for a transportation demand management program in any business park, industrial or commercial land use that employs more than 50 full time equivalent employees.
- C-I-16. The City shall make information available at City Hall and the library regarding public transit, ridesharing, van-pools, and other transportation alternatives to single occupant vehicles.
- C-I-17. The City shall provide information about transit services at the City Hall and library.

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