4 Circulation

The Circulation Element is intended to provide guidance and specific actions to ensure the continued safe and efficient operation of Lemoore' circulation system. The Element is based on a fundamental philosophy that traffic conditions in the City can be managed through a comprehensive program of transportation planning, land use planning, and growth management strategies. This Element includes provisions for roadways, truck routes, transit, rail use, pedestrian, and bicycle transportation modes, as well as parking.

State law recognizes that circulation and land use are closely related and requires that policies in this Element and the Land Use Element be linked. Careful integration of the City's traffic and circulation policies with its land use policies will ensure that there is sufficient roadway capacity to accommodate traffic generated by planned future development. The City is committed to designing a system of regional routes, local roads, public transit, and bicycle and pedestrian routes that will enhance the community and protect the environment.

The Circulation Element includes policies related to the physical framework for development that the circulation system is designed to serve, and includes policies for parking and public transportation.

4.1 BACKGROUND: CONTEXT

Transportation programs are based on circulation system planning and land use planning. The City's traffic circulation planning efforts are integrated with those of the Kings County Regional Transportation and Caltrans in a cooperative, regional planning effort. State of the art traffic engineering is used to bring planned improvements to reality. Only through the development and implementation of all these strategies can the City's commitment to a balanced, efficient circulation system be achieved.

Another objective of this Element is to create a balanced transportation system that addresses the needs of drivers, bicyclists, pedestrians as well as rail and public transport users. The

General Plan provides for new routes to serve new development and expansion of capacity and efficiency of the existing circulation system. In addition, the Plan provides for narrower streets in some areas than might otherwise be designed based on traffic requirements alone. The Element recognizes the need to provide an environment that encourages walking, particularly at high-activity centers, and provides ways to reduce auto-dependence by facilitating the use of alternate modes of travel.

4.2 ROADWAY NETWORK

At the core of Lemoore's circulation network is the roadway system. All modes of transportation depend to some degree upon the roadway system. In Lemoore, this system is based on a traditional grid pattern in the downtown surrounded by a system of arterial and collector roadways. Regional access is provided by SR-198 from northeast to southwest and SR-41 from north to south. The hierarchy of street classifications is shown in **Figure 4-1** and listed in **Table 4.3,** while the general design is shown on **Figure 4-3**.

C-G-1 STREET SYSTEM

Highways. Highways are designed to carry heavy traffic volumes at speeds of 40-65 miles per hour and link the City with other nearby urban areas. Lemoore is bisected by two highways – SR-198 in an east-west direction and SR-41 in a north-south direction. On both highways, access is limited, crossings are generally signalized at grade or grade-separated, parking is not allowed, and a continuous median separates lanes moving in opposite directions. On SR-198 between the City of Hanford to Lemoore Avenue exit, a concrete wall separates eastbound and westbound traffic. In the near future, Caltrans anticipates continuing the wall to the Lemoore Naval Air Station.

Arterial Streets. Arterial streets are designed to move large volumes of traffic between highways and other arterials in Lemoore and to adjacent jurisdictions. Major arterials are access controlled roadways emphasizing mobility between major portions of the City and to regional freeways and highways. The only major arterial the City has is on a portion of Hanford-Armona Road from Blake Street (near Lemoore Avenue) to the Lemoore Canal. Minor arterials provide mobility through the City and access to major residential, employment, and activity centers. On-street parking should not be provided on major arterials but may be appropriate for minor arterials that emphasize accessibility over mobility. Minor arterials should provide two lanes and striped bike lanes in each direction of travel. Where inadequate room exists to stripe bike lanes in the street, large sidewalks should be installed to protect children walking or bicycling to school. Driveway access should be minimized, consistent with the primary function of arterials to move through traffic. Landscaped parkway strips, sidewalks, and transit facilities may also be accommodated within the right-of-way of minor arterials, depending on the right-of-way width. Lemoore Avenue, 19th Avenue, Bush Street, D Street, Belle Haven Drive, Iona Avenue, College Drive, Pedersen Avenue, Marsh Drive, Semas Drive (which is also a parkway), Jackson Avenue west of 19th Avenue, and portions of Hanford-Armona Road are examples of this category. Where older streets cannot accommodate parkways, street trees will be planted in tree wells within sidewalks while maintaining adequate handicapped access. (Lemoore Avenue is a perfect example of a street with challenges.)

Figure 4-1 Roadway System

back

Figure 4-2 Planned Improvements

Back

Median Parkways. Median Parkways are designed to provide a scenic and pastoral driving experience. It is a street that has full or partial access control, divided by a wide, landscaped median with trees. It is usually located adjacent to residential neighborhoods or extremely wide roadways segments, and prohibits trucks or commercial vehicles on many segments. Buses are not considered commercial vehicles in this case. All of Cedar Lane, Golf Links Drive, and the proposed Semas Drive falls under this category of street system as well as portions of Hanford-Armona Road, Fox Street, and Bush Street as depicted in **Figure 4-1**.

Lemoore Avenue is one of the busiest arterials in the City.

Collector Streets. Collector streets provide a link between neighborhood streets and arterials. Collectors provide two through travel lanes, in addition to any bike lanes where called for in the bikeway plan. In fact, all collectors should be designed to include bicycle lanes. On-street parking may be provided if sufficient width is available. Collectors also provide access to adjacent properties, so driveway access should be discouraged but need not be restricted (subject to accepted engineering practices). Bike lanes, landscaped parkway strips, sidewalks, and transit facilities may also be accommodated depending on the right-of-way available. Collector Streets include Hanford-Armona Road, west of Belle Haven Drive, Industry Way, Cinnamon Drive, Cedar Lane, 19th ½ Avenue, Liberty Drive, Fox Street, Follett Street, Daphne Lane as well as the three proposed collectors (2 north-south and 1 east-west) in the north-easterly part of the City.

Local Streets. The primary function of local streets is to provide direct access to adjacent properties. Local streets should provide two travel lanes, landscaped parkway strips, and sidewalks. On-street parking may be restricted if needed. Bike lanes are usually not needed because these streets carry low traffic volumes and all are considered to be bicycle friendly.

Rural Streets. Rural streets are not a technical classification. However, the City uses this term to describe streets that are outside of or near the edge of the Urban Growth Boundary or Planning Area or can be located in very low density residential neighborhoods. Along the urban/rural edge, some collector and arterial streets have been designated; they will be designed as streets with rural "edges," as illustrated in *Chapter 3: Community Design*. Rural Streets typically have two travel lanes without curbs or gutters and have little or no lighting. The only exception would be Marsh Drive, which is anticipated to contain four travel lanes and other City improvements on one side of the street.

Planned Improvements to Accommodate Buildout

To achieve a balance between existing and future land use and traffic carrying capacity, improvements to the roadway network are planned. Major street additions or widening planned or programmed for Lemoore are shown in **Figure 4-2**. Additional right-of-way will be needed along Bush Street from College Drive to 19th ½ Avenue. These improvements include:

- 18th Avenue - SR-198 to Iona Avenue widen from 2 to 4 lanes
- 19th Avenue - Construct 2 new lanes connecting north of Hanford-Armona Road to 18 ¾ Avenue
- 19th Avenue - Hanford-Armona Road to Idaho Avenue widen portions from 2 to 4 lanes, as needed
- 19th ½ Avenue - Cinnamon Drive to Silverado Drive widen from 2 to 4 lanes
- Belle Haven Drive – North of Bush Street to Railroad realign 4 lanes as shown on **Figure 4-2** at least 525 feet west of the existing southbound SR-41 ramp intersection
- Belle Haven Drive - South of Bush Street (new roadway) construct newly aligned private roadway with a minimum of 6 lanes (as required to accommodate final design)
- Bush Street – Marsh Drive to College Drive widen from 2 to 4 lanes
- Bush Street - College Drive to Semas Drive widen from 2 to 6 lanes
- Bush Street - Semas Drive to Belle Haven Drive widen to 8 lanes with landscaped median (includes turn lanes per Wal-Mart administrative Draft TIS)
- Bush Street - Belle Haven Drive to SR-41 SB ramps widen between 7 to 8 lanes
- Bush Street - Between the SR-41 SB and NB ramps widen to 7 lanes
- Bush Street - SR-41 NB ramps to 19th ½ Avenue - widen to 6 lanes with landscaped median
- Bush Street - 19th ½ Avenue to 19th Avenue widen from 2 to 4 lanes with landscaped median
- Bush Street - Lemoore Avenue to East D Street stripe and widen from 2 to 4 lanes where missing
- Cedar Lane - Blue Jay Avenue to 19th ½ Avenue construct with 2 through lanes
- Cedar Lane - Brooks Drive to Lemoore Avenue construct with 2 through lanes
- Cinnamon Drive - 19th ½ Avenue to Lemoore Avenue stripe and widen from 2 to 4 lanes
- Cinnamon Drive – Lemoore Avenue to Hanford-Armona Road stripe from 2-4 lanes if determined to be necessary by future traffic impact study
- College Drive - South of Bush Street widen or construct new street to 4 lanes on missing portions (new roadway)
- College Drive - North of Bush Street to Hanford-Armona Road construct with 2 lanes (acquire adequate right-of-way to accommodate a standard arterial street)

- College Drive at railroad tracks - construct new railroad crossing in coordination with the Public Utilities Commission (PUC) and the railroad
- D Street - Smith Avenue to 17th Avenue widen from 2 to 4 lanes
- Daphne Lane Extension - Daphne Lane north of railroad tracks to D Street construct new 2-lane collector roadway and railroad crossing in coordination with PUC and railroad
- Follett Street - Cinnamon to G Street construct with 2 lanes
- Hanford-Armona Road - 17th Avenue to a point approximately 525 feet east of SR-41 widen from 2 to 4 lanes where segments are missing.
- Hanford-Armona Road – 525 feet east of SR-41 to a point approximately 525 feet west of SR-41 widen from 2 to 6 lanes
- Hanford-Armona Road - 525 feet west of SR-41 to new College Drive extension widen from 2 to 4 lanes
- Iona Avenue - 19th Avenue to Lemoore/18th Avenue widen from 2 to 4 lanes.
- Industry Extension - Construct 2-lanes west of Production Place
- Lemoore Avenue - Bush Street to "G" Street widen street
- Liberty Drive - Hanford-Armona Road to Lacey Boulevard widen from 2 to 4 lanes
- Marsh Drive - North of SR-41 (new roadway) construct with 4 lanes
- Pederson Avenue (new roadway) - Construct with 4 lanes
- Semas Drive - South of Bush Street to Marsh Drive (new roadway) construct with 4 lanes
- Sierra Drive – Remove and abandon existing east-west street with 19th Avenue Interchange project and replace with newly aligned north-south Sierra Drive
- Silverado Avenue - 19th ½ Avenue to 19th Avenue stripe from 2 to 4 lanes
- SR-198 and 19th Avenue - Construct new interchange
- SR-198 - D Street/Houston Avenue to 21st Street westbound widen from 2 to 3 lanes (Caltrans' responsibility)
- SR-198 - Vine Street to D Street/Houston Avenue eastbound widen from 2 to 3 lanes (Caltrans' responsibility)
- SR-198 at Marsh Drive - Construct new interchange
- SR-41 at Hanford-Armona Road - Add 2 left turn lanes for each approach at the intersection as per August 2007 Leprino mitigated negative declaration
- New Arterials within the development area west of SR-41 - Construct with 4 lanes
- Vine Street on both sides of SR-198 - Cul-de-sac when new interchange is built at 19th Avenue
- Between Liberty Drive/18 ¾ Avenue to 17th Avenue one block north of the Glendale Avenue alignment - Construct new east-west Collector street
- North of Glendale Avenue to Lacey Boulevard between 18th and 17th Avenues -

Construct new north-south rural Collector street

Anticipated Intersection Improvements

- Signalize or install full or small scale roundabouts at 19th /Hanford-Armona Road, Fox/Hanford Armona Road, Fox Street/Cinnamon Drive, Cinnamon Drive/Hanford-Armona Road, Bush Street/19th Avenue, 19th/Avenue/Cedar Lane, East D Street/East Bush Street, Pedersen Avenue/Marsh Drive, Iona Avenue/Lemoore Avenue, Semas Drive at angled street (after signal warrants and appropriate studies are done)
- Signalize Liberty Drive/Hanford-Armona Road, Cinnamon Drive/19th Avenue, and Bush Street at College Drive, Semas Drive, Bellehaven Drive, SR-41 SB ramps, SR-41 NB ramps, and 19th ½ Avenue (after signal warrants and appropriate studies are done)
- Upgrade existing railroad crossings at Lemoore Avenue, Follett Street, Fox Street, 19th Avenue, and 19 1/2 Avenue

Additional Traffic Calming and Pedestrian Oriented Street Improvements

- Urban/Rural Edge tree plantings along 19th Avenue, Bellehaven Drive, Idaho Avenue, Iona Avenue, Industry Way, Jackson Avenue, Marsh Drive, 18th Avenue, East D Street as shown, 19th Avenue, and the Lemoore Canal as shown on **Figure 3-1**
- Landscaped medians added to all of Cedar Lane, and Semas Drive, as well as portions of Hanford-Armona Road, Fox Street, and Bush Street as depicted in Figure 4-1
- Widen/improve Lemoore Avenue to include contiguous 6-10 foot sidewalks with trees in landscape strips or tree wells
- Additional parkway strips along Cedar Lane
- Obtain a total of 84 feet of right-of-way along D Street from Lemoore Avenue to a point 100 feet to the east of the intersection and widen street and curb radius to accommodate truck route traffic
- Cul-de-sac Larish Street 220 feet west of Lemoore Avenue once Cedar Lane connects to Lemoore Avenue to stop cut-through traffic and allow for the improvement of the adjacent neighborhood commercial
- Add pedestrian bridge over SR-198 at Vine Street

C-G-2 LEVEL OF SERVICE

The Level of Service (LOS) concept is generally used to measure the amount of traffic that a roadway or intersection can accommodate, based on maneuverability, driver dissatisfaction, and delay. LOS ranges from LOS A, or free-flow conditions, to LOS F, or jammed conditions. These conditions are generally described in **Table 4.1**. The daily capacities for Lemoore are shown in **Table 4.2**.

Table 4.1 Qualitative Description of Level of Service

Level of Service	*Driver's Perception*
A / B	LOS A / B are characterized by light congestion. Motorists are generally able to maintain desired speeds on two and four lane roads and make lane changes on four lane roads. Motorists are still able to pass through traffic-controlled intersections in one green phase. Stop-controlled approach motorists begin to notice absence of available gaps.
C	LOS C represents moderate traffic congestion. Average vehicle speeds continue to be near the motorist's desired speed for two and four lane roads. Lane change maneuvers on four lane roads increase to maintain desired speed. Turning traffic and slow vehicles begin to have an adverse impact on traffic flows. Occasionally, motorists do not clear the intersection on the first green phase.
D	LOS D is characterized by congestion with average vehicle speeds decreasing below the motorist's desired level for two and four lane roads. Lane change maneuvers on four lane roads are difficult to make and adversely affect traffic flow like turning traffic and slow vehicles. Multiple cars must wait through more than one green phase at a traffic signal. Stop-controlled approach motorists experience queuing due to a reduction in available gaps.
E	LOS E is the lowest grade possible without stop-and-go operations. Driving speeds are substantially reduced and brief periods of stop-and-go conditions can occur on two and four lane roads and lane changes are minimal. At signalized intersections, long vehicle queues can form waiting to be served by the signal's green phase. Insufficient gaps on the major streets cause extensive queuing on the stop-controlled approaches.
F	LOS F represents stop-and-go conditions for two and four lane roads. Traffic flow is constrained and lane changes minimal. Drivers at signalized intersections may wait several green phases prior to being served. Motorists on stop-controlled approaches experience insufficient gaps of suitable size to cross safely through a major traffic stream.

Source: Dowling Associates, 2007 and 2000 Highway Capacity Manual.

The City of Lemoore does not currently have any adopted level of service (LOS) standard. However, recent traffic studies have used level of service D as the standard for evaluating project impacts at intersections. Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on SR-facilities, however, Caltrans acknowledges that this may not always be feasible and recommends the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing measures of effectiveness should be maintained.

Table 4.2 Peak Hour Level of Service Criteria for Roadway Segments in Lemoore

Facility Capacity Volumes

Facility Class	*Code*	*One Direction Lanes*	*Area Type*	*LOS A*	*LOS B*	*LOS C*	*LOS D*	*LOS E*
Freeway	Fwy4	2	All	1,290	2,130	2,890	3,420	3,800
Freeway	Fwy6	3	All	2,000	3,290	4,460	5,280	5,870
Rural Highway	RurHwy2	1	Rural	100	330	620	870	1,200
Rural Highway	RurHwy4	2	Rural	980	1,590	2,300	2,980	3,390
Arterial	RurArt2	1	Rural	72	120	590	740	800
Arterial	UrbArt2	1	Urban	77	100	590	810	850
Arterial	RurArt4	2	Rural	166	290	1,360	1,570	1,660
Arterial	UrbArt4	2	Urban	162	220	1,360	1,710	1,800
Collector	Coll2	1	All	73	97	480	760	810
Collector	Coll4	2	All	138	224	1,120	1,620	1,720

Per Lane Capacity Volumes

Facility Class	*Code*	*Single Lane*	*Area Type*	*LOS A*	*LOS B*	*LOS C*	*LOS D*	*LOS E*
Freeway	Fwy4	1	All	645	1,065	1,445	1,710	1,900
Freeway	Fwy6	1	All	667	1,097	1,487	1,760	1,957
Rural Highway	RurHwy2	1	Rural	100	330	620	870	1,200
Rural Highway	RurHwy4	1	Rural	490	795	1,150	1,490	1,695
Arterial	RurArt2	1	Rural	72	120	590	740	800
Arterial	UrbArt2	1	Urban	77	100	590	810	850
Arterial	RurArt4	1	Rural	83	145	680	785	830
Arterial	UrbArt4	1	Urban	81	110	680	855	900
Collector	Coll2	1	All	73	97	480	760	810
Collector	Coll4	1	All	69	112	560	810	860

V/C Ratios as function of LOS E/F

Facility Class	*Code*	*Both Direction Lanes*	*Area Type*	*LOS A*	*LOS B*	*LOS C*	*LOS D*	*LOS E*
Freeway	Fwy4	4	All	0.34	0.56	0.76	0.9	1
Freeway	Fwy6	6	All	0.34	0.56	0.76	0.9	1
Rural Highway	RurHwy2	2	Rural	0.08	0.28	0.52	0.73	1
Rural Highway	RurHwy4	4	Rural	0.29	0.47	0.68	0.88	1
Arterial	RurArt2	2	Rural	0.09	0.15	0.74	0.93	1
Arterial	UrbArt2	2	Urban	0.09	0.12	0.69	0.95	1
Arterial	RurArt4	4	Rural	0.1	0.17	0.82	0.95	1
Arterial	UrbArt4	4	Urban	0.09	0.12	0.76	0.95	1
Collector	Coll2	2	All	0.09	0.12	0.59	0.94	1
Collector	Coll4	4	All	0.08	0.13	0.65	0.94	1

Source: Dowling Associates, 2007.

Intersections

Intersections were not evaluated as part of this General Plan. Rather, roadway segments were the focus of the Dowling Associates, Inc. analysis. That said, several locations where major changes in the roadway traffic demand that results in roadway widening will also require the consideration of traffic signal installation and/or modifications. City staff reviewed recent project-specific traffic studies and the 2007 Impact Fee Report in order to anticipate what intersections may likely need signalization or other improvements as well as railroad crossing improvements. These anticipated improvements have been included in **Figure 4-2**. Prior to moving forward with such projects, a traffic warrant study should be done to evaluate the need based on seven warrants. Stop or yield signs are not reviewed in this plan and their installation is determined by the Police Department. An anticipated lane configuration column is included in **Table 4.3**. The recommendations for left or right turn lanes would apply to the intersections located along the roadway segments. The recommendation for a center turn lane would apply to the mid-block portion of the roadway segment. Further analysis of peak hour operations at all critical intersections will be undertaken as part of implementation of the recommended turn lanes to ensure that where independent turning lanes are needed, they are provided.

2007 Traffic Conditions and Forecast Volumes

To determine existing conditions and the impact of General Plan development on traffic conditions, a Traffic Model was constructed for selected street segments. Traffic volume-to-capacity ratio and the resultant levels of service (LOS) for existing conditions and for the build out under the General Plan are shown in **Table 4.3**.[1] No roadway segments were found to operate at unacceptable levels of service under existing conditions.

For the buildout condition, the roadway improvements listed above were assumed constructed. Under the build out condition, all City roadway segments operate at acceptable levels of service. No further improvements are needed to maintain acceptable operations. It should be noted that the Circulation Element includes policies directed to local intersection impacts, which should be addressed during the normal environmental review of a project, as needed.

C-G-3 TRANSPORTATION MANAGEMENT FOR THE BUSINESS, TECHNOLOGY, AND INDUSTRIAL RESERVE AREA

To minimize traffic impacts, the General Plan requires adoption of a Transportation Performance Monitoring (TPM) program, as part of the specific plan for the Business, Technology, and Industrial Reserve Area on the southside of SR-198 between 21st Avenue and SR-41. This will ensure that the Marsh Drive/21st Avenue interchange at SR-198 will not operate at unacceptable service levels once it is fully constructed.

C-G-4 CITYWIDE STREET DESIGN

The design objectives for street standards are as follows:

- To provide guidance for a system of public streets that will meet the City's needs.

[1] Values in **Table 4.3** for those roadway segments, which will be constructed under the General Plan are blank under existing conditions.

- To ensure that streets will fulfill their intended functions, consistent with the General Plan, and support multiple modes of travel.
- To provide adequate traffic-carrying capacity, while minimizing width, to create strong neighborhood character.
- To create a system of sidewalks and bikeways which promote safe walking and bicycle riding for transportation and recreation.

Table 4.4 establishes the required elements and typical widths for each street classification that serves residential neighborhoods. All street designs are subject to review and approval by the Planning Commission, City Council, Planning Department and Public Works Department. **Figure 4-3** showcase typical street sections.

Table 4.3 Existing and Buildout Traffic Volumes and Levels of Service for Roadway Segments

Table 4.3 pg 2

Table 4.3 pg 3

Table 4.3 pg 4

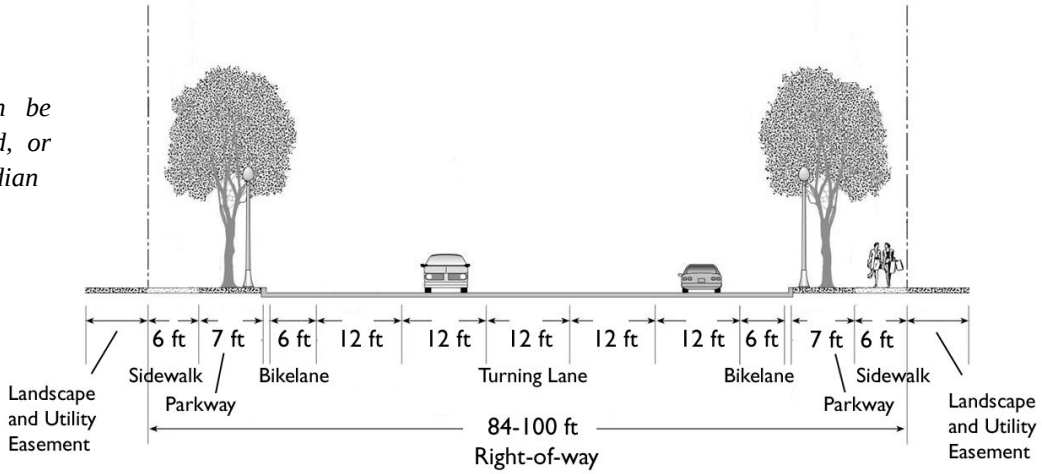
Table 4.3 pg 5

Back

Figure 4-3 Street Sections

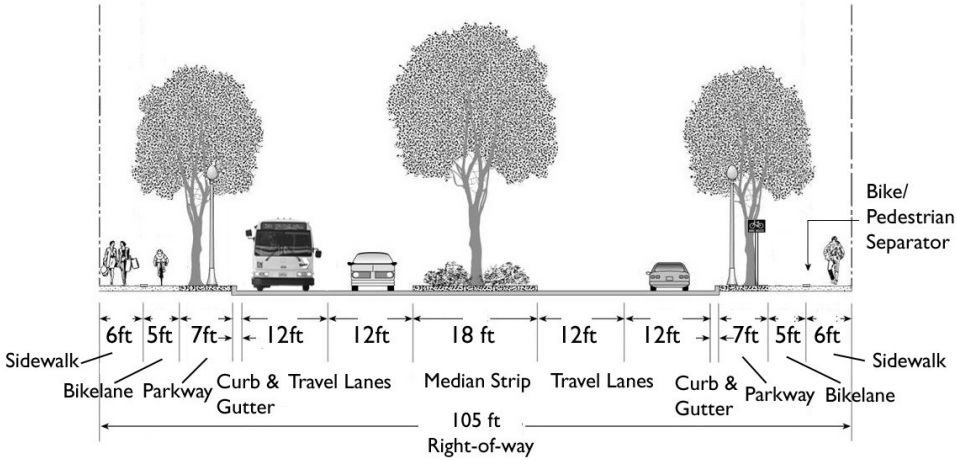
ARTERIAL

The turning lane can be omitted if not required, or turned into a center median

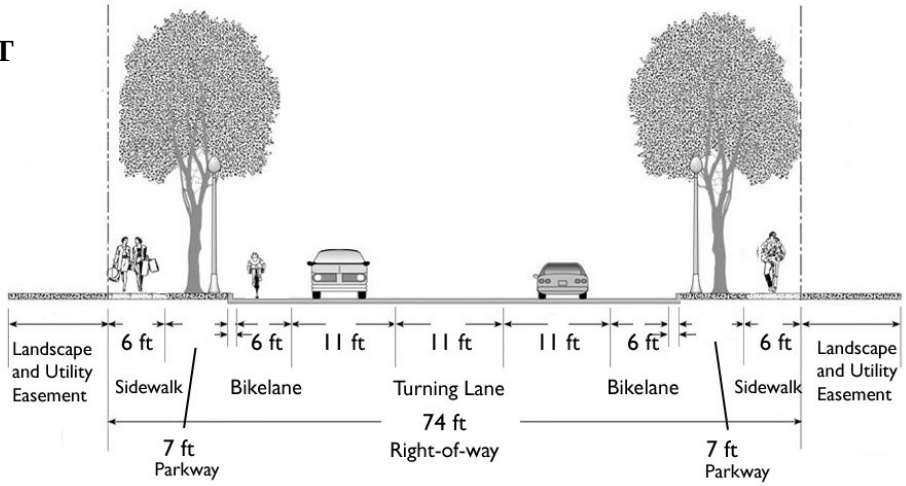


MEDIAN PARKWAY

The median width is negotiable depending on site and road conditions.

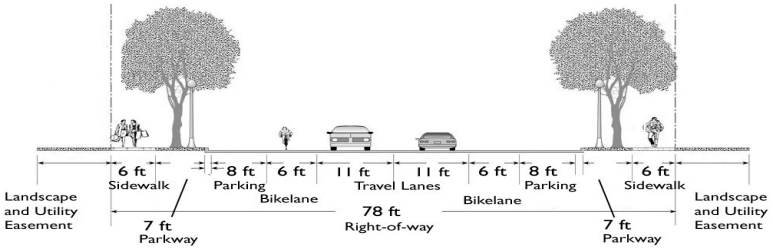


COLLECTOR WITHOUT ON-STREET PARKING

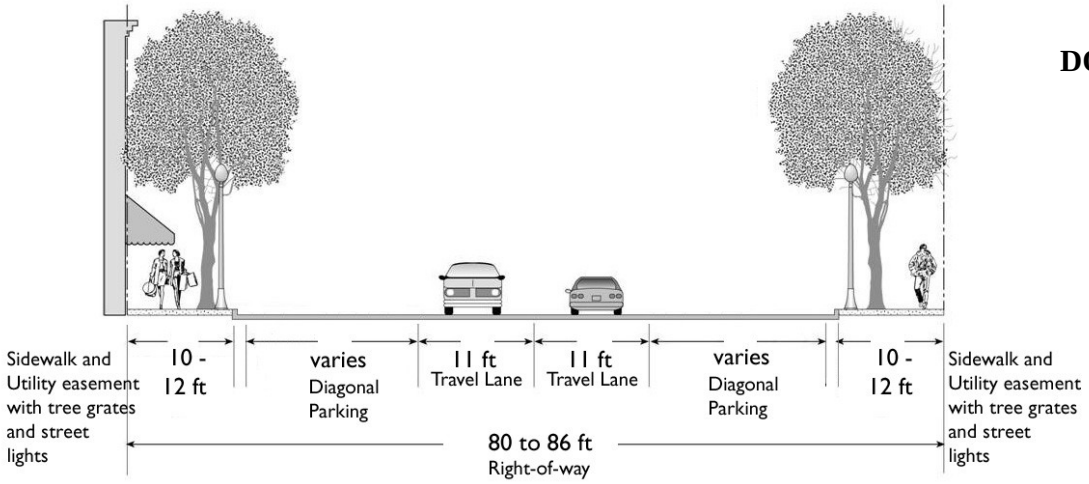


Collector With On-street Parking

At intersections parking will be removed to accommodate turn lanes.



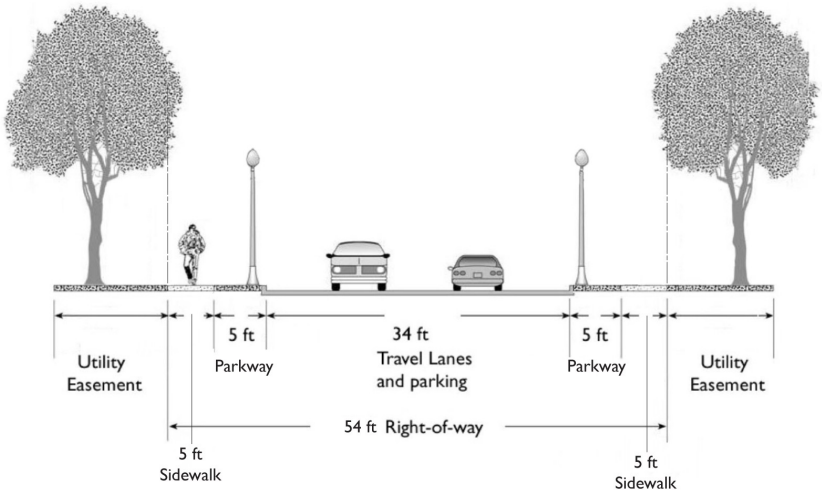
DOWNTOWN STREET



Revised 3-20-2012

Local Street

The general proposed street width from curb- to-curb should be 34', however the Planning Commission and/or the City Council can modify the size based on the street and neighborhood characteristics.



RURAL STREET

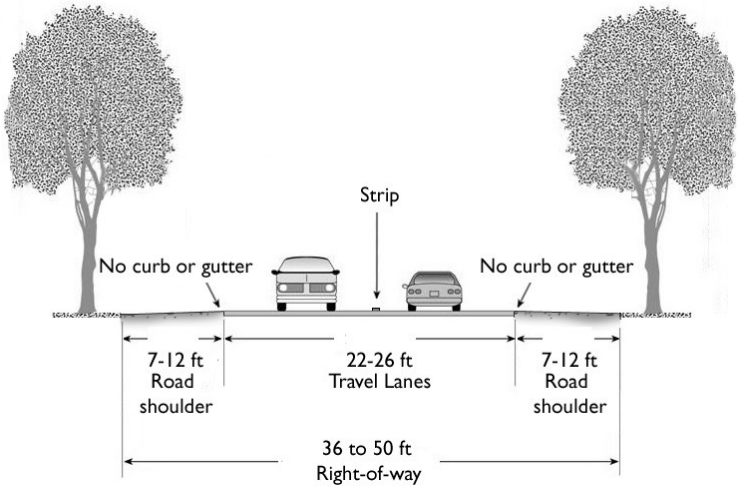


Table 4.4 Typical Street Elements and Widths

Revised 3-20-2012

Street Classification	*Right-of-Way Width*	*Curb-to-Curb Width*	*Travel Lanes: Number*	*Parking Lanes: Number*	*Bicycle Lanes: (each side)*	*Median Strip*	*Parkway (each side)**	*walks (each side)*
Arterial	84-100 ft	56-75 ft	4-5	None	6 ft	None	7 ft	6 ft
Parkway	105 ft	69 ft	4	None	5 ft	18 ft	7 ft	6 ft
Collector: without on-street parking	74 ft	48 ft	2-3	None	6 ft	None	7 ft	6 ft
Collector: with on-street parking	78 ft	52 ft	2	2	6 ft	None	7 ft	6 ft
Downtown Street	80-86 ft	Approx. 60 ft	2	2 (Diag-onal Parking)	None	None	10-12 ft combined width of sidewalks and planter strip or tree wells	
Local Residen-tial Street	54 ft	34 ft	Parking lanes on each side, and one shared central travel lane.		None	None	5 ft	5 ft
Cul-de-sac or other dead-end Street serving less than 10 homes	52-54 ft	36 ft	2	2	None	None	5 ft	5 ft, which may have op-tion to eliminate at bulb
Rural Street	36-50 ft	22-26 ft	2	None	None	None	Dirt/gravel road shoulder	

Notes: All dimensions shown are approximate only and should be adjusted to suit site conditions and functional need.
Street trees shall be provided along local streets at a rate of one tree per single family dwelling or every 30 feet for other uses. The tree shall be located either within the parkway, behind the sidewalk within the utility easement, or in the front yard setback at the choice of the developer/property owner.

Source: Dyett & Bhatia, 2007.

Connectivity

Traditional grid street designs allow for through movement and good connections between and within neighborhoods. Short blocks offer a choice of routes and enable more direct connections. Variations from the traditional grid can allow for diagonal and curvilinear streets as well as larger or smaller blocks for maximum flexibility and improved connectivity.

Some neighborhoods in Lemoore have been built using many cul-de-sacs. This type of design promotes circuitous travel and results in traffic being distributed along fewer streets where heavy traffic concentrates. More desirable is a grid-based development that balances a sense of proximity and ease of access with the quieter environments of neighborhoods. In order to ensure that street layout in future development incorporates the need for neighborhood connectivity and the comfort and safety of pedestrians and bicyclists, it is essential that:

- New development be "connected" to the surroundings with an increased number of access points and pedestrian and bicycle connections to the neighborhood network;
- Blocks be short to allow for more direct connections;
- Neighborhood streets be designed at a human-scale, without excessively wide streets; and
- Traffic controls are incorporated including speed limits, signage and truck routes to restrict commercial traffic in neighborhoods.

As part of the detailed planning that will follow Plan adoption, new residential development will need to be linked through transportation to the State highway system, Downtown and other employment centers, as well as shopping locations in Lemoore.

Careful integration of land use and transportation systems will be especially critical between the eastern and the western part of Lemoore, given that both sides are separated by SR-41, with only Bush Street and Hanford-Armona Road connecting the parts locally. As already noted, there is potential in the planning area to foster development that supports pedestrian-oriented development and maintains a “small-town” atmosphere; however, simply allowing market-driven development, without regard to use mix, dispersion and connections with the transportation system, will not be considered adequate. Attention must be given to the design and location of pedestrian and bicycle networks, the design of linkages, the location of parking and provisions for local transit will be essential. The following guiding and implementing policies are designed to address the issues described in this Element:

C-G-5 GUIDING POLICIES

Overall Circulation System Planning

C-G-6 Provide a wide variety of transportation alternatives and modes serving all residents and businesses to enhance the quality of life and increase pedestrian safety.

C-G-7 Make efficient use of all transportation facilities and, through coordinated land use planning, strive to improve accessibility to shops, schools, parks and employment

centers and reduce the total vehicle miles traveled per household to minimize vehicle emissions and save energy.

C-G-8 Improve the aesthetic character of transportation corridors in the City.

Traffic Level of Service

C-G-9 Maintain acceptable levels of service and ensure that future development and the circulation system are in balance.

C-G-10 Ensure that new development pays its fair share of the costs of transportation facilities.

C-G-11 IMPLEMENTING ACTIONS

Overall Circulation System Planning

Plan policies aim to increase pedestrian safety and improve the attractiveness of roads in the City.

C-I-1 Adopt street standards that provide flexibility in design, especially in residential neighborhoods. Revise right-of-way and pavement standards to reflect adjacent land use and/or anticipated traffic, and permit reduced right-of-way dimensions where necessary to maintain neighborhood character.

*Cross-sections and design standards are shown on **Figure 4-3**. Some existing areas may require additional right-of-way to accommodate buildout traffic demand, or may be constrained by existing land use, which may limit the City's ability to meet the standards in Table 4.4.*

C-I-2 Require all new developments to provide right-of-way and improvements consistent with the General Plan street designations and street cross-section standards. Further, ensure that either the City Capital Improvement Program Budget or new developments carries out the planned improvements included in **Table 4.3**. Alternative improvements shall be considered if supported by a traffic assessment conducted under the guidance of City staff.

Within infill areas, the City may just require that street improvements match the designs and cross-sections of abutting streets.

C-I-3 Provide for greater street connectivity by:

- Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g.

at least two access points for every 10 acres of development, with additional access, if warranted, for multi-family housing);

- Encouraging the construction of roundabouts instead of traffic signals and 4-way stop signs, where feasible;
- Requiring bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets; and
- Requiring new residential communities on undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.

C-I-4 Develop a multi-modal transit system map integrating bicycle, public transportation, pedestrian and vehicle linkages within the City to ensure circulation gaps are being met. Safe Routes to School and any necessary related improvements will also be shown on this map, and costs and priorities indicated based on need.

C-I-5 Use traffic calming measures to reduce speeds in existing and future residential areas. Traffic calming measures may include, but are not limited to:

- Reducing curb-to-curb pavement widths to the minimum necessary to ensure traffic flow and safety;
- Allowing on-street parking where possible;
- Providing generous street tree plantings and other vegetation;
- Building corner bulb-outs and intersection roundabouts;
- Allowing for curvilinear street design; and
- Installing, where appropriate, specific traffic calming features, such as bulb-outs and medians.

Landscaped medians will be provided to calm traffic, add greenery to the City, and reduce heat reflected from pavements.

These measures are preferred over the use of speed bumps and undulations. As part of the planning and design for the implementation for traffic calming devices, the City will evaluate the impacts to adjacent neighborhoods created by cut-through and diverted traffic patterns.

C-I-6 Establish vehicular access controls that limit access to developments from new median parkways, such as Semas Drive, by:

- Limiting left-turn intersections to only major intersecting roads by use of medians; and

- Limiting driveway access for new development along parkways by promoting use of alleys and frontage streets.

Traffic Level of Service

C-I-7 Develop and manage the roadway system to obtain Level of Service (LOS) D or better for two hour peak periods (a.m. and p.m.) on all major roadways and arterial intersections in the City. This policy does not extend to local residential streets (i.e., streets with direct driveway access to homes) or state highways and their intersections, where Caltrans policies apply. Exceptions to LOS D policy may be allowed by the City Council in areas, such as Downtown, where allowing a lower LOS would result in clear public benefits, social interaction and economic vitality, and help reduce overall automobile use.

No new development will be approved unless it can be shown that required LOS can be maintained on affected roadways either through this General Plan documentation or more specific traffic studies conducted through the City where appropriate.

C-I-8 Develop and manage local residential streets (i.e., streets with direct driveway access to homes) to limit average daily vehicle traffic volumes to 1,100 or less and 85th percentile speeds to 25 miles per hour or less.

An average daily traffic volume of 1,100 is considered the threshold for a local residential street. Traffic volumes above this level tend to change the street from a residential street where children can play to a traffic street with the primary task of moving traffic.

C-I-9 Establish a Transportation Performance Monitoring (TPM) program for the Business, Technology, and Industrial Reserve Area, generally located in the Southwest quadrant of SR-198 and SR-41, to monitor and control traffic arising from new development.

Development occurring within the TPM program area or any other such designated portion of the City must submit data to the City Engineer to calculate the number of site trips generated per developable acre. Within this area, development "caps" will be assigned to maintain service levels within traffic analysis zones (TAZs). Developers must provide data to the City Traffic Engineer for site trip calculations and reduce the number of housing units or size of non-residential buildings if the number of trips exceeds the allowed cap to gain development approval. The City will maintain a "trip ledger" showing all site trips that have been approved for each TAZ, with allocations made on the basis of receipt of a Certificate of Reservation of Site Trips or a building permit application. The City Council will periodically review the trip generation rates and allowable adjustments and exceptions established for the TPM program and the trip allocations by TAZ, and allow for recalculation of the maximum number of site trips allowed based on approved changes in trip generation rates or other adjustment factors. Details on how trip generation rates are established, how site

trips are calculated, how the trip ledger is maintained, how exceptions are granted and what happens when unallocated site trips are unavailable will be included in the ordinance establishing the TPM once a Specific Plan has been developed.

C-I-10 Require traffic impact studies for any proposed General Plan amendment that will generate significant amounts of traffic (such as 100 or more peak hour trips).

Specific thresholds will be based on location and project type, and exceptions may be granted where the traffic generation is consistent with the assumptions made for this General Plan or traffic studies have been completed for adjacent development and the City knows what mitigation, if any, will ensure that LOS standards will be maintained. The City's new traffic model developed for the 2030 General Plan will facilitate this analysis. Detailed intersection and queuing analyses may be required to determine site specific improvements as circumstances warrant.

C-I-11 Establish and implement additional programs to maintain adequate peak hour LOS at intersections and along roadway segments as circumstances warrant, including the following actions:

- Collect and analyze traffic volume data on a regular basis (at least every 5 years) and monitor current intersection and roadway segment levels of service on a regular basis. Use this information to update and refine the City's travel forecasting model, so that estimates of future conditions are more strongly based upon local travel behavior and trends.
- Consider, on a case by case basis, how to shift travel demand away from the peak period by changing work shift starting times, especially in those situations where peak traffic problems result from a few major generators (e.g. the West Hills College area and Bush Street corridor and the Industrial Area south of the City).
- Perform routine, ongoing evaluation of the efficiency of the urban street traffic control system, with emphasis on traffic signal timing, phasing and coordination to optimize traffic flow along arterial corridors. Use traffic control systems to balance arterial street utilization (e.g. timing and phasing for turn movements, peak period and off-peak signal timing plans).

To assure acceptable traffic operating standards over time, the Public Works Department will conduct on-going traffic counts and the City Engineer or other designee will monitor conditions on an ongoing basis and apply applicable remedial measures as needed.

C-I-12 To increase roadway safety and maintain emergency access between Cedar Lane and Lemoore Avenue:

- Construct the extension of Cedar Lane to Lemoore Avenue as a two-lane collector roadway with restricted access on Lemoore Avenue to only allow northbound left, southbound right, and eastbound right turn movements;

- Construct a center median along Lemoore Avenue to restrict all other movements (such as eastbound left turns from Cedar Lane onto northbound Lemoore Avenue). Further, do not provide any pedestrian crossings of Lemoore Avenue at this location;
- Provide crosswalks across Cedar Lane at Lemoore Avenue;
- Provide a stop control sign on the Cedar Lane approach to the intersection with Lemoore Avenue. No signalized traffic controls will be provided on Lemoore Avenue; and
- Cul-de-sac Larish Street approximately 220 feet west of Lemoore Avenue to eliminate cut-through traffic and better facilitate southbound left turn movements into the High School parking lot.

Funding for Improvements

C-I-13 Continue to require that new development pay its fair share of the costs of street and other traffic improvements based on traffic generated and its impact on traffic service levels.

C-I-14 Establish city-wide traffic impact fees to provide additional funding for transportation improvements needed to serve new development, including new interchanges and ramps. Provide for automatic annual adjustments in traffic fees to reflect increases in construction costs (e.g. materials, rate of inflation, etc.).

4.3 TRUCK ROUTES AND RAILROAD CORRIDOR

C-G-1 TRUCKS

In addition to moving people, the roadway system in Lemoore carries a substantial number of trucks moving goods. Specific truck routes have been designated throughout the City and are shown on **Figure 4-4**. These routes are designed to allow truck traffic to pass through the City with minimal impact on residential neighborhoods as well as local vehicular and pedestrian traffic.

C-G-2 RAIL

The San Joaquin Valley Railroad provides east-west train operation service on Union Pacific owned land in the City. An average of two train trips stop in, and/or pass through, the community per day with speeds ranging from 10-40 miles per hour.

In 2000, the City of Lemoore worked with the cities of Huron and Visalia to form the Cross Valley Rail Corridor Joint Powers Authority (CVRC JPA) to upgrade 45 miles

In downtown Lemoore, the multi-modal railroad depot is aesthetically-pleasing and provides current transit and future passenger rail opportunities.

of track from the City of Huron, through Lemoore and Hanford to the Visalia industrial park for approximately $15 million.

Figure 4-4 Truck Routes

Back

By 2004, the upgrade allowed the accommodation of 286,000 pound railcars to safely travel down the line with the intent of improving economic development opportunities for communities along the rail line and removing trucks off valley highways.

At this time, the primary rail shipper in Lemoore is Leprino Foods. In an attempt to further utilize rail access, the City created an new industrial park on the north side of the railroad tracks west of Belle Haven Drive to help accommodate future industries to locate within the community that require the use of the railroad. As a branch facility, the railroad only carries freight at this point in time and stops on demand.

Crossing arms are required at all arterial and collector railroad crossings. Railroad crossing improvements are needed at all existing crossings in Lemoore with the exception of Belle Haven Drive which was constructed in 2001 and 19th ½ Avenue. Two new railroad crossings are needed in the future to accommodate needed roadway connectivity, one at Daphne Lane and one at the College Drive alignment. Improvement locations are shown on **Figure 4-2**.

In 2003, the City relocated, reconstructed, and renovated the old Strathmore train depot on the south side of the tracks just north of Heinlen Street, where Lemoore's old passenger and freight rail depot used to stand. This building is the same year and type station as the previously demolished Southern Pacific rail depot. The intent of the project was to bring back a historic depot, provide a multi-mode component to the downtown area, and prepare for future passenger rail service along the line. This general plan designates the current depot and a second site on the Westside of Lemoore near West Hills College for future passenger rail.

An extensive passenger rail feasibility study by Kings County Association of Governments in the 1990's looked at the entire local rail system run by the San Joaquin Valley Railroad. In 2004, the CVRC JPA study further analyzed the feasibility of passenger rail from the Naval Air Station Lemoore, through Lemoore and Hanford to the City of Visalia. Both studies showed that passenger rail was not viable until future population could support it and necessary upgrades could be made to the railroad's signal system and a possibly a flyover needed to be constructed in Goshen junction in Tulare County to eliminate stoppages at the Union Pacific's north-south rail line.

When the CVRC JPA upgraded the railroad, their contract with the San Joaquin Valley Railroad stated that the railroad might consider passenger rail services in the future. Additionally, if the freight service went out of business, the CVRC JPA would have the first right to purchase the track structure to retain future passenger rail viability. Passenger rail service may not seem like a reasonable option, but if it is not reasonably planned for it will never be a transportation option. For long range planning purposes, the reservation and possibly early acquisition of land developed with an interim carpool parking area, assuming funding is available, can help keep this option open, as well as helping preserve the track structure, and increasing the residential population around future stations to create dense ridership starts. If high speed rail becomes a reality in California, connecting passenger rail on the San Joaquin rail line to Hanford or Visalia becomes more viable.

C-G-3 GUIDING POLICIES

C-G-4 Improve commercial goods movement.

C-G-5 Support the San Joaquin Valley Railroad operations.

C-G-6 Support the activities of the Joint Powers Authority of the Cross Valley Rail Corridor, which include freight and passenger rail goals.

C-G-7 IMPLEMENTING ACTIONS

C-I-1 Designate specific truck routes to provide for movement of goods throughout the City, ensure that adequate pavement depth, lane widths, and turn radii are maintained on the designated truck routes, and prohibit commercial trucks on non-truck routes except for direct deliveries.

C-I-2 Require the truck route street designs on Idaho and Iona Avenues and others to match the estimated truck weight and include unloading and turning movement for safe and efficient goods delivery.

C-I-3 Ensure that truck and tractor vehicle overnight parking is designated at key freeway-oriented locations to avoid truck parking in residential neighborhoods.

These truck parking locations will be shielded from view with landscaping and trees, when possible.

C-I-4 Re-route truck routes to avoid residential neighborhoods and schools, where feasible:

- Obtain adequate right of way on East D Street, widen where necessary due east of Lemoore Avenue, and re-route the existing truck route along East Bush Street to East D Street to increase safety by the High School; and
- Reevaluate designated truck routes when the new 19th Avenue or 21st Avenue/Marsh Drive interchanges are constructed on SR-198.

C-I-5 Work with Amtrak California and the San Joaquin Valley Railroad in the planning for freight service, train schedules, proposed stations, railroad crossings, and other issues of interest to the City in line with the General Plan discussion.

The City will support the activities of the Cross Valley Rail Corridor Joint Powers Authority, which include freight and passenger rail goals outlined in the 2004 Passenger Rail Feasibility Study.

4.4 PUBLIC TRANSIT

Kings Area Rural Transit (KART) provides fixed-route and demand-response (Dial-a-Ride) service in the Planning Area. Amtrak and Orange Belt provide bus service connections to

areas outside of the KART service area. These services connect to Goshen in Tulare County for transfers to Greyhound or to Paso Robles to connect to points beyond. The Navy base provides bus service around the military base to areas that KART does not serve.

KART Fixed Route Services

KART transit busses provide service to Lemoore residents

The KART fixed route system covers all of the urbanized areas, as well as the rural communities of Kings County and Visalia. KART transit route #7 provides service within Lemoore and between the City of Lemoore and the NAS Lemoore and the City of Hanford Amtrak station. One-hour service is provided between Lemoore and Hanford from 6:30 AM until 10:30 PM Monday to Friday. Saturday service is provided 8 AM to 5 PM. One-hour service is also provided between Lemoore and the NAS Lemoore Monday through Friday from 5:00 AM until 7:00 PM. However, the service to the base may be reduced due to the lack of funding. The service also operates Saturdays from 9:00 AM until 5:00 PM. The extended half-hourly schedule makes this route convenient for commuters traveling between communities, giving it the second highest ridership figures in the KART system.

KART Dial-a-Ride Services

Dial-a-Ride services are offered by KART each weekday within the communities of Hanford, Lemoore, Armona and Avenal to meet the needs of the disabled community who might not be able to access the fixed route services. Dial-a-ride service is used for rides to the Lemoore Senior Center, medical appointments, and shopping. Riders can connect with the Lemoore fixed route service for transportation beyond Lemoore city limits. Service is available for persons who are eligible for Americans with Disabilities Act (ADA) status and for persons who are more than a half-mile from the fixed route and within the services area.

C-G-1 GUIDING POLICIES

C-G-2 Promote improved transit service and the development and use of park-and-ride facilities for commuters.

C-G-3 IMPLEMENTING ACTIONS

C-I-1 Coordinate with Caltrans and Kings Area Rural Transit to identify and implement Park & Ride sites with convenient access to public transit.

Park & Ride areas should include secure parking for cars, motorcycles, and bicycles, and have minimal impact on neighborhoods.

C-I-2 Work with Kings Area Rural Transit to situate transit stops and hubs at locations that are convenient for transit users, and promote increased transit ridership through the provision of benches, bike racks on buses, and other amenities.

This will include identifying existing underserved neighborhoods and new areas under development that will need transit service. The Kings County Association of Governments conducts annual transit needs public hearings where the City and the public may express their transit needs.

Bus shelters should shield patrons from the elements, as well as blend well with surrounding urban design.

C-I-3 Work with Kings Area Rural Transit to provide accessible, well-lighted and attractive bus shelters that are compatible with surrounding neighborhoods.

Bus shelters should be located within landscape easement areas adjacent to the pedestrian sidewalks and incorporate features that are handicapped-friendly. They should be designed to discourage overnight sleepers and withstand vandalism. The City will work with KART on the issue of sharing responsibility on the upkeep of these shelters and incorporate them as part of its Capital Improvements Plan, if necessary.

C-I-4 Provide incentives for City employees to commute by public transit, car-pool, or use alternative fuel technology vehicles.

C-I-5 Offer alternative work hours and telecommuting when appropriate to City employees to reduce VMT and trips to work.

C-I-6 Purchase hybrid gasoline-electric, bio-diesel fuel or electric vehicles for the City fleet.

C-I-7 Ensure that new development is designed to make public transit a viable choice for residents. Options include:

- Locate medium-high density development whenever feasible near streets served by public transit; and
- Link neighborhoods to bus stops by continuous sidewalks or pedestrian paths.

Figure 4-5 Bus and Bike Routes

Back

4.5 BICYCLES, TRAILS, AND PEDESTRIAN CIRCULATION

C-G-1 BIKEWAYS

Kings County's Regional Bicycle Plan, adopted in 2005, illustrates both existing and planned bikeways for the City of Lemoore as well as other jurisdictions within the County. Currently Lemoore's bikeways extend throughout central Lemoore to the Municipal Golf Course and Little League field in the south and out 18th Avenue to the north. Planned bikeways will expand the network further out from central Lemoore to include the West Hills Community College in the west. In all, the Plan identifies 56 miles of existing and future bike lanes. **Figure 4-5** depicts both existing and future bicycle paths and trailways within the Planning Area.

Bike lanes and bike paths will continue to be a familiar sight in Lemoore at full buildout.

There are three types of bikeway classifications, as shown in **Table 4.5**. A "Class I" bikeway, also referred to as a bike path or multi-use trail, is a right-of-way that is completely separated from any street. A "Class II" bikeway, or bike lane, is a one-way, striped, and signed lane on a street or highway. A "Class III" bike route shares the road with motor vehicle traffic and is marked only by signs.

Table 4.5 Bikeway Classifications

Classification	*Function*	*Access Control*	*Right-of-Way*
Class I - Bike Paths	Provide exclusive right-of-way for bicyclists with cross flows by motorists minimized.	Where crossing or access from the bicycle path is required, the crossing should be grade-separated or occur at pedestrian crossings. Mid-block crossings should assign right-of-way through signing or signalization.	Minimum of 8 feet for a two-way facility. The minimum paved width for a one-way bike path is 5 feet. A minimum 2-foot wide graded area shall be provided adjacent to the pavement, but a 3-foot graded area is recommended. Where pedestrian activity is expected, along arterials and median parkways where street traffic generally exceeds 40 mph, a minimum of 11 feet for a two-way facility should be provided.
Class II - Bike Lanes	Provides preferential use of the paved area of roadway for bicyclists by establishing specific lines of demarcation between areas reserved for bicycles and motorists.	Access should be controlled to minimize intersection and driveway crossings. At intersections where there is a bike lane and an actuated signal, it is desirable to install bicycle-sensitive detectors. Push button detectors force the bicyclists to stop and actuate the push button.	Class II bike lanes are one-way facilities. On roadways with parking, the bike lane is located between the parking area and the traffic lane with 5-foot minimums for the bike lane. Where parking is permitted and not marked, minimum width is 12 feet. On roadways where parking is prohibited, a minimum of 5 feet is required, including a 2-foot gutter.
Class III - Bike Routes	Provides a right of way designated by signs or permanent markings and shared with motorists.	Access should be controlled to minimize driveway crossings.	The width of a Class III bike route varies. It is desirable to have a minimum bicycle travel way, however, due to various constraints/conditions; a minimum width has not been established.

Source: Fehr & Peers, 2003.

C-G-2 PEDESTRIAN CIRCULATION

Pedestrian flow patterns show similarities to vehicular traffic stream characteristics. Speed, flow rate, and density are interrelated. Capacity and density for pedestrians are dependent on width of the walking facility and the type of walking facility (e.g., walkways, crosswalks, and street corners). For crosswalks, pedestrian capacity and waiting time is affected by turning vehicles, signal timing, pedestrian/vehicle right-of-way laws, and pedestrian platoons meeting in the middle of the street. Street corners at signalized intersections are holding areas as well, and can be a critical location in the sidewalk network.

While sidewalk capacity is not an issue, in general, all areas should be designed to a scale

Policies in the proposed General Plan are designed to make Lemoore a more “pedestrian friendly” city in the future.

that accommodates pedestrians and bicyclists. Improvements in areas within the City that currently have undersized or no pedestrian facilities should be made a priority so that the pedestrian system will be better connected. The new neighborhood centers should also be designed to be "pedestrian friendly." In these areas, wider sidewalks should be considered to accommodate increased flows and to give preferential treatment to pedestrians. Pedestrian-friendly facilities should also be provided near transit stops and adjacent to medium and higher density residential areas.

C-G-3 GUIDING POLICY

C-G-4 Promote bicycling and walking as alternatives to the automobile.

C-G-5 IMPLEMENTING ACTIONS

C-I-1 Implement the Lemoore Bikeway Plan in coordination with the County’s Regional Bicycle Plan, which is updated every four years.

C-I-2 Establish bicycle lanes, bike routes, and bike paths consistent with the General Plan.

This would include establishing a new, more specific, Lemoore Bike Map.

C-I-3 Increase bicycle safety by:

- Sweeping and repairing bicycle lanes and paths on a regular basis;

- Ensuring that bikeways are delineated and signed in accordance with Caltrans' standards, and lighting is provided, where needed;
- Providing bicycle paths or lanes on bridges and overpasses;
- Ensuring that all new and improved streets have bicycle-safe drainage grates and are kept free of hazards such as uneven pavement, gravel, and other debris;
- Providing adequate signage and markings warning vehicular traffic of the existence of merging or crossing bicycle traffic where bike routes and paths make transitions into or across roadways;
- Working with the Lemoore Union School districts to promote classes on bicycle safety in the schools; and
- Installing large sidewalks along arterial and median parkway streets so that children may ride safely away from traffic (e.g., Lemoore Avenue and Hanford-Armona Road).

C-I-4 Amend the Zoning Ordinance to require bicycle parking facilities at large commercial and industrial employer sites, including racks and lockers that are integrated into the overall site and building design.

C-I-5 Develop a series of continuous walkways within new office parks, commercial districts, and residential neighborhoods so they connect to one another.

C-I-6 Provide for pedestrian-friendly zones in conjunction with the development, redevelopment, and design of mixed-use neighborhood core areas, the Downtown area, schools, parks, and other high use areas by:

- Providing intersection "bulb outs" to reduce walking distances across streets in the Downtown and other high use areas;
- Providing pedestrian facilities at all signalized intersections;
- Providing landscaping and shade that encourages pedestrian use;
- Constructing adequately lit and safe access through subdivision sites; and
- Providing mid-block electronic warning lights and signals, where warranted, to inform motorist of the presence of pedestrians at the crosswalk.

C-I-7 Establish specific standards for pedestrian facilities to be accessible to physically disabled persons, and ensure that roadway improvement projects address mobility or accessibility for bicyclists or pedestrians.

The City will incorporate federal and State requirements of the Americans with Disabilities Act (ADA) into standards for circulation access and pedestrian facilities (such as provisions for ramp improvements, curb cuts, audible traffic signals, etc.)

C-I-8 Amend the Zoning Ordinance to include standards in all new development for pedestrian circulation including: patterned concrete sidewalks across vehicular

streets, crossing signalization, bulb-outs, bicycle parking and lockers integrated with parking areas, and street lighting.

4.6 PARKING

Parking regulations are intended to accommodate vehicles used by occupants, visitors, customers, clientele, and employees of a variety of buildings. The regulations can help to provide accessible, attractive, secured parking facilities; they can help to reduce traffic congestions. Cutting-edge parking is shared parking, or parking that is no longer paved, but on pervious surface with grass filtering systems to increase groundwater levels, or includes solar panels on parking structures.

C-G-1 GUIDING POLICY

C-G-2 Foster practical parking solutions.

C-G-3 IMPLEMENTING ACTIONS

C-I-1 Ensure that all residential development provides adequate on-site parking for residents and guests.

As part of the Zoning Ordinance update, the City will evaluate what best practices exist for parking standards and establish procedures and criteria for requiring that developers provide parking surveys where spillover parking demand could cause neighborhood impacts.

C-I-2 Amend the Zoning Ordinance to require large employers to implement a Traffic Demand Management program that combines parking restrictions with transit or bicycle subsidies, such as promoting carpooling, free bus passes, priority bicycle parking and car share programs.

These requirements would apply to businesses employing more than 100 people for any single shift. They also will help the City meet greenhouse gas reduction targets.

C-I-3 Amend the Zoning Ordinance to allow shared parking for mixed-uses where peak parking demands do not overlap.

Different standards may be established for downtown and mixed-use areas. Shared parking should include residential in its typical nighttime use.

C-I-4 Amend the City's Parking Design Standards to promote multiple benefits, including shared parking for mixed-use projects, solar panels on parking structures to generate energy for parking lot lighting, and pervious pavement for parking lots to improve groundwater recharge.

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