CITY OF HANFORD
PEDESTRIAN AND BICYCLE MASTER PLAN

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PUBLIC DRAFT
HANFORD PEDESTRIAN AND BICYCLE MASTER PLAN

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Walking and bicycling provide opportunities for healthy exercise and to improve mobility for all members of the community. In addition, these alternative transportation modes benefit a community by reducing impacts on air and noise quality, relieving traffic congestion, vehicle parking demand, and reducing consumption of energy resources. The principal goal of this City of Hanford's Pedestrian and Bicycle Master Plan (Plan) is ***to provide the means to support bicycling and walking as an alternative mode of transportation for work, daily activities, and recreational trips.***

According to the California Streets and Highways Code, Sections 890 to 892, a city may complete a Bicycle Transportation Plan (BTP), which can then be used as part of grant applications to obtain funding in building infrastructure that is identified in the plan. Section 891.2 describes eleven (11) key elements that should be in the plan:

1. Number of Existing and Future Bicycle Commuters
2. Land Use and Settlement Patterns
3. Existing and Proposed Bikeways
4. Existing and Proposed Bicycle Parking Facilities
5. Existing and Proposed Access to other Transportation Modes
6. Facilities for Changing and Storing Clothes and Equipment
7. Bicycle Safety, Education, and Enforcement Programs
8. Citizen and Community Involvement in the Development of the Plan
9. Coordination and Consistency with Other Plans
10. Projects Proposed in the Plan and their Priority for Implementation
11. Past Expenditures for Bicycle Facilities and Future Financial Needs

A Bicycle Transportation Plan should be updated approximately every five years. The last such plan adopted by the City of Hanford was the 2011 Kings County Regional Bicycle Plan. Due to changes in state legislation such as the California Global Warming Solutions Act of 2006 (AB 32); Transportation Planning, Travel Demand Models, Sustainable Communities Strategy, Environmental Review Act of 2008 (SB 375); and, the California Complete Streets Act of 2008 (AB 1358), the purpose of this plan was to focus on integrating land use planning and public health into transportation planning decisions. This Pedestrian and Bicycle Master Plan is intended to be an update to that plan.

The study area for this Master Plan is the Urban Development Boundary shown in the 2035 Hanford General Plan. The Master Plan identifies what is needed to improve Hanford's pedestrian and bicycle infrastructure. It then recommends improvements that can be constructed now, as funding becomes available, as the city expands and grows.

A (1) vision, (2) goal, and (3) objectives and policies were developed and presented at a series of public workshops held at Coe Hall and Park with city staff, community members, and the consultant team.

Workshop #1 introduced the project to the public, define project parameters, and solicit opinions and concerns from the community to help shape the development of the Pedestrian and Bicycle Master Plan. The workshop also included a walking tour and audit of existing conditions of two round trip segments of City of Hanford streets.

Workshop #2 summarized the community's input on the walking tours; identified key destinations and sought suggestions for other key destinations; reviewed the 2011 Bicycle Plan and the routes that have been completed to date; suggested new pedestrian and bicycle routes to link destinations and connect existing routes; reviewed potential safety and education programs; and, begin the process of prioritizing pedestrian and bicycle routes and programs.

Workshop #3 summarized contents of the draft 2016 Pedestrian and Bicycle Master Plan. Three stations were set up that focused on the proposed pedestrian network, the proposed bicycle network, and programs for public safety and education. Participants were invited to visit each station at their leisure, learn more about the draft master plan, and fill out comment forms and questionnaires. The third workshop sought input from the public for finalizing the prioritization of routes and programs.

During the series of workshops and meetings with the City of Hanford, a community vision, and overall project goal, and objectives and policies of the pedestrian and bicycle plan are briefly summarized here and were further developed and identified in Chapter 5 of this report.

1. Vision

Hanford - A city where walking and cycling are fully integrated into daily life, providing environmentally-friendly transportation alternatives that are both safe and convenient for people of all ages and abilities.

2. Goal

An interconnected bikeway and community pedestrian network that facilitates and encourages non-motorized travel throughout Hanford.

3. Objectives and Policies

The following list of ten overall objectives was developed with the assistance and approval of community members and city staff. . The intent of the objectives is to guide policies in specific areas. Policies were developed in this master plan that are summarized and further detailed in Chapter 5 of this document. Policies begin to define the approach to achieve the vision, and goal, and objectives of the plan.

Objective 1: Prepare and maintain a Pedestrian and Bicycle Master Plan that identifies existing and future needs, provides specific recommendations for facilities and programs, and identifies priorities and funding sources for implementation.

Objective 2: Develop a comprehensive pedestrian and bikeway network that is feasible,

fundable over the life of the Master Plan, and serves the pedestrian's as well as bicyclist's needs for all trip purposes.

Objective 3: Provide the related support facilities and amenities necessary for bicycle travel to assume a significant role as a local alternative mode of transportation and recreation.

Objective 4: Improve safety for pedestrians and bicyclists by implementing education and promotion programs for all Hanford residents and by enforcing pedestrian, bicycle, and motorist laws and regulations affecting pedestrian and bicycle safety.

Objective 5: Require that routine maintenance of local roads consider pedestrian and bicycle safety.

Objective 6: Increase public awareness of the benefits of available walking and bicycling programs.

Objective 7: Encourage methods to increase pedestrian access and mobility for ages and ability.

Objective 8: Street crossings should be safe and accessible.

Objective 9: Maximize the amount of funding for pedestrian and bicycle projects and programs throughout Hanford, with an emphasis on implementation of this Master Plan.

Objective 10: Integrate pedestrian and bicycle facilities with public transit.

In order to meet the vision and goals, this Master Plan describes improvements to the infrastructure that can be made in Chapters 3 and 4. It also recommends programs to improve pedestrian and bicycle usage as well as pedestrian and bicycle safety. These programs can be found in Chapter 5.

CHAPTER 1

INTRODUCTION

INTRODUCTION

1.1 Purpose of the Plan

The City of Hanford's Pedestrian and Bicycle Master Plan (Master Plan) is intended to guide pedestrian and bikeway policies, programs, and facility improvements to improve safety, comfort, and convenience for pedestrians and bicyclists in Hanford. The Master Plan serves as a tool for the City of Hanford to implement the goals of the 2035 Hanford General Plan, the 2010 Hanford Air Quality Element, the Kings County Regional Bike Plan, and the 2011 Kings County Regional Transportation Plan.

The primary purpose of this Master Plan is to facilitate the development of pedestrian and bicycle facilities. To accomplish this goal, the Master Plan focuses on the following objectives:

- Guide the City in their overall pedestrian/bicycle transportation program;
- Provide an assessment of existing and proposed walkways/bikeways and pedestrian/ bicycle programs;
- Develop a feasible and comprehensive plan to meet Hanford's pedestrian and bicycle transportation needs;
- Assure consistency with existing relevant documents, including the Hanford General Plan and the Kings County Regional Bicycle Transportation Plan;
- Provide recommendations for pedestrian and bicycle facilities with a five-year priority outlook;
- Identify potential funding sources; and
- Conduct public outreach workshops to involve the public in the development of the Master Plan.

Walking and bicycling are low-cost, non-polluting, sustainable, and healthy forms of transportation. Once considered primarily a recreational activity, bicycling is now recognized as a viable alternative to the automobile. Societal benefits from walking and bicycling include: reduced motor vehicle traffic; reduced consumption of fuel resources; improved air quality; and, reduced health care costs due to a healthier population. Walking and bicycling are vital components in addressing environmental, traffic, and quality of life concerns for the citizens of Hanford.

1.2 Background

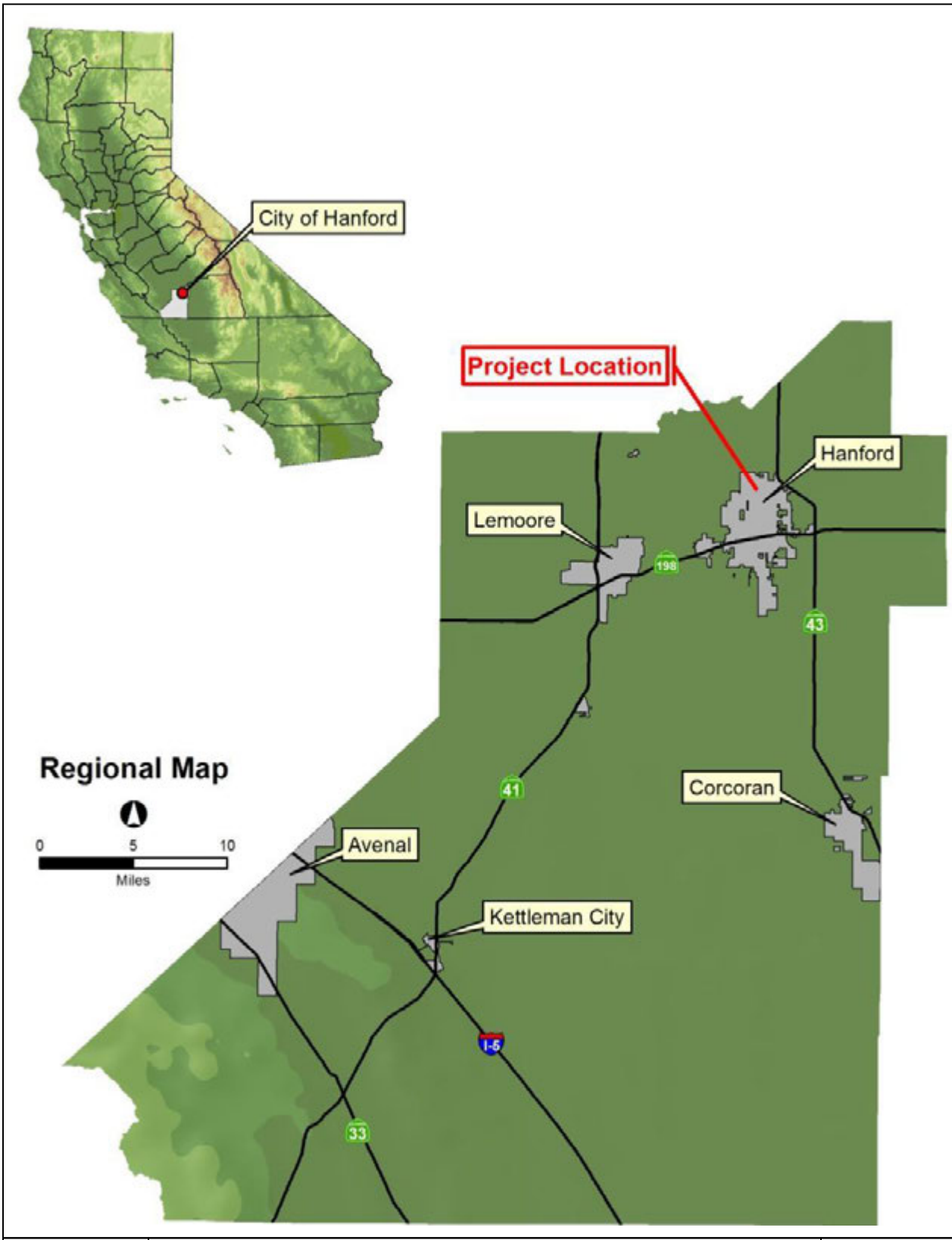
The City of Hanford last updated its bicycle transportation plan through the adoption of the 2011 Kings County Regional Bicycle Plan, joint planning document prepared by the Kings County Association of Governments (KCAG.) This Master Plan is an update to that document and now includes plans and policies for pedestrians. California Department of Transportation (Caltrans) guidelines recommend revisiting a bicycle transportation plan every five years.

The study area for this Master Plan is the Urban Growth Boundary that is proposed in the draft 2035 General Plan Update. This draft General Plan is anticipated to be adopted in the summer of 2016.

According to California Streets and Highways Code Sections 890 to 892, a local agency may prepare a bicycle transportation plan that includes elements list in Table 1-1. Once adopted and submitted to the county transportation agency, in this case KCAG, the City of Hanford can submit the Master Plan to Caltrans in connection with an application for funds for bikeways and related facilities that will implement the Master Plan. The following list indicates where the master plan elements are located this document.

Table 1-1
Elements of a Bicycle Transportation Plan

	Description from Streets and Highways Code 891.2	Section(s) Where Addressed Within This Master Plan
(a)	Estimated number of existing and future bicycle commuters	3.3
(b)	Map and description of land use and settlement patterns	1.4, 3.1.3, Appendix A
(c)	Map and description of existing and proposed bikeways	3.5.4
(d)	Map and description of bicycle parking facilities	3.6.4
(e)	Map and description of multimodal connections	3.1.4, 3.6.6
(f)	Map and description of facilities for changing and storing clothes and equipment	3.6.5
(g)	Description of bicycle safety and education programs	3.6.1
(h)	Description of citizen and community participation	Chapter 2
(i)	Description of coordination with transportation, air quality, and energy conservation plans	1.5, 2.2
(j)	Description of proposed bicycle projects and priority for implementation	5.1 to 5.5
(k)	Description of past expenditures and future financial needs for bicycle facilities	5.5, Appendix F



Quad Knopf	REGIONAL LOCATION	Figure 1 - 1

1.3 Setting

Hanford is centrally located in California's San Joaquin Valley and is the county seat and largest city in Kings County. See Figure 1-1 (Regional Location.) It currently covers about 17 square miles. Hanford's estimated population on January 1, 2013, was approximately 55,122 based on California Department of Finance statistics. According to the proposed 2035 General Plan Update, Hanford's population is expected to grow to a projected population of 90,000 persons by the year 2035, which is roughly a 2.1% annual growth rate. Hanford is a family-friendly community that has retained its small town atmosphere. Downtown Hanford is the commercial, cultural, historic, and civic center of the community. Downtown's central location provides easy access from all parts of the city.

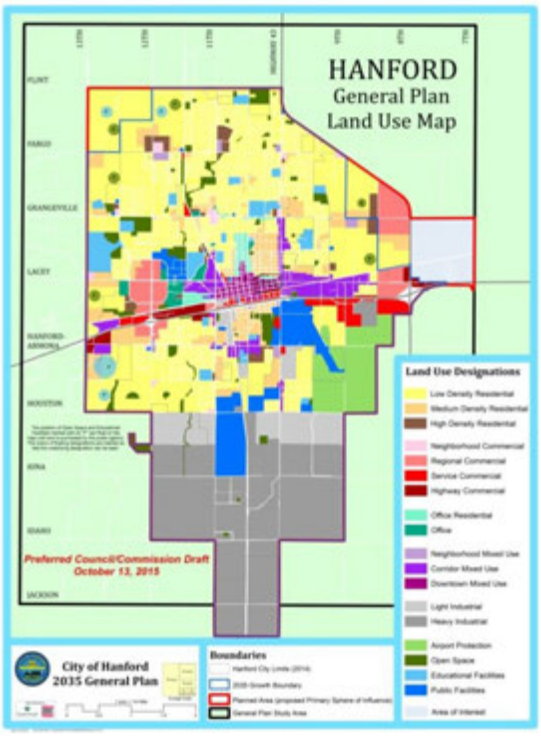
Hanford is located on the Valley floor with a very shallow natural slope in its terrain. Hanford's average monthly high temperatures from October through May are 54 to 83 degrees. Hanford receives an average of 8.2 inches of rain annually and has an average of 266 sunny days per year. For the most part, the terrain and climate of Hanford makes it an ideal setting for walking and bicycling.

Hanford, rich in history and culture, is a progressive city that continues to preserve its past and plan for its future. The city has a diversified employment base, including the agricultural, manufacturing, educational, medical, and service industries. Besides its vibrant downtown, there are several commercial shopping centers, a multimodal transportation center, community and neighborhood parks, and a municipal airport. Hanford is a great place for both residents and visitors to explore, live, and enjoy.

From a pedestrian's and bicyclist's perspective, Hanford is an appealing city to travel with many opportunities for enhancement. The flat local topography is ideally suited for both pedestrian and bicycle use. The many quiet, tree shaded streets offer pedestrians and cyclists comfort and safety. The size of the city also makes most areas accessible within a 20-minute bicycle ride.

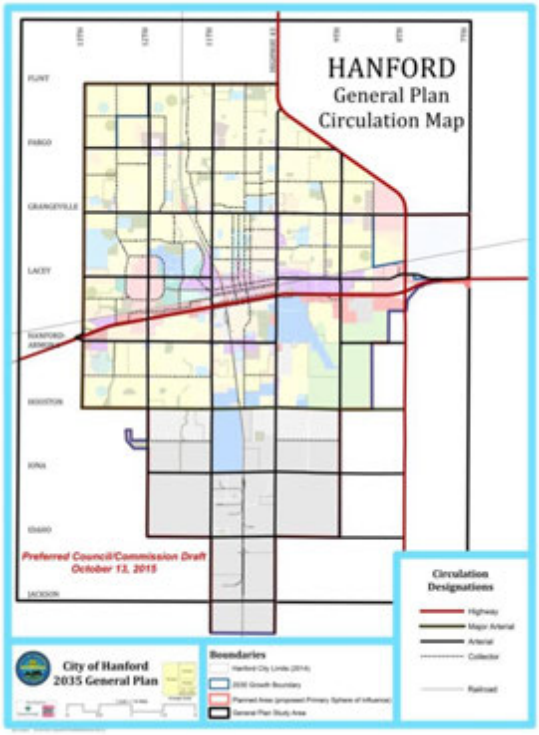
Hanford does face many challenges for developing future bicycle and pedestrian facilities and increasing pedestrian and bicycle usage. Hanford's most significant barrier is the seasonal temperature extremes that can make walking and bicycling undesirable for some. As in most California cities, Hanford's roadways are dominated by the automobile, making a typical trip uncomfortable for many bicyclists. Traffic conditions will continue to worsen as Hanford continues to grow. However, the City can increase the number and connectivity of pedestrian and bicycle facilities, thereby improving the ease and desirability of walking and bicycling in the community.

1.4 Land Use Pattern



Hanford's land use pattern focuses on its downtown, which is both the physical center of the community, as well as the commercial, cultural, and civic center of the community. There are two regional commercial areas, one centered around the intersection at 12th Avenue and Lacey Boulevard, and a future center on Lacey Boulevard just west of State Route (SR) 43. Hanford currently has three high schools, an off-site extension of the larger College of the Sequoias community college, and a number of elementary and middle schools. Residential neighborhoods are dominated by single-family housing, multi-family housing, and neighborhood commercial with office centers. The Land Use Element Map from the draft 2035 Hanford General Plan is provided in Appendix A of this Master Plan.

1.5 Transportation System



Hanford's transportation system includes freeways, arterials, collectors, and local streets. The system is based on a one-mile square grid pattern of east-west and north-south arterials and collectors. SR 43, along the eastern edge of Hanford, is a major north-south corridor providing access between the cities of Selma to the north and Corcoran, Wasco, Shafter, and Bakersfield to the south. SR 198 is a grade-separated highway running east-west through the center of the Hanford, connecting to SR 99, Visalia, and Sequoia National Park to the east and to Lemoore, SR 41, and Naval Air Station (NAS) Lemoore to the west.

SR 43 is open to bicycle travel. SR 198 is open to bicycle travel east of SR 43 and west of NAS Lemoore. The Bicycle Guide for District 6 (Caltrans, 2015) recommends that bicyclists traveling on SR 198 use Houston Avenue and SR 43 when traveling through Hanford. The Circulation Element Map from the draft 2035 Hanford General Plan is provided in Appendix B of this Master Plan.

CHAPTER 2

COMMUNITY INVOLVEMENT AND RELEVANT PLANS AND POLICIES

COMMUNITY INVOLVEMENT AND RELEVANT PLANS AND POLICIES

2.1 Community Involvement

A number of opportunities were made available to the public to participate in the development of this Master Plan. These opportunities included meetings, walking tours, surveys, questionnaires, comment cards, the City's website (for information), and public hearings.

2.1.1 STAKEHOLDERS GROUPS

The responsibilities of the following stakeholder groups were defined:

City Council (CC): The City Council is the final decision-maker and authority on the contents of the Pedestrian and Bicycle Master Plan. Meetings were noticed on the City's website, by email distribution to workshop participants, and to those who requested email notification.

Planning Commission (PC): The Planning Commission is responsible for reviewing and directing actions and approaches taken by the City staff. They reviewed recommendations made by the consultant team, City staff, and then made formal recommendations to the City Council. Meetings were noticed on the City's website, by email distribution to all the workshop participants, and those who have requested email notification.

Other Meetings: The consultant team contacted and/or met with the following groups in order to solicit a broad spectrum of community participants for the workshops and encourage participation by children, seniors, disabled individuals, and all income groups. The following organizations were contacted to participate at the workshops:

- California Highway Patrol
- Kings Community Action Organization;
- Kings County Bicyclists;
- Hanford Chamber of Commerce;
- Main Street Hanford;
- City of Hanford Parks and Recreation Department;
- Kings County Community Development; and
- Local Schools.
- Latino Environmental Advancement & Policy (LEAP), represented by Rey Leon.

Technical Advisory Committee (TAC): The Technical Advisory Committee (TAC) is made up of the consultant team and City staff. They reviewed administrative drafts of documents prior to public release and made decisions on technical issues. The team met with the City of Hanford Parking and Traffic Commission on December 3, 2015, to present a summary of the previous workshops and gather input and comments from them.

Community Based Workshops: Public workshops were open to all interested residents, business owners, and stakeholders. Three workshops were held on November 15, 2014, June 27,

2015, and November 14, 2015. All Planning Commissioners and the City Council were invited, but not required to attend. Public workshops were noticed via email distribution, posters at selected locations throughout the City, City website, and the Hanford Sentinel. Spanish translators were available at every workshop. Sign Language interpreters were made available upon advance request. The workshops were held on Saturday mornings to allow a wide range of participants to attend. The workshops were held at Coe Park Hall, just south of downtown.

2.1.2 ADVERTISING THE COMMUNITY WORKSHOPS

A number of techniques were used to market that the City of Hanford was hosting a series of workshops to gather input from the community on their needs and desires for pedestrianways, bikeways, pedestrian and bicycle facilities, and safety and education issues and programs relative to both. The following advertising was done to promote the workshops:

Hanford Sentinel: Quarter page advertisements were placed in the newspaper prior to each workshop.

City of Hanford Website: Information about the workshops was posted to the City's website.

Displayed Posters: Posters were placed at Hanford City Hall and the Hanford Branch of the Kings County Library. Extra copies of the poster were made available at City Hall and the Main Street Hanford office for businesses to pick up and post at their place of business. Figure 2-1 shows the poster from Workshop #1. Posters for the other workshops were similar.

Emailed Posters: The following organizations were emailed a PDF version of the poster for the workshop to advertise via their social media contacts:

- Kings Community Action Group;
- City of Hanford Parks and Recreation Department;
- Main Street Hanford;
- Kings County Bicyclists;
- Rotary Club of Hanford;
- Hanford Chamber of Commerce;
- Kings County Community Development;
- Local Schools; and
- City of Hanford Parking and Traffic Commission.
- Planning Commission
- City Council.

Thursday Night Marketplace. When the consultant team presented information about the 2035 General Plan update process to the community at our booth at the September 25, 2014, Thursday Night Marketplace, the team also informed the public about the Pedestrian and Bicycle Plan with the goal of attracting interested community members to participate in future workshops for the Master Plan. Announcements were distributed, a brief survey was presented, and local citizens were asked to sign up if they wanted to be notified to participate in the workshops.

Quad Knopf	WORKSHOP #1 POSTER	Figure 2 - 1

2.1.3 COMMUNITY WORKSHOP DESCRIPTIONS

The following describes each of the three community workshops that took place on November 15, 2014, June 27, 2015, and November 14, 2015.

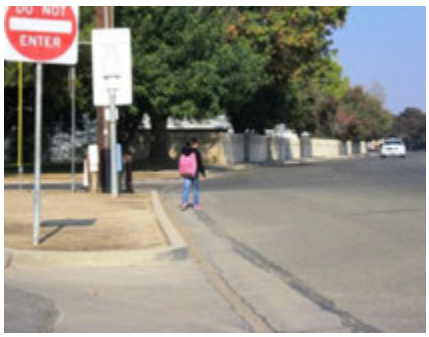
Community Workshop #1: Introduction and Walking Tour

The first community workshop included a walking tour that began and ended at Coe Park Hall located south of Second Street and east of Douty Street. The walking routes for the tour were determined prior to the community workshop, and a route map was distributed to all participants. The route was divided into two tours. Each tour was selected for its diversity of conditions and character. Figure 2-2 shows the Walking Tour Map.

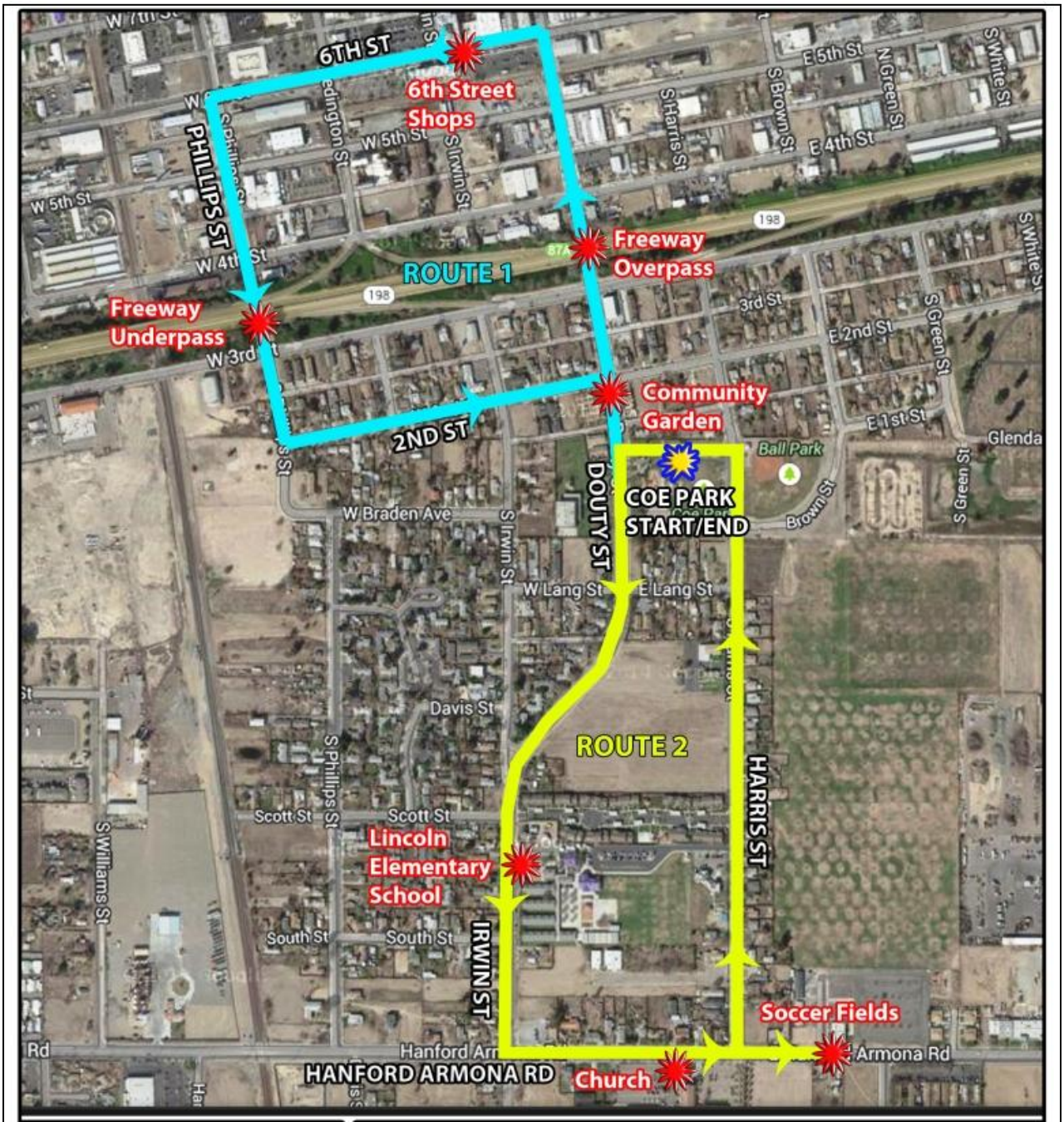
- Tour 1 crossed SR 198 both over and under the freeway, crossed a railroad, and passed through several blocks of downtown, and a residential area. Streets included Douty Street, Sixth Street, Phillips Street, and Second Street.

- Tour 2 passed Lincoln Elementary School, the Soccer Complex, and included Douty Street, Irwin Street, Hanford-Armona Road, and Harris Street.

Each participant was asked to score the selected segment of roadway using a "walking audit" survey. The walking audit survey is meant to identify qualities such as deficiencies, conflicts, barriers, aesthetics, universal accessibility, comfort, and maintenance. Following the walking tour, the workshop included use of TurningPoint (handheld response keypad) Technology and a PowerPoint presentation. Bicycle access, bicycle parking, and pedestrian access were addressed.



The intent of the first workshop was to introduce the project to the public, define project parameters, and solicit opinions and concerns from the community to help shape the development of the Pedestrian and Bicycle Plan. The consultant team conducted preliminary research and identified findings on existing conditions including pedestrian/vehicle collisions and bicycle/vehicle collisions to the participants during the workshop. The process of soliciting ideas, needs, concerns, and record comments from the community were used as a basis for planning exercise(s).



Quad Knopf	WALKING TOUR MAP	Figure 2 - 2

The contents of the first workshop included:

- Objective and purpose of the study;
- Benefits of walking and bicycling;
- Collision data;
- Preliminary findings on existing conditions;
- Current bicycle routes to and within Hanford; and
- Walking tours with walking audit surveys.

Community Workshop #2: Map Your Route

Since the participants from the first workshop recommended meeting again at the same location, the second community workshop was also held at Coe Hall. The meeting consisted of an interactive presentation-style workshop using large format exhibits that included the existing Bicycle Master Plan, the proposed plan maps for both pedestrianways and bikeways, and a map of the trip attractors in Hanford. The conceptual pedestrian and bicycle plans allowed the participants to chart their preferences and priorities for pedestrian access, bikeways, and destinations. The consultant team used "dot-macracy" (voting dots) to gauge their preferences.

The second workshop focused on identifying the key findings, components, and priorities. PowerPoint and TurningPoint software were used again. The contents of the second workshop focused on the following:

- Workshop #1 summary and recap;
- Survey results (from both TurningPoint, open-ended questions, and walking audit surveys);
- Destinations/Trip Attractors Map;
- Suggestions for new destinations not currently linked by pedestrian paths or bikeways;
- Bikeway Map (existing and recommended bikeways);
- Pedestrian Plan (existing and recommended pedestrian corridors);
- Bicycle facilities "tool kit";

- Examples of policies and programs to improve safety and encourage bicycling and walking;
- Priority list of improvements as determined by participants; and
- An overview of the Safe Routes to School Program.

Community Workshop #3: Preliminary Draft Plan and Public Safety

The third community workshop was another open house event located at Coe Park Hall, and consisted of a presentation-style workshop that summarized the contents of the draft Master Plan document. The presentation and handouts were made available and all presented materials were posted to the City's website.

This workshop focused on refining and finalizing the ideas discussed during the second workshop and development of the draft Master Plan. The consultant team solicited input from the community on the draft plan maps and document contents. PowerPoint software and large scale maps and exhibits were used in our workshop. Three stations were set up for workshop participants to visit on their own and observe and learn more about the pedestrianways, bikeways, and potential safety and education programs. Once again, each workshop was open to the public, without restriction. Surveys were provided at each table in English and Spanish, and participants were asked to prioritize pedestrianways, bikeways, and safety and education programs.

2.2 Relevant Plans and Policy Documents

Hanford has a number of existing planning documents that plan for pedestrians and bicycles. This section describes these documents and summarizes the goals and policies that contribute to improving pedestrian and bicycle access throughout the Hanford and in Kings County.

2.2.1 KINGS COUNTY REGIONAL BICYCLE PLAN (2011)

The 2011 Kings County Region Bicycle Plan was prepared by the Kings County Association of Governments (KCAG) in collaboration with the member jurisdictions of Avenal, Corcoran, Lemoore, and Hanford and the Bicycle Advisory Committee in consultation with the people of Kings County. This plan was prepared to provide guidance in developing bicycling networks and support programs to the communities in Kings County.

The bicycle plan for Kings County is unique because it was designed to serve dual purposes: (1) to provide a regional bicycle plan that ensures facilities planned within all five local jurisdictions are integrated and compatible and (2) to provide "stand-alone" bicycle plans for each jurisdiction which are independent and can be used by each agency to secure funding and implement individual bicycle plans. In addition, the plan focuses on developing a countywide network of routes that would provide bicycle access between communities for commuting and recreational trips. Figure 2-3 shows the City of Hanford Planned and Existing Bikeways from the 2011 Kings County Regional Bike Plan. The identified countywide bikeways connecting to and traveling through Hanford were considered in development of this Master Plan.

Goals and policies of the Kings County Regional Bicycle Transportation Plan that also serve to influence the planning, design, and implementation of the Hanford Pedestrian and Bicycle Master Plan include:

Goal 1: Provide a well-developed, safe, and convenient, interregionally connected system of bikeways complete with support facilities.

Policy 1.1: Design bikeways with adequate width to safely accommodate bicycles by conforming to the Caltrans Highway Design Manual, the California Manual on Uniform Traffic Control Devises (MUTCD), and the Federal MUTCD.

Policy 1.2: Exploit all available federal, state, and local grant funding sources to develop and enhance bikeways.

Policy 1.3: Ensure that the bikeway system is consistent with the availability of funds to construct, operate, and maintain. Also identify responsibility for each of these functions.

Policy 1.4: Identify, where possible, desirable alternative routes to those with high traffic volumes and high accidents as well as to take measures to make high traffic volume routes safer.

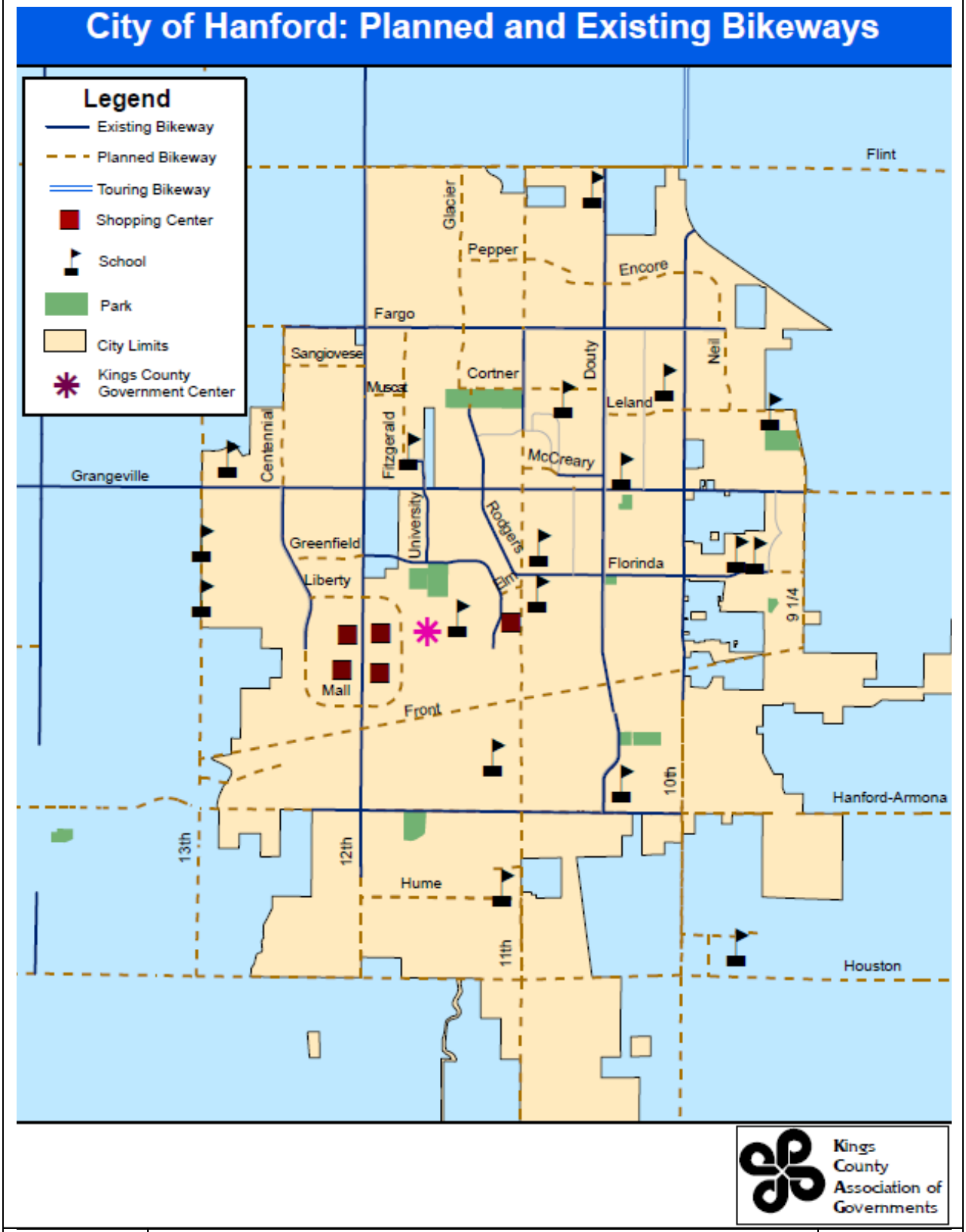
Policy 1.5: Design bikeways to ensure safe passage of cyclists (lighting, removal or trimming of foliage adjacent to the bikeway, etc).

Policy 1.6: Define and prioritize logical project limits for bicycle routes which ensure continuity between routes, especially across jurisdictional boundaries within the County and encourage links with other counties.

Policy 1.7: Identify key areas for the placement of bicycle racks and support facilities.

2.2.2 CITY OF HANFORD GENERAL PLAN CIRCULATION ELEMENT

The Circulation Element makes references to bicycle travel and bikeways. As most bikeways are located on roadways, the focus of this report on roadways and circulation is especially pertinent to the Master Plan and bicycle access.



Quad Knopf	HANFORD MAP FROM 2011 REGIONAL BICYCLE PLAN	Figure 2 - 3

The 2035 General Plan Circulation Element presents a classification of Hanford roadways. Much of the policy discussion is relevant to bicycle and pedestrian travel in Hanford particularly in providing an integrated transportation system for the safe and efficient movement of people and goods in the Hanford planning area. While maintaining an acceptable level of service (LOS) on all roadways, there is also the consideration of facilitating a balanced use of all travel modes, including bicycles. Of particular interest to this Master Plan are the policies requiring adequate safety measures, including appropriate maintenance, lighting, traffic controls and signage; policies related to giving priority to projects that complete links on the existing system or relieve deficiencies; and policies focusing on encouraging bicycle usage. The 2035 Circulation Element Map is shown in Appendix B.

The Circulation Element and the Bicycle Plan promote the establishment of a shared use roadway system, but encourages newly developing areas to provide for bicycle facilities along certain roadways and as part of an overall link to open space and recreational amenities and other land uses.

2035 General Plan Circulation Element Goals and Policies Related to this Master Plan

Goal T8: An interconnected bikeway and community pedestrian network that facilitates and encourages nonmotorized travel throughout Hanford.

Policy T39 – Accommodating All Modes of Traffic: Plan, design, and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.

Policy T40 – Pedestrian and Bicycle Placemaking: Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.

Policy T64 – Bicycle Network Master Planning: Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.

Policy T65 – Bicycle Network: Prioritize the elimination of gaps in the bicycle network to connect destinations across Hanford.

Policy T66 – Public Bicycle Parking: Increase the amount of publicly accessible bicycle parking and storage throughout the city and adopt standards for bicycle parking at new development projects.

Policy T67 – Bicycle Safety Programs: Support programs that educate bicyclists and motorists about bicycle safety.

Policy T68 – Bicycle Transportation Ordinance: Consider adoption of a bicycle transportation ordinance that addresses safe use and operation of bicycles.

Policy T69 – Road Projects with Bicycle Facilities: Incorporate planned bicycle facilities into road maintenance projects where feasible.

Policy T70 –Pedestrian Connections: Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers and other destinations throughout the city.

Policy T71 – Pedestrian and Bicycle Crossings: Identify and enhance key pedestrian and bicycle crossings that cross physical barriers, such as highways or railroad tracks.

Policy T72 – Reduction of Pedestrian Barriers: Coordinate with utility providers to reduce or eliminate barriers to pedestrian mobility created by utility infrastructure, such as utility poles that obstruct accessibility.

Policy T92 – Amenities that Support Alternative Modes of Transportation: Encourage new developments to include on-site amenities that support alternative modes of transportation. Emphasize pedestrian and bicycle-friendly design, accessibility to transit, preferred rideshare parking, showers and lockers, on-site food service, and child care, where appropriate.

2.2.3 CITY OF HANFORD GENERAL PLAN LAND USE ELEMENT

This Land Use Element describes the extent of the Hanford General Plan Planning Area. It describes the location and type of future land uses. The 2035 General Plan Land Use Map is shown in Appendix A. Specific to walkways and bikeways, it addresses the need for alternative modes of transportation for commuting to improve the quality of air in the City of Hanford and its air basin. It includes the following implementing policies:

2035 General Plan Land Use Element Related to this Master Plan

Policy L96 – Types of Uses in Open Space Land Use Designation: Typical uses in the Open Space land use designation include parks, pathways, storm drainage basins and water recharge areas, reservations for future freeway interchanges, areas designated for noise attenuation, and major landscape corridors along entryways into the city.

2.2.4 CITY OF HANFORD GENERAL PLAN HEALTH, SAFETY, AND NOISE ELEMENT

Communities can be developed in such a way that promotes good health. Components of healthy living include walkable and bikeable streets, convenient and accessible parks, increased opportunities for social interaction, access to healthy foods and medical services, safe neighborhoods and public places, and policies that promote healthier living. A community's overall health depends on multiple factors, including the environment they live in. A healthier living environment reduces health risks and promotes better lifestyle choices.

Policy H65 – Comfortable Walking and Biking Environments: Provide comfortable environments and destinations for walking and bicycling to integrate physical activity into daily routines.

Policy H66 – Non-Vehicular Access: Improve bicycle, pedestrian, and public transportation access to residential areas, educational and childcare facilities, employment centers, commercial centers, recreational areas, and other destination points.

2.2.5 CITY OF HANFORD GENERAL PLAN AIR QUALITY ELEMENT, JULY 2010

The following objectives or policies that serve to improve air quality through alternative modes of transportation such as walking and biking are:

Objective AQ 2: Educate the public on the impact that individual choices and decisions regarding land use, transportation, lifestyle, and energy use have on our air quality and climate.

Objective AQ 6: Design new development projects within the City that provide facilities and programs that improve the effectiveness of transportation control measures and congestion management programs such as bicycle paths and lanes, sidewalks and pedestrian paths, secure bicycle parking, transit stops at appropriate locations, transportation demand management programs at large employers, and transportation improvements that reduce congestion and improve traffic flow.

Policy AQ 6.3: Provide end of trip facilities such as preferential parking for vanpools and rideshare, bicycle parking, and other facilities suitable for the type of business for projects with the potential for over 100 employees to support compliance with San Joaquin Valley Air Pollution Control District Rule 9410.

Policy AQ 7.7: Promote urban forestry projects that shade buildings, homes, streets, pedestrian walkways, and urban core areas to reduce surface and ambient temperatures and reduce energy required for cooling.

2.2.6 2011 KINGS COUNTY REGIONAL TRANSPORTATION PLAN

With an increased focus on green infrastructure at the state, local, and federal levels, nonmotorized facilities have been elevated to greater importance as a necessary component of the overall transportation system. The 2011 Kings County Regional Transportation Plan (RTP), covering the 25-year period from 2010 to 2035, is a continuation of Kings County's transportation planning process which began in 1975 with the adoption of its first RTP. The RTP is intended to serve many purposes that impact local levels such as the City of Hanford. The RTP is designed to provide the foundation for transportation decisions by local, regional, and state officials, identify transportation improvements, and set forth an action plan to address transportation issues and needs. The action plan is detailed in the Implementation Strategies that follow.

1. Carry out the recommendations of the Kings County Regional Bicycle Plan.

2. On designated shared-use roads, provide adequate shoulder space, stripe the pavement, place bike route indicator signs, and maintain a good riding surface.

3. Ensure that public and private sectors provide adequate bicycle parking. This can be done by amending each jurisdiction's zoning ordinance. The ordinances could be written to allow installation of secure bicycle parking "in lieu" of a portion of automobile parking normally required.

4. Utilize existing private and public bicycle safety seminars. Seminars can be scheduled at schools, adult education programs, local retailing outlets, and public workshops. Funding opportunities should be explored in the private sector (retailers, social service clubs, recreational clubs, etc.) and in public/private partnerships. Additional funds could be drawn from state traffic safety grants.

5. Local police departments should conduct regular campaigns and enforce traffic laws regarding, riding against traffic, disregarding traffic signals and signs, and the appropriate use of working bicycle lights in the evening or early morning as well as efforts to educate motorists concerning the rights of cyclists on the roadway.

6. Each city should have an active bicycle registration program.

7. KCAG should join with other counties to petition the State Department of Motor Vehicles to require knowledge of bicycle traffic laws in licensing tests. DMV should be held responsible for making motorists aware of bicyclists' rights and responsibilities.

8. Seek all available state, federal, and private grant funds to install and maintain bicycle facilities and to conduct educational programs.

9. Local agencies should consider bicycle issues in all phases of planning for transportation. This includes local land use, air quality, zoning and circulation elements of general plans, capital improvement plans, and recreational programs.

10. KCAG should consider bicycle issues in its Regional Transportation Plan, Federal Transportation Improvement Program, and Regional Transportation Improvement Plan. KCAG should also ensure that bicycle issues are represented at annual LTF allocation discussions and public hearings.

11. Better coordination in developing and implementing bicycle plans can be achieved by:
    a. Designating a single individual within each jurisdiction to ensure that bicycle issues are represented in that agency's various functions; and
    b. Encouraging bicycle advisory and support groups to work closely with local officials in identifying and seeking solutions to bicycle problems. These groups should assume the responsibility of keeping bicycle issues before decision-makers.

12. The rehabilitation of roads will benefit bicycle users. As roads are repaved, wider shoulders should be provided to upgrade the riding surface for bicyclists.

13. Bicycle parking facilities should be installed at transit stops, park-and-ride lots, and intermodal stations to provide a seamless transition with other transportation modes. Transit buses should continue to be equipped with bicycle transporting racks.

14. Encourage newly developing areas to incorporate bicycle facilities along appropriate roadways and off-road systems as part of open space and recreational amenities.

15. Continue to develop and maintain a safe sidewalk system that facilitates pedestrian and ADA access to public transit for commuting, recreation, or other purposes.

16. The abandonment of rail lines provides an opportunity to establish trails for nonmotorized, recreational, or open space uses. Converting abandoned rail corridors into trails also preserves the right-of-ways for any future transit use.

CHAPTER 3

BICYCLE NETWORK

BICYCLE NETWORK

3.1 Existing Conditions

3.1.1 BIKEWAYS

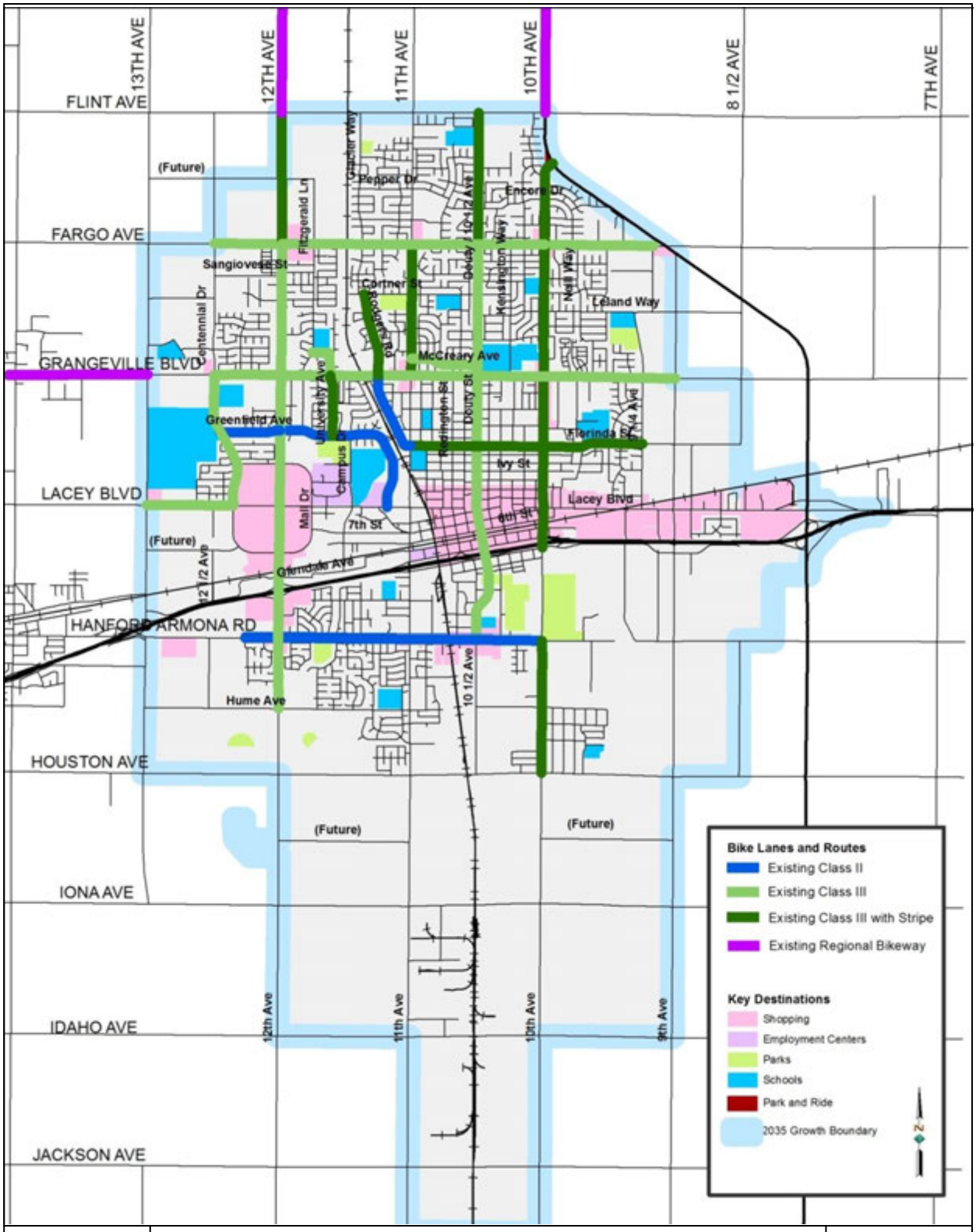
Currently, there are 30.56 miles of existing bikeways in the City of Hanford, as shown in Table 3-1. Hanford's bikeways are currently classified into three categories: Class II (Bike Lanes), Class III (Bike Routes), and Class III (Bike Routes with Stripes).

Generally, Class II bike lanes in Hanford are five to six feet wide and, where located adjacent to a parking lane, are striped with a line on both sides of the street such as Hanford-Armona Road, Rodgers Road, and Greenfield Avenue. The bike lane is designated by black and white bike lane signage near major intersections and bike lane pavement markings on each block. Some Class II bike lanes are located on streets that are designed for four travel lanes, but are currently striped for two lanes until traffic warrants an expansion. The typical cross section includes one travel lane, a bicycle lane, and a parking lane in each direction, and a center turn lane. If additional vehicular travel lane capacity is warranted in the future and the roadway cannot be widened due to right-of-way constraints, the Class II bike lane may need to be reclassified to a Class III bike route.

Hanford has a large number of Class III bike routes. The bike routes are typically provided as connections between bike lane facilities where there may be limited street width to accommodate a designated bike lane. The bike route is designated by green and white bike route signage near intersections. In some instances, as is the case with 10th Avenue and Florinda Street, Class III bike routes are delineated by a white stripe on the pavement and a bike route sign. Parking is permitted between the stripe and the curb. Fargo Avenue, Grangeville Avenue, and Lacey Boulevard are examples of Class III bikeways that are not striped but are designated with bike route signs. The breakdown of bikeway classifications and mileages are shown in Table 3-1. A map of the existing bikeways is shown in Figure 3-1.

Table 3-1
Total Length of Existing Bikeways by Classification

Bikeway Classification	Mileage
Class I Bike Paths	0.00
Class II Bike Lanes	5.69
Class III Bike Routes	15.99
Class III w/Stripe	8.88
Total	**30.56**



Quad Knopf

EXISTING BIKEWAYS MAP

Figure 3 - 1

A field review of the existing bikeway facilities was conducted. A brief description of each facility including facility type by street segment, posted speed limits, and signs or pavement markings located on the facility is presented below.

Table 3-2
Existing Conditions by Classification

EXISTING CONDITIONS				
Street Name	**Segment**	**Speed**	**Bike Lane/Route Signs**	**Pavement Markings**
Class II				
Rodgers Road	Grangeville to Florinda	35 mph	✓	✓
Greenfield Avenue	Centennial to Lacey	35 mph	✓	✓
Hanford-Armona Road	Greenbrier to 10th	40 mph	✓	✓
Class III				
Centennial Drive	Grangeville to Lacey	45 mph	✓	×
12th Avenue	Fargo to Hume	40 mph	✓	×
Kings Road/Berkshire Way	Fitzgerald to Grangeville	30 mph	✓	×
Douty Avenue	Fargo to Hanford-Armona	25-40 mph	✓	×
Fargo Avenue	Centennial to 9¼	35 mph	✓	×
McCreary Avenue	11th to Douty	25 mph	✓	×
Grangeville Boulevard	Centennial to 9th Ave	45 mph	✓	×
Lacey Boulevard	13th to Centennial	45 mph	✓	×
Class III with Stripe				
12th Avenue	Flint to Fargo	55 mph	✓	×
11th Avenue	Fargo to Grangeville	40 mph	✓	✓
University Avenue	Grangeville to Greenfield	35 mph	✓	✓
Rodgers Road	Mallard to Grangeville	30 mph	✓	✓
Douty Street	Flint to Fargo	40 mph	✓	✓
10th Avenue	SR 43 to Third	35-45 mph	✓	✓
10th Avenue	Hanford-Armona to Houston	55 mph	✓	×
Florinda Street	11th to 9¼	35 mph	✓	✓

Existing Conditions by Classification – Descriptions

The following paragraphs describe the existing bikeways, their classification, and condition.

CLASS II

Rodgers Road – Grangeville Boulevard to Florinda Street: Rodgers Road is a north-south collector roadway with a striped and signed north-south bikeway. It provides one vehicular travel lane and a four (4) foot wide bike lane in both directions connecting Grangeville Boulevard to Florinda Street. The posted speed limit is 25 mph. These bike lanes also provide

connections to the existing Class III bike route on Rodgers Road between Mallard Way and Grangeville Boulevard.

Greenfield Avenue – Centennial Avenue to Lacey Boulevard: Greenfield Avenue is a collector roadway connecting Lacey Boulevard to 12th Avenue. It provides one travel lane, one lane of parking, and one bike lane on both sides of the street. This segment has both bike lane signs and pavement markings. The posted speed limit is 35 mph between Lacey Boulevard and University Avenue. Greenfield Avenue serves Hanford's Youth Athletic Complex, Hanford West High School, and many professional offices. Participants at this Master Plan's public workshops named Greenfield Avenue as one of their favorite bikeways.

Hanford-Armona Road – Greenbrier Drive to 10th Avenue: Hanford-Armona Road is an arterial roadway with a striped and signed east-west bikeway. It provides one vehicular travel lane and bike lane in both directions, parking on both sides of the street, and a center turn lane. The bikeway is a four (4) foot wide bike lane adjacent to a parking lane. This bikeway provides access to parks, school, a church, and the Kings County Fairgrounds.

CLASS III

Centennial Drive – Grangeville Avenue to Lacey Boulevard: Centennial Drive is a north-south two lane collector that serves Sierra Pacific High School and residential uses. This segment of bikeway is a striped bike route with pavement markings. The posted speed limit is 45 mph.

12th Avenue – Fargo Avenue to Hume Avenue: 12th Avenue is a north-south arterial. From Fargo Avenue to Grangeville Avenue it consists of one travel lane on either side of the street. Most of this segment includes uneven and sometimes narrow shoulders. The bikeway includes bike lane signs and the speed limit is posted at 45 and 55 mph. One bike lane sign is posted on each side of the street. From Grangeville to Hume, 12th Avenue is a north-south arterial passing through a mix of residential development and commercial and office uses north of SR 198 including the regional shopping district at the 12th Avenue and Lacey Boulevard intersection. The roadway is a signed bike route with posted speed limits of 40 and 45 mph.

Kings Road/Berkshire Way – Fitzgerald Street to Grangeville Avenue: Kings Road and Berkshire Way are local streets that serve as a connection between the University Avenue bike route and Fitzgerald Lane. There are two vehicular travel lanes and parking is allowed.

11th Avenue – Fargo Avenue to Grangeville Boulevard: 11th Avenue is a north-south arterial street. The bike route extends from Grangeville Avenue north to Fargo Avenue. This segment has bike lane signs (should be bike route) but no actual striped lane. It shares two travel lanes and parking on both sides of the street. This segment provides access to residential neighborhoods and Hidden Valley Park. The posted speed limit is 40 mph.

Douty Street – Fargo Avenue to Hanford-Armona Road: Douty Street is a north-south collector roadway that serves residential neighborhoods, Coe Park, Longfield Center, Lincoln Elementary School, Immaculate Heart of Mary Catholic Church, Central Valley Hospital, Lacey Park, Earl F. Johnson High School, Hanford High School, Pioneer Middle School, Monroe

Elementary School, and downtown Hanford. It has two vehicle travel lanes and parking on both sides of the street. This segment of bikeway is identified with bike route signs and no pavement markings. The speed limit is 35 and 40 mph.

Fargo Avenue – Centennial Avenue to 9¼ Avenue: From 12th Avenue to 11th Avenue, Fargo Avenue is a four lane arterial roadway with no parking permitted. It shares commercial and residential uses. The roadway has bike route signs with a posted speed limit of 45 mph west of 11th Avenue. Fargo Avenue becomes a three-lane roadway east of 11th Avenue and a two lane roadway with parking permitted on both sides east of Fir Lane to Neill Way/Encore Drive. The speed limit reduces to 35 and 40 mph in residential areas. There is no curb and gutter east of Neill Way/Encore Drive. The speed limit increases to 50 mph outside the city limits of Hanford.

McCreary Avenue – 11th Avenue to Douty Street: McCreary Avenue is a local street serving residential land uses. It is a two-lane roadway with permitted parking during limited hours of the day. The roadway is a signed bike route. This route provides direct connections to bike lanes on Douty Street and Mulberry Drive. The bikeway provides access to residential neighborhoods and Hanford High School. The posted speed limit is 25 mph. Most of McCreary Avenue lacks curb-and-gutter (between Douty Street and Peralta Way). Shoulders are uneven or nonexistent. McCreary Avenue stops at Mulberry Drive and does not connect to 11th Avenue. Mulberry Drive provides the bikeway to 11th Avenue.

Grangeville Boulevard – Centennial Avenue to 9th Avenue: Grangeville Boulevard is an east-west four lane arterial street with a center turn lane. Bike route signs have been installed. Parking is not permitted on Grangeville Boulevard. The speed limit is 45 mph and slows to 25 mph near Hanford High School. This facility is part of a planned route eastward through the City of Lemoore. It will be a direct connection to future facilities planned within Hanford's city limits. Currently, the bike route does not extend westward from 12th Avenue. The bikeway provides access to many residential neighborhoods, Hanford High School, shopping centers, restaurants, and coffee shops.

Lacey Boulevard – 13th Avenue to Centennial Avenue: Lacey Boulevard is an east-west arterial street. From 13th Avenue to Centennial Avenue there is a Class III bike route with signs. The roadway provides access to College of the Sequoias and Sierra Pacific High School.

CLASS III WITH STRIPE

Previous bicycle master plans for Hanford utilized a standard that combined a bike route with on-street parallel parking. They were designated Class III with stripe because they have a single stripe that separates the motorized travel lane from the bike route/parking area.

12th Avenue – Flint Avenue to Fargo Avenue: 12th Avenue is a 2-lane arterial road located in an area that is mostly undeveloped, but is planned to have development in the future as the City grows. There are Class III signs with a single stripe and no parking.

University Avenue – Grangeville Boulevard to Greenfield Avenue: University Avenue is a north-south collector street that extends from Grangeville Boulevard to Greenfield Avenue. It

has two vehicular travel lanes and two eight (8') foot bike/parking lanes on each side of the street. The bike/parking lanes are currently shared between bicycles and parked vehicles. University Avenue provides access to Joseph Simas Elementary School to the north and the Youth Sports Complex south of Greenfield Avenue.

Rodgers Road – Mallard Way to Grangeville Boulevard: Rodgers Road is a north-south collector street with a striped and signed bikeway. The speed limit is posted at 30 mph. This bikeway terminates at Hidden Valley Park. There are bike/parking lanes that are shared between bicycles and parked vehicles.

Douty Street – Flint Avenue to Fargo Avenue: Douty Street is a north-south collector street that extends from Flint Avenue to Cortner Street. The speed limit is 40 mph. The roadway consists of two lanes of vehicular traffic. Two eight (8') bicycle/parking lanes on each side of the street are located south of Fareway Lane. Striping and signage do not exist north of Fareway Lane. Shoulders here are uneven or nonexistent. Currently, the bike lanes are also used for vehicle parking. Numerous driveways and side streets line both sides of Douty Street.

10th Avenue – SR 43 to Third Avenue: 10th Avenue is a north-south four lane arterial roadway. It has two travel lanes and one eight (8) foot wide bike route on either side of the street with a center turn lane from SR 43 to Orange Street. From Orange Street to SR 198, the roadway becomes a divided arterial with two travel lanes and one bike lane on either side of the street. From Orange Avenue to Leland Way, the bike route on the east side of the street is eight (8) feet wide and it is four (4) feet wide on the west side of the street. "No Parking" signs are posted on the west side of the street and parking is permitted in the bike route on the east side of the street. There are "No Parking" signs from Leland Way to Grangeville and the posted speed limit varies from 35 to 40 mph. The bikeways provide access to commercial retail uses, residential neighborhoods, and Hanford's downtown area. Bike routes are shared with parked vehicles between Fargo Avenue and Lacey Boulevard. No parking is allowed from Fargo Avenue to SR 43.

10th Avenue – Hanford-Armona Road to Houston Avenue: On 10th Avenue from Hanford-Armona Road to Houston Avenue there is one bike lane sign per side, uneven shoulders (some narrow) and a 55 mph speed limit. This segment also includes access to the unincorporated community of Home Garden. Destinations include Kings County Fairgrounds, Hanford Cemetery, and Hanford Municipal Airport.

Florinda Street – 11th Avenue to 9¼ Avenue: Florinda Street is an east-west collector street. This segment of bikeway has striped bike/parking lanes with bike route signs. It has two vehicular travel lanes. The eight (8) foot wide bike/parking lanes are shared with parked cars. The Florinda Street bikeway provides access to residential neighborhoods, Woodrow Wilson High School, John F. Kennedy Junior High School, Lee Richmond Elementary School, Central Valley General Hospital, Lacey Park, St. Brigid's Catholic Church, St. Rose Catholic School, and KART bus stops. The posted speed limit is 30 mph.

CLASS I BIKE PATHS

Hanford has irrigation canals and sloughs that flow through private property, and behind residences. While initially thought to be attractive locations for Class I bike paths, the cost of pursuing an easement, construction costs, and safety and potential for litigation are factors that make trails along irrigation canals and sloughs an unsuccessful proposition in Hanford. Two operating railroad lines (San Joaquin Valley Railroad and Union Pacific Railroad) cross through the City of Hanford. Each railroad passes along properties that are mostly developed. Although there have been attempts by the City of Hanford to identify areas along the San Joaquin Valley Railroad that might allow a bike path to be constructed, railroad companies have not been open to granting an easement for bike path use.

The construction cost for Class I bike paths is estimated at $300,000 per mile and includes installation of signage, pavement markings, and amenities. Costs do not include contingencies, design and administrative costs, fencing, right-of-way acquisition, or inflation factors. For these reasons, there are no existing Class I bike paths and no new paths are identified in this Master Plan.

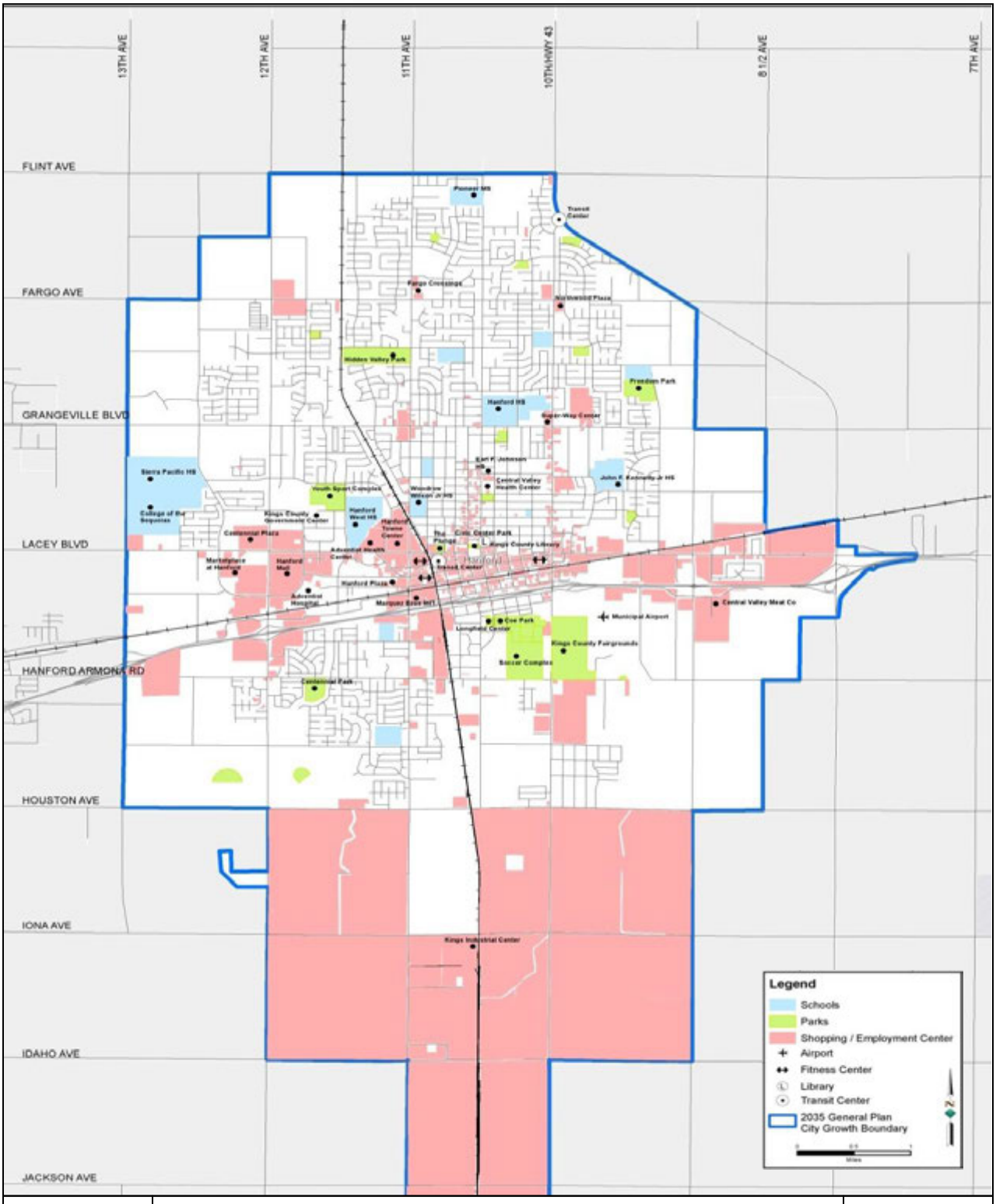
3.1.2 EXISTING BICYCLE SUPPORT FACILITIES

Bicycle support facilities are essential components of bicycle travel. Support facilities include bicycle parking (covered or open), bicycle parking signage, shower and changing space, and secure storage (lockers or cages) for bicycle gear. These support facilities encourage bicycling, and in some cases their availability may be the determining factor as to whether or not the trip is made by bicycle.

Bicycle parking, in the form of bicycle racks, is available at Hanford's public schools, College of the Sequoias, parks, and other major trip attractors such as Hanford Mall, County Civic Center, Kings County Library, and some downtown locations. Shower and storage facilities located in schools and private facilities, such as health clubs, are not currently available to the general public and therefore do not represent potential resources.

3.1.3 EXISTING AND FUTURE LAND USE/TRIP ATTRACTORS

Understanding existing and future land use patterns in Hanford is important to developing a fully interconnected pedestrian and bikeway system. Connections should be provided between trip generators (residential areas) and trip attractors or destinations. Activity centers, including downtown businesses and government centers, schools, shopping centers, parks, athletic fields, and employment centers serve as 'attractors' or destinations for pedestrian and bicycle trips. Convenient access to these locations from the pedestrian and bicycle network is crucial to the ability of the network to encourage and promote bicycle and pedestrian trips. A map of trip attractors in Hanford is shown in Figure 3-2. This map was compiled from a review of aerial photography, General Plan Maps, and field observation. The 2035 Land Use Map (see Appendix A) can also assist in predicting future development patterns and identifying future bicycle facility needs.



Quad Knopf	TRIP ATTRACTORS MAP	Figure 3 - 2

The primary trip attractors for the current land uses and the proposed 2035 General Plan land uses are:

- Downtown;
- Hanford Mall/Centennial Plaza/Marketplace at Hanford Shopping District;
- Hanford Towne Centre/Hanford Plaza/Adventist Health Center;
- Future Regional Shopping District at SR 43 and Lacey Boulevard;
- Coe Park/Soccer Complex/Longfield Center/ Kings County Fairgrounds;
- College of the Sequoias/Sierra Pacific High School;
- Hanford West High School/Youth Sports Complex; and
- Hanford High School and Ballpark/Super-Way Shopping Center.

Hanford has several concentrations of employment centers that would also serve as trip attractors. Those locations are as follows:

- Kings Industrial Park;
- Kings County Government Center;
- Central Valley Meat Company;
- Central Valley Health Center; and
- Fourth and Fifth Street area south of downtown.

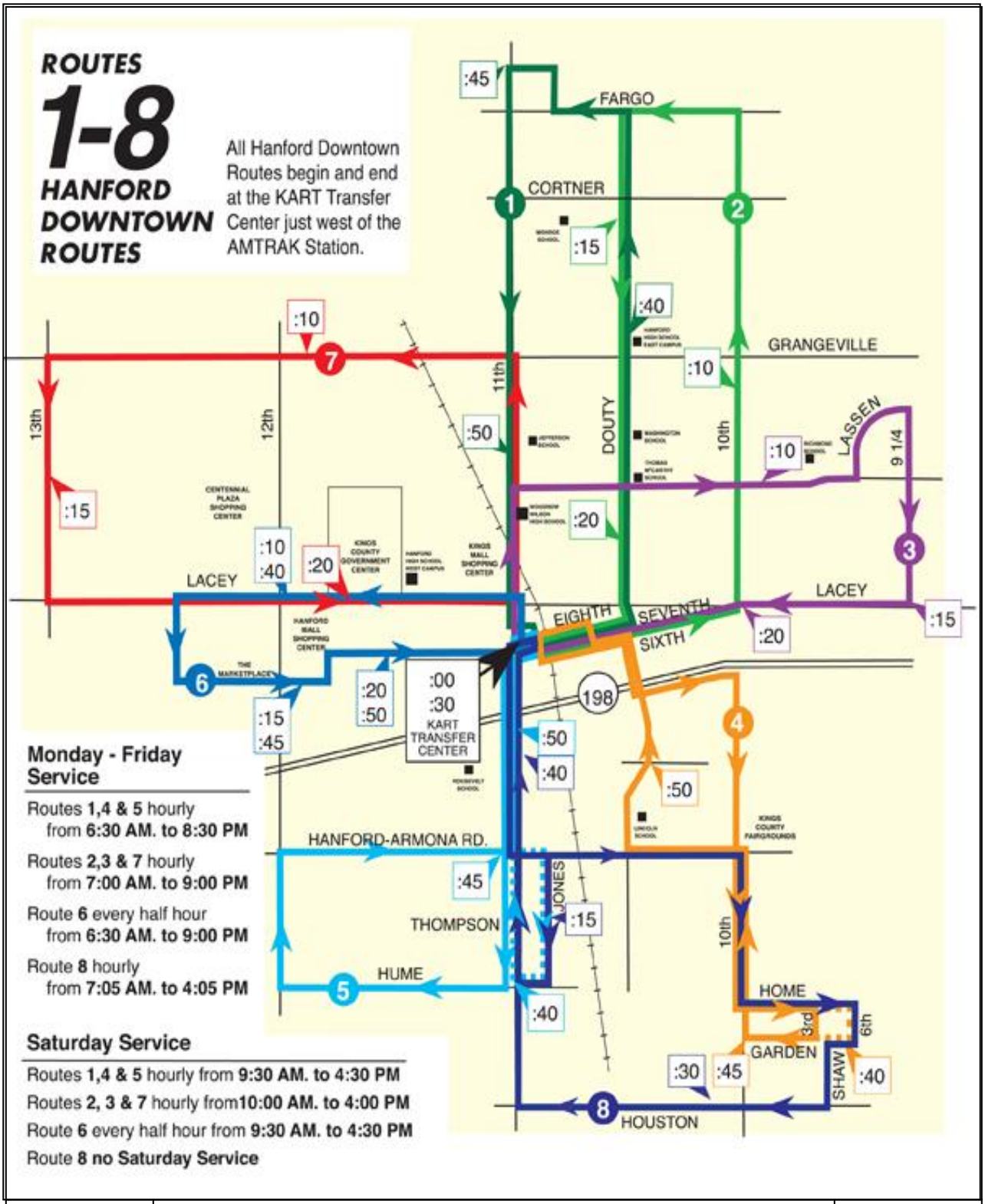
3.1.4 INTERMODAL OPPORTUNITIES

KART

Some bicycle parking is currently available at the Hanford Train Station and KART Transfer Facility located at Seventh Street and Santa Fe Avenue in downtown Hanford. The 2035 Hanford General Plan has identified policies to provide for a multi-modal facility at this location that includes bicycle access. The General Plan policy states "Support multi-modal access to and from the existing Amtrak station".

Allowing bicycles on buses encourages an intermodal (i.e., connected) transportation network, increases transit ridership, and provides another alternative to automobile use. KART currently offers bicycle racks on the front of all their buses. While KART will continue to expand its services and ridership, the need for bicycles racks will continue to be an essential part of the service.

KART currently provides bus service on eight routes throughout Hanford. A map of the routes is shown in Figure 3-3. Some routes begin as early as 6:30 AM and end as late as 9:00 PM during the week. Saturday service is also available from 9:30 AM to 4:30 PM. All routes run on Saturday. All downtown routes begin and end at the KART Transfer Center just west of the Amtrak Station.



Quad Knopf	KART HANFORD TRANSIT ROUTES	Figure 3 - 3

AMTRAK

Full-size bicycles may not be carried on trains at the Hanford Amtrak station. Bicycles would need to be boxed and checked for a fee. Each traveler who checks a bicycle can either box it themselves or purchase a box at the station. Recumbent, tandem and special bicycles that are larger than the standard bicycle dimensions and will not fit in a standard bicycle box are prohibited. There are no plans to provide designated walk-on bicycle service on any Amtrak trains in the San Joaquin Valley.

3.1.5 BICYCLE SAFETY, EDUCATION, ENFORCEMENT, AND PROMOTION PROGRAMS

In general, bicycle education programs can be described as those that develop awareness and provide information, such as posters, brochures and videos; and, those that change behavior and/or develop skills, such as programs with on-bike instruction. Programs can take many forms including hands-on riding instruction for adults and children, curriculum for adults who supervise children (i.e. teachers, day care persons), public awareness programs aimed at the whole community, instruction for motorists, law enforcement and community events. Key to any bicycle education program is engaging the target audience; in other words, getting people to participate. Bicycle promotion programs are intended to increase the community's awareness of the benefits of bicycling and can also serve to improve safety for bicyclists.

Although education programs are provided for the school-aged population, since the prevalence of adult bicycle rider collisions is much higher than school aged riders, the need for adult education programs is important as well.

3.2 Bicycle Collision Analysis

Bicycle-involved collision data was obtained from the Transportation Injury Mapping System (TIMS) and the Statewide Integrated Traffic Records System (SWITRS) for a five-year period from January 2008 through December 2012. This data represents all reported bicycle-involved collisions occurring within Hanford. It should be noted that bicycle-involved collisions are typically underreported. Therefore, it is likely that some collisions are not included in the TIMS data. Collisions that occur off the street are also not included in TIMS data. A summary of total collisions by year and severity are shown in Table 3-3.

Table 3-3
Bicycle-Involved Collision Summary

Year	Total Collisions	Injury	Fatality
2008	12	12	0
2009	9	9	0
2010	13	13	0
2011	14	14	0
2012	11	11	0
Total	**59**	**59**	**0**

Source: California Highway Patrol SWITRS data 2008-2012

Collision data was analyzed to identify patterns in the occurrence of bicycle-involved collisions which might highlight specific improvements needed in the City of Hanford's bicycle program. This analysis primarily focused on collision location, primary cause, party at fault, age of parties involved, and helmet use. Analysis results will be used to determine not only the need for physical improvements, such as bike lanes, to increase bicyclist safety, but also to identify the areas of most concern for education, enforcement, and safety programs.

The variation of bicycle-related collisions by time of day, day of week and season of year are typical of expected travel patterns. Consequently, the higher numbers of collisions experienced in Hanford during peak travel times are most likely the result of higher volumes of bicycle and motor vehicle traffic rather than any other contributing factor. Weekdays account for 79.7% of the bicycle-involved collisions. During the weekday peak periods, the evening (4:00 PM to 6:00 PM) commute had 50% more collisions than the morning commute (7:00 AM to 9:00 AM.) A review of seasonal variations shows that the incidences of collisions are highest in the autumn, and lowest in the winter. The highest monthly rates are in September, October, and November, while the lowest rates are in January, February, March, July, and December. As mentioned above, these variations are consistent with normal traffic patterns for both bicycles and motor vehicles.

3.2.1 LOCATION

Intersections pose the highest safety hazard for all traffic and the greatest challenge to traffic engineers. Of the 59 bicycle-involved collisions reported between 2008 and 2012, 49 (or over 83.1%) occurred at or within 100 feet of an intersection. The locations with the highest collision rates identify the areas which have hazards for bicycling or driving and/or carry the higher volumes of bicycle and vehicle traffic. Tables 3-4 and 3-5 identify the roadways and intersections with the highest number of bicycle collisions. Figure 3-4 maps the locations.

Table 3-4
Roadways with Highest Number of Bicycle-Involved Collisions

Roadway	Number of Collisions
11th Avenue	18
Hanford-Armona Road	5
Lacey Boulevard	5
Redington Street	5

Source: California Highway Patrol SWITRS 2008-2012

Table 3-5
Intersections with Highest Number of Bicycle-Involved Collisions

Intersection	Number of Collisions		
	Within 100' of intersection	Over 100' from intersection	Total
11th Avenue at 6th Street	3	0	3
11th Avenue at Lacey Boulevard	2	1	3
11th Avenue at 3rd Street	2	0	2
Harris Street at Elm Street	2	0	2
11th Avenue at Grangeville Boulevard	1	1	2
11th Avenue at Hanford-Armona Road	1	1	2

Source: California Highway Patrol SWITRS 2008-2012

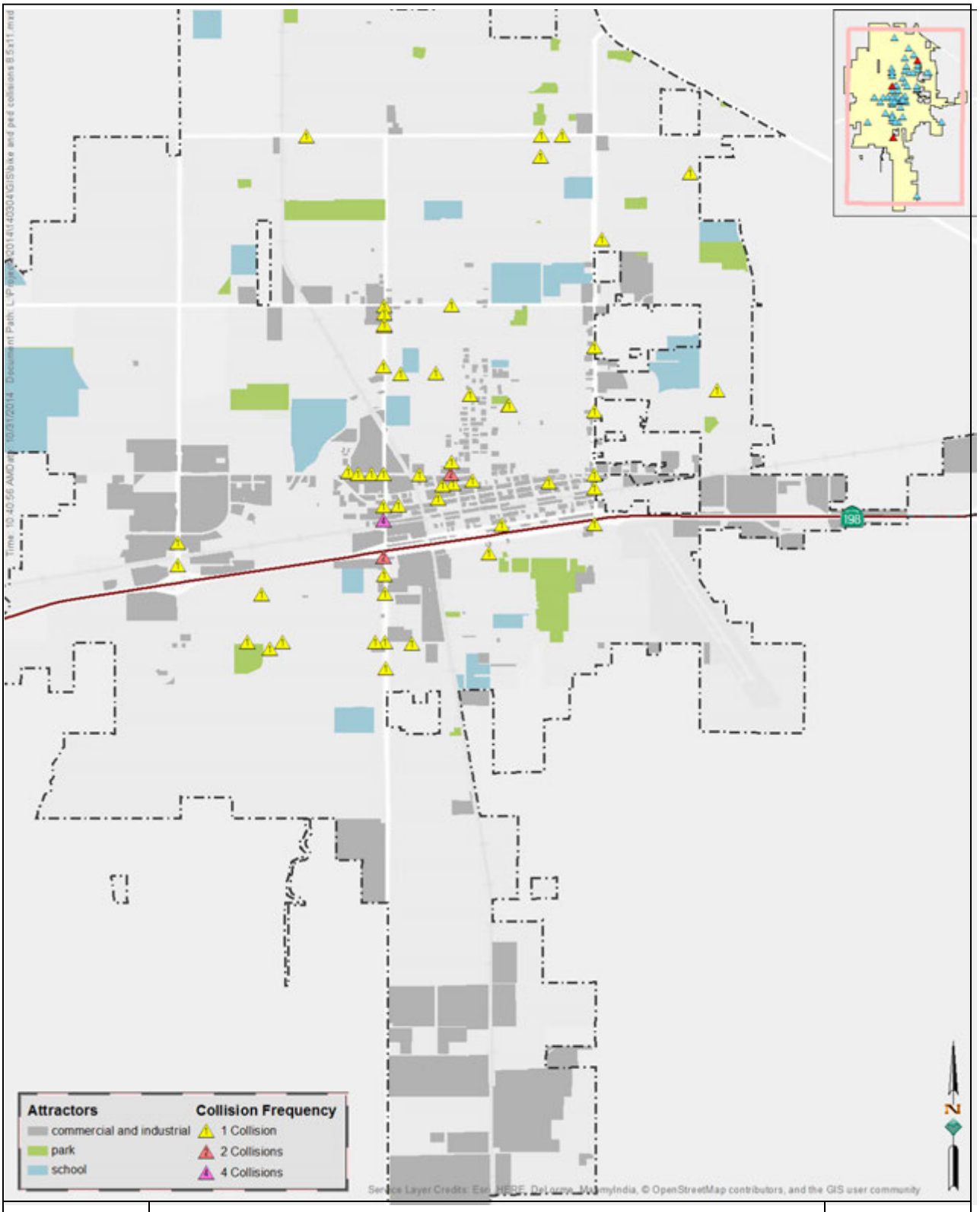
3.2.2 PARTY AT FAULT

This analysis includes all age groups of motorists from beginning drivers to seniors. Intersections, driveways, and other junctions continue to be locations where about three-fourths of the bicycle/vehicle crashes occur. For pedestrian/vehicle crashes, forty-one percent of crashes occurred at roadway intersections, and an additional 8 percent occurred in driveways or alley intersections. Table 3-6 summarizes the primary cause of the collision as stated in the SWITRS reports.

Table 3-6
Collisions by Primary Cause

Primary Cause of Collision	Number	Percentage
Wrong Side of the Road (Bicycle)	26	44.1%
Right-of-Way Violation (Auto)	14	23.7%
Failure to Obey Stop Sign or Traffic Signal	6	10.2%
Improper Turn	5	8.5%
Alcohol or Drugs	2	3.4%
Not Stated	2	3.4%
Right-of-Way Violation (Pedestrian)	1	1.7%
Unsafe Speed	1	1.7%
Unsafe Starting or Backing	1	1.7%
Other Improper Driving	1	1.7%

Source: California Highway Patrol SWITRS 2008-2012



Quad Knopf	BICYCLE COLLISION MAP	Figure 3 - 4

Of the 59 total bicycle collisions, a bicyclist riding on the wrong side of the road was overwhelmingly determined to be the primary cause. This behavior was more common to adult bicyclists, as 88.5% of this collision cause were the fault of an adult bicyclist. Child and adult bicyclists were found at fault in 33.3% and 66.7%, respectively, for not obeying traffic signs. In fact, for all primary causes of bicycle collisions, adult bicyclists were found at fault significantly more often than child bicyclists.

Of the collisions where drivers were determined to be at fault, the majority were due to right-of-way violations and improper turning movements, 23.7% and 8.5%, respectively. These types of driver-at-fault collisions can be attributed to the difficulty in seeing a bicyclist, especially under low light or dark conditions, improper assessment of the speed in which the bicycle is traveling, and/or a lack of awareness or disregard of the bicyclist's right to be on the roadway.

Of the collisions classified by type, 49.2% were identified as 'broadside' in the SWITRS reports. This type of collision generally occurs at intersections and is primarily the result of improperly executed right and left turning movements. In the case of bicyclists, this type of collision is greatly exacerbated by the tendency of 'wrong way' bicycling.

3.2.3 HELMET USE

According to the National Highway Traffic Safety Association (NHTSA), wearing a bicycle helmet is 85% to 88% effective in mitigating head and brain injuries. The use of a bicycle helmet is the most effective way to reduce head injuries and fatalities resulting from bicycle crashes. The NHTSA estimates the annual cost of bicycle related injuries and deaths is $8 billion. It is estimated that every dollar spent on bicycle helmets saves society $30 in indirect costs. This is because bicycle related head injuries have the potential to require medical treatment for the rest of one's lifetime.

In 1994, Section 21212, "Youth Bicycle Helmets: Minors" was added to the California Vehicle Code requiring bicyclists under the age of 18 to wear an approved and properly fitted bicycle helmet. This was amended in 2002 to require minor children to wear helmets when operating non-motorized scooters or skateboards, or wearing in-line or roller skates. This requirement also applies to passengers on bicycles, non-motorized scooters, or skateboards. Of bicyclists in collisions in Hanford from 2008 to 2012 under the age of 18 and required by State law to wear a helmet, none were wearing them.

3.3 Existing and Future Bicycle Usage

Table 3-7 identifies the percentage of existing bicycle usage by San Joaquin Valley city and mode of transportation. It should be noted that the Journey to Work data does not include non-

commute bicycling trips, such as errands or trips to school. It also does not include individuals that may ride to work periodically.

Table 3-7
Existing Mode Split Percentage – Journey to Work

City	Drive Alone*	Carpool*	Public Transportation*	Bicycle**	Walk**	Other
Hanford	**79.5%**	**14.7%**	**0.8%**	**0.8%**	**2.00%**	**2.9%**
Visalia	78.1%	10.9%	0.9%	.7%	1.3%	6.9%
Bakersfield	77.4%	13.4%	1.9%	0.5%	1.5%	5.0%
Clovis	70.6%	12.0%	0.6%	.4%	1.4%	10.0%
Fresno	74.4%	14.4%	2.8%	0.8%	1.9%	4.9%
Merced	74.2%	15.9%	0.9%	.6%	2.7%	4.8%
Modesto	76.9%	11.7%	1.6%	.8%	1.3%	5.9%
Sacramento	65.9%	16.4%	5.9%	2.5%	3.2%	5.9%
State of California*	71.8%	14.5%	5.0%	0.8%	2.9%	5.0%

* Source: Census 2000 Journey to Work, as taken from the City of Fresno Bicycle Master Plan, 2010
** Source: Bicycle and Walk Journeys to Work from 2008-2012 Census Data

Future bicycle and pedestrian use, whether by commuters or other users, is difficult to project. The simplest method is to assume a straight line increase. With a current population of roughly 55,000 people and a future projected 2035 population of 90,000 people, walking and bicycling to get to work should increase by roughly 39%. However, since most of the destinations are in areas of the city that already have existing roadways, almost all of that increase will occur on streets that exist today. This increases the need to repurpose existing roadways into the complete streets that can accommodate motorized vehicles, bicyclists, and pedestrians.

3.4 Needs Assessment

Based upon field review and discussions with City staff, several issues and opportunities were identified to improve opportunities for bicycle travel in Hanford. These needs are based upon the various types of bicyclists and trip purposes that can be found in the community. The following discussion is general to the City; needs and improvements related to specific portions of the roadway and bikeway system will be addressed in this Chapter 5 – Implementation Plan.

3.4.1 CONTINUOUS BIKEWAY LINKS

Several existing bikeways identified in the 2011 bikeway plan have not yet been completed. In other cases, bike lanes end without linking to other bicycle facilities. Continuation of existing facilities is necessary to provide the most inter-connected bikeway network possible. The following streets could provide links to other bikeways:

- Fitzgerald Lane connecting Fargo Avenue to Grangeville Boulevard;
- Liberty Street, Kings County Drive, Mall Drive, and Centennial Drive to Lacey Boulevard;

- Elm Street between Greenfield and 11th Avenue;
- Neill Way between Fargo Avenue and Leland Way;
- 10th Avenue south of SR 198;
- Hanford-Armona Road from 10th Avenue to Hanford Municipal Airport;
- 11th Avenue south of SR 198; and
- Hume Avenue from 12th Avenue to 11th Avenue.

3.4.2 LINKS TO MAJOR ATTRACTORS

Hanford's existing and planned bikeways will provide access to the major attractors in the community. Many of the bikeways are planned, but not yet installed. Priority focus should be given to the lanes and routes that connect people to the major attractors.

3.4.3 REDUCTION OF TRAFFIC SPEEDS/TRAFFIC CONTROL VIOLATIONS

Like all communities in California and the nation, the automobile continues to be the dominant mode of transportation. Unfortunately, the travel speed differential between cars, bicycles and pedestrians continues to rise as some motorists respond to increasing congestion and the desire to get to their destinations by speeding and running red lights and stop signs. What saves the motorist a few seconds in travel time can cost the bicyclist or pedestrian his life. Efforts to decrease motorist travel speeds and control violations can include traffic calming designs, improved enforcement, and increased public awareness. In some cases, the addition of bike lanes and crosswalks often serve as the traffic calming device needed to reduce those travel speeds.

3.4.4 LINKS TO COUNTY ROUTES

While bicycle connectivity within the City of Hanford is the main focus of this plan, connections to the regional bicycle network and adjacent communities are also important. After all, bicycle trips do not always end at the city limits.

The 2011 Kings County Bicycle Master Plan designates several routes near Hanford that can be extensions of Hanford's bikeway network. County bikeways are included on:

- Existing Routes
    - 12th Avenue, north of Flint Avenue
    - SR 43/10th Avenue, north of Flint Avenue
    - Grangeville Boulevard, west of 13th Avenue
- Proposed Routes
    - 13th Avenue, north of Fargo Avenue
    - Flint Avenue, west of 13th Avenue
    - Grangeville Boulevard, east of 8½ Avenue
    - Hanford-Armona Road, west of 13th Avenue

- Houston Avenue, west of 13th Avenue
- Houston Avenue, east of 9th Avenue

3.5 Recommended Bikeway Network

This section presents the recommended bikeway network. First, the benefits of bicycling in the transportation system are discussed. Goals and objectives to guide development of this Master Plan are then presented. These are followed by a discussion of the methodology used to identify the network, including information on different types of users served by the network. Finally, the recommended bikeway network is described in table and map form. Recommendations for bicycle support facilities and programs are included in Section 5.

3.5.1 BICYCLING BENEFITS IN THE TRANSPORTATION SYSTEM

The goals and objectives of a Master Plan are important as guides throughout the development and implementation process. They are also crucial in gaining public and political support as they become succinct, understandable arguments on the importance of funding the Plan's recommended improvements. Before reasonable and supportable arguments can be made to support bicycling and walking in Hanford, the benefits of bicycling and walking to the community should be understood.

- Flexible – Any trip purpose can be accomplished by bicycle and walking in a community that has appropriate infrastructure and support facilities. Bicycling and walking is used for school trips, work trips, shopping/errand trips, and recreational trips.

- Energy Efficient – Bicycling is the most efficient form of transportation in terms of energy expended per mile traveled. It is eight times as efficient as a passenger train at capacity, and 24 times as efficient as a single occupant automobile.

- Reduction in Environmental Impacts – Bicycling is better for the environment than most other modes of transportation for many reasons. The most obvious are reduced traffic congestion, improved air quality, and reduced use of fuel resources. More subtle, but just as real, improvements include reduced noise pollution, water pollution from roadway storm water run-off, and loss of habitat and natural open space to paved roads and parking lots.

- Time Efficient – Bicycling can provide competitive travel times to that of automobiles for short trips (under two miles), especially where parking is hard to find.

- Space Efficient – Bicycling is also very space efficient; in particular, 2,400 bicycles per hour can be accommodated in 3.28 feet of roadway space, versus 2,200 cars per hour in 12 feet of roadway space. Furthermore, ten to twelve bicycles can be parked in the space of one automobile. The average cost of a parking space is $4,000. If those ten to twelve bicycles were vehicles, the cost to park them would be $40,000 to $48,000.

- Congestion Relief – Bicycling does not contribute to traffic congestion; in fact, bicycling as well as walking to school or work from within neighborhoods can remove vehicle trips from

arterials and collectors. If everyone used a non-motorized mode of transportation only one day per week, it would be the equivalent of increasing roadway capacity by 20 percent.

- Expanded transit catchment – Bicycle access to transit expands the service area of a transit route and increases the transit system's ability to attract additional riders.

- Improved Mobility – Bicycling offers mobility options to those who do not have access to cars, who cannot drive because of age or physical reasons, or who choose not to drive. It is estimated that almost 8% of Hanford's households have no motor vehicle.

- Cost Efficient – Bicycling is chosen by people both with and without cars as the most cost-effective way to travel. According to the American Automobile Association (AAA), the cost of driving an average sedan for one year is approximately $7,800. The cost of operating a bicycle for a year is only $120 (League of American Bicyclists). When there is a charge for car parking, bicycling is even more cost-effective.

- Better Health – Finally, bicycling and walking is popular among those who are concerned with health and fitness. Bicycling provides excellent cardio-vascular conditioning, and studies have shown that employees who regularly bike to work are sick less often than the average employee. Many bicycle commuters recognize that the time spent commuting to work is time that does not have to be spent at the gym or on a home treadmill.

3.5.2 METHODOLOGY

Opportunities and constraints for new bikeways were determined via extensive field reviews, analysis of existing bikeway and walkway locations, and other sources such as collision histories, review of existing planning documents, input from area bicyclists, three public workshops, and analysis of trip attractor and generator locations. It should be noted that this Master Plan does not distinguish between facilities used primarily for transportation or recreation. Many facilities which at first appear to be primarily recreational are indeed used for commuting or other transportation purposes, and vice-versa. Just as roadways are built and maintained for motorists without regard to trip purpose, all the recommended facilities described in this Plan should be considered important, regardless of whether they are primarily used for transportation or recreation.

Streets that are not yet built to their ultimate width should incorporate the Master Plan's recommended bicycle lanes or routes into their design when widened. Where existing streets cannot feasibly be widened, and it is determined that additional travel lanes are warranted, this Master Plan should not be used to prohibit implementation of the recommendations of the warrant study. If the warrant study recommends modifications inconsistent with this Master Plan, the Public Works Director, and ultimately the City Council, can make such modifications upon finding that the modifications are the best solution to maintain safety for all travel modes.

3.5.3 RECOMMENDED BIKEWAY TYPES

The California Streets and Highways Code Section 890.4 define a "Bikeway" as a facility that provides primarily for, and promotes bicycle travel. Two types of bikeways are recommended in the Hanford bikeway network:

- Class II Bike Lane
- Class III Bike Route

Class II Bike Lane

The purpose of a bike lane is to improve conditions for bicyclists within a shared transportation corridor. Bike lanes are intended to delineate the portion of the right-of-way assigned exclusively to bicyclists. The striped bike lane is enhanced by bike lane signs and pavement markings.

Bike lanes should be provided when traffic volumes exceed a certain threshold, such as 4,000 vehicles per day on a two-lane street. Below this traffic volume, there should be adequate gaps in oncoming traffic for motor vehicles to safely pass bicyclists. However, if adequate width is available to separate vehicular from bicycle traffic, without loss to levels of service, the installation of bicycle lanes should still be considered.

Bike lanes are intended for the exclusive use of bicycles, with exceptions. Motorists may drive in a bike lane to park where permitted, to enter or leave the roadway, or to prepare for a right-turn within 200 feet from the intersection.

The California Manual on Uniform Traffic Control Devices (MUTCD) provides the technical specifications for bike lanes in its Section 9C.04 Markings for Bike Lanes.

In general, bike lanes are to be striped and identified as bike lanes with a BIKE LANE signs and pavement markings. The bike lane is to be placed adjacent to the curb if on-street parking is not allowed or between the parking lane and the motorized travel lane if parking is allowed.

Class III Bike Route

Class III bike routes are intended to provide continuity to other bicycle facilities (generally to connect bike lanes) or to designate the preferred route through a high-demand corridor. As such, the signing of a bike route should indicate to bicyclists that certain advantages exist to using this route compared to others. It is expected that measures have been taken through design and maintenance to assure that these routes are suitable for shared use.

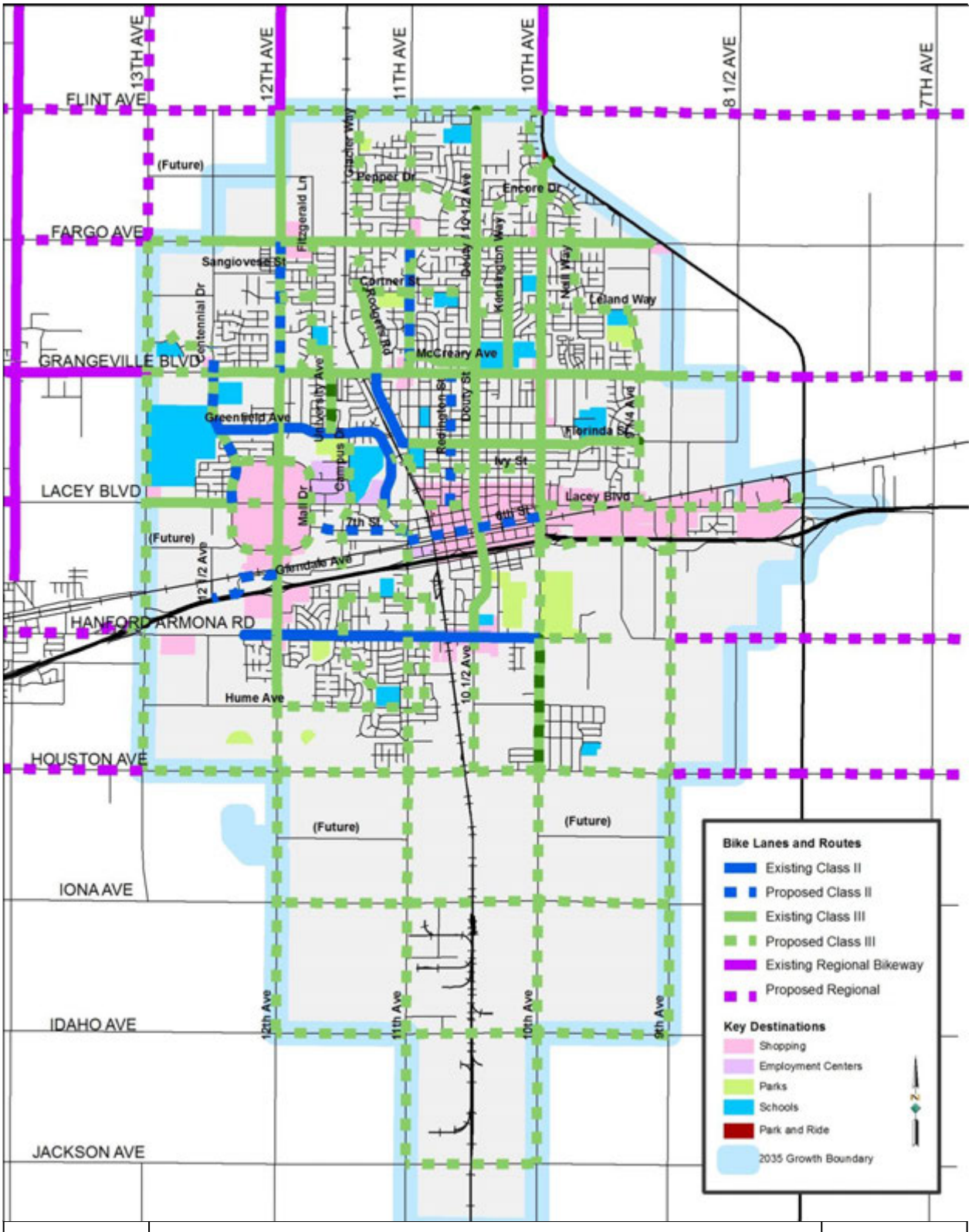
Bike route signing is used to alert motorists to the presence of bicyclists on the roadway. Signage and pavement markings used on Class III routes to provide additional warning to motorists and bicyclists can include Bicycle Warning (W11-1) signs in conjunction with the Share the Road (W16-1) plaque or the Shared Roadway Bicycle Marking, commonly referred to as 'Sharrow'. The sharrow is used to assist bicyclists with positioning on a shared roadway with on-street parallel parking and to alert road users of the location a bicyclist may occupy within the travel way.

3.5.4 RECOMMENDED BIKEWAY NETWORK

Bikeway recommendations have been divided into two stages. The 2016 Initial Bikeway Plan describes actions that can be taken now without the need to widen or build a street. The 2035 Bikeway Plan describes the recommendations once streets are widened or built to their full width. The mileage of the recommended bicycle network is summarized in Table 3-8. Table 3-9 is a four-page table that lists each of the bikeway road segments with existing or planned bikeways and then describes their characteristics. This table corresponds with Figure 3-5, which shows the 2016 Initial Stage Bikeway Plan and Figure 3-6, which shows the 2035 Bikeway Plan.

Table 3-8
Mileage Summary of Recommended Bikeway Network

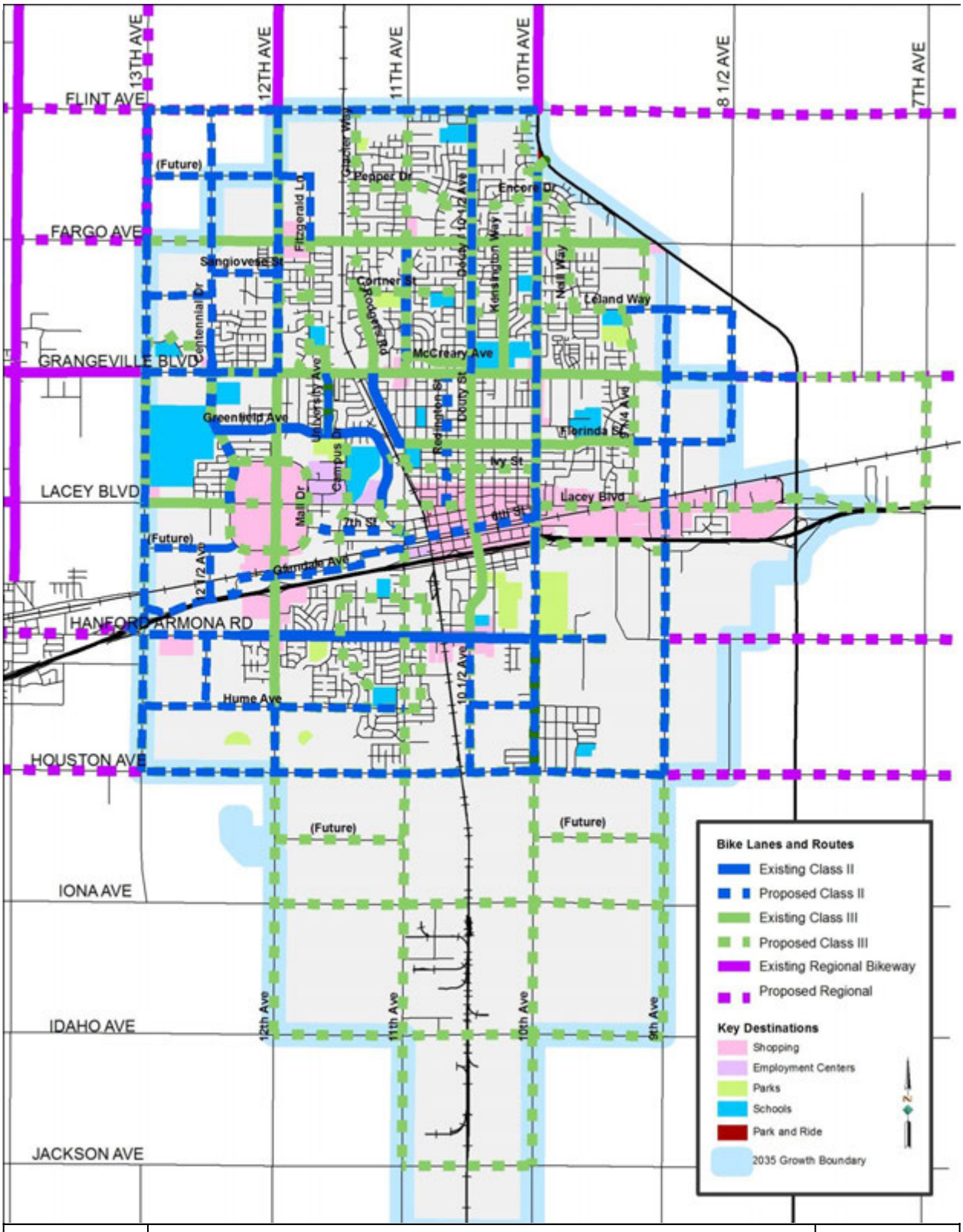
Facility Type	Existing	2016 Existing & Planned	2035 Planned	Total
Class II (Bike Lane)	5.69	10.34	40.23	50.57
Class III (Bike Route)	24.87	84.26	5.55	89.81
Totals (miles)	**30.56**	**94.60**	**45.78**	**140.38**



Quad Knopf

2016 INITIAL STAGE BIKEWAY PLAN

Figure 3 - 5



Quad Knopf

2035 BIKEWAY PLAN

Figure 3 - 6

The following are descriptions of each of the columns in Table 3-9, Bikeway Plan Street Segments. .

Street Name – identifies the street segment's name. North-south streets are listed first in order from west to east. Then east-west streets are listed in order from north to south.

Segment From-To – identifies the extent of the street segment

Miles – identifies the length of the street segment

General Plan Street Classification – Identifies the street classification given by the 2035 General Plan Circulation Element. Classifications (from highest level to lowest) are major arterial, arterial, collector, and local.

Speed Limit (mph) – Identifies the existing speed limit of the street segment. N/A means that the street segment does not yet exist, but is planned in the 2035 General Plan.

Existing Motor Vehicle Travel – Shows the number of lanes (#) and the width of the outside travel lane.

Existing Bikeway and Parking – Identifies street segments with existing bikeways and the type of bikeway (Class II or III). The lane width identifies the width of the bike lane. "Share" means that it is a shared lane in the travel lane. The ability to park on the street segment is identified with yes or no if there is no parking stripe or the width of the parking lane if there is a parking stripe.

2016 Initial Bikeway Plan – Identifies street segments with bikeways in the 2016 Initial Stage Bikeway Plan and the type of bikeway (Class II or III). Classes (II or III) shown in bold identify that the Class has changed from the existing conditions. Lane width identifies the width of the bike lane. "Share" means that it is a shared lane in the travel lane. The ability to park on the street segment is identified with yes or no if there is no parking stripe or the width of the parking lane if there is a parking stripe.

2035 Bikeway Plan – Identifies street segments with bikeways in the 2035 Bikeway Plan and the type of bikeway (Class II or III). Classes (II or III) shown in bold identify that the class has changed from the previous condition. Lane width identifies the width of the bike lane. "Share" means that it is a shared lane in the travel lane. The ability to park on the street segment is identified with yes or no if there is no parking stripe or the width of the parking lane if there is a parking stripe.

Table 3-9
Bikeway Plan Street Segments (page 1 of 4)

Street Name	Segment		Miles	General Plan Street Classification	Speed Limit (mph)	Existing Motor Vehicle Travel		Parking	Existing			2016 Initial Bikeway Plan			2035 Full Bikeway Plan					Comment
									Bikeway		Parking	Bikeway		Parking	Motor Vehicle		Bikeway		Parking	
	From	To				#	Width (ft) (outside lane)	Marked?	Class	Lane Width (ft)	Width (ft) or yes/no	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	# (change in bold)	Width (ft) (outside lane)	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	
NORTH - SOUTH																				
13th Ave	Flint	Fargo	1.00	Major Arterial	50	2	12	-	-	-	no	**-**	-	no	**4**	12	**II**	8	no	Change to Class II when roadway is widened.
	Fargo	Grangeville	1.00	Major Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no	
	Grangeville	Lacey	1.00	Major Arterial	40-45	3	12	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no	
	Lacey	Hanford-Armona	1.11	Major Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no	
	Hanford-Armona	Houston	1.19	Major Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no	
Centennial Dr	Flint	Fargo	1.00	Collector	N/A	N/A	-	-	-	-	no	-	-	no	**2**	12	**II**	5	8	Install after road is constructed.
	Fargo	Berkshire	0.81	Collector	35	2	12-32	-	-	-	no	**-**	-	no	2	12	**II**	5	8	
	Berkshire	Grangeville	0.20	Collector	35	2	12-32	-	-	-	no	**II**	5	no	2	12	II	5	8	
	Grangeville	Greenfield	0.45	Collector	45	2	12-32	-	III	6	no	**II**	5	no	2	12	II	5	8	
	Greenfield	Lacey	0.60	Collector	45	2	32	-	III	6	no	**II**	7	no	2	12	II	7	no	No parking when restriped for Class II lanes.
	Lacey	12th	0.65	Collector	35	4	12	-	-	-	no	**III**	share	yes	4	12	III	share	yes	
12 1/2 (Aquifer)	Future Street	Glendale	0.39	Collector	N/A	N/A			-	-	yes	-	-	yes	**2**	12	**II**	5	8	Install after road is constructed.
	Hanford-Armona	Hume	0.54	Collector	N/A	N/A			-	-	yes	-	-	yes	**2**	12	**II**	5	8	
12th Ave	Flint	Fargo	1.00	Arterial	55	2	12	-	III	share	no	III	share	no	**4**	12	**II**	5	8	Travel lane may need to be reduced to accommodate 5' bike lane. Alternative: remove parking
	Fargo	Grangeville	1.00	Arterial	45	4	11	-	III	share	no	**II**	5	8	4	11	II	5	8	
	Grangeville	Lacey	1.00	Arterial	45	4	11	-	III	share	no	III	share	no	4	11	III	share	yes	
	Lacey	RR Tracks	0.49	Arterial	40	4	11	-	III	share	no	III	share	no	4	11	III	share	yes	Drop to existing Class III at the railroad crossing and over the freeway on narrow segment.
	RR Tracks	Hanford-Armona	0.51	Arterial	40	2	12	-	III	share	no	III	share	yes	**4**	12	III	share	yes	
	Hanford-Armona	Hume	0.54	Arterial	40	2	12	N	III	share	7	III	share	yes	**4**	12	III	share	yes	Remove stripe
	Hume	Houston	0.50	Arterial	50	2	12	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no	Min. of 5' Bike Lane from FOC, no parking on arterial street; if parking is allowed, stripe Bike Lane to be 5' from 8' parking lane.
	Houston	Iona	1.00	Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes	
	Iona	Idaho	1.00	Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes	
Fitzgerald Ave	Pepper alignment	Fargo	0.47	Collector	N/A	N/A		-	-	-	no	-	-	no	**2**	12	**II**	5	8	Install after road is constructed.
	Fargo	Grangeville	1.03	Collector	35	2	24	N	-	-	8	**III**	share	yes	2	12	III	share	yes	
Kings Rd/Berkshire	Fitzgerald	Grangeville	0.30	Local	30	2	19	N	III	share	8	III	share	yes	2	12	III	share	yes	
University Ave	Grangeville	Greenfield	0.46	Collector	35	2	16	-	**III**	8	8	III	share	yes	2	12	**II**	5	7	Travel lane width could accommodate Class II if parking lane is reduced to 7'.
Campus Dr	Greenfield	Lacey	0.55	Collector	35	2	15-18	N	-	-	8	**III**	share	yes	2	11	III	share	yes	
	Lacey	Glendale	0.51	Collector	30	2	20	N	-	-	8	**III**	share	yes	2	12	III	share	yes	
11 1/2 /Milpas/Echo	Davis	Hume	0.99	Local	25	2	24	N	-	-	6	**III**	share	yes	2	12	III	share	yes	
Glacier Way	Flint	Fargo	1.01	Collector	35	2	24	-	-	-	no	**III**	share	no	2	12	III	share	yes	
	Fargo	Cortner	0.38	Collector	30	2	24	-	-	-	no	**III**	share	no	2	12	III	share	yes	
Rodgers Rd	Mallard	Grangeville	0.64	Collector	30	2	12	Y	III	8	8	III	share	yes	2	12	III	share	yes	Remove stripe
	Grangeville	Florinda	0.62	Collector	35	2	17	Y	II	5	8	II	5	8	2	17	II	5	8	

Table 3-9
Bikeway Plan Street Segments (page 2 of 4)

Street Name	Segment			General Plan Street Classification	Speed Limit (mph)	Existing Motor Vehicle Travel		Parking	Existing			2016 Initial Bikeway Plan			2035 Full Bikeway Plan						Comment
									Bikeway		Parking	Bikeway		Parking	Motor Vehicle		Bikeway			Parking	
	From	To	Miles			#	Width (ft) (outside lane)	Marked?	Class	Lane Width (ft)	Width (ft) or yes/no	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	# (change in bold)	Width (ft) (outside lane)	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no		
NORTH - SOUTH (continued)																					
11th Ave	Flint	Fargo	1.01	Arterial	45	2	30	-	-	-	no	**III**	share	no	**4**	12	III	share	no		
	Fargo	Grangeville	1.01	Arterial	40	2	12-24	Y	II	8	8	**III**	share	yes	**4**	12	III	share	yes		Remove striping and add signs/sharrows
	Florinda	Ivy	0.18	Arterial	40	4	12	N	-	-	no	**III**	share	no	4	12	III	share	no		
	Seventh	Hanford-Armona	0.81	Arterial	35-40	2	12	N	-	-	6	**III**	share	6	**4**	12	III	share	no		No parking when change to 4 lanes
	Hanford-Armona	Hume	0.54	Arterial	40	4	12	N	-	-	6	**III**	share	yes	4	12	III	share	yes		Remove stripe in 2016 Plan
	Hume	Houston	0.49	Arterial	45	4	12	-	-	-	no	**III**	share	no	4	12	III	share	yes		
	Houston	Iona	1.00	Arterial	50	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes		
	Iona	Idaho	1.00	Arterial	50	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes		
	Idaho	Jackson	1.00	Arterial	55	2	12-23	-	-	-	no	**III**	share	no	**4**	12	III	share	yes		
Williams/Jones	Davis	Hume	0.83	Local	25	2	24	N	-	-	6	**III**	share	yes	2	12	III	share	yes		
Redington St	Grangeville	Lacey	1.01	Collector	30	2	16-24	N	-	-	8	**II**	5	7	2	12	II	5	7		
10-1/2 (Douty St)	Flint	Fargo	1.01	Collector	40	2	15-23	Y	III	8	8	III	share	yes	2	12	**II**	5	8		Add sharrows outside of parking lane
	Fargo	Grangeville	1.01	Collector	35-40	2	17-25	Y & N	III	0-8	8	III	share	yes	2	11	**II**	5	7		Available travel lane width can accommodate bike lane where parking lane is reduced to 7'.
	Grangeville	Eighth	1.03	Collector	25-35	2	16	N	III	share	6	III	share	yes	2	11	III	share	yes		
	Eighth	Third	0.36	Collector	25	4	16	-	III	share	no	III	share	yes	4	11	III	share	yes		
	Third	Hanford-Armona	0.66	Collector	35	2	23-32	N	III	share	6	III	share	yes	2	11	III	share	yes		
10-1/2 (Irwin St)	Hanford-Armona	Houston	1.03	Collector	40	2	12	-	-	-	yes	**III**	share	yes	2	11	**II**	5	8		Change to Class II only after road is widened.
Kensington Way	Fargo	Grangeville	1.01	Collector	25	2	20	N	III	share	6	III	share	yes	2	12	III	share	yes		
Mission Dr	Flint	10th	0.56	Local	25	2	20		-	-	yes	**III**	share	yes	2	12	III	share	yes		
10th Ave (HWY 43)	HWY 43	Mission	0.12	Arterial	45	4	18	Y	III	6-8	8	III	share	yes	4	11	III	share	yes		Remove stripe
	Mission	Grangeville	1.54	Arterial	40	4	14	N & Y	III	5-8	5-8	III	share	yes	4	11	**II**	5	no		All lanes (parking and travel) need to be reduced to accommodate addition of bike lane. Parking may be lost in some areas
	Grangeville	Lacey	1.02	Arterial	40	4	15	Y	III	8	8	III	share	yes	4	11	**II**	5	no		
	Lacey	Third	0.30	Arterial	35	4	18	Y	III	6	6	III	share	yes	4	12	**II**	5	no		
	Third	Hanford-Armona	0.71	Arterial	45	2	24	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no		Alternatively, would stay as Class III in 2035 Full Plan if center turn lane is warranted for traffic needs.
	Hanford-Armona	Houston	1.01	Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	**II**	8	no		
	Houston	Iona	1.00	Arterial	55	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes		
	Iona	Idaho	1.01	Arterial	50	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes		
	Idaho	Jackson	1.01	Arterial	45	2	12	-	-	-	no	**III**	share	no	**4**	12	III	share	yes		
Neill Way	Fargo	Leland	0.51	Local	25	2	20	N	-	-	6	**III**	share	yes	2	12	III	share	yes		
9-1/4 Ave	Fargo	Leland	0.51	Local	25	2	10	-	-	-	no	**-**	-	no	2	10	**III**	share	yes		Install when road is extended.
	Leland	Grangeville	0.51	Collector	35	2	12-24	-	-	-	yes	**III**	share	yes	2	11	III	share	yes		
	Grangeville	Lacey	1.01	Collector	45	2	12-29	-	-	-	yes	**III**	share	yes	2	11	III	share	yes		CTL should be installed to increase safety by providing refuge for turning vehicles due to high posted speed limit. Change to Class II only after road is widened.
9th Ave	Leland	Lacey	1.51	Arterial	N/A	N/A					yes	-	-	yes	**4**	12	**II**	5	8		Change to Class II when road is widened.
	Lacey	Hanford-Armona	0.96	Arterial	40	2	10-12	-	-	-	no	**III**	share	no	2	12	**II**	5	8		
	Hanford-Armona	Houston	1.04	Arterial	50	2	10	-	-	-	no	**III**	share	no	2	12	**II**	5	8		
	Houston	Iona	1.00	Arterial	55	2	10	-	-	-	no	**III**	share	no	2	12	III	share	yes		
	Iona	Idaho	1.00	Arterial	55	2	10	-	-	-	no	**III**	share	no	2	12	III	share	yes		
8 1/2 Ave	Leland	Florinda	1.01	Collector	N/A	N/A	10	-	-	-	no	-	-	no	**2**	12	**II**	5	8		Install after road is constructed/widened.
7th Ave	Grangeville	Lacey	0.98	Arterial	55	2	10	-	-	-	no	**-**	-	no	2	10	**III**	share	yes		

Table 3-9
Bikeway Plan Street Segments (page 3 of 4)

Street Name	Segment		Miles	General Plan Street Classification	Speed Limit (mph)	Existing Motor Vehicle Travel		Parking	Existing			2016 Initial Bikeway Plan			2035 Full Bikeway Plan					Comment
									Bikeway		Parking	Bikeway		Parking	Motor Vehicle		Bikeway		Parking	
	From	To				#	Width (ft) (outside lane)	Marked?	Class	Lane Width (ft)	Width (ft) or yes/no	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	# (change in bold)	Width (ft) (outside lane)	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	
EAST - WEST																				
Flint Ave	13th	12th	1.00	Major Arterial	55	2	11	-	-	-	no	**-**	-	no	2	12	**II**	8	No	
	12th	11th	1.00	Major Arterial	50	2	11	-	-	-	no	**III**	share	no	2	12	**II**	8	No	Change to Class II when road is widened.
	11th	Hwy 43	1.00	Major Arterial	50	2	11	-	-	-	no	**III**	share	no	2	12	**II**	8	No	
Pepper alignment	13th	Fitzgerald	1.29	Collector	N/A	N/A		-	-	-	no	-	-	no	**2**	12	**II**	5	8	Add Class II when road is constructed.
Pepper Drive/Aspen	Glacier	11th	0.41	Local	25	2	16	N	-	-	6	**III**	share	yes	2	16	III	share	yes	
	11th	Encore	0.36	Local	25	2	16	N	-	-	6	**III**	share	yes	2	16	III	share	yes	
Encore Drive	Aspen	10th	0.77	Local	30	2	12	N	-	-	6	**III**	share	yes	2	12	III	share	yes	
	10th	Fargo	0.50	Local	30	2	12	N	-	-	6	**III**	share	yes	2	12	III	share	yes	
Fargo Ave	13th	Centennial	0.50	Arterial	50	2	11-32	-	-	-	0	**III**	share	yes	2	11	III	share	yes	
	Centennial	12th	0.52	Arterial	50	2	11-32	N	III	share	no	III	share	no	2	11	III	share	yes	
	12th	11th	0.99	Arterial	45-50	2-4	11-26	N	III	share	no	III	share	no	2-4	11	III	share	yes	
	11th	10th	1.00	Arterial	35	2	24	N	III	share	6	III	share	yes	2	12	III	share	yes	
	10th	9 1/4	0.83	Arterial	40	2	11-24	N	III	share	6	III	share	yes	2	12	III	share	yes	
Sangiovese St	Centennial	12th	0.51	Local	25	2	24	N	-	-	6	-	-	yes	2	16	**II**	7	no	No parking on street.
Muscat alignment	13th	Centennial	0.50	Collector	N/A	N/A		N	-	-	yes	-	-	yes	**2**	12	**II**	5	8	Add Class II when road is constructed.
Muscat Pl	12th	Fitzgerald	0.24	Local	25	2	24	N	-	-	6	**III**	share	yes	2	16	III	share	yes	
Cortner St	Glacier	Kensington	1.16	Collector	30	2	20	N	-	-	6	**III**	share	yes	2	12	III	share	yes	
Leland Way	Douty	10th	0.51	Collector	30	2	24	N	-	-	6	**III**	share	yes	2	16	III	share	yes	
	10th	9 1/4	0.69	Collector	35	2	12-24	N	-	-	6	**III**	share	yes	2	12	III	share	yes	
	9 1/4	8 1/2	0.81	Collector	N/A	N/A		-	-	-	yes	-	-	yes	**2**	12	**II**	5	8	Install with road construction.
Mustang/Berkshire	13th	Centennial	0.55	Local	25	2		N	-	-	7	**III**	share	yes	2	12	III	share	yes	
McCreary Ave	11th	Douty	0.51	Collector	25	2	16-30	N	III	share	6	III	share	yes	2	16	III	share	yes	
Grangeville Blvd	13th	Centennial	0.51	Arterial	50	2	12	-	-	-	no	**III**	share	no	2	12	**II**	5	8	Change to Class II when road is widened.
	Centennial	12th	0.51	Arterial	50	2-3	12-18	-	III	share	no	III	share	no	2	12	**II**	5	8	
	12th	11th	0.99	Arterial	40	4	13-14	N	III	share	0-6	III	share	yes	4	14	III	share	yes	
	11th	10th	1.01	Arterial	35	4	14	-	III	share	no	III	share	no	4	14	III	share	yes	
	10th	9th	1.00	Arterial	45	4	14	-	III	share	no	III	share	no	4	14	III	share	yes	
	9th	8 1/2	0.50	Arterial	55	2	12		-	-	no	**III**	share	no	**4**	12	**II**	5	8	Change to Class II when road is widened.
	8 1/2	8th (HWY 43)	0.50	Arterial	55	2	12	-	-	-	no	**-**	-	no	**4**	12	**II**	5	8	
	8th (HWY 43)	7th	1.00	Arterial	55	2	12	-	-	-	no	**-**	-	no	2	12	**III**	share	yes	
Greenfield	Centennial	12th	0.46	Collector	35	2	20	Y	II	5	7	II	5	7	2	12	II	5	7	
	12th	Lacey	1.34	Collector	35	2	12	Y	II	5	8	II	5	8	2	12	II	5	8	
Florinda St	11th	Douty	0.51	Collector	30	2	16	Y	III	7	7	III	share	yes	2	12	III	share	yes	Remove stripe
	Douty	10th	0.51	Collector	35	2	15	Y	III	8	8	III	share	yes	2	12	III	share	yes	
	10th	9 1/4 Ave	0.76	Collector	30	2	30	N	III	6	6	III	share	yes	2	11	III	share	yes	
	9 1/4 Ave	8 1/2 Ave	0.75	Collector	N/A	N/A		-	-	-	yes	-	-	yes	**2**	12	**II**	5	8	Install with road construction.
Elm St	Greenfield	11th	0.14	Collector	30	4	12	N	-	-	no	**III**	share	no	2	12	III	share	no	
Ivy St	11th	10th	1.01	Collector	30	2	20	N	-	-	6	**III**	share	yes	2	12	III	share	yes	
Liberty St	Centennial	12th	0.33	Collector	35	2	13-24	-	-	-	0	**III**	share	yes	2	12	III	share	no	
Kings County Dr	12th	Lacey	0.51	Collector	30	2	18	N & Y	-	-	0-6	**III**	share	yes	2	12	III	share	yes	
Mall Dr	12th	Lacey	0.53	Collector	35	2	18	-	-	-	no	**III**	share	no	2	12	III	share	no	

Table 3-9
Bikeway Plan Street Segments (page 4 of 4)

Street Name	Segment		Miles	General Plan Street Classification	Speed Limit (mph)	Existing Motor Vehicle Travel		Parking	Existing			2016 Initial Bikeway Plan			2035 Full Bikeway Plan					Comment
									Bikeway		Parking	Bikeway		Parking	Motor Vehicle		Bikeway		Parking	
	From	To				#	Width (ft) (outside lane)	Marked?	Class	Lane Width (ft)	Width (ft) or yes/no	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	# (change in bold)	Width (ft) (outside lane)	Class (change in bold)	Lane Width (ft)	Width (ft) or yes/no	
EAST - WEST (continued)																				
Lacey Blvd	13th	Centennial	0.66	Arterial	45	2-4	12-22	-	III	share	no	III	share	no	2-4	12	III	share	yes	
	Centennial	Mall Dr	0.60	Arterial	35-40	4	12-22	-	-	-	no	**III**	share	no	4	12	III	share	yes	
	Garner	Irwin	0.65	Arterial	30-35	4	12-22	-	-	-	no	**III**	share	no	4	12	III	share	yes	
	10th	9th	0.99	Arterial	40	2	12-25	-	-	-	no	**III**	share	no	2	12	III	share	yes	
	9th	8th (HWY 43)	1.03	Arterial	40	2	12	-	-	-	no	**III**	share	no	2	12	III	share	yes	Consider Class II lanes if major road widening occurs.
	8th (HWY 43)	7th	1.01	Arterial	55	2	12	-	-	-	no	**-**	-	no	2	12	**III**	share	yes	
Garner Ave	Lacey	Seventh	0.34	Collector	35	2	12		-	-	yes	**III**	share	no	2	12	III	share	yes	
Seventh St	Mall	11th	0.75	Collector	35	2	17-24	N & Y	-	-	yes	**II**	5	0-6	2	11	II	5	0-6	5' BL where parking is allowed, 6' BL where parking is not allowed
Future steet west of Target Store	13th	Centennial	0.71	Collector	N/A	N/A			-	-	yes	-	-	yes	2	12	**II**	5	8	Install with road construction.
Sixth St	11th	Redington	0.37	Collector	35	2	26-30	N	-	-	8	**II**	5	8	2	12	II	5	8	
	Redington	Douty	0.18	Collector	35	2	14	Y	-	-	diagonal	**II**	5	8	2	12	II	5	8	Diagonal parking to change to parallel.
	Douty	10th	0.48	Collector	35	2	26-30	N	-	-	7	**II**	5	8	2	12	II	5	8	
Glendale Ave	13th	12 1/2 (Aquifer)	0.53	Collector	45	2	23	-	-	-	no	-	-	no	2	12	**II**	5	8	Add Class II when road is widened.
	12 1/2 (Aquifer)	12th	0.61	Collector	30	2	16		-	-	yes	**II**	5	8	2	12	II	5	8	
	12th	11th	1.10	Collector	N/A	N/A	12	-	-	-	no	-	-	no	**2**	12	**II**	5	8	Install with road construction.
Third St	10th	9th	1.03	Collector	50	2	13	-	-	-	no	**III**	share	no	2	13	III	share	yes	
Davis St	11 1/2	Williams	0.67	Local	25	2		N	-	-	7	**III**	share	yes	**2**	12	III	share	yes	
Hanford-Armona	13th	Greenbrier	0.76	Arterial	55	2	13	-	-	-	no	-	-	-	2	12	**II**	5	8	Add Class II when road is widened.
	Greenbrier	12th	0.25	Arterial	45	2	12	Y	II	5	8	II	5	8	2	12	II	5	8	
	12th	11th	1.00	Arterial	40	2	12	Y	II	5	8	II	5	8	2	12	II	5	8	
	11th	10th	1.00	Arterial	40	2	12-18	Y	II	5	8	II	5	8	2	12	II	5	8	
	10th	Airport entrance	0.55	Local	40	2	12	-	-	-	no	**III**	share	no	2	12	**II**	5	8	Change to Class II if road is widened.
Hume Ave	13th	12th	1.02	Collector	N/A	N/A		-	-	-	yes	-	-	yes	**2**	12	**II**	5	8	Install with road construction.
	12th	11th	1.00	Collector	35-40	2	10-23	-	-	-	no	**III**	share	no	2	12	**II**	5	8	Change to Class II with road widening.
	11th	Jones	0.05	Local	25	2	12		-	-	yes	**III**	share	yes	2	12	**III**	share	yes	
Orchard alignment	Douty	10th	0.50	Collector	N/A	N/A		-	-	-	yes	-	-	yes	**2**	12	**II**	5	8	Install with road construction.
Houston	13th	12th	1.02	Major Arterial	55	2	12	-	-	-	no	**III**	share	no	2	12	**II**	8	no	Change to Class II when road is widened.
	12th	11th	1.00	Major Arterial	55	2	11	-	-	-	no	**III**	share	no	2	12	**II**	8	no	
	11th	10th	1.00	Major Arterial	45-50	2	11	-	-	-	no	**III**	share	no	2	12	**II**	8	no	
	10th	9th	1.00	Major Arterial	45-55	2	12	-	-	-	no	**III**	share	no	2	12	**II**	8	no	
Industrial Collector	12th	11th	1.00	Collector	N/A	N/A		-	-	-	yes	-	-	yes	**2**	12	**III**	share	yes	
	10th	9th	1.00	Collector	N/A	N/A		-	-	-	yes	-	-	yes	**2**	12	**III**	share	yes	
Iona	12th	11th	1.00	Arterial	55	2	10	-	-	-	no	**III**	share	no	2	12	III	share	yes	Parking can be accommodated in the 2035 Plan with street widening
	11th	10th	1.00	Arterial	45	2	11-22	-	-	-	no	**III**	share	no	2	12	III	share	yes	
	10th	9th	1.01	Arterial	45	2	12	-	-	-	no	**III**	share	no	2	12	III	share	yes	
Idaho	12th	11th	1.00	Arterial	55	2	11	-	-	-	no	**III**	share	no	2	12	III	share	yes	
	11th	10th	1.00	Arterial	45	2	12-17	-	-	-	no	**III**	share	no	2	12	III	share	yes	
	10th	9th	1.00	Arterial	50	2	13	-	-	-	no	**III**	share	no	2	12	III	share	yes	
Jackson	11th	10th	1.00	Arterial	55	2	11	-	-	-	no	**III**	share	no	2	12	III	share	yes	

3.5.5 LOW VOLUME TRAFFIC BIKEWAY LOOPS

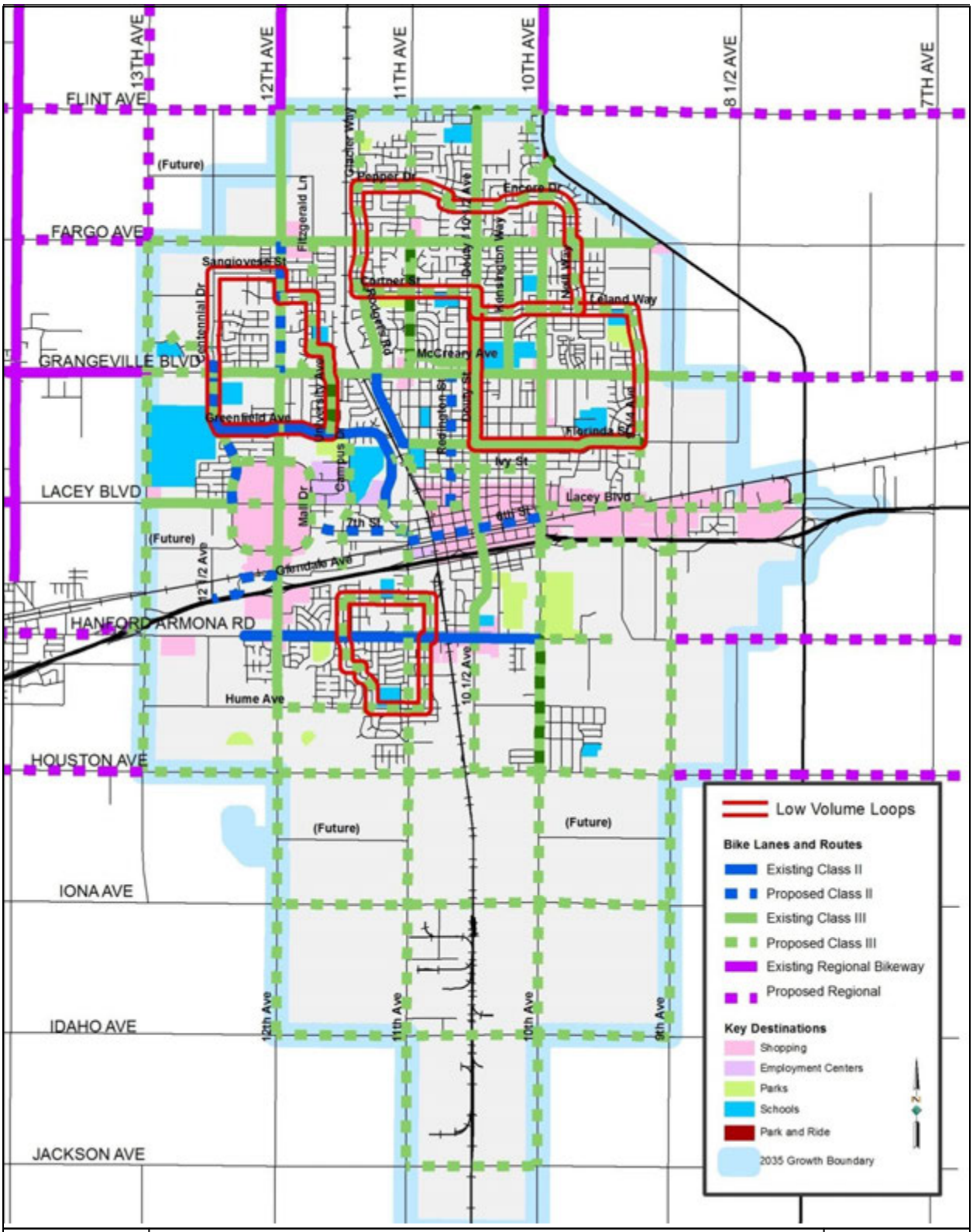
During the public workshops, mothers who ride bikes with their kids described how they were looking for a safer alternative than busy streets and public sidewalks. Many currently use the public sidewalks for riding bicycles. Riding bicycles on the sidewalk is dangerous for three main reasons: speed, visibility and predictability. Cyclists travel faster than people on foot. Pedestrians aren't looking out for bicycles on the sidewalk. A great variety of sidewalk users – people with strollers, wheelchairs or walkers, seniors, children, and even pets – are not compatible with fast-moving bicyclists.

In response to the request, **Low Volume Traffic Bikeway Loops** have been identified in each of the four quadrants of Hanford. These Class II lanes and Class III routes are located on low traffic volume street. Most intersections along the bikeways are signalized. The intent is that these bikeways can be promoted as a type of training area for adults to teach children how to safely ride bicycles on the street.

The Low Volume Traffic Bikeway Loops have the following characteristics:

- Low vehicular traffic volume;
- Class II or Class III bikeways or a combination of bikeway classifications;
- Primarily through residential neighborhoods;
- Streets with speed limits of 35 mph or less; and,
- Access to schools and parks.

These low volume traffic bikeway loops can be used by parents to educate children on bicycle and traffic safety before they venture out onto the Class II and Class III bikeways located on larger collector and arterial roadways. Four loops were identified with lengths ranging from 2.9 to 5.2 miles in locations where residents can access them conveniently from their homes, parks or schools. Three of the four loops can be implemented on existing streets. The fourth loop can be developed as the future segments of Centennial Drive and Sangiovese Street are constructed.



Quad Knopf	LOW VOLUME TRAFFIC BIKEWAY LOOPS	Figure 3 - 7

3.6 Bicycle Programs and Support Facilities

More than just a good pedestrian and bicycle plan is needed to encourage walking and bicycling. Additional support facilities and programs are also essential for increasing public awareness of walking and bicycling opportunities in the community. This section describes bicycle detection, bicycle parking, shower/locker facilities needs, and bicycle access to transit facilities, and provides policies for bicycle education and promotion programs.

The safety of bicyclists can be increased by improving a number of factors. Education programs are needed to encourage both children and adults about the benefits of wearing bicycle helmets and following traffic laws. A large portion of bicyclists' injuries were due to either not wearing a helmet, riding the wrong way on a street, or both. Maintenance of bicycle infrastructure is another factor that affects safety. Uneven pavement, potholes, unsafe drainage grates, debris, trash cans, or gravel in the bicycle lane can cause bicycle collisions.

3.6.1 BICYCLE SAFETY EDUCATION PROGRAMS

Although constructing bicycle facilities is the most effective way to increase the number of bicycle riders, bicycle education is also important for encouraging bicycling and improving safety. Bicycle education programs are designed to increase bicycle safety by educating bicyclists of the proper rules of the road and by improving their bicycling skills. Simultaneously, these programs can be used to help motorists understand the rights of bicyclists on the road. One of the difficulties in providing bicycle education programs is the need to tailor training sessions for groups of varying ages and knowledge needs. For example, young children should be taught the basic rules of the road in conjunction with hands-on bicycling instruction. Adults benefit most from a program demonstrating how to ride safely on the road and how to drive safely around bicyclists. Information on bicycle commuting and its benefits will also benefit most adults. Target audiences for education programs include:

- Current and potential bicyclists;
- Drivers;
- Students;
- Children and families; and
- Law enforcement.

Education programs can be time consuming and costly, especially when first establishing them. Funding and staffing are in short supply in almost all jurisdictions. For these reasons, agencies must explore all possible avenues in designing and implementing a bicycle education strategy. Various City departments, including Community Development, Engineering, Parks and Recreation, Police, and Public Works should be brought into the effort. Schools, community and civic organizations, employers, local businesses, and cycling clubs should also be tapped as resources. Some of the most successful programs are the result of a public and private coalition working together toward a common goal. Hanford currently has limited educational programs, including Stop-on-a-Dime organized by the Hanford Police Department.

According to the 2011 Kings County Regional Bicycle Master Plan, a 2004 telephone survey of public schools showed that 72% of those schools have some form of bicycle safety or education program. The survey also indicated 44% of junior highs and high schools do not currently have an existing program(s). Those existing elementary school-based programs occur annually and are typically presented by law enforcement officials. Additionally, the Optimists have an on-going local bicycle safety program. School officials feel that these programs are effective and should be continued. Listed below are sources of information which may be considered for a local bicycle safety program:

- Safe bicycling pamphlets available for distribution to area schools;
- League of American Bicyclists courses for adults and children;
- Legislation requiring bicycle helmets for children under 18 years old;
- Kings County Bikeway Maps which list the rules of the road, preferred bicycle route, and safety tips; and
- Stop-on-a-Dime programs presented by the Hanford Police Department.

Although education programs are provided through these sources for the school aged population, since the prevalence of adult bicycle rider collisions is much higher than school aged riders, there is a need for adult education programs as well.

Appendix D includes bicycle education programs which have been developed for use in communities throughout the country. Resources for program materials and assistance are also provided. In general, bicycle education programs can be described as those which promote awareness and provide information, and those which change behavior and/or develop skills. Programs vary, but may include hands-on riding instruction, teaching adults who supervise children, public awareness campaigns, community events, and education for motorists. The key to any bicycle education program is to reach your target audience and get people to participate.

Existing City of Hanford Programs

On October 15, 2015, the Hanford Police Department hoped to curb the number of bicycle-related traffic collisions by reaching out to the community's youngest riders. School resource officers and traffic officers visit schools in the Hanford Elementary School District to teach kids about basic bicycle safety laws and the importance of wearing a helmet every time they ride.

Some basic traffic laws and tips to keep kids safe when they ride their bikes included:

- Always wear a helmet. Make sure it's properly buckled so it won't fall off;
- Use a light when riding at night;
- Make sure safety features like reflectors and brakes are all working properly;
- Ride the same direction as cars. Don't ride against traffic;
- Stop, look, and listen when crossing the street. Use crosswalks whenever possible;
- Observe all stop signs, traffic signals, and railroad crossings; and
- Don't wear headphones when riding.

The Hanford Police Department has noted an increased number of complaints about bicycle-related violations. Bicyclists tend to be at fault in a collision, often because they are riding the wrong way. State law requires bicycles to observe the same rules as motorists. That means bikes must ride in the same direction as other traffic. The most common complaints involve cyclists darting across roadways, riding against traffic or failing to acknowledge stop signs. Hanford Police Department's Traffic Division consists of three people. This staff is responsible for traffic enforcement and collision investigation; however, no officers are specifically assigned to bicycle or pedestrian safety.

The following programs are currently in operation or are being adopted.

Student Safety Information for Schools: Traffic officers are working with school resource officers and local school districts to help teach students to ride safely.

Helmet Program: This is a new program to provide helmets to minors. The California Vehicle Code prohibits anyone younger than 18 from operating a bicycle, scooter, skateboard, or skates without a helmet. The law also applies to minors riding as passengers. The police department recently bought 400 bicycle helmets for the program. Riders younger than 18 who are caught riding without a helmet will be issued a warning citation and given an application for a free helmet. The application process will allow police to track who has already received a helmet and deal with repeat offenders.

Bicycle Safety Day: The City of Hanford Police Department is considering an event that would likely include a course to demonstrate basic riding skills, as well as bicycle inspections to ensure students have properly adjusted seats, handlebars and safety features like brakes and reflectors.

Possible Future Programs

The existing schools that provide bicycle safety or education programs should continue their programs. In schools where there is not a current program established, one should be established (particularly for younger children). There are several agencies at the state and national levels that are available to help organize a program. The bicycle safety or education program should include one or more of the following.

- Annual or bi-annual bicycle safety presentations and discussions.

- Explanations of existing laws including: riding with the direction of traffic and stopping at traffic stop signs and traffic signals, and requiring children to wearing a helmet.

- An annual bicycle rodeo to be held at schools and/or shopping centers. This event might include: a basic skills course, safety instructions or a maintenance clinic.

- Distribution of information through the medium of public service announcements, local TV commercials, and newspaper articles should be targeted toward bicycle safety for Hanford youth.

- Distribution of the Hanford Bicycle Map to the community that contains a summary of the bicycle section of the California Vehicle Code, bicycle safety tips, bicycle routes within the County, and phone numbers to get more information about local bikeways.

- Efforts should be made to enhance and strengthen bicycle safety and education awareness, with the goal of reducing the number of bicycle collisions in the future. While there are some costs involved in starting bicycle safety and education programs and establishing and maintaining bicycle lanes and routes, the benefits are worth the cost if collisions can be prevented and lives saved.

The following programs should be considered for improving bicyclist safety in the City of Hanford.

Special Enforcement Days. Police could schedule special enforcement days where motor officers and traffic officers will specifically enforce bicycle laws. Cyclists should follow the rules closely and be extra cautious, as they are more likely to suffer serious injuries in a crash. As necessary, the Police Department may consider assigning more police to traffic control and issuing citations for traffic violations more frequently. Enhanced police enforcement should be used in conjunction with sting operations and walking audits to focus on improving locations most dangerous for bicyclists and pedestrians. Before such a program is implemented, police officers need education on how best to approach an offender and what violations should be targeted for enforcement.

Bicycle Traffic School. Bicycle safety should be an integral part of traffic school curricula for motorists; however, cyclists hold an equal obligation to adhere to traffic rules. Accordingly, the City should consider instating a traffic school for cyclists. Such a program would parallel conventional motorist traffic schools and would allow cyclists cited with a moving violation to take a class to lessen or eliminate their financial penalty. A similar, albeit less formal program might also be required of youths who are stopped for illegal cycling maneuvers. In this "diversion" program, youths who ride illegally must attend a one-day remedial cycling skills course, which is typically held on a weekend and conducted by the police department.

Driver Education. Driver education courses should include the importance of sharing the road and teach each new driver their responsibilities when it comes to sharing the road. Sharing the road with bicyclists should be included in high school driver education programs, local Hanford driver education schools, and traffic schools. The *2015 California Driver Handbook* includes extensive information on sharing the road with bicyclists. Bicycles are legally considered to be vehicles in California. Therefore, bicyclists are required to obey most of the same laws and have most of the same rights as do automobile drivers. The motor vehicle code addresses issues associated with the registration, necessary equipment, and operation of bicycles on the roadway. Over 100 bicyclists are killed each year in California. Every six hours a bicyclist is fatally injured in the US. 49% of all bicyclist deaths occur to youths age 16 or younger. 86% of all bicycle collisions involve an automobile or truck. Motorists failing to yield the right-of-way to a bicycle cause 42% of bicycle-related collisions. 39% of bicycle collisions occur because cars make turns without noticing bicyclists. 87% of bicyclists in California who die in a collision were not wearing a safety helmet.

"Share the Road" Signage. Signage on roadways, such as "Share the Road" signs and bicycle stencils on the street are also an additional tool and reminder which alert motorists to the presence of bicyclists.

The following programs are geared towards age groups, motorists, bicyclists, and law enforcement officials.

Bicycle Safety Programs for Children

Most bicycle safety efforts target elementary school-aged children and their parents. Programs for parents of beginning bicyclists, between the ages of five and eight, focus on the role the parent plays in selecting the proper size and type of equipment, in supervising their child's use of that equipment, and in teaching the basic mechanical skills needed to start, balance, steer, and stop a bicycle. Parents may be reached through parent-teacher associations and children through programs sponsored by the schools, day care centers, summer camps, and boys and girls clubs.

Children pose a special safety problem as they learn to ride bicycles. Learning to ride by the rules, look for traffic and use of hand signals are not second nature - these skills must be taught. Bicycle education programs should start early as children learn to ride and be modified as the years go by to focus on the needs of the particular age group. There is a critical juncture when children migrate from riding on the sidewalk to riding on the street. Although this age varies from child to child, children between the ages of nine and ten are generally old enough to learn street cycling skills. They can learn how to enter and exit the roadway; scan ahead, behind and to the side while riding straight; and communicate and cooperate with other road users and pedestrians. The following recommendations are made for programs that improve bicycle safety for children:

Bicycle Helmets. Helmet distribution programs should be continued and a citation alternative program should be adopted to encourage the purchase and use of bicycle helmets. Bicyclists under the age of 18 are required by state law to wear a properly fitted and fastened bicycle helmet. Before 1994 when this law went into effect, over 25% of bicycle collisions involved head injuries. Of these, more than one-half were life threatening.

Youth Bicycle Programs. There are many programs available for linking youth with bicycles. These programs, usually organized by non-profit organizations or a police department, have been very successful in involving teenagers and giving them something constructive to do with their time. While teaching bicycle safety and proper riding practices, these programs have had favorable results in keeping kids away from drugs, gangs and crime while instilling in them a sense of purpose and worth. Some of the highlights of these programs are:

- After school bicycle maintenance and repair;
- Recycle a bike program - kids fix up bikes and keep them;
- Earn-a-bike program through community service;
- Drop-in repair classes - also good for adult bicyclists; and
- Bicycle trips for kids programs.

Programs for Adult Bicyclists

There are few materials and programs that focus on the adult rider. Most adult bicyclists have not had any formal bicycle education in childhood outside of learning the basic mechanical skills. At the same time, there are misconceptions, myths, and outdated advice that further challenge adult bicyclists' safety. For instance, some believe a bicyclist should ride facing traffic, and it is still common to see a bicyclist at night not using the required lights and reflectors. Bicycle education programs developed for the adult cyclist need to educate cyclists about bicyclists' rights and responsibilities on the road, about techniques for sharing the road with motorists, and about secure bike locking techniques. Adults should also be educated about pedestrian rights and the need to be aware of people with mobility, hearing, and/or vision impairments. The following recommendations are made for programs that improve bicyclist safety for adults:

- Conduct a public awareness campaign focused on responsible road behavior and directed to bicyclists and motorists alike. Make use of public service space from newspapers, television, radio, bus advertising, posters and flyers mailed in utility bills;

- Promotional events such as Bike to Work Day enhance bicycle education;

- Community events such as charity bike rides, costume rides, bike fairs and bicycle rodeos are useful in attracting adults and families in more recreational surroundings. Include bicycle safety checks and helmet giveaways as part of these rides;

- Educate parent groups and adult groups that supervise children, like PTAs, day care centers, and youth camp operators, on safe bicycling practices;

- Conduct a public awareness campaign emphasizing the individual and community benefits of using a bicycle for daily trips. As part of this campaign have a city-wide contest for number of miles bicycled, oldest bicyclist, farthest commuter, etc.;

- Programs for motorists discussed in the following section can also reach adult bicyclists since most adults drive;

- Work with businesses that sell bicycles to provide incentives for adults to purchase helmets and safety gear, such as lights;

- Develop informational materials and programs specifically addressing the cycling needs of seniors, such as a tricycle program;

- The City should work with and encourage students about proper, effective cycling in Hanford; and

- The adult-targeted Effective Cycling course by the League of American Bicyclists (LAB) would serve the public need for cycling education and can be offered at bike shops and community centers. Kings County has a local chapter of the LAB.

Programs for Motorists

Motorists are probably the most difficult group to reach with bicycle education. Existing motorist-oriented programs typically reach their intended audience only at specific points. Some amount of bicycle education is distributed during driver education courses, driver licensing exams and traffic schools for violators. While these methods can be improved upon, for most motorists, these events will only occur once every several years. Additionally, programs targeted to children can benefit motorists as children bring home information to their families.

The following recommendations are made for programs that improve safety for motorists:

- Public awareness campaigns are most useful for educating the motorist on how to safely share the road with bicyclists and overall awareness of bicyclists' rights and responsibilities. Media campaigns including bumper stickers and banners, could be developed;

- Make use of public service space from newspapers, television, radio, bus advertising, posters and flyers mailed in utility bills;

- Incorporate "sharing the road" training into driver's education programs; and

- Signage on roadways, such as "Share the Road" signs and bicycle stencils on the street, both of which are proposed for Class 3 bike routes, are also an educational tool which alert motorists to the presence of bicyclists.

Programs for Law Enforcement Officials

Bicycle safety education and promotion programs will hopefully reduce the need for heavy investments in enforcement. Nonetheless, the Hanford Police Department should enforce traffic regulations for both children and adult bicyclists and motorists. Police officers are generally hesitant to cite bicycle offenders, especially children, because they believe it will result in negative publicity for the department. As a result, some bicyclists are under the impression that they can do whatever they want while on a bicycle. However, roughly half of bicycle/automobile collisions are caused by the bicyclist who is not obeying traffic laws, i.e. riding on the wrong side of the street or riding without lights at night. (Source: Federal Highway Administration, *"Pedestrian and Bicycle Crash Types of the Early 1990's*", Publication No. FHWA-RD-95-163, June 1996). Enforcement should be viewed as another component of a bicycle education program and as a most effective way to reduce the number of bicycle collisions and injuries. The following recommendations are made for programs for law enforcement officials:

- Police officers and departments need to be convinced that enforcing traffic regulations for bicyclists is a good idea. Officers also need some education on the laws regarding bicyclists' rights and responsibilities, on how best to approach the bicyclist offender, and on what offenses should be earmarked for enforcement. Any bicycle enforcement program should start first with a citation alternative program and warnings, and then move to giving citations;

- In 1994, California made it easier to use enforcement as a bicycle education and safety tool by allowing local authorities to reduce fines for bicycle offenses. Previously, bicyclists were fined at the same rates as motor vehicle offenders. Most police officers and departments felt that these fines for a bicyclist, especially a child, were excessive and were hesitant to impose them. The City should develop its own bicycle fine structure so that bicycle fines will not be excessive and officers will be more willing to impose them;

- A citation alternative program, such as those developed for children not wearing a helmet, should be developed for adults. Attendance at an education program, similar to auto traffic school, would allow fees to be waived. Motorists involved in a bicycle collision could also be required to attend, to learn how to safely share the road;

- Posted speed limits should be enforced. High auto speeds make bicyclists feel unsafe, discourage people from trying out cycling, and increase the severity of collisions;

- Traffic officers should enforce the "Three Feet for Safety Law" signed in September 2013 by Governor Jerry Brown which requires drivers of motor vehicles to remain a distance of at least three feet from bicyclists when passing them on the roadway. Failure to obey the law would result in a fine. The fine would increase if the bicyclist is injured by the motorist.

- The City should expand opportunities for people to register their bicycles by either increasing the hours for bicycle registration or allowing businesses that sell bicycles to register bikes when they are sold; and

- When asked to prioritize specific programs that are designed to increase bicycle and pedestrian safety, the community workshop participants preferred that traffic officers cite both bicyclists and motor vehicle drivers who break parking and traffic laws, particularly at critical locations throughout the City.

3.6.2 BICYCLE PROMOTION PROGRAMS

Bicycle promotion programs are intended to increase a community's awareness of the benefits of bicycling and improve safety for bicyclists. Through marketing campaigns and incentive programs, the community is encouraged to bicycle. As a viable alternative to the automobile, bicycling reduces traffic, improves air quality, and improves personal health. The three main components of a bicycle promotion program are described below:

Identify benefits of bicycle commuting. Bicycling is an enjoyable, low-cost, non-polluting, sustainable, and healthy alternative to the traditional motorized commute. Bicycling reduces the

cost of commuting for employees, improves health through exercise, reduces traffic, improves air quality, and reduces consumption of fuel resources;

Provide an incentive for bicycle commuting. Many agencies and employers use monetary or other incentives to lure the prospective participant out of his/her single occupant vehicle and into a carpool or transit. These programs should be expanded to include incentives for bicycle commuting; and

Support and applaud bicycle commuting. Endorsement of bicycle commuting by the City is a significant aspect of a promotion program. Prospective bicycle commuters are more apt to try out this underutilized mode if it is accepted and supported by city officials. Endorsement from "the people in charge" will go a long way towards persuading employers to establish their own programs and encouraging individuals to commute by bicycle.

Possible bicycle promotion programs and activities, appropriate for use in Hanford, are outlined in Appendix E. Programs focused on encouraging employees to bicycle are often adopted by city governments as an example to other employers within their jurisdiction. Some activities can be implemented in conjunction with other community groups; and thereby minimize the cost to the city. The programs described in the Appendix include possible employee programs as well as activities aimed at the general population.

3.6.3 BICYCLE DETECTION

In 2009, Caltrans issued Traffic Operations Policy Directive (TOPD) 09-06, which requires that bicycle and motorcycle detection be implemented at all new or modified traffic signals. The TOPD was issued to implement Assembly Bill 1581 (CVC Section 21450.5), which became law on January 1, 2008, requiring bicycle and motorcycle traffic-actuated signals and related signal timing. Subsequently, Part 4, Highway Traffic Signals, of the CA MUTCD was updated to reflect the new requirements.

TOPD 09-06 indicates that bicycle and motorcycle detection must be provided on all new and modified approaches to actuated traffic signals. Each lane of the intersection, on a public or private road or driveway, shall include detection for bicycles and motorcycles at all new traffic signals whether detection loops or video detectors. If more than 50 percent of the limit line detectors need replacing at an existing signalized intersection, then the entire intersection should be improved to include bicycle/motorcycle limit line detection in every lane. In addition, traffic signal timing shall include minimum green times to accommodate bicyclists.

Two types of bicycle detection technology are available: detection loops and video detectors. Bicycle detection loops (also called inductive loop sensors) are used for detection of traffic at demand-actuated traffic signals, and can be configured and adjusted to detect bicycles with metal rims. These loops establish a magnetic field in the loop area that changes when metal, such as a vehicle or bicycle, moves over the loop. This change is detected, and subsequently, triggers a change to the traffic signal operations. All in-pavement detectors are not capable of detecting bicycles. Type D detectors have been found to be most sensitive for detecting bicycles in the middle of the loop area. There are some detection loops in Hanford already in use.

Video detectors are a sensor technology in use more often than detection loops in Hanford. Video detector systems use digital image processing to detect a change in the image at a specific location in the travel lane due to the presence of a vehicle. Video camera technology potentially allows a wider variety of vehicles to be detected than inductive loop sensors.

Permanent recall or fixed-time operation of the traffic signal is allowed. These types of timing allow for a green light for a predetermined period of time for all approaches. They are not traffic-responsive; and therefore, do not require detection of vehicles or bicycles. As these can be fairly inefficient, they are usually used in urban areas, where traffic is fairly predictable. In Hanford, they are used at some locations in and around downtown.

Since many bicyclists and motorists are not familiar with traffic signal detection, particularly bicycle/motorcycle detection, a pavement marking indicating where the bicyclists should stop to be detected should mark the lanes where bicyclists are expected. These would be the outside through lane and outside left-turn lane on each approach. Should a Class II bike lane extend to the intersection, it would be marked instead of the outside through lane.

Bicycle detection and signal timing requirements must be included with traffic signal installation or modification. As this requirement is California law, it cannot be waived. The City should update the city standard drawings and specifications to include these new requirements. It is recommended the requirements include installing the bicycle loop detector symbol pavement marking.

Bicycle detection and timing should be implemented on a City-wide basis, as funding and implementation opportunities occur. In addition, correct operation of vehicle and bicycle detection should be monitored. Bicycle/motorcycle detector loops should be calibrated to ensure their detection by bicyclists. Extended waiting times at a traffic signal, due to inoperable detector loops, may make motorists and bicyclists take the risk of running a red light. Proper maintenance of detector systems and signal timing is essential.

3.6.4 BICYCLE PARKING

Safe, secure, and convenient bicycle parking is a necessity for promoting bicycle use. Bicycle parking facilities are sometimes classified into Class I and Class II facilities (see description below). Although bicycle parking is available at public schools, parks, and other trip attractors, some of these are Class III facilities (see description below) and are no longer considered appropriate, except in guarded areas or locked rooms. Class II bike racks are preferred as they allow the user to lock the frame and at least one wheel to the rack. The type of bicycle parking provided at a destination should reflect the type of parking demand expected at that location. Bicycle parking demand falls into three general duration categories:

- Short-term: 2 hours or less; typical application is the shopping trip;

- Long-term: 3 hours to a full day; typical application is the work trip; and,

- Overnight: one night to two weeks or more; typical application is the weekend or vacation trip, but is also used by commuters who do not ride home the same day they rode to work.

When selecting the type of bicycle parking to be installed at a location, a mix of parking types may be the most appropriate. Attention should be paid to the varying requirements for the different potential users of the facility. For example, a shopping mall will need short-term parking for shoppers, as well as long-term parking for employees. Bicycle parking facilities have been grouped into three general categories. A description of these categories and how they meet the need for bicycle parking are discussed below.

Class I: These facilities are storage spaces which protect the entire bicycle and its components from theft, vandalism, and inclement weather. It is appropriate for long-term bicycle parking, such as at major employment centers, multi-family residential units, park and ride lots, or transit stations. Examples are bike lockers, bike rooms with key access for regular bike commuters, guarded parking areas, and valet or check-in parking. A common variation of Class I parking is often found at schools where racks are placed within a fenced area to provide more security to discourage thieves, but do not protect from the weather. These are not true Class I facilities.

Class II: These facilities are defined as a rack or stand to which the frame and at least one wheel can be secured with a user-provided U-lock or padlock and cable. This type of parking is appropriate for short-term parking such as at shopping areas, libraries, and other places where the typical parking duration is about two hours. Examples of racks popular with bicyclists are the inverted U-rack or horse rail rack, and the wave or ribbon rack. Increasingly popular are higher security Class II racks.

Class III: These facilities secure only one wheel to the rack. Class III facilities have historically been popular in school yards; however, these are relatively unsecure facilities. Potential thieves are able to steal most of the bicycle while leaving just the locked wheel behind. These are never recommended, except in guarded areas or locked rooms, where they are used inside Class I facilities.

Bike Rack Placement. The placement of bike racks is important for several reasons:

- To ensure they are safe from vandalism;
- To ensure they are easily accessible to bicyclists;
- To avoid adversely impacting pedestrian circulation; and,
- To ensure they can be used to their maximum design capacity

The following guidelines for bike rack placement should be followed:

- Racks should not be obscured by landscaping, fences, or other obstructions;
- Racks should be lit at night to protect both the bicycle and the user;
- Visibility should be provided to at least one of the following: security guard, station agent, parking garage attendants, clerks, vendors, or passing pedestrians;
- Racks should be located within 50 feet of a building entrance and should be clearly visible from the building entrance and its approaches;
- Protection from the weather should be provided for a portion of the rack supply at locations that attract long-term parking;
- Ground surface of the bicycle parking area should be an all-weather and drainable material such as asphalt or concrete; care should be taken when using brick, or other materials that can become slippery when wet;
- Racks should be located outside the typical pedestrian travel path, with additional room for bicyclists to maneuver outside the pedestrian way;
- Racks shall be located at a sufficient distance from motor vehicles to prevent damage to parked bicycles and motor vehicles;
- Signage should be posted to direct bicyclists to the locations of bicycle racks that may not be readily apparent, such as in parking garages; and
- Signage indicating the location of bicycle parking should be posted wherever a 'No Bicycle Parking' sign is posted.

An indication of needed bicycle parking is bicycles parked to trees, poles or parking meters. Locations with frequent use of other objects to secure bicycles should be provided with suitable bicycle parking. Additionally, a program sponsored by the City to provide parking at the request of businesses could be implemented.

One way to ensure that bicycle parking is installed where needed is to require it to be installed by property owners or developers. The City of Hanford currently does not have a bicycle parking ordinance, requiring the installation of facilities when certain criteria are met. It is recommended that the City consider adopting a bicycle parking ordinance that targets different uses and requires both long-term and short-term parking. Two recent sample parking ordinances from the City of San Jose, California and Bend, Oregon are included in Appendix C. While this ordinance may be more detailed than what is needed by Hanford, bicycle parking requirements should be considered for new commercial buildings, existing buildings undergoing major renovations, building change of use, City-owned and leased buildings, and public and privately owned parking lots.

3.6.5 SHOWER/LOCKER FACILITIES

Shower and locker facilities in Hanford are located in schools, health clubs, offices, and hospitals. These facilities are not currently available to the general public. Shower and locker facilities are most needed at the workplace, as employees are more likely to commute via bicycle if these facilities can be conveniently accessed.

3.6.6 BICYCLE ACCESS TO TRANSIT

Bicycles can be carried on the primary transit systems serving the City - Kings Area Rapid Transit (KART). Regional service is provided via Orange Belt Stages and Greyhound. Bicycles can be carried in the luggage compartment of Orange Belt Stages with no boxing requirement; Greyhound requires boxing to transport bicycles. No bicycles can be carried on the Amtrak Thruway bus for connection to the train in Hanford. Short-term, Class II bicycle parking is available at the City's transit center. Policies for bicycle access to transit are located in Chapter 5 of this report.

CHAPTER 4

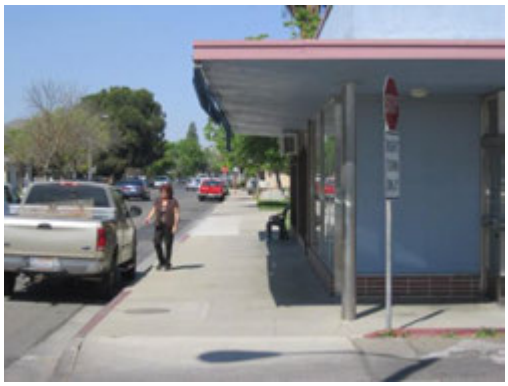
PEDESTRIAN NETWORK

PEDESTRIAN NETWORK

4.1 Existing Conditions

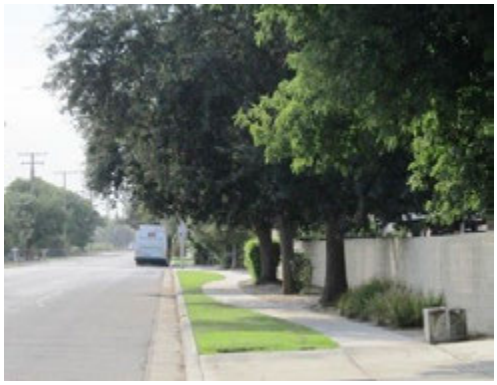
Pedestrian facilities include walkways, traffic signals, crosswalks, refuge islands, pedestrian-scale illumination, and benches. The different types of walkways are described below:

4.1.1 SIDEWALKS



Sidewalks are located along roadways, separated with a curb and/or planting strip or swale, and have a hard, smooth surface. Sidewalks in residential areas are sometimes used by bicyclists, but many cities ban bicycle riding on sidewalks.

The principal reason for a sidewalk is pedestrian safety. The sidewalk gives the pedestrian a place to walk outside of the vehicular travel lanes. Curb, gutter and sidewalk are required for all new development in the City. Some areas of Hanford lack sidewalks and curb and gutter such as McCreary Avenue. Currently, pedestrians walk in the street at these locations. The City's standard for a sidewalk requires a minimum of 4'-6" wide sidewalk for residential areas. In commercial areas, the requirement is a minimum 7'–6" wide sidewalk. When placed adjacent to the street, the curb would add another six (6) inches to the sidewalk width. In some residential areas, the sidewalk is separated from the street by a 7'–6" parkway. Canopy trees are usually planted at these locations. In some residential areas, sidewalks meander between adjacent arterial roads and the property lines.



Sidewalks are sometimes wider than are required by the City of Hanford Public Works Construction Standards such as in areas next to a school or a park. Most downtown sidewalks are ten (10) feet in width.

The preferred material for sidewalks is Portland Cement Concrete (PCC), which provides a smooth, durable finish that is easy to grade. A light broom finish parallel to the direction of flow is required.

4.1.2 PATHS OR PATHWAYS

Paths or pathways are typically used by pedestrians and some cyclists. Paths typically develop randomly as a means to travel the shortest distance between point of trip origin to destination by walking or bicycling and often when paved walkways are unavailable. For example, students have created their own well-trodden walking paths between the Country Crossings residential

community at Centennial Drive/Lacey Boulevard intersection and the College of the Sequoias and Sierra Pacific High School.

4.1.3 SHOULDERS

Shoulders serve pedestrians in many areas outside the city limits. The Caltrans-recommended shoulder widths are usually adequate to accommodate pedestrians. In areas where population densities are too low to justify sidewalks, shoulders should be wide enough (6 feet) to accommodate pedestrian and bicycle traffic. Many areas in and around Hanford such as the County islands and areas outside the city limits do not have sidewalks. Examples include Lacey Boulevard east of 10th Avenue, Fairview Place and Fargo Place northeast of the city, Kings Road in the central portion of the city, Furlong Drive in the north central area of the city, the streets in the unincorporated area of Home Garden, and the following roadways located east of 10th Avenue and north of Lacey Boulevard: Kruger Avenue, Miller Street, Jessie Avenue, Whitney Drive, Elm Street, Myrtle Street, Forrest Way, Gladys Way, and Ivy Street.

4.1.4 BRIDGES

Sidewalks on bridges should always be provided on both sides of bridges where pedestrian use can be expected. According to Caltrans Design Manual Basic Design Policies Section 105.2 Sidewalks and Walkways, ("the minimum width of sidewalk should be 6 feet when contiguous to a curb"). Wider sidewalks should be considered in urban settings with high pedestrian use. The bridge sidewalk must not be narrower than the approach sidewalk. Sidewalks on bridges with design speeds greater than 40 MPH require a vehicle barrier at the curb line.

4.1.5 UNDERPASSES

Sidewalks under bridges should always be provided on both sides of underpasses where pedestrian use can be expected. In Hanford, currently two streets pass under SR 198 and provide north-south connections to the City – Phillips Street and 11th Avenue. Currently, the design speed for streets that pass under the highway in Hanford is 30 mph. Sidewalk widths are less than six (6) feet under bridges.

4.1.6 SCHOOL ACCESS

The Pedestrian Network Map (Figure 4-2) identifies eighteen public school facilities including elementary, middle, and high schools, and the College of the Sequoias with roughly a 1,000 foot walking distance where Safe Routes to School improvements may be located. Safe Routes to School are discussed in Section 4.7.2 of this chapter. School access can include bicycles and

pedestrians. Currently many schools in Hanford have some signage and marked crosswalks at the primary entrance to the school grounds and the speed limit is reduced to within 500 feet of the school. Some schools, such as Pioneer Middle School, should increase the extent of striping, marked crosswalks, ADA curb ramp improvements, and signage to improve safety around schools.

4.2 Pedestrian Collision Analysis

Bicycle-involved collision data was obtained from the Transportation Injury Mapping System (TIMS) and the Statewide Integrated Traffic Records System (SWITRS) for a five-year period from January 2008 through December 2012. This data represents all reported pedestrian-involved collisions occurring in Hanford. Collisions that occur on off-street paths are also not included. A summary of total reported pedestrian collisions by year and severity are shown in Table 4-1.

Table 4-1
Pedestrian-Involved Collision Summary

Year	Total Collisions	Injury	Fatality
2008	18	17	1
2009	16	15	1
2010	11	10	1
2011	16	16	0
2012	11	11	0
Total	**72**	**69**	**3**

Source: California Highway Patrol SWITRS data 2008-2012

Collision data was analyzed to identify patterns in the occurrence of pedestrian-involved collisions which might highlight specific improvements needed in the City of Hanford's pedestrian program. This analysis primarily focused on collision location, primary cause, party at fault, and age of parties involved. Analysis results will be used to determine not only the need for physical improvements, such as sidewalk or marked crosswalks, to increase pedestrian safety, but also to identify the areas of most concern for education, enforcement, and safety programs.

The variation of pedestrian-related collisions by time of day, day of the week, and season of the year are typical of expected travel patterns. Consequently, the higher numbers of collisions experienced in Hanford during peak travel times are most likely the result of higher volumes of pedestrian and motor vehicle traffic rather than any other contributing factor. Weekdays account for 86.1% of the pedestrian-involved collisions. During the weekday peak periods, the evening (4:00 PM to 6:00PM) commute had twice as many collisions as the morning (7:00 AM to 9:00 AM.) A review of seasonal variations indicates that the incidences of collisions are highest in the autumn and lowest in the spring and early summer. The highest monthly rates are in November, September, August, October, and January, while the lowest rates are in July, March, April, May, and June.

4.2.1 LOCATION

Intersections pose the highest safety hazard for all traffic and the greatest challenge to traffic engineers. Of the 72 pedestrian-involved collisions reported between 2008 and 2012, 63, or 87.5%, occurred at or within 100 feet of an intersection. Tables 4-2 and 4-3 identify the roadways and intersections with the highest number of pedestrian collisions. The results will be used in developing pedestrian walkway recommendations in this Master Plan.

Table 4-2
Roadways with Highest Number of Pedestrian-Involved Collisions

Roadway	Number of Collisions
11th Avenue	22
7th Street	14
10th Avenue	9
Lacey Boulevard	9
Florinda Street	6
Douty Street	6
Grangeville Boulevard	5
Hanford-Armona Road	5
Irwin Street	5

Source: California Highway Patrol SWITRS data 2008-2012

Table 4-3
Intersections with Highest Number of Pedestrian-Involved Collisions

Intersection	Collisions within 100' of intersection	Collisions over 100' from intersection
11th Avenue at 7th Street	4	0
11th Avenue at Lacey Boulevard	2	0
11th Avenue at 6th Street	2	0
11th Avenue at Florinda Street	2	0
10th Avenue at Leland Way	2	0
7th Street at Irwin Street	2	0
Lacey Boulevard at Greenfield Avenue	2	0
Lacey Boulevard at Park Avenue	2	0
11th Avenue at Beverly Drive	0	2

Source: From California Highway Patrol SWITRS data 2008-2012

4.2.2 PARTY AT FAULT

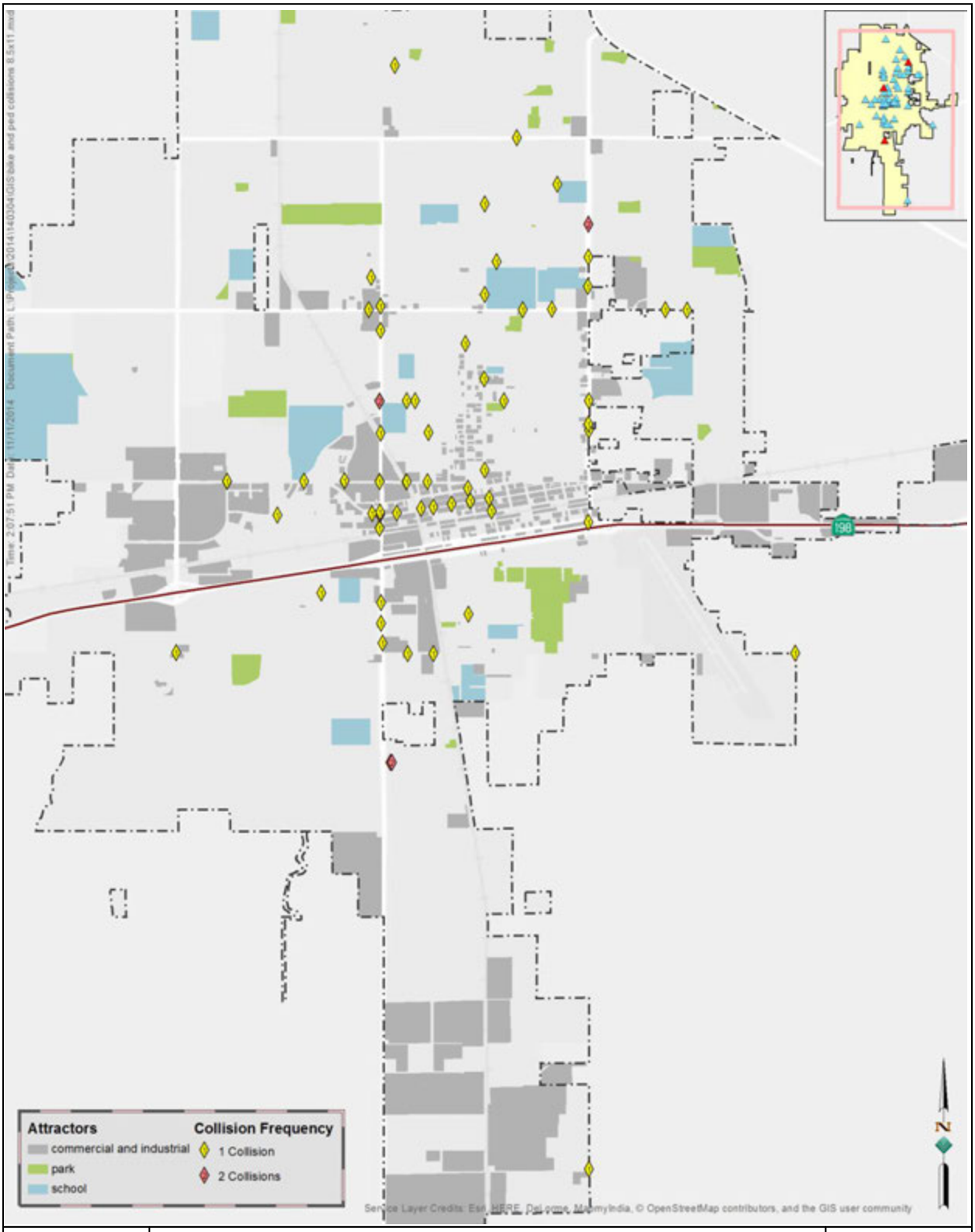
Table 4-4 summarizes the primary cause of Hanford's pedestrian collisions as stated in the SWITRS reports. Figure 4-1 shows the locations of these collisions.

Table 4-4
Collisions by Primary Cause

Primary Cause of Collision	Number	Percentage
Pedestrian Right-of-Way (Crosswalk or Intersection)	31	43.1%
Pedestrian Violation	21	29.2%
Unsafe Speed	4	5.6%
Unsafe Starting or Backing	4	5.6%
Improper Turn	3	4.2%
Not Stated	3	4.2%
Other Improper Driving	2	2.8%
Failure to Obey Stop Sign or Traffic Signal	1	1.4%
Unknown	1	1.4%
Other Hazardous Violation	1	1.4%
Other than Driver (or Pedestrian)	1	1.4%
Total	**72**	**100%**

Source: California Highway Patrol SWITRS data 2008-2012

Of the 72 total pedestrian collisions, a pedestrian being struck at a crosswalk or intersection was determined to be the primary cause. Of the collisions where pedestrians were determined to be at fault, the overwhelming majority were due to pedestrians crossing the roadway outside of marked or unmarked crosswalks. This behavior was more common with adult pedestrians, as 66.7% of this collision cause were the fault of a pedestrian.



Quad Knopf	PEDESTRIAN COLLISIONS MAP	Figure 4 - 1

4.3 Pedestrian Safety

Pedestrian safety education targeted at all road users is an important means for promoting safe interactions between pedestrians, motorists, and cyclists. Currently, no programs or initiatives are currently in place in Hanford targeted specifically for pedestrian safety.

4.4 ADA Self Evaluation and Transition Plan

4.4.1 AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law for persons with disabilities. The ADA states that its purpose is to provide a "clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities." Congress emphasized that the ADA seeks to dispel stereotypes and assumptions about disabilities and to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. The ADA states that a public entity must reasonably modify its policies, practices, or procedures to avoid discrimination against people with disabilities.

4.4.2 ADA TRANSITION PLAN

The City of Hanford developed an ADA Transition Plan in 1995 and updated, with the public's input, in 2010-2011. As part of the update, the City performed a city-wide survey of its existing facilities and sidewalks to identify barriers for accessibility and developed a plan to update and improve pedestrian accessibility on it street rights-of-way. The City has established a 20-year time frame to remove pedestrian barriers that limit program accessibility to facilities and sidewalks.

Based on criteria listed in the ADA, the City will continue to prioritize and improve projects that include: government offices and facilities; bus stops and transportation facilities; places of public accommodation such as commercial and business areas; facilities containing employers; and other areas such as residential neighborhoods and underdeveloped regions of the City.

Hanford's General Plan will promote opportunities for pedestrian traffic throughout the City's more than 200 miles of roadway by continuing to develop and maintain a safe sidewalk system that facilitates pedestrian access for all persons, including the disabled, to public transit for commuting, recreation or other uses and destinations. City sidewalks will be planned and constructed in connection with street construction. The General Plan also states that subdivision layouts should include safe and pleasant designs which promote pedestrian access to arterial and collector streets, and consider the location of community services such as schools, parks and neighborhood shopping activity centers in the accessibility of their design for all persons.

4.4.3 ONGOING MAINTENANCE, REPAIR, AND NEW CONSTRUCTION

The City of Hanford's Design Standards for sidewalks, driveways, and curb ramps have been reviewed for consistency with state and federal accessibility requirements. The review found that

several of the City standard details need to be brought up to current accessibility standards. The City engages in annual maintenance efforts to repair cracked or heaved sidewalks and to address sidewalk improvements based on citizen's requests and/or needs at specific locations as budget allows. Street overlay and street re-construction projects include repair of sidewalk and construction of ADA compliant curb ramps. Other capital improvement projects with ADA components are completed every year and when applicable, the City works with developers to ensure that accessibility is included in the scope of their project.

4.4.4 ADA STANDARDS FOR SIDEWALKS

Safe and accessible sidewalk connections are the backbone of creating a pedestrian-friendly city. The City of Hanford has a very extensive sidewalk network. However, in order to build off of this existing network and promote connectivity and accessibility, the City needs to ensure that all sidewalk surfaces meet ADA standards. Meeting or exceeding ADA standards will contribute to a better pedestrian environment for all users.

ADA standards require a minimum of four (4) feet of unobstructed sidewalk. Some exceptions may be made to a minimum of three (3) feet because of right-or-way restrictions, natural barriers, or other existing conditions. Sidewalks should have a continuous surface that is not interrupted by steps or abrupt changes in level and have a slip resistant surface.

There are instances within the City of Hanford where the sidewalks are not up to standard for a number of reasons. In many cases, sidewalks are old and their age has caused the surface to crack and cause abrupt level changes. Additionally, sidewalks are frequently obstructed by signs, poles, benches, or other streetscape amenities, which encroach on the minimum four (4) foot sidewalk. There are also areas within the City where there may be a gap in the existing sidewalk network. As part of the ADA Transition Plan, the City should conduct an audit of the sidewalks and identify locations that need to be updated to meet the minimum ADA requirements.

4.4.5 ADA STANDARDS FOR CURB RAMPS

Curb ramps allow people with mobility impairments to gain access to the sidewalks and to pass through median islands in streets. Without curb ramps, these individuals would be forced to travel in streets and roadways, where they are in potential conflict with vehicles and/or are prevented from reaching their destination.

Curb ramps are required at every intersection where a pedestrianway crosses a curb. The preferred orientation is for two curb ramps per corner that align with the direction of the crosswalks. Sometimes the limited width of a sidewalk makes it necessary to locate one curb ramp in the center of the curb return. However, in locations where space is limited curb extensions should be considered as a method to widen the sidewalk and provide adequate room for curb ramps.

4.5 Recommended Pedestrian Network

4.5.1 RECOMMENDED ROUTE SELECTION CRITERIA

The Pedestrian Network Map (Figure 4-2) was created using available aerial photography, the General Plan Land Use Map, and on-site tours and evaluation. Although there are many miles of sidewalk throughout the City of Hanford that pedestrians are encouraged to use, the sidewalks on this Master Plan were selected based on the following criteria.

- **Connections to trip attractors:** Pedestrian routes provide links to shopping, parks, schools, and jobs.

- **Proximity to bus stops:** Although bus stops in the City are located along streets with sidewalks, the routes selected on the Pedestrian Network Map (Figure 4-2) meet two or more of the criteria listed here.

- **Exhibits or is earmarked as a great opportunity for future improvement:** Streets such as Lacey Boulevard east of 10th Avenue and 10th Avenue south of SR 198 are located in areas that are in the county, but when annexed into the City of Hanford, will be eventually improved. Zoning for Lacey includes mixed-use, regional retail, and higher density housing, all pedestrian traffic generating uses.

4.5.2 RECOMMENDED PEDESTRIAN NETWORK ROUTES

The Pedestrian Network Plan has been developed to encourage walking; improve the health of Hanford's citizens; connect residents to places where they can shop, relax, meet, pray, go to school, and work; and, explore the City where they live. Although residents and visitors are encouraged to walk on all sidewalks in the City, the following sidewalks were selected from the criteria identified in the previous section and represent the key locations where improvements should be prioritized. Improvements would include, but not be limited to, upgraded ADA-compliant curb ramps, marked crosswalks, street trees, bus shelters, sidewalk repairs, sidewalk widening, and new sidewalk installation.

- **Centennial Drive from Fargo Avenue to Lacey Boulevard:** The sidewalk meanders in a twenty foot (20') wide landscape strip and is separated from the street by a parkway. Shade trees help make a comfortable environment, and the privacy wall is composed of attractive masonry. The city should require that all future development create the same or similar pedestrian environment.

- **Irwin Street from Grangeville to Downtown:** The homes along this portion of Irwin Street display a variety – almost a history -- of architecture in the City of Hanford. Beautiful timeless examples exist of Craftsman, Tudor, American Farmhouse, Spanish Colonial, and Monterey style. In addition, parkways are wide, often include mature shade trees, and make for a pleasant walking experience. The City may want to look at opportunities for crosswalks to improve connectivity and safety. Further analysis of Irwin Street may need to be

performed to determine potential crosswalk locations. Curb ramps may need to be upgraded to be ADA compliant.

- **Douty Street from Fargo Avenue to Downtown:** Like Irwin Street, many of the homes along Douty Street from Ivy Street to Grangeville Boulevard display a variety – almost a history of architecture in the City of Hanford. Parkways are wide, often include mature shade trees, and make for a pleasant walking experience. Douty Street provides access to Hanford High School, Lacey Park, Earl F. Johnson High School, Central Valley Hospital, and St. Rose Catholic School north of SR 198. Douty Street provides connections to Coe Park, Longfield Center, Lincoln Elementary School, and Immaculate Heart of Mary Church south of SR 198. The City may want to look at opportunities for crosswalks to improve connectivity and safety. Further analysis of Douty Street may need to be performed to determine potential crosswalk locations. The intersection of Irwin Street at Douty Street 400 feet (400') north of Lincoln Elementary School is likely to require pedestrian safety improvements. Curb ramps may need to be upgraded to be ADA compliant.

- **10th Avenue from SR 43 to Hanford-Armona Road:** This nearly four (4) mile route provides access from residential neighborhoods to shopping, schools, the downtown core, Kings County Fairgrounds, the youth soccer complex, and other designated routes on the pedestrian network. Many of the sidewalks meander in 15', 20', or 25' landscaped setbacks. Some sidewalks abut the street curb. South of Crass Street, sidewalks take on a more urban feel where they abut the street with street trees located in cut-outs in the concrete. Curb ramps may need to be upgraded to be ADA compliant.

- **9 ¼ Avenue from Leland Way to Lacey Boulevard:** The west side of 9-¼ Avenue is one of the few streets on the recommended pedestrian network where sidewalks abut the street curb. It was selected because as properties develop, it does provide future opportunities on the east side of the street as well as a portion from Lacey Boulevard to a point one hundred feet (100') south of Hawthorn Street to require developers to separate five foot (5') minimum sidewalks from the street curb by a landscaped tree covered parkway. Crosswalks may also be considered at controlled intersections to improve connectivity. Further analysis of 9-¼ and 9th Avenues may need to be performed to determine the suitability of potential crosswalk locations. There are many locations where shade trees have been planted between the sidewalk and the property line. The City should make efforts to add trees in the locations where space exists and trees are lacking or nonexistent. During the workshops, the community identified this segment as one of their key sidewalk improvement priorities on the pedestrian plan.

- **Fargo Avenue from Centennial Drive to 10th Avenue:** Portions of this section include a meandering sidewalk within the twenty foot (20') width landscape buffer, and landscaping.

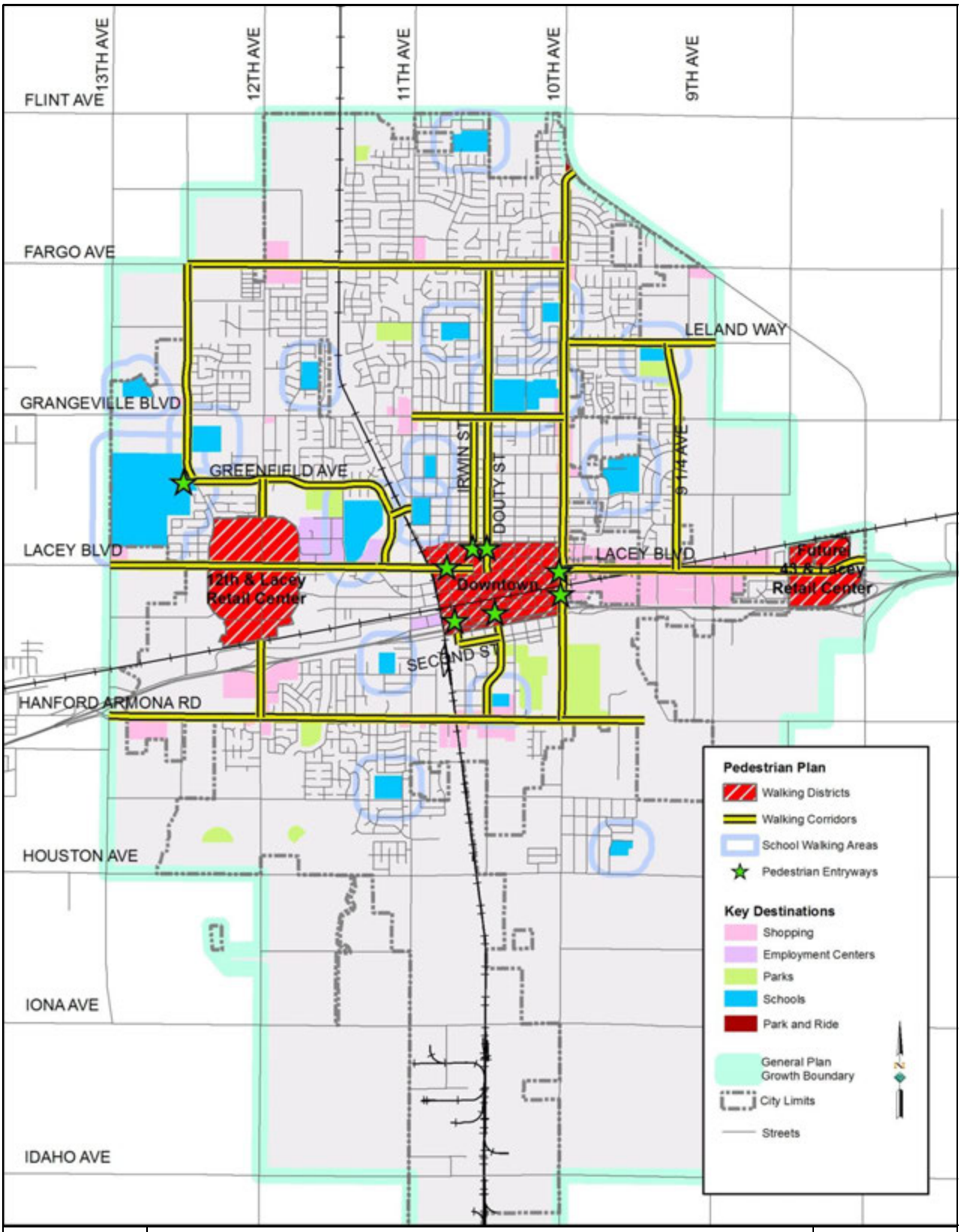
The sidewalk is separated from the street curb by a variable width parkway with shade trees. This section of roadway provides access to shopping at 10th and 11th Avenues, a park at Glacier Way, and connections to the pedestrian network at 10th Avenue and Douty Street. Many homes front Fargo Avenue between Aspen Street and 10th Avenue resulting in a large number of driveways. The City should ensure that new development plans include a similar approach to the pedestrian network here.

- **Leland Way from 10th Avenue to 9th Avenue:** Leland Way is one of the few streets on the recommended pedestrian network where sidewalks abut the street curb. It was selected because it provides access to 10th Avenue, Hamilton Elementary School, and Freedom Park (via 9-¼ Avenue). As the area develops, crosswalks should be considered at busy intersections to improve connectivity. Further analysis of Leland Way may need to be performed to determine potential crosswalk locations. Curb ramps may need to be upgraded to be ADA compliant and sidewalks may need to be widened where light poles and utility poles interfere with adequate width.

- **Grangeville Boulevard from 11th Avenue to 10th Avenue:** This one mile portion of Grangeville Boulevard provides access to Hanford High School, the shopping center at 11th Avenue and Grangeville Boulevard, shopping at 10th Avenue and Grangeville Boulevard, and connections to the pedestrian network at Irwin and Douty Streets. One of the priorities along this portion of Grangeville Boulevard is the upgrading of curb ramps. Much of this area lacks street trees which should also be a consideration.

- **Greenfield Avenue from Centennial Drive to Lacey Boulevard and Elm Street to Wilson Junior High School:** The sidewalks provide access from the residential neighborhoods to Hanford West High School, Youth Sports Complex, shopping along Lacy Boulevard, and Adventist Health Center. Further analysis of Greenfield Avenue may need to be performed to determine potential crosswalk locations. During the public workshops, the community identified this section of the pedestrian plan as one of their preferred locations for walking and biking. They selected this street as an ongoing priority for sidewalks, curb ramps, and amenity improvements.

- **West Lacey Boulevard from 13th Avenue to Civic Center Park:** Lacey Boulevard is the City's main east to west commercial corridor. West Lacey Boulevard provides access to and from many trip attractors including Centennial Plaza and Hanford Mall, Kings County Government Center, Adventist Medical Center, Hanford Towne Center, and Downtown.



Quad Knopf

PEDESTRIAN NETWORK MAP

Figure
4 - 2

- **East Lacey Boulevard from Downtown to SR 43:** East Lacey Boulevard provides access to and from downtown, shops like Smart & Final, and the proposed regional center at SR 43. Lacey Boulevard is the City's main east to west commercial corridor. Sidewalks and ADA ramps will need to be installed as Lacey Boulevard is improved. The City could consider requiring up to ten feet (10') of buffer from the street curb to the property line. The ten feet should include a minimum five foot (5') sidewalk separated from the curb by a landscaped parkway that includes shade trees to encourage walking. During the workshops, the community selected the corridor of sidewalks between 10th Avenue and SR 43 as one of their key priority improvement projects.

- **Hanford-Armona Road from 13th Avenue to Hanford Municipal Airport:** Hanford-Armona Road is also one of the City's bike lanes. Efforts should be made to install shade trees in the parkways between the curb and the sidewalk or between the sidewalk and the property line. ADA access should be improved around utility poles that are embedded in the sidewalk wherever additional width is available. Crosswalks should be considered in high traffic areas such as Harris Street at the Immaculate Heart of Mary Church. Further analysis of Hanford-Armona Road may need to be performed to determine this potential crosswalk location.

- **Second Street from Douty Street to Phillips Street:** Second Street is a residential street with wide unlandscaped parkways. Second Street gets pedestrians from Coe Park, Longfield Center, and residential neighborhoods to downtown via Phillips Street, which. provides access to downtown under SR 198. Providing more pedestrian and bicyclist opportunities for access from the homes, schools, and businesses south of SR 198 to downtown is a signature goal of this report.

- **Phillips Street from Second Street to Downtown:** Providing more pedestrian and bicyclist opportunities for access from the homes, schools, and businesses south of SR 198 to downtown is a signature goal of this report. Phillips Street is one of two streets that pass under SR 198. The City might consider improving lighting and installing a mural here at the underpass which would encourage greater pedestrian use to downtown and the jobs on Fourth and Fifth Streets. Curb ramps may need to be upgraded to be ADA compliant. Crosswalks at the Third Street intersection should be considered. Completion of a sidewalk between Fourth Street and the alley north of Fourth Street will need to be installed. Further analysis of Phillips Street may need to be performed to determine potential crosswalk locations.

- **12th Avenue from SJVRR tracks to Hanford-Armona Road:** This segment serves to connect the Lacey Boulevard/12th regional retail center with Hanford-Armona Road and the commercial and mixed uses along the way. The 12th Avenue interchange with SR 198 is currently being upgraded and will have improved pedestrian access over the freeway.

4.6 Recommended Improvements

4.6.1 ADA TRANSITION PLAN

The City should continue the efforts for improvements on facilities identified in the "ADA Self Evaluation and Transition Plan", as well as all sidewalks in street rights-of-way. At the time of its publication, the schedule requires that all improvements be completed in fifteen years (2025-2026) for facilities and twenty years (2030-2031) for sidewalks in street rights-of-way.

4.6.2 ASSESS AND REPAIR SIDEWALK SURFACE

Safe and accessible sidewalk connections are the backbone of creating a pedestrian-friendly city. The City of Hanford has a very extensive sidewalk network. However, in order to build off of this existing network and promote connectivity and accessibility, the City needs to ensure that all sidewalk surfaces meet ADA standards and is void of any tripping hazards to everyone. Meeting or exceeding ADA standards will contribute to a better pedestrian environment for all users.

ADA standards require a minimum of four feet (4') of unobstructed sidewalk. Some exceptions may be made to a minimum of three feet (3') because of right-or-way restrictions, natural barriers, or other existing conditions. Sidewalks should have a continuous surface that is not interrupted by steps or abrupt changes in level and have a slip resistant surface.

There are instances within the City of Hanford where the sidewalks are not up to standard for a number of reasons. In many cases, sidewalks are old and their age has caused the surface to crack and cause abrupt level changes. In some instances, tree roots in close proximity to a sidewalk have forced the concrete to rise causing tripping hazards and obstacles for the elderly or disabled.

Additionally, sidewalks are frequently obstructed by signs, poles, benches, or other streetscape amenities, which encroach on the minimum four foot (4') sidewalk. There are also areas within the City where there may be a gap in the existing sidewalk network. As part of the ADA Self Evaluation and Transition Plan, the City should conduct an audit of the sidewalks and identify locations that need to be updated to meet the minimum ADA requirements. These areas should be prioritized by the City based upon their proximity to major destinations.

4.6.3 MARKED CROSSWALKS

Pedestrians are only prohibited from crossing a street at unmarked locations between two adjacent signalized crossings in California. Crosswalks are generally marked to indicate the preferred locations for pedestrians to cross the street and to designate right-of-way for motorists to yield to pedestrians. Crosswalk markings should not be used indiscriminately. In 2002, the Federal Highway Administration released the results of a nationwide study of 1,000 marked crosswalks and 1,000 unmarked crossings at uncontrolled (without stop signs or traffic signals) intersections that lacked any traffic calming or special pedestrian crossing devices (i.e. bulb outs, flashing beacons). The study found that marked crosswalks alone did not significantly reduce the number of pedestrian crashes. In fact, on multi-lane streets with over 12,000 vehicles per day, **marked crosswalks were associated with higher incidents of pedestrian crashes**. In general, crosswalks may be marked under the following conditions:

- At locations with traffic signals or stop signs;
- At non-signalized crossings in designated school zones;
- At non-signalized locations where an engineering judgment may find a crosswalk desirable due to the number of vehicle lanes, traffic speeds, traffic volumes, and the geometry of the location;
- In some instances, marked crosswalks alone may not be sufficient:
    - On streets where the speed limit exceeds 40 miles per hour;
    - On roadways with four or more lanes, average daily traffic over 12,000, and without a raised median or crossing island; and
    - On roadways with four or more lanes that do have a raised median or crossing island but with average daily traffic exceeding 15,000.

Other crossing improvements can include traffic calming measures (i.e. curb extensions, raised crosswalks, "road diets"), traffic signals and pedestrian signals where warranted, enhanced overhead lighting, or other substantial crossing improvements. Crosswalks shall be white unless located in a school zone, where they are to be yellow.

4.6.4 PARKING RESTRICTIONS AT INTERSECTIONS AND CROSSWALKS

Vehicles parked in parking lanes adjacent to the curb can limit the visibility of pedestrians at intersections and crosswalks. Implementing parking restrictions adjacent to intersections and crosswalks is a relatively easy method of improving pedestrian visibility.

Based upon the California Manual on Uniform Traffic Control Devices' (MUTCD) recommendations, the City should ensure that parking is restricted for a minimum of 1.5-car lengths (30 feet) on the nearside of signalized intersection and for 1-car length (20 feet) on the

far side of a signalized intersection. Similarly, a parking restriction of 1-car length (20 feet) should be installed adjacent to both sides of all marked crosswalks. Red "no parking zones" should be regularly maintained to enforce these recommendations.

The City of Hanford Municipal Code *Title 10: Vehicles and Traffic* states that it is unlawful for the driver of a vehicle to stop or park their vehicle "within fifteen (15) feet of a crosswalk at an intersection in any business district" or "within fifteen (15) feet of the approach to any traffic signal, boulevard stop sign, official electric flashing device" or in high violation areas. The curb in these locations should be painted red. To create a culture of compliance for these existing and newly proposed rules, the City needs to consistently enforce these rules through warnings and ticketing.

4.6.5 PEDESTRIAN SIGNALS

We are all familiar with the pedestrian signals of the walking person or walk and raised hand or DON'T WALK at traffic signals, but pedestrian signals can be enhanced with other technologies.

Accessible Pedestrian Signals (APS): Accessible pedestrian signals (APS) are devices that communicate information about the pedestrian signal timing in non-visual formats such as audible tones, verbal messages, and/or vibrating surfaces. These devices should be used at signalized intersections that are difficult to cross for pedestrians with visual disabilities, including those locations with complex signal operations, right turn on red, wide streets, quiet traffic, and traffic circles. APS signals are usually installed at particular intersections at the request of a visually impaired individual or their family member.

When audible tones are used, the sound will only activate during the WALK interval. These sounds can be bells, buzzing, birdcalls, or speech messages (for example, "Lacey. Walk sign is on to cross Lacey"). Different and distinct sounds should be used for east/west travel and for north/south travel. The installation of Audible Pedestrian Signals may be considered when an engineering study and evaluation have been conducted and minimum conditions have been met (see CA MUTCD Section 4E).

Vibrotactile APS: Vibrotactile APS involves either the push button or a raised arrow on the housing vibrating during the WALK interval. The vibration may be slow during the DON'T WALK interval and fast during WALK.

Countdown Signals: Pedestrian countdown signals should be provided at all new signals. Countdown signals display how many seconds remain in the pedestrian change interval (flashing upraised hand). This reduces the number of pedestrians that get stranded in the middle of the street when the light changes. This application is particularly useful at wide crossings and where there are a high number of mobility-impaired pedestrians.

Push Buttons: The push buttons used to activate a pedestrian signal have their own design requirements. Since 2012, all new APS installations are required to have a tactile arrow on the pushbutton and are required to be a minimum of two inches (2") in diameter so they can be operated using a closed fist. This is especially helpful for persons with mobility impairments or if one's hands are full and cannot activate the button with their fingers. Push buttons should be located convenient to the corresponding crosswalk so as to encourage their use by both pedestrians and people in wheelchairs. Push buttons should be located no more than five feet from the crosswalk and should be placed on signal poles if they are adjacent to the crosswalk area. Separate pedestrian push button posts should be used when the signal poles are more than five feet from the crosswalk.

Mid-Block Crossings: There are instances when a mid-block crossing is desirable, especially on long blocks where crossings are far apart or where there is a concentration of pedestrians crossing mid-block anyway. With proper design and placement, mid-block crossings can provide safety benefits. Before installing a mid-block crossing, consideration must be given to traffic speeds and volumes, roadway width, sight distance, nearby land uses, and lighting. As roadway widths, traffic volumes, and traffic speeds increase, mid-block crossings may require more safety features. For example, a crossing on a two-lane local road may need no more than just a marked crosswalk and required signage whereas a four-lane arterial street may require a marked crosswalk, signage, beacons, and a refuge island.

If gaps in traffic flow are inadequate and pedestrians become impatient, they may endanger themselves by crossing when it is not safe. Mid-block crossings along busy streets may need to be improved with pedestrian actuated signals.

Reductions in Crossing Widths: The less time a pedestrian spends in the roadway, the smaller the risk of conflict with automobiles. Reducing pedestrian crossings is a desirable design feature when feasible. Crossing islands (center islands, refuge islands, pedestrian islands, median slow points) are placed in the center of the street and allow pedestrians to cross one direction of traffic at a time. This treatment is especially helpful for children, seniors, and people with disabilities who may not be able to cross the entire width during short gaps in traffic. Islands and medians are also traffic calming devices because they narrow the roadway which often slows motorists. A well-designed island provides a cut-through (rather than ramps) that is at least four feet (4') wide and eight feet (8') long with detectable warnings at both ends.

Another way to narrow crossing widths is with curb extensions or bulb outs that extend the sidewalk into the parking lane and usually reduces the radius of the corners to slow turning vehicles. This brings pedestrians closer to the travel lanes, making them more visible to motorists.

4.6.6 STREETSCAPE ENHANCEMENTS

Streetscape enhancements are pedestrian improvements beyond the minimum standard that help to create an enhanced pedestrian experience and contribute to the overall livability of the City. Streetscape enhancements include pedestrian scaled lighting, street trees and landscaping, street furniture, colored or decorative paving, and decorative crosswalks. During the public

workshops, the community identified pedestrian scale and street lighting, shade trees, benches, and access to bus stops as their key priorities for improving the pedestrian network in Hanford. In addition, traffic calming measures are often employed to reduce crossing distances and traffic speeds and increase visibility of pedestrians crossing the street. Streetscape enhancements should be prioritized for locations adjacent to major trips attractors identified in Chapter 3 and on Figure 3-2.

4.6.7 KART BUS STOPS

The City should work with KART to increase the number of bus shelters along each of its routes particularly in areas where there is high passenger use. The pedestrian network is particularly important to transit riders, who will most often begin and end their trips as pedestrians. Because people with disabilities and senior citizens often rely on transit as a vital means of transportation, accessible routes to transit stops and site design must accommodate their needs. As a general rule, riders are willing to walk one-quarter mile to and from a transit stop. At a minimum, the City needs to ensure that dense pedestrian networks - including paved sidewalks, curb ramps, and safe crossings - are in place within a quarter mile radius of transit stops.

Bus stops must be designed for safety and accessibility. They should be equipped with bus stop signage, lighting, trash receptacles, and shelters with seating. If a bus shelter is in place, there must be a clear path allowing pedestrians to comfortably pass. Stops should be located on the far side of intersections so pedestrians cross the street behind the bus where motorists are more likely to see pedestrians. It is also imperative to provide a wider sidewalk at stops to allow enough room to operate wheelchair lifts.

4.6.8 DRIVEWAY CROSSINGS

Driveways can be an especially challenging obstacle for people in wheelchairs or using walkers. Problems occur most often when the sidewalk is located adjacent to the curb which forces pedestrians to walk across the driveway apron. Driveway aprons are constructed similar to curb ramps with flares on either side of the ramp. So when the sidewalk leads right to the driveway apron, pedestrians must travel over the flares. These flares and ramps can have slopes greater than two percent that can cause wheelchairs to tip and provides an unstable surface for walkers. Driveway crossings must be designed with a level pedestrian zone to meet ADA requirements.

4.7 Pedestrian Support Facilities and Programs

4.7.1 SUPPORT FACILITIES

A number of elements that are not necessary for pedestrians, but will enhance the pedestrian environment are:

- Benches placed in retail areas, parks, and at bus stops;
- Trash receptacles provide a service for pedestrians and keep pedestrian areas clean; and,
- Landscaping can create a more inviting environment in which to walk, especially when trees provide much needed shade on warm days. Trees and shrubs need to be maintained so as not to intrude upon the pedestrian space – both horizontally and vertically – and to not block motorists' ability to see pedestrians at intersections and driveways.

4.7.2 EDUCATION PROGRAMS

Pedestrian safety education targeted at all road users is an important means for promoting safe interactions between pedestrians, motorists, and cyclists. The following programs and initiatives should be considered for the City of Hanford:

- Community education programs: Community education programs relating to pedestrians and bicyclists;
- Neighborhood Traffic Calming Program: The City of Hanford may consider adopting a Neighborhood Traffic Calming Program, traffic enforcement, and traffic safety education;
- Walking audits: The City should consider holding periodic walking audits at locations with high incidence of pedestrian collisions. These events would bring together City transportation staff, police officers, bicycle and pedestrian advocates, and community members to strategize ways of improving walking conditions and general safety at these locations;
- Local walking promotions: Walk-your-child-to-school day, monthly community walking days, employer lunchtime walks, and organized walk-to-transit campaigns are all examples of simple initiatives that can conveniently and seamlessly integrate walking into a variety of lifestyles;
- Pedestrian map: As a companion piece to the Bicycle Master Plan, the City should consider publishing a citywide pedestrian guide complete with safe walking tips, key pedestrian zones, annual or recurring events such as festivals and farmers markets, and contacts for additional walking information. The City should consider preparing a Pedestrian Network Map that can be distributed to the residents of Hanford in order to identify safe, comfortable, and attractive environments where they would be encouraged to walk. Walking encourages people to rely

less on the use of the automobile, improves health and mental attitudes, and serves as opportunities to improve and increase social activities; and

- Public education campaigns: These campaigns are designed to promote walking, as well as bicycling, focusing on the benefits of non-motorized travel modes;

    - As funding or other opportunities become available, consider using volunteers or City staff to create public service announcements for display on television, the internet, and/or outdoor billboards;

    - Partner with KART to display posters promoting safe interactions between road users on transit vehicles and at bus stops;

    - Partner with other cities to share and obtain traffic safety information and best practices; and

    - Utilize home mailings and utility bills to distribute brochures, newsletters, and other safety and education materials. Consider providing different materials depending on the target audience, which might vary by location or age.

4.7.3 SAFE ROUTES TO SCHOOL

Safe Routes to School (SR2S) is a shorthand name for a broad array of programs designed to encourage walking and cycling to school. These programs focus on improving traffic safety around schools and promoting the health benefits of increased walking and biking. At the same time, SR2S programs benefit non-participating motorists and transit users with reductions in traffic congestion around schools. SR2S programs typically involve partnerships among municipalities, school districts, community volunteers, and law enforcement. Safe Routes to School programs encompass a five-pronged strategy known as the "Five E's":

- Education: For Safe Routes to School programs, students are taught bicycle, pedestrian and traffic safety skills, and educational campaigns aimed at drivers are developed;

- Encouragement: Events and contests such as walkathons are used to encourage walking,

bicycling, or carpooling. These events are especially effective when they include participation by parents in an effort to change their travel behaviors as well;

- Enforcement: Law enforcement agencies use a variety of specialized enforcement tactics, such as pedestrian safety stings and speed radar trailers;

- Engineering: Signing, striping, and infrastructure improvements are put in place to create clearly delineated walking and cycling routes to schools; and

- Evaluation: Monitoring and documenting outcomes, attitudes and trends through the collection of data before and after activities and projects so modifications can be made if needed.

The Sustainable Transportation Planning Grant Program was created to support the California Department of Transportation's (Caltrans) current Mission: Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The goals of the grant program are directed to emphasize more transportation planning efforts that promote sustainability.

Transportation planning grant applications for Sustainable Communities Grants fund transportation planning projects for 2016 – 2017 were due in December 31, 2015. The City of Hanford will need to wait until the next round of grant funding is available for safe routes to school plans. The City would need to work with the school district, individual schools, and parents to identify barriers to walking and bicycling and prepare a plan with detailed recommendations and supportive policies for physical changes to streets, sidewalks, and intersections that will support safe and active transportation to all the schools within the City.

The Pedestrian Network Map (Figure 4-2) identifies eighteen public school facilities including elementary, middle, high, and college with roughly a 1,000 foot walking distance where Safe Routes to School improvements can be focused in order to improve safe pedestrian and bicycle access around schools. Signing, striping, and infrastructure improvements will need to be identified on a school-by-school basis to determine the needs and funding availability.

CHAPTER 5

IMPLEMENTATION PLAN

IMPLEMENTATION PLAN

This section presents the implementation plan for the Hanford Pedestrian and Bicycle Master Plan. It first describes the many ways that projects can be implemented. The action steps necessary to implement and maintain a pedestrian and bicycle-friendly street network are addressed. Criteria developed for prioritizing projects are discussed, followed by a listing of the projects. Finally, cost estimates for constructing the pedestrian and bicycle plan and potential funding sources are provided.

5.1 Implementation Process

The actual implementation of the projects described in this Master Plan will occur incrementally through a variety of methods. While many projects will be planned, designed, and constructed as stand-alone projects, others can be implemented in conjunction with road maintenance projects or new development projects. The four most common ways this can occur are:

- **Standard repaving program:** When an arterial or collector is scheduled for repaving, reevaluate roadway and lane configurations with bike lanes and routes in accordance with the Master Plan. If necessary, consider restriping for narrower inside travel lanes. Lower volume collectors and local streets may be able to support 11-foot wide lanes.

- **Frontage development or redevelopment:** When the frontage of a roadway is developed, the roadway should be designed and constructed to have bike lanes or routes as proposed in this Master Plan.

- **Roadway extensions:** When a roadway is built or extended, bike lanes or bike routes, as proposed in this Master Plan, should be included as part of the total project.

- **New developments:** New streets in new developments should be constructed in conformance with this Master Plan.

Bicycle education programs face serious challenges; they must compete for funds, and for public interest and participation with school, work, family, and all the usual daily distractions. Attempts by a community to provide all these programs can put stress on a system that is already overloaded; money and staff are in short supply in every jurisdiction. For this reason, a community must explore all possible avenues in designing and implementing a bicycle education strategy and prioritize which programs are the most important. School districts and city departments such as Planning, Public Works, Police, etc. must be brought into the effort. Community and civic organizations, employers, local businesses, and cycling clubs should also be recruited as resources and volunteers. Some of the most successful programs are a result of coalitions of public agencies and private groups working together towards a common goal.

This section prioritizes projects, but this does not mean that low and medium priority projects must wait until high priority projects are implemented. Rather, due to the variety of ways projects can be funded and constructed, all the projects in this Master Plan should be considered

important. If one of the above opportunities arises that could implement any of these bikeways within the scope of another project, the project should be included. In reality, the highest priority projects are those projects whose implementation can be efficiently and effectively achieved with the resources at hand.

5.2 Implementation Policies

In addition to implementing project-specific improvements, the following policies will help provide the needed staff directive to keep Hanford a pedestrian-friendly and bicycle-friendly city.

Objective 1: Prepare and maintain a Pedestrian and Bicycle Master Plan that identifies existing and future needs, provides specific recommendations for facilities and programs, and identifies priorities and funding sources for implementation.

Policy 1.1: Implement the Pedestrian and Bicycle Master Plan which identifies existing and future needs.

Policy 1.2: Update the Pedestrian and Bicycle Master Plan to meet requirements of funding opportunities approximately every four to five years.

Policy 1.3: Schedule pedestrian and bicycle network improvements in annual updates to the Capital Improvement Program (CIP).

Policy 1.4: In the annual staff, operations, and maintenance budgets, include funding for regular facility evaluation, maintenance, and repair, as well as funding to review development and zoning proposals for effect on mobility.

Policy 1.5: Establish a spot improvement program for low-cost, small-scale improvements, such as pavement maintenance, hazard removal, or bicycle rack installation.

Policy 1.6: Work with Caltrans on pedestrian and bikeway issues related to State highways.

Policy 1.7: Assign a project coordinator to oversee implementation of the Pedestrian and Bicycle Master Plan and coordinate activities between City departments and other jurisdictions.

Policy 1.8: Initiate a program to identify and repair unsafe areas along designated bikeways, such as unsafe drainage grates and uneven pavement.

Policy 1.9: Develop procedures to ensure proper communication between Public Works, Police, and Fire Departments to ensure access to walkways/bikeways, quick response times, and cleanup after special events such as vehicle collisions, severe storms, and other events.

Policy 1.10: Involve nearby businesses, residents, and appropriate organizations and nonprofits to assist with maintenance responsibilities, watch programs, litter collection days, and similar events.

Policy 1.11: Require proposed development to implement and develop funding mechanisms to 1) maintain sidewalks, roadway paving, and landscaping 2) implement streetscape design improvements, and 3) accommodate growth with an emphasis on reduced reliance on the automobile.

Policy 1.12: Consider the California Highway Design Manual (HDM), the California Manual of Uniform Traffic Control Devices (MUTCD), the National Association of City Transportation Officials (NACTO) guidelines, and the American Association of State Highway Transportation Officials (AASHTO) Guidelines when designing pedestrian and bicycle facilities.

Policy 1.13: Accommodate the needs of bicyclists of all types (commuters, recreational riders, children, and families) in planning, developing, and maintaining a bikeway network that is safe and convenient.

Policy 1.14: Work with the College of the Sequoias and Sierra Pacific High School to provide a multi-use trail from Greenfield Avenue at Centennial Drive through the school properties to 13th Avenue.

Policy 1.15: Consider development of a loop trail system within the Youth Soccer Complex and the Bob Hill Youth Athletic Complex by cooperating and coordinating efforts with the complexes' managers.

Policy 1.16: Where existing streets cannot feasibly be widened, and it is determined that additional travel lanes are warranted, this Master Plan should not be used to prohibit implementation of the recommendations of the warrant study. If the warrant study recommends modifications inconsistent with this Master Plan, the Public Works Director, and ultimately the City Council, can make such modifications upon finding that the modifications are the best solution to maintain safety for all travel modes.

Objective 2: Develop a comprehensive pedestrian and bikeway network that is feasible, fundable over the life of the Master Plan, and serves the pedestrian's as well as bicyclist's needs for all trip purposes.

Policy 2.1: Expand the current bikeway network to fill the gaps in existing routes, provide links to trip attractors, and enhance safety for all roadway users and bicyclists of all abilities.

Policy 2.2: Develop a pedestrian and bikeway network that enhances safety and convenience of walking and bicycling to work and to school as a means to reduce dependence on the automobile, improve air quality, and promote healthy exercise.

Policy 2.3: Include facilities that support bicycling in all new development projects. This should include pedestrian/bicycle connections from contemporary subdivision designs to surrounding arterials and collectors, bicycle parking at shopping, employment, and recreational centers, and bikeways on new collector roadways.

Policy 2.4: For schools in the City of Hanford, evaluate and consider opportunities to improve pedestrian and bicycle safety within a quarter mile radius of school grounds, including, but not limited to, crosswalks, lighting, signage, pavement markings, traffic calming, ADA access, crossing supervision, and wide sidewalks.

Objective 3: Provide the related support facilities and amenities necessary for bicycle travel to assume a significant role as a local alternative mode of transportation and recreation.

Policy 3.1: Consider the support of facilities such as secure bicycle parking, showers, and storage lockers for equipment and clothing for City employees. Encourage other employers to provide similar programs.

Policy 3.2: Require secure bicycle parking at shopping, employment, and recreational centers.

Policy 3.3: Adopt a bicycle parking ordinance that specifies parking needs for commercial, office, multi-family, and industrial developments of a certain size.

Policy 3.5: Encourage new large scale commercial, office, and industrial development to provide a variety of support facilities such as secure and convenient bicycle parking and shower/locker facilities.

Policy 3.6: Ensure secure, adequate and easily accessible bike parking at destinations throughout Hanford.

Policy 3.7: Install directional and informational signage, "Share the Road" signs, markers, and stencils on on-street bikeways, local roads, and State Routes to improve "way-finding" for bicyclists, assist emergency personnel, and heighten motorist's awareness.

Policy 3.8: Encourage all Hanford school districts to provide and actively maintain sufficient, convenient, safe, and attractive bicycle racks at all public schools.

Objective 4: Improve safety for pedestrians and bicyclists by implementing education and promotion programs for all Hanford residents and by enforcing pedestrian, bicycle, and motorist laws and regulations affecting pedestrian and bicycle safety.

Policy 4.1: Develop and distribute pedestrian/bicycle safety material and education programs for child pedestrians and bicyclists and develop programs for adult bicyclists and motorists that increase knowledge of safe walking/bicycling practices and encourage individual behavior change with emphasis on walking/bicycle safety and laws related to walking and cycling.

Policy 4.2: Continue the enforcement of the California Vehicle Code (CVC) with respect to pedestrian and bicyclists' rights and responsibilities in order to reduce CVC violations that result in collisions.

Policy 4.3: Consider assigning an officer to pedestrian and bicycle safety.

Policy 4.4: Develop a schedule of fines applicable to infractions committed by bicyclists within the City of Hanford (allowable under CVC Section 42001 (d)).

Policy 4.5: Promote programs that reduce incidences of theft and continue efforts to recover stolen bicycles through the bicycle license program.

Policy 4.6: Coordinate the delivery of bicycle safety education programs to schools, utilizing assistance from law enforcement agencies, local sports and/or bicycle shops, and other appropriate groups and organizations.

Policy 4.7: Improve safety of busy intersection crossings using one or more of the following: routine pedestrian signal cycles, pedestrian push buttons, high-visibility crosswalk markings, signage, and education.

Policy 4.8: Prioritize safety improvements in the vicinity of schools, public transit, and other high-priority pedestrian destinations.

Policy 4.9: Improve collection and analysis of collision data. The Public Works Department shall review this data to identify problem areas which require immediate attention.

Policy 4.10: Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.

Policy 4.11: Restrict parking near intersections to ensure visibility and traffic safety.

Policy 4.12: Work to reduce the rate of pedestrian and bicycle collisions, injuries, and fatalities.

Policy 4.13: Identify safety counter measures at areas of high collision activity. Recommend and implement safety improvements.

Policy 4.14: Driveways and driveway landscaping shall be designed to minimize interference with pedestrians.

Policy 4.15: Ensure that on-street parking does not conflict with Class II bike lanes.

Policy 4.16: The City shall include bicycle detection and signal timing requirements along with traffic signal installation or modification requirements for new developments. Bicycle detection and timing should be implemented on a City-wide basis, as funding and implementation opportunities occur.

Objective 5: Require that routine maintenance of local roads consider pedestrian and bicycle safety.

Policy 5.1: Work with the City's existing maintenance reporting system with a central point of contact that can be used to report, track, and respond to routine pedestrian and bicycle maintenance issues in a timely manner and increase public awareness of the existing system as a means to report pedestrian and bicycle facilities needing repair and/or clean-up.

Policy 5.2: Establish a standard for trimming intrusive and obstructive vegetation and clearing of debris from pedestrian and bicycle areas.

Policy 5.3: Maintain and/or improve the quality, operation, and condition of pedestrian and bicycle infrastructure.

Policy 5.4: Maintain geometry, pavement surface condition, debris removal, markings, and signage on Class II and Class III bikeways to the same standards and condition as the adjacent motor vehicle lanes.

Policy 5.5: Continue and encourage residents to report maintenance issues through the maintenance reporting system on the City's website.

Policy 5.6: Require that road construction projects minimize their impacts on pedestrians and bicycles through the proper placement of construction signs and equipment, and by providing adequate detours.

Objective 6: Increase public awareness of the benefits of available walking and bicycling programs.

Policy 6.1: Provide current and easily accessible information and public outreach programs about the bicycle and pedestrian plan, bicycle parking, and other related programs.

Policy 6.2: Encourage bicycling and walking through incentive/awareness programs.

Policy 6.3: Develop and promote education and encouragement programs, including but not limited to Bike to Work Day, Bike to School Day, Walk to School Day, Bicycle Safety courses and City-wide pedestrian and bicycle network maps. School programs to encourage walking and biking should include the elementary, middle, and high school levels. Promote programs of the Police Department such as Bicycle Rodeos, bicycle and pedestrian pamphlets, senior and historic walks/tours, and classroom education. Evaluate the success and effectiveness of each program and introduce at least one new initiative each year.

Policy 6.4: Participate in the development and maintenance of a pedestrian and bicycle safety campaign as a tool to deliver comprehensive safety awareness, driver, cyclist, and pedestrian education information.

Objective 7: Encourage methods to increase pedestrian access and mobility for ages and ability.

Policy 7.1: Encourage the inclusion of amenities, such as benches, landscaping, or art, in pedestrian improvement projects.

Policy 7.2: Continue to implement the City's ADA Self Evaluation and Transition Plan and make ongoing improvements to facilities and sidewalks in public streets.

Policy 7.3: Review City sidewalk design standards to ensure continued compliance with requirements of the Americans with Disabilities Act and to better serve pedestrian needs.

Policy 7.4: Identify gaps and deficiencies in the City's existing pedestrian network and develop strategies to rectify them.

Policy 7.5: Consider the use of root barriers to help prevent sidewalk deterioration from street trees.

Policy 7.6: In the Downtown, facilitate the flow of traffic and access to Downtown businesses and activities consistent with maintaining a pedestrian-friendly environment.

Policy 7.8: Consider a program for installing shade trees along streets where currently little or none exist to encourage walking.

Policy 7.9: Create a pedestrian network map that showcases access to Hanford's historic buildings, parks, and places to shop and dine.

Objective 8: Street crossings should be safe and accessible.

Policy 8.1: Crosswalks should be a minimum of 6 feet in width, and at least 10 feet in business districts.

Policy 8.2: Appropriate pedestrian crossing signage should be displayed in advance of and adjacent to all marked controlled crosswalks in order to enhance visibility of pedestrians by motorists.

Policy 8.3: Controlled pedestrian crosswalks should be well marked with high visibility paint, be adequately lighted, have clear sight distances, and be free from obstructions, such as foliage and poles.

Policy 8.4: Mid-block crosswalks, if supported by an engineering study, should be designated in areas with relatively high pedestrian activity and crossing patterns, mainly in the Downtown.

Policy 8.5: Where feasible, pedestrian crossing islands should be considered where pedestrians are required to cross a wide multi-lane street, especially at uncontrolled locations.

Policy 8.6: Curb extensions should be considered at intersection corners in highly urbanized areas as a way to minimize the crossing distance of pedestrians and to increase visibility in areas of high urban activity.

Policy 8.7: Identify and mitigate impediments and obstacles to walking to locations that attract pedestrians, such as business districts, schools, transit stops, recreational facilities, and senior facilities.

Policy 8.8: Modify signal timing as needed to provide pedestrians with sufficient crossing time and minimize pedestrian/vehicle conflicts.

Policy 8.9: Identify locations where lighting should be enhanced to provide better visibility and a more comfortable nighttime environment for pedestrians.

Policy 8.10: Consider opportunities to upgrade existing pedestrian signals by adding countdown, audible, and tactile/vibrational signals.

Objective 9: Maximize the amount of funding for pedestrian and bicycle projects and programs throughout Hanford, with an emphasis on implementation of this Master Plan.

Policy 9.1: Work with federal, state, regional, and local agencies and any other available public or private funding sources to secure funding for the pedestrian and bicycle system.

Policy 9.2: Encourage multi-jurisdictional funding applications to implement the regional pedestrian and bicycle system.

Policy 9.3: Seek funding from the Active Transportation Program (ATP) and other grants for alternative transportation.

Objective 10: Integrate pedestrian and bicycle facilities with public transit.

Policy 10.1: Develop and enhance opportunities for pedestrians and bicyclists to easily access other modes of transportation.

Policy 10.2: Continue to work with KART to accommodate bicycles on transit and plan for the need for additional bicycle storage capacity on transit to ensure capacity keeps up with demand.

5.3 Bikeway Prioritization Criteria

Recognizing that there are limited financial resources that can be devoted to development of the Master Plan, recommended bikeway projects were prioritized for implementation (recommended pedestrian projects are not prioritized.) Four characteristics or prioritization criteria were used to judge or evaluate the relative importance of each bikeway project to the overall network. Those projects ranking highest in this evaluation were identified as high priority. All other projects were identified as either medium or low priority. Each is discussed in the following section. The criteria used to prioritize the projects are:

- Community and City support: Projects that were rated high in the community outreach workshops were given high priority;

- Closure of a gap or gaps in the pedestrian/bicycle plan: Connectivity is important and projects that enable direct travel are given higher priority;

- Expansion of existing network: Projects that improve pedestrian/bicycle access extending existing facilities by infill of the network grid for better walkway and bikeway coverage are given higher priority; and

- Ease of Implementation: Projects that are currently mostly in County jurisdiction were given low priority.

5.4 Bikeway Project Prioritization

Based upon the criteria described above, bikeway projects were divided into high, medium, and low priority projects. High priority projects meet the above criteria by filling gaps in the existing network, extending the existing network to provide connections between residential neighborhoods and trip attractors, increasing coverage of the pedestrian and bicycle network, providing connections to the regional network, and promoting walking and bicycle use. These projects also ranked highest by the participants at the community outreach workshops. Low priority projects are mostly on the edge of the community and will require coordination with Kings County since many of the road segments are currently outside the city limits. A detailed listing of projects by segment, including segment length and estimated costs, are described below in Tables 5-1, 5-2, and 5-3. The methodology used for calculating costs is shown in Appendix F.

5.5 Pedestrian and Bikeway Project Cost Estimates

The costs to implement the bikeway project segments are presented in Tables 5-1, 5-2, and 5-3. The costs to implement the pedestrian projects are presented in Table 5-4. The estimated costs were developed using unit construction cost assumptions obtained from similar projects in California, Kings County, and the City of Hanford. More detailed estimates should be developed after completion of a feasibility analysis, preliminary engineering, and design.

Costs are not included for pavement repair. These costs also do not include right-of-way acquisition, any needed pavement construction or reconstruction, or inflation factors. It is recommended that an additional eight percent (8%) of the estimated costs shown in the tables be added to the project for mobilization and traffic control.

Although the cost estimates are based on actual costs experienced locally and in various California communities, more detailed cost estimates should be developed after preliminary engineering designs are completed for each proposed project. These cost estimates are to be used primarily for project planning and grant applications.

Table 5-1
High Priority 2016 Bikeway Project Improvements

Roadway Segment	Class	Miles	Estimated Cost
12th Avenue from Hume to Houston	III	0.50	$2,300
11½ Avenue/Milpas/Echo from Davis to Hume	III	0.99	$14,059
Glacier Way from Flint to Fargo	III	1.01	$13,254
Glacier Way from Fargo to Cortner	III	0.38	$7,130
11th Avenue from Florinda to Ivy	III	0.18	$2,243
Williams/Jones Street from Davis to Hume	III	0.8.	$10,149
Redington Street from Grangeville to Lacey	II	1.01	$22,963
Irwin Street (10½) from Hanford-Armona to Houston	III	1.03	$4,687
10th Avenue from Third to Hanford-Armona	III	0.71	$3,767
10th Avenue from Hanford-Armona to Houston	III	1.01	$8,079
9¼ Avenue from Leland to Grangeville	III	.51	$2,329
9¼ Avenue from Grangeville to Lacey	III	1.01	$8,942
Leland Way from Douty to 10th	III	0.51	$8,367
Leland Way from 10th to 9¼	III	0.69	$11,472
Elm Street from Greenfield to 11th	III	0.14	$1,265
Ivy Street from 11th to 10th	III	1.01	$11,529
Sixth from 11th to 10th	II	1.03	$18,548
Davis Street from 11½ to Williams	III	0.67	$8,827
Hume Avenue from 12th to Jones	III	1.05	$9,919
Houston Avenue from 12th to 10th	III	2.00	$10,063
Subtotal			$179,892
Mobilization and Traffic Control (8%)			14,391
Total		16.10	**$194,283**

Table 5-2
Medium Priority 2016 Bikeway Project Improvements

Roadway Segment	Class	Miles	Estimated Cost
13th Avenue from Grangeville to Lacey	III	1.00	$3,738
Centennial Drive from Berkshire to Grangeville	II	0.20	$2,613
Centennial Drive from Grangeville to Greenfield	II	0.45	$4,509

Roadway Segment	Class	Miles	Estimated Cost
Centennial Drive from Greenfield to Lacey	II	0.60	$11,110
Centennial Drive from Lacey to 12th	III	0.65	$3,594
12th Avenue from Fargo to Grangeville	II	1.00	$11,961
Fitzgerald Avenue from Fargo to Grangeville	III	1.03	$16,762
University Avenue from Grangeville to Greenfield	III	0.46	$6,498
Campus Drive from Greenfield to Lacey	III	0.55	$4,169
Campus Drive from Lacey to Glendale	III	0.51	$4,054
11th Avenue from Flint to Fargo	III	1.01	$11,529
11th Avenue from Fargo to Grangeville	III	1.01	$12,201
11th Avenue from Seventh to Hanford-Armona	III	0.81	$10,954
11th Avenue from Hanford-Armona to Hume	III	0.54	$7,095
11thAvenue from Hume to Houston	III	0.49	$6,584
Mission Drive from Flint to 10th	III	0.56	$9,373
Neill Way from Fargo to Leland	III	0.51	$8,367
Pepper Drive from Glacier to 11th	III	0.41	$4,629
Pepper Drive/Aspen from 11th to Encore	III	0.36	$4,485
Encore Drive from Aspen to 10th	III	0.77	$9,114
Encore Drive from 10th to Fargo	III	0.50	$8,338
Muscat Place from 12th to Fitzgerald	III	0.24	$3,278
Cortner Street from Glacier to Kensington	III	1.16	$13,685
Mustang/Berkshire from 13th to Centennial	III	0.55	$4,169
Grangeville from 13th to Centennial	III	0.51	$2,329
Liberty Street from Centennial to 12th	III	0.33	$2,674
Kings County Drive from 12th to Lacey	III	0.51	$4,054
Mall Drive from 12th to Lacey	III	0.53	$4,112
Lacey Boulevard from Centennial to Mall Drive	III	0.60	$2,588
Lacey Boulevard from Garner to Irwin	III	0.65	$8,769
Lacey Boulevard from 10th to 9th	III	0.90	$8,022
Lacey Boulevard from 9th to 8th (SR 43)	III	1.03	$9,862
Garner Avenue from Lacey to Seventh	III	0.34	$3,565
Seventh from Mall Drive to 11th	II	0.75	$8,971
Third Street from 10th to 9th	III	1.03	$6,412
Hanford-Armona Boulevard from 10th to airport	III	0.55	$3,307
Subtotal			$247,474
Mobilization and Traffic Control (8%)			19,798
Total		23.10	**$267,272**

Table 5-3
Low Priority 2016 Bikeway Project Improvements

Roadway Segment	Class	Miles	Estimated Cost
13th Avenue from Fargo to Grangeville	III	1.00	$4,600
13th Avenue from Lacey to Hanford-Armona	III	1.11	$5,779
13th Avenue from Hanford-Armona to Houston	III	1.19	$6,872
12th Avenue from Houston to Iona	III	1.00	$5,256
12th Avenue from Iona to Idaho	III	1.00	$3,738
11th Avenue from Houston to Iona	III	1.00	$4,600
11th Avenue from Iona to Idaho	III	1.00	$3,738
11th Avenue from Idaho to Jackson	III	1.00	$3,738
10th Avenue from Houston to Iona	III	1.00	$4,600
10th Avenue from Iona to Idaho	III	1.01	$3,767
10th Avenue from Idaho to Jackson	III	1.01	$3,767
9th Avenue from Lacey to Hanford-Armona	III	0.96	$5,348
9th Avenue from Hanford-Armona to Houston	III	1.04	$5,578
9th Avenue from Houston to Iona	III	1.00	$4,600
9th Avenue from Iona to Idaho	III	1.00	$3,738
Flint Avenue from 12th to 11th	III	1.00	$4,600
Flint Avenue from 11th to SR 43	III	1.00	$6,325
Fargo Avenue from 13th to Centennial	III	0.50	$2,300
Grangeville from 9th to 8½	III	0.50	$2,300
Glendale Avenue from 12½ to12th	II	0.61	$4,797
Houston Avenue from 13th to 12th	III	1.02	$3,795
Houston Avenue from 10th to 9th	III	1.00	$7,188
Iona Avenue from 12th to 9th	III	3.01	$11,242
Idaho Avenue from 12th to 9th	III	3.00	$11,213
Jackson Avenue from 11th to 10th	III	1.00	$3,738
Subtotal			$127,217
Mobilization and Traffic Control (8%)			10,177
Total		27.35	**$137,394**

Table 5-4
Pedestrian 2016 Project Improvements

Project	Units	Estimated Cost
9¼ Avenue from Leland to Lacey – 18 ADA curb ramps	18 ramps	$103,500
Phillips Street from alley north of Fourth to Third – sidewalk and 8 ADA curb ramps	580 ft & 8 ramps	$79,350
Phillips Street underpass @ SR 198 – improve lighting and consider wall murals	N/A	$35,938
10th Avenue from Grangeville to Terrace – 10 ADA curb ramps	10 ramps	$57,500
Leland Way from 10th to 9th – 35 ADA curb ramps	35 ramps	$201,250
Irwin Street from Grangeville to downtown – 48 ADA curb ramps	48 ramps	$276,000
Monroe Elementary School – add curbs/gutter, ramps, and sidewalk on Leoni Drive from Monroe to Grangeville	2,660 ft. & 26 ramps	$417,163
Update/refurbish signing and school crosswalks around schools using thermoplastic and fluorescent green signs	70 crosswalks & estimated 280 signs	$267,663
Restripe crosswalks and other pavement markings in the Downtown area with thermoplastic	300 crosswalks & 309 pavement markings	$544,721

5.6 Environmental Assessment

This Master Plan was prepared at roughly the same time that the City of Hanford updated its General Plan. The Environmental Impact Report (EIR) that was prepared for the General Plan Update was written so that it could be utilized as the environmental document for this Master Plan, and was identified as such as a subsequent implementation project in the EIR.

Due to the timelines for the grant that funded the preparation of this Master Plan, it may need to be accepted, but not adopted, prior to the completion of the EIR. Once the EIR is certified, the Master Plan will be brought to the City Council for official adoption.

5.7 Funding Opportunities

This section describes the most probable funding sources to implement the projects recommended in this Master Plan. These sources include regional/local, State, Federal, and non-traditional private funding opportunities. These sources were available at the time of writing, but could be modified or made unavailable in the future.

5.7.1 REGIONAL AND LOCAL FUNDING SOURCES

California Clean Air Act (CCAA) – SJVAPCD Remove II Program. These funds, otherwise known as Clean Air Funds, are generated by a surcharge on automobile registration imposed by authorized air districts in California to provide funds to meet responsibilities mandated under the California Clean Air Act (CCAA). For the City of Hanford, this program is administered by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The Remove II Grant Program includes a bicycle infrastructure component to assist with the development or expansion of a comprehensive bicycle transportation network. The program provides incentives for construction of Class I, Class II, and Class III bicycle facilities. The program serves to promote bicycling as a viable option of transportation for residents traveling short distances to school, work, and commercial sites. Applications are accepted on an ongoing basis as funds are available. More information for the program can be found at:
http://valleyair.org/General_info/Grant_Programs/GrantPrograms.htm

The purpose of this program is to assist with the development or expansion of a comprehensive bicycle transportation network. Residents of the San Joaquin Valley can utilize commuter bicycling as an alternative to daily vehicular travel. Therefore, the program serves to promote bicycling as a viable option of transportation for residents traveling short distances (less than five miles) to school, work and commercial sites. Funds are available for eligible projects that meet specific program criteria on a first-come, first-serve basis until the program funds are exhausted. Projects serving commuters, rather than recreational users are given higher priority for funding. The maximum incentive for a Class I bicycle path and a Class II bicycle lane is $150,000 and $100,000.

City of Hanford. Bicycle projects can be implemented in conjunction with another project including pavement resurfacing, new developments, and frontage development. Local funds to implement projects can also come from a dedication of a certain dollar amount in a City's Capital Improvements Program (CIP). Developers can contribute either directly or indirectly through impact fees.

> **General Fund.** As with any public improvement, local general fund revenues can be used to build and maintain pedestrian and bicycle facilities, or to provide a match for State and Federal grants.
>
> **Developer Fees.** Development fees could be levied and administered by local jurisdictions to provide improvements to accommodate new development.

Other Local Programs. Local agencies may implement other local programs to provide bikeways and bicycle facilities including "adopt-a-bikeway" and memorials. These programs require that private individuals or groups donate money, property, or time for the design, acquisition, and construction of bikeway facilities.

5.7.2 STATE FUNDING SOURCES

Active Transportation Program (ATP). The Active Transportation Program (ATP) program was originally enacted in 2013. The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program. The program focuses on increasing bicycle and pedestrian trips, health, and safety. The latest cycle approved $360 million with an annual grant application process between March and May. This is currently the most important funding source for pedestrian and bikeway improvements. More information and application procedures can be obtained at http://www.dot.ca.gov/hq/LocalPrograms/atp/

California Infrastructure and Economic Development Bank (I-Bank). The mission of I-Bank is to finance public infrastructure and private development to promote economic growth, revitalize communities, and enhance quality of life for Californians. The Infrastructure State Revolving Fund Program (ISRF) provides low-cost financing to public agencies for a wide variety of infrastructure projects. Funding is available from $50,000 to $25,000,000 with loan terms of up to 30 years. Preliminary applications are accepted continuously. Additional information may be found at http://www.ibank.ca.gov/infrastructure_loans.htm.

California Office of Traffic Safety (OTS). This funding source can be used for pedestrian and bicycle safety projects as well as roadway projects. It can also be used for traffic calming projects and programs and safety and education programs. It is one of the few sources that funds support programs in addition to capital projects. For example, traffic safety rodeos may be funded for elementary, middle, and high schools, and community groups in an effort to increase awareness among various age groups. To boost compliance with the law and decrease injuries, safety helmets can be properly fitted and distributed to children in need. Court diversion courses may be established in communities for those violating the bicycle helmet law. Other programs target high-risk populations and areas with multicultural public education addressing safer driving, biking and walking behaviors. Information on available grant programs can be found at www.ots.ca.gov/

Local Transportation Fund (LTF). Under Transportation Development Act (TDA) Article III, LTF allocations include return-to-source funds generated from the sales tax on gasoline. They are returned to the source county for local transportation projects; up to two percent of these funds may be set aside for bicycle and pedestrian projects. These funds can be used for engineering, right-of-way acquisition, and the construction of projects emphasizing bicycle commuters rather than recreational bicycle users. Projects may include trails serving major transportation corridors, bicycle safety programs, restriping Class II bicycle lanes, secure bicycle parking at employment centers, retrofitting to comply with American with Disabilities Act (ADA), and route improvements. Each county establishes its own formula for allocating the funds to the local jurisdictions within that county. Up to 20 percent of the amount available each

year to the City may be allocated to restripe Class II bicycle lanes. These funds can be used directly for bicycle and pedestrian projects or as the local match for competitive State and Federal sources. Projects must be approved by a local Bicycle Advisory Committee and be included in the bicycle plan, transportation element, or other adopted plan. More information and application procedures can be obtained at http://www.dot.ca.gov/hq/MassTrans/State-TDA.html.

State Transportation Improvement Program (STIP). The STIP is a multi-year capital improvement program of transportation projects funded with both Federal and State monies. The available funding is divided into two programs: the Interregional Transportation Improvement Plan (ITIP) and the Regional Transportation Improvement Plan (RTIP). The City would work through KCAG to nominate projects for inclusion in the STIP. Additional information can be found at: http://www.dot.ca.gov/hq/LocalPrograms/stip.htm

Land and Water Conservation Fund Program. This program provides grants to plan, acquire, and develop recreation parks and facilities including bikeway and pedestrian trails. The California Department of Parks and Recreation provides reimbursement grant funds of 50% of the total projects costs. More information and application procedures can be obtained at: http://www.parks.ca.gov/?page_id=21360

Mello-Roos Community Facilities District Act of 1982. This program allows a sponsoring agency to issue a special tax bond for a community facilities district to finance public facilities and services such as parks, recreation areas, parkways, and open spaces. Bicycle and pedestrian projects could be included in any proposed public facility. More information and application procedures can be obtained at http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=53001-54000&file=53311-53317.5

5.7.3 FEDERAL FUNDING SOURCES

Congestion Management and Air Quality (CMAQ) Program. The purpose of the CMAQ Program is to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards for ozone and carbon monoxide by reducing congestion and improving air quality. This program will fund the construction of bicycle and pedestrian facilities, as well as bicycle support programs such as brochures, maps, and public service announcements. The projects must be mainly for transportation rather than recreation, be included in Transportation Improvement Projects (TIP), and complete the National Environmental Policy Act (NEPA) requirements. Additional information can be found at: http://www.dot.ca.gov/hq/transprog/federal/cmaq/Official_CMAQ_Web_Page.htm.

Highway Safety Improvement Program (HSIP). The purpose of this program is to reduce traffic fatalities and serious injuries on public roads through the implementation of infrastructure-related highway safety improvements. Work on any publicly-owned roadway or pedestrian/bicycle pathway or trail that corrects or improves the safety for its users is eligible. Project types may include intersection safety improvements; pavement and shoulder widening; installation of rumble strips or other warning devices; installation of skid-resistant surfaces; improved safety for bicyclists, pedestrians, and persons with disabilities; elimination of hazards

at railway-highway crossings; traffic calming features; improved signage or pavement markings; and improvement in the collection and analysis of crash data. More information on the HSIP can be found at http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm.

Recreational Trails Program (RTP). This program provides funds to develop and maintain recreational trails and trail related facilities for both motorized and nonmotorized recreational trail users. Uses can include maintenance, new trail development, purchase of right-of-way and education programs. The RTP is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA). Federal transportation funds benefit recreation including hiking and bicycling. More information about this possible funding source can be found at http://www.parks.ca.gov/?Page_id=24881.

TIGER Discretionary Grants. On April 3, 2015, U.S. Transportation Secretary Anthony Foxx announced $500 million will be made available for transportation projects across the country under a seventh round of the highly successful U.S. Department of Transportation's (DOT) Transportation Investment Generating Economic Recovery (TIGER) competitive grant program. In 2015, TIGER 2015 discretionary grants funded capital investments in surface transportation infrastructure and were awarded on a competitive basis to projects that have a significant impact on the nation, a region, or metropolitan area. The TIGER 2015 grant program will continue to make transformative surface transportation investments by providing significant and measurable improvements over existing conditions. The grant program focused on capital projects that generate economic development and improve access to reliable, safe and affordable transportation for disconnected communities both urban and rural, while emphasizing improved connection to employment, education, services and other opportunities, workforce development, or community revitalization. More information about this possible funding source can be found at https://www.transportation.gov/tiger

Revised Surface Transportation Program (STP). On July 6, 2012, the President signed the Moving Ahead for Progress in the 21st Century Act (MAP-21) into law. The effective date of this MAP-21 STP eligibility guidance is October 1, 2012. The STP requirements in effect on October 1, 2012, will apply to all related funding obligated on or after that date, whether carryover or new. The funding is for bicycle transportation and pedestrian walkways and the modification of public sidewalks to comply with the Americans with Disabilities Act. More information about this possible funding source can be found at http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm

5.7.4 PRIVATE FUNDING SOURCES

In addition to the sources listed above, there are several non-traditional funding sources that are available for the implementation of project and program recommendations. The following paragraphs briefly describe several of the innovative ways that communities have funded parts of their bicycle programs.

California Conservation Corps (CCC). The program provides emergency assistance and public service conservation work for City, County, State, Federal and non-profit organizations. Both urban and rural projects are eligible and are selected on the basis of environmental and

natural resource benefits and public use and on-the-job training opportunities. Use of the CCC would be effective at reducing project costs. The Active Transportation Program encourages participation of the CCC and Local Conservation Corps. More information may be found at http://www.ccc.ca.gov/work/programs/ATP/Pages/ATP%20home.aspx.

Grant and Foundation Opportunities. Private foundations provide excellent opportunities for funding specific capital projects or single event programs. Generally, to qualify for these types of funds, a bicycle advisory committee or established non-profit group acting in its behalf must exist. Typically, private foundations are initially established for specific purposes, e.g. children and youth needs, promotion of certain professional objectives, educational opportunities, the arts, and community development. An excellent source of information about foundations and their funding potential can be found in the Foundation Directory, available at many public libraries or on-line at www.fconline.foundationcenter.org/. Several foundations to consider are:

- People for Bikes;
- Bikes Belong Coalition;
- Compton Foundation, Inc.;
- REI Corporate Contribution Programs; and
- Robert Wood Johnson Foundation.

Memorial Funds. These programs are advertised as potential donor projects to be funded via ongoing charitable contributions or funds left to a particular project through a will. Most memorial projects include a memorial plaque at a location specific to the improvement or at a scenic vista point.

Revenue-Producing Operations. As part of the development of a trail or bike path, plans can specifically include the location of a revenue-producing operation adjacent to the proposed improvement. For example, bicycle rental facilities, food and drink establishments, bike storage facilities and equipment centers, and/or equestrian centers would be appropriate uses. The on-going lease revenues from these operations could then be used for trail and/or path maintenance.

5.8 Maintenance and Security of Bikeways

Both off-street and on-street bikeways need regular maintenance. Bicycles are more susceptible than motor vehicles to pavement irregularities such as cracks, potholes, broken glass, sand, or gravel. Roadway construction activities present additional maintenance and safety needs because of increased roadway wear from heavy vehicle traffic and increased debris. Unmaintained landscaping causes safety issues by obstructing travel lanes and hindering visibility. Major storms can leave debris in bikeways, presenting hazards to cyclists.

5.8.1 BIKEWAY FACILITY MAINTENANCE

Maintenance of street rights-of-way and adjacent landscaping has direct impacts to nearby, on-street Class II and III bikeways. The City's street maintenance and repair operations should include the following policies to ensure that they reflect the needs of bicyclists:

Street sweeping. As motor vehicles travel along the roadway, debris is pushed to the outside lanes and shoulders, and the center of intersections. Roads that also serve as Class II or III bikeways should be swept frequently, and should include removing debris on the shoulder and at intersections;

Minor repairs and improvements. Potholes and cracks along the shoulder of roadways affect bicyclists more than motor vehicles. Repairs should be made in a timely manner and should be flush to the existing pavement surface. Striping and restriping of bike lanes should occur on a regularly scheduled basis and whenever slurry seal or asphalt overlay is completed;

Trash pickup. The purpose of having bicycle lanes is thwarted when trash cans are placed in the bicycle travel lane. Encourage the public to not place trash cans awaiting pickup in bike lanes;

Street resurfacing. When streets are resurfaced, utility covers, grates and other in-street items should be brought up to the new level of pavement. Similarly, the new asphalt should be tapered to meet the gutter edge and provide a smooth transition between the roadway and the gutter pan. When only partial resurfacing is needed, resurfacing should include the bicycle lane. This will ensure a smoother, more bicycle-friendly riding surface;

Actively coordinate with maintenance workers. Maintenance supervision and staff should be involved in the development of bicycle-related maintenance policies to ensure that City staff and maintenance workers understand each others' needs and limitations;

Proactively sweep streets after special events. The Public Works Department should work closely with the Police Department to ensure that streets with Class II and III bicycle facilities are swept after automobile collisions, severe storms, parades, and other events when debris may be deposited in the bikeways; and,

Drainage grates. When repaving or maintaining roadways, drainage grates should be inspected to ensure that grate patterns are perpendicular to the road so that bicycle wheels cannot fall between grates. Replacement of bicycle-unfriendly grates should occur as soon as practical after they are identified.

5.8.2 BIKEWAYS IN CONSTRUCTION ZONES

Street construction and longer duration maintenance activities present particular challenges for bicyclists. Road construction and maintenance can sometimes force bicyclists out into travel lanes with vehicles. To help alleviate impacts to bicyclists during road construction and maintenance, several guidelines are recommended to help inform bicyclists of and protect them from obstacles:

Bicycle traffic control. Ensure that bicycle facilities are not reduced or eliminated in construction zones and that roadway improvement projects provide reasonable and appropriate bicycle detours.

Construction vehicles. To the extent feasible, avoid parking construction or maintenance vehicles in bicycle lanes or on designated bicycle routes.

Signage and warnings. Provide suitable construction warning signs for any activities that involve work in a designated bikeway. Signage should warn bicyclists well in advance of any location where the bicycle lane is closed for construction or maintenance activities.

Construction detours. Provide detour routes, designated with traffic cones, for bicyclists using bikeways that are undergoing long-term construction.

Temporary speed limits in construction zones. A temporary reduction of speed limits or work zone speed limit should be considered on roadways where motor vehicles travel 40 mph or greater.

Temporary transitions during construction. Metal plates that cross or cover bicycle lanes or routes that occur for longer durations should have temporary transition paving to allow the bicycle to easily ride up onto the plate. A sign warning that the plate may be slippery should be posted.

5.9 Maintenance and Security of the Pedestrian Network

The City of Hanford Street Maintenance Division provides residents and visitors with maintenance of 207 miles of roadway that includes sidewalks. The Division installs 30,000 square feet of sidewalks each year. The City asks residents to help them maintain City streets and sidewalks by contacting them or filling out the website form if they spot any damaged asphalt or sidewalks.

5.9.1 STRATEGIES FOR IMPROVED SIDEWALK MAINTENANCE

The City's sidewalk maintenance and repair operations should include the following strategies to ensure that they reflect the needs of pedestrians.

Deficient Maintenance Practices Negatively Affect Safety and Security. Without appropriate maintenance practices, the safety and security of users is at a higher level of risk. Poor maintenance practices that allow graffiti, trash, and general disrepair sends the signal that nobody cares or is watching. In addition, quality maintenance practices will reduce incidents of litter, graffiti, and vandalism. The most common ADA complaints relate to sidewalk maintenance are: cracks, holes, and loose gravel. Poor sidewalk surfaces such as swelling,

cracking, and other repair issues are ADA problems. Also, poor maintenance practices can lead to dangerous conditions or physical obstacles, which have been linked to causing constraints for pedestrians. Consider the following ongoing approach to routine maintenance:

- Conduct regular inspections to identify trip hazards, cracks, and other surface problems;
- Use GIS or other technology systems to efficiently conduct annual inspections and repairs; and
- Identify areas that are frequented with litter and debris.

Pavement. The most common ADA complaints relate to sidewalk maintenance are: cracks, holes, and loose gravel. Frequent sidewalk problems include step separation (vertical displacement of 0.5 inches or greater), badly cracked concrete (holes and rough spots wider than 0.5 inches), spalled areas (crumbling or flaking concrete), depressions that trap water (depressions, reverse cross-slopes, indentations), and tree root damage. Typical shared-use path maintenance issues are virtually identical to sidewalks including step separation, badly cracked pavement, settled areas that trap water, tree root damage, and vegetation overgrowth.

Sidewalk Design. Tight budgets and timelines can lead to lower quality design and construction. However, the difficulty of finding and receiving additional funding for issues is well-noted and thus the likelihood that facilities will receive additional funding to correct or improve their facilities in the near future is unlikely. When designing and constructing sidewalks or shared-use paths, the City should subscribe to the following principles to ensure quality design:

- Treat sidewalks and shared-use paths as the transportation facilities they are;
- Design and construct facilities correctly the first time and to the highest standards;
- Ensure designers are trained in bicycle and pedestrian design;
- Adopt uniform statewide standards that incorporate ADA guidelines and requirements;
- Incorporate quality control into the construction process to ensure that the facility designed is the facility that is built. Particular attention should be given to accessibility issues such as grades and slopes;
- Design for safety first. Keep safety in mind throughout facility design; and
- Design for all users. Assume a range of skill levels and different groups of users will be utilizing the facility.

5.9.2 STRATEGIES FOR IMPROVING SECURITY

There is no way to "ensure" total security on any transportation facility. However, there are many strategies that can be utilized to enhance it. Communities like Hanford should consider regular inspections of facilities. Inadequate maintenance involving vegetation removal can create security issues. The City could implement an easy system for users to report problems and complaints such as an online reporting system for users to report maintenance issues such as downed trees, burned-out lighting, or security problems such as vandalism or suspicious behavior.

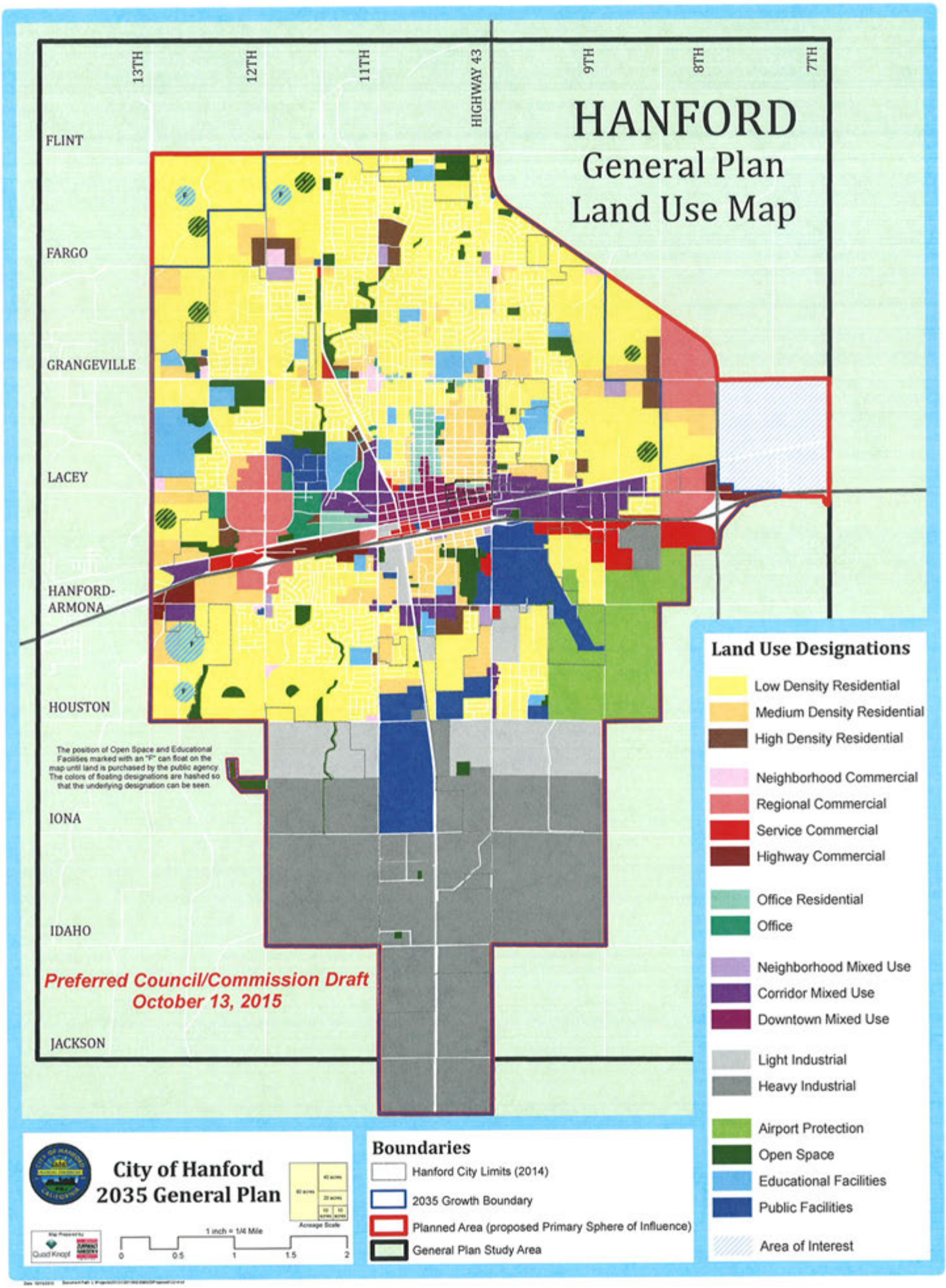
Facilities with More Users Have Fewer Security Issues. Another important component of security is "eyes," in other words, the more people present, the less likelihood of criminal activity. To that end, the design of sidewalks and multi-use paths should create a pleasant environment where people want to spend time. Heavily used facilities typically experience less crime.

Fear of Crime and Appearance. Even when reported data indicate that a facility has experienced almost no incidents of criminal activity, public perception of crime may lead to the avoidance of the facility. Research has shown that fear of crime is higher for women than men, and women are more likely to avoid walking after dark. Physical factors such as litter, poorly maintained buildings, and graffiti as well as social influences like publicly intoxicated individuals, homeless people, and groups of youth all affect an individual's perception of risk. Studies have also found that a lack of familiarity with an area and dark areas create an increased fear of crime.

APPENDICES

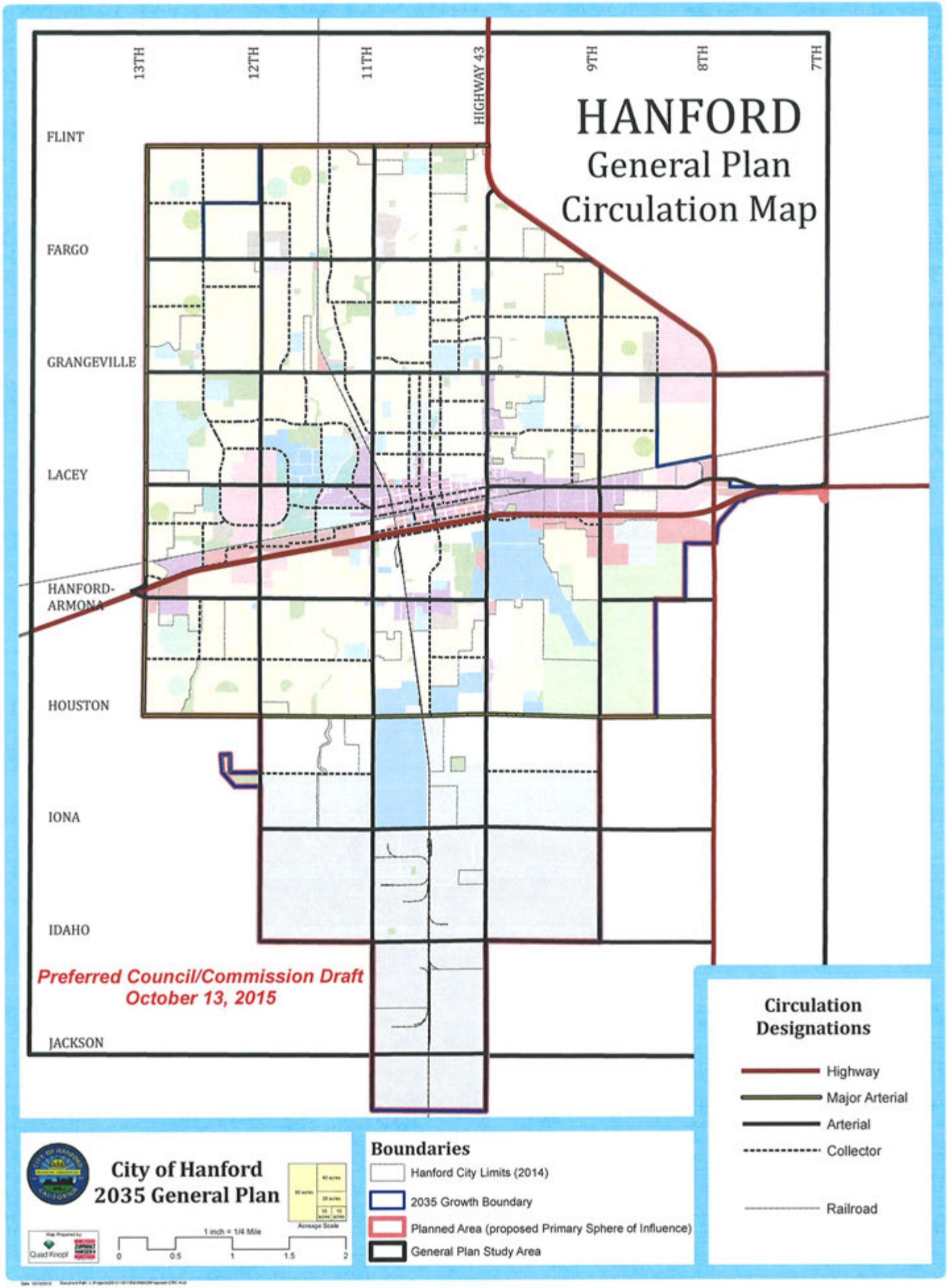
APPENDIX A

HANFORD 2035 GENERAL PLAN
LAND USE MAP


HANFORD
General Plan
Land Use Map
13TH
12TH
11TH
HIGHWAY 43
9TH
8TH
7TH
FLINT
FARGO
GRANGEVILLE
LACEY
HANFORD-
ARMONA
HOUSTON
IONA
IDAHO
JACKSON
The position of Open Space and Educational Facilities marked with an "F" can float on the map until land is purchased by the public agency. The colors of floating designations are hashed so that the underlying designation can be seen.
Preferred Council/Commission Draft
October 13, 2015
Land Use Designations
Low Density Residential
Medium Density Residential
High Density Residential
Neighborhood Commercial
Regional Commercial
Service Commercial
Highway Commercial
Office Residential
Office
Neighborhood Mixed Use
Corridor Mixed Use
Downtown Mixed Use
Light Industrial
Heavy Industrial
Airport Protection
Open Space
Educational Facilities
Public Facilities
Area of Interest
City of Hanford
2035 General Plan
Quad Knopf
1 inch = 1/4 Mile
0
0.5
1
1.5
2
Boundaries
Hanford City Limits (2014)
2035 Growth Boundary
Planned Area (proposed Primary Sphere of Influence)
General Plan Study Area

APPENDIX B

HANFORD 2035 GENERAL PLAN
CIRCULATION MAP


13TH
12TH
11TH
HIGHWAY 43
9TH
8TH
7TH
FLINT
FARGO
GRANGEVILLE
LACEY
HANFORD-
ARMONA
HOUSTON
IONA
IDAHO
JACKSON
HANFORD
General Plan
Circulation Map
Preferred Council/Commission Draft
October 13, 2015
Circulation
Designations
Highway
Major Arterial
Arterial
Collector
Railroad
Boundaries
Hanford City Limits (2014)
2035 Growth Boundary
Planned Area (proposed Primary Sphere of Influence)
General Plan Study Area
City of Hanford
2035 General Plan
Acreage Scale
1 inch = 1/4 Mile
0
0.5
1
1.5
2

APPENDIX C

SAMPLE BICYCLE PARKING ORDINANCES

SAMPLE BICYCLE PARKING ORDINANCES

BEND OREGON – BICYCLE PARKING ORDINANCE

3.3.600 Bicycle Parking Standards.

All uses that are subject to Site Development Review shall provide bicycle parking, in conformance with the following standards, which are evaluated during Site Development Review. This section does not apply to single-family, two-family, and three-family housing (attached, detached or manufactured housing), home occupations or other developments with fewer than 10 vehicle parking spaces.

A. Number of Bicycle Parking Spaces. A minimum of one bicycle parking space per use is required for all uses subject to Site Development Review. Table 3.3.600 lists additional standards that apply to specific types of development:

Table 3.3.600

Required On-Site Bicycle Parking

Use	Requirement
Multifamily dwellings with 4 units or more:	1 covered space per unit. Covered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the residential complex has no garage or other easily accessible storage unit, the bicycle parking spaces may be sheltered from sun and precipitation under an eave, overhang, an independent structure, or similar cover.
Retirement home or assisted living complex:	2 covered spaces or 1 covered space for every 10 employees, whichever is greater
Retail sales and service	1 covered space for every 10 employees plus 1 space for every 20 motor vehicle spaces
Multiple uses	For buildings with multiple uses (such as a commercial or mixed-use center), bicycle parking standards shall be calculated by using the total number of motor vehicle parking spaces required for the entire development. A minimum of one bicycle parking space for every 10 motor vehicle parking spaces is required.
Street vendors, itinerant merchants, and similar temporary sales operations	No bicycle spaces required

Table 3.3.600

Required On-Site Bicycle Parking

Use	Requirement
Restaurants, cafes, and bars	1 covered space for every 10 employees plus 1 space for every 20 motor vehicle spaces
Professional office	1 covered space for every 10 employees plus 1 space for every 20 motor vehicle spaces
Medical or dental office or clinic or hospital	1 covered space for every 10 employees plus 1 space for every 20 motor vehicle spaces
Stadium, arena, theater or similar use	1 covered space for every 20 seats
Public or private recreational facility	1 space for every 10 employees plus 1 space for every 20 motor vehicle spaces
Parking lots	All public and commercial parking lots and parking structures shall provide a minimum of one bicycle parking space for every 10 motor vehicle parking spaces.
Industrial uses without retail trade or service	1 covered space for every 20 employees
Industrial uses with retail	1 covered space for every 20 employees
Elementary school	1 covered space for every 25 students. All spaces should be sheltered under an eave, overhang, independent structure, or similar cover.
Junior high school	1 covered space for every 25 students. All spaces should be sheltered under an eave, overhang, independent structure, or similar cover.
High school	1 covered space for every 25 students. All spaces should be sheltered under an eave, overhang, independent structure, or similar cover.
College, university or trade school	1 space for every 10 motor vehicle spaces plus 1 covered space for every dormitory unit. Colleges and trade schools shall provide one bicycle parking space for every 10 motor vehicle spaces plus one space for every dormitory unit. Fifty percent of the bicycle parking spaces shall be sheltered under an eave, overhang, independent structure, or similar cover.

B. Special Standards for the Central Business District. Within the Central Business District, bicycle parking for customers shall be provided in the right-of-way along the street either on the sidewalks or in specially constructed areas such as pedestrian curb extensions at a rate of one space per 3,000 square feet of gross floor area of the building. In addition, individual uses shall

provide covered bicycle parking at the rate of one bicycle space for every 10 employees. At a minimum, each use shall provide one covered bicycle parking space. The bicycle parking shall not exceed six bicycles per parking area. Only when providing the required bicycle parking spaces is not feasible as determined by the City, the developer may pay a fee established by City.

C. Location and Design.

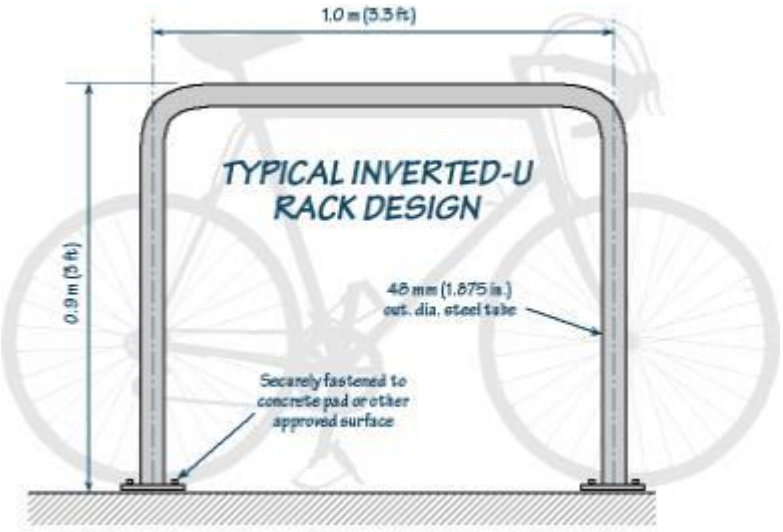
1. All bike racks shall have following design features:

a. Inverted ñUò style racks or similar design as illustrated below.

b. Each rack shall provide each bicycle parking space with at least two points of contact for a standard bicycle frame.

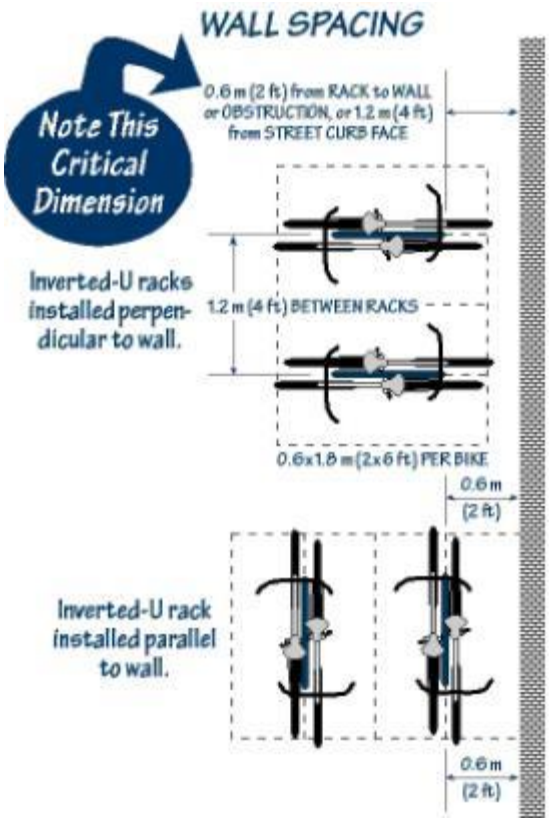
c. The bike rack shall have rounded surfaces and corners.

d. The bike rack shall be coated in a material that will not damage the bicycleôs painted surfaces.



2. Each required bicycle parking space shall be on asphaltic concrete, portland cement, or similar hard surface material and each space shall be at least two feet wide by six feet long with a minimum vertical clearance of seven feet. An access aisle width of at least five feet wide shall be provided and maintained beside or between each row of bicycle parking.

3. The location of the rack and subsequent parking shall not interfere with pedestrian passage, leaving a clear area of at least 36 inches between bicycles and other existing and potential obstructions. Customer spaces may or may not be sheltered. When provided, sheltered parking (within a building, or under an eave, overhang, or similar structure) shall be provided at a rate of one space per 10 employees, with a minimum of one space per use.



4. Bicycle parking shall be conveniently located to both the street right-of-way and at least one building entrance (e.g., no farther away than the closest parking space). It should be incorporated whenever possible into building design and coordinated with the design of street furniture when it is provided. Street furniture includes benches, street lights, planters and other pedestrian amenities.

D. Visibility and Security. Bicycle parking shall be visible to cyclists from street sidewalks or building entrances, so that it provides sufficient security from theft and damage, except for bicycles stored per subsection (E) of this section.

E. Options for Storage. Bicycle parking requirements for long-term and employee parking can be met by providing a bicycle storage room, bicycle lockers, racks, or other secure storage space inside or outside of the building.

F. Lighting. Bicycle parking should be at least as well-lit as vehicle parking for security.

G. Reserved Areas. Areas set aside for bicycle parking should be clearly marked and reserved for bicycle parking only.

H. Hazards. Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas shall be located so as not to conflict with vision clearance standards (BDC Chapter 3.1, Lot, Parcel and Block Design, Access and Circulation). [Ord. NS-2016, 2006]

SAN JOSE BICYCLE PARKING ORDINANCE

Part 2.5 - BICYCLE PARKING REQUIREMENTS

20.90.190 - Bicycle parking space design standards.

A. For the purpose of this section, "bicycle parking facilities" shall refer to long-term and short-term bicycle parking facilities as defined in Section 20.90.050.

1. All bicycle parking spaces provided shall be on a hard and stable surface.

2. All bicycle parking facilities shall be securely anchored to the surface so they cannot be easily removed and shall be of sufficient strength to resist vandalism and theft.

3. All bicycle parking facilities shall support bicycles by at least two contact points on the bicycle to prevent the bicycle from falling over and to prevent damage to wheels, frame, or other components.

4. All bicycle parking facilities within vehicle parking areas shall be separated by a curb or other physical barrier to protect bicycles from damage by automobiles and other moving vehicles.

5. Short-term bicycle parking facilities are subject to and shall meet all the following requirements:

    a. The facilities shall be located at least three feet away from any wall, fence, or other structure.

    b. When multiple short-term bicycle parking facilities are installed together in sequence, they shall be installed at least three feet apart and located in a configuration that provides space for parked bicycles to be aligned parallel to each other.

    c. The facilities shall be installed in a clear space at least two feet in width by six feet in length to allow sufficient space between parked bicycles.

    d. Permanently anchored bicycle racks shall be installed to allow the frame and one or both wheels of the bicycle to be securely locked to the rack.

20.90.195 - Bicycle parking space location.

A. Short-term bicycle parking facilities that consist of permanently anchored bicycle racks shall be located in a convenient, highly visible and well lighted area within twenty feet of a building entrance and within view of pedestrian traffic.

B. Short-term bicycle parking facilities that consist of: covered, lockable enclosures with permanently anchored racks for bicycles; or lockable bicycle rooms with permanently anchored racks; or lockable, permanently anchored bicycle lockers shall be located in a convenient, highly visible and well-lighted area within one hundred feet of a common publicly accessible building entrance and within view of pedestrian traffic.

C. Long-term bicycle parking facilities for tenant and occupant use shall be conveniently accessible by pedestrians from the street and located within one hundred feet of building entrances accessible by tenants and occupants.

APPENDIX D

BICYCLE AND PEDESTRIAN SAFETY EDUCATION PROGRAMS

SAMPLE BICYCLE AND PEDESTRIAN SAFETY EDUCATION PROGRAMS

California Safe Routes to School Program. Safe Routes to Schools programs are designed to decrease traffic and pollution and increase the health of children and the community. Safe Routes to Schools promotes walking and biking to school using education. The program addresses parents' safety concerns by educating children and the public, partnering with traffic law enforcement, and developing plans to create safer streets.

http://saferoutestoschools.org
http://guide.saferoutesinfo.org/education/strategies_for_educating_children.cfm

An Organizers Guide to Bicycle Rodeos. A rodeo is a bicycle skills event which provides an opportunity for bicyclists to practice and develop skills that will help them to become better bicyclists and avoid typical crashes. Some rodeos are designed as large, municipal events with skills activities, exhibits and games, while others are much smaller in format, requiring a smaller number of volunteers. The goal of any bicycle rodeo is to provide an opportunity for the participants to learn, practice, and demonstrate their bicycle handling skills in a fun, noncompetitive atmosphere.

http://saferoutespartnership.org/sites/default/files/pdf/Bike_Rodeo_CT.pdf

League of American Bicyclists. Kids I - Designed for parents, instructors explain how to teach a child to ride a bike. Topics include how to perform a bicycle safety check, helmet fitting and bike sizing. Includes 10-minute ôKids Eye Viewô video and parent brochure. Kids II - 7-hour class for 5th & 6th graders includes on-bike skills and safe riding routes.

http://bikeleague.org

International Bicycle Fund. This website offers education programs for bike safety, health, and use of bicycle helmets. It offers numerous learning opportunities in both video and literature.

http://www.ibike.org/education

Bike Smart Youth Bicycle Safety Program. Bike Smart conducts bicycle skills training for Santa Cruz County youth in grades 3rd -12th. They offer classroom presentations, assemblies, hands-on bicycle skills obstacle courses (ñRodeosò), community rides (on-street training), as well as education booths at local fair and special events. The programs are carried out at schools, community centers and events. The website identifies various activities and events for educating the public on bicycle safety. Since 2003 Bike Smart has worked with over 17,000 youth throughout Santa Cruz and Monterey Counties.

http://bikesmart.org

APPENDIX E

SAMPLE BICYCLE PROMOTION PROGRAMS

SAMPLE BICYCLE PROMOTION PROGRAMS

CITY OF BERKELEY

Bicycle Promotion Programs

Bicycling has gained significant publicity, both positive and negative, in the San Francisco Bay Area over the past few years due in great measure to the efforts of bicycle activists and coverage by the media. Attention grabbing events such as Critical Mass in San Francisco, conflicts with bike messengers, and protest rides for better bicycle access on Bay Area bridges have gained national attention. Bicyclists have received a vote of confidence from the general public with the recent decision to include a bicycle path on the new eastern span of the San Francisco-Oakland Bay Bridge. AC Transit has added new buses with front loading bicycle racks to many of its local and transbay routes. In addition, bicycle access to the BART system was improved this July by the relaxing of some commute-hour restrictions. The most notable of these was the opening of the Fremont-Richmond line, which serves the Berkeley area, to bicyclists at all times. Through this exposure, both good and bad, bicycling is becoming more visible in the Bay Area. The question now is: What else can be done to promote bicycling as a viable transportation mode, and in particular what can the City of Berkeley do?

Implementing many of the infrastructure and education elements of this Plan will itself promote bicycling in Berkeley. A basic first step towards encouraging people to bike is providing them with safe and convenient bicycle facilities.

This Chapter focuses on promoting bicycle use for commute trips, since commute trips cause much of the traffic congestion and are a group of trips that can be easily targeted with employer programs. It is acknowledged that there are many other types of trips, such as shopping and entertainment. In the future, the City can explore ways to be involved in promoting bicycle use for these types of trips as well.

Guidelines for a Bicycle Promotion Program in Berkeley

In the present climate of concern over the crowded conditions of our roads and the lack of adequate parking, a variety of Transportation Demand Management (TDM) programs have been implemented by state and local governments and private industry. These programs have focused on education and incentives to get people away from the SOV (single occupant vehicle), with carpools, vanpools, and transit being the most popular alternative modes. Bicycle commuting is often an overlooked or underutilized opportunity for attaining trip reduction goals.

Like the rest of the San Francisco Bay Area, Berkeley suffers from congestion on its streets and highways; parking is at a premium in the commercial and residential neighborhoods. The following section provides the City of Berkeley with the tools to develop an effective bicycle promotion program to increase bicycle commuting and alleviate some of the demand on the overcrowded transportation infrastructure.

The following bicycle promotion program for Berkeley is based on research of existing bicycle commute programs in the Bay Area and around the country sponsored by both government agencies and private industry. Although any city, company, university or other organization can implement a bike commute promotion program, the most successful programs result from collaboration between the public and private sectors. The City of Berkeleyôs primary role will be to serve as the "model employer" for the bicycle commute promotion program. With the City setting the example, other employers in Berkeley can be more successfully persuaded to institute programs of their own.

Whether the bicycle commute program is sponsored by the City or by a local company, an effective bicycle commuting promotion program must do the following:

Identify benefits of bicycle commuting - Before bicycling will be considered as a commute alternative, the feasibility and benefits of bicycle commuting must be made known to the potential cyclist. Many people are unaware of the opportunities that bicycle commuting can provide. Bicycle commuting reduces the costs of commuting to the employee; bicycle commuting improves health through exercise and can lower employer costs through a reduction in health insurance costs and better performance by employees; bicycle commuting can save time for the employees during the actual commute and can replace time and money spent in lengthy workouts in a gym; bicycle commuting reduces the demand on overcrowded streets and highways and the need for parking; bicycle commuting does not pollute the air. In sum, bicycle commuting is an enjoyable, low cost and healthy alternative to the traditional commute.

Provide an incentive to use bicycle commuting - Many of the existing TDM programs use monetary or other incentives to lure the prospective participant out of their single-occupant-vehicle and into a carpool or transit. These TDM programs should be expanded to include incentives for bicycle commuting.

Support and applaud bicycle commuting - Endorsement of bicycle commuting by those in charge is a significant aspect of a promotion program. Prospective bicycle commuters are more apt to try out this underutilized mode if it is accepted and supported by elected officials and city department heads. Endorsement from "the people in charge" of city government will go a long way towards persuading individuals to bicycle commute, and companies to establish bicycle commute programs of their own.

Implementation of a Bicycle Promotion Program

The implementation of bicycle promotion programs, typically part of an overall trip reduction program, is usually staff intensive. Currently, minimal staff resources are dedicated to the Cityôs trip reduction program, due to funding constraints. This section proposes many possible programs and activities which are appropriate for the bicycle promotion program in Berkeley. However, the amount of funding available for staff and programs will determine how many of the following programs can be implemented. Programs targeting the entire Berkeley community could be developed and implemented by Berkeley TRiP, if they are provided adequate funding for this task. Local bicycle merchants are natural allies in any effort to promote cycling, and their participation should be solicited.

The bicycle promotion program has been divided into two segments; one directed at city employees and the other geared for the general population of Berkeley.

Elements of a City Employee Campaign to Identify Benefits of Bicycle Commuting

- **Info Flyer** - Publish a "Bicycle Commute Info sheet" with information on bicycles and other needed equipment, where the safe and secure bicycle parking is located, where bike shops are located, and the available transit-access options.
- **Informational Materials** - Make available bicycle route maps, safety information, effective-cycling pamphlets and flyers of upcoming bicycle events.
- **Bicycle Club** - Start a bicycle commuter club and information network to advise the potential bicycle commuter of their best commute routes, to locate experienced bicycle commuters in their area ("Bicycle Buddies") who are willing to assist and escort them during their first bicycle commutes, and to find out what events and activities are coming up. RIDES for Bay Area Commuters provides this service for potential bicycle commuters, including information about bicycle access on bridges and transit throughout the area.
- **Bicycle Safety Demonstrations** ï Hold demonstrations during the lunch hour on safe-riding, how to bicycle commute, and bicycle repair. The City, local businesses, local bicycling clubs or advocacy groups can sponsor these events.
- **Bicycle Commute Competition –** Hold a competition between city departments and agencies to determine which has the most bicycle commuters during a week.

Elements of a Citywide Campaign to Identify Benefits of Bicycle Commuting

- **Media Campaigns** ï Television and radio public service announcements can help reach a broad audience. A weekly bicycle newspaper column that can discuss local bicycling news as well as advertise upcoming events.
- **Bicycle Hot Line** ï Telephone Hot Line for reporting potholes, missing bike route signs or other bicycle related hazards. The system could also be expanded to provide bicycle news on upcoming events. Also provide comparable service on the World Wide Web.
- **Bicycle safety demonstrations** ï Expand the program of demonstrations discussed above to include presentations at schools, fairs or other city events. Get the Police Department involved in developing and presenting these programs.
- **"Berkeley Bicycle Safety Week"** ï Develop a week-long event to promote the benefits of bicycling to the citywide audience. Include activities in the schools as part of the program. This event can culminate in a "Berkeley Fun Ride" one evening bringing together all the participants.
- **City Bicycle Rides** - To maintain interest and attention on bike commuting after the "Bicycle Safety Week" is over, a monthly or quarterly City ride could be organized. These rides should be supervised and designed with clear safety guidelines and a pre-determined route. Or a Bike Day could be instituted once a month when everyone is encouraged to use a bicycle for that dayôs trips. Or, a ride could be organized with a popular Berkeley personality, like a writer or U.C. athlete.

Elements of a City Employee Bicycle Commuting Incentive Campaign

- **Parking** ï Secure and protected long-term parking must be provided. Options include bicycle lockers, bicycle storage rooms, locked cages, attendant parking or allowing bicycles into the workplace.
- **Cash Incentives –** There are many types of cash incentives which can be used to encourage bike commuting. The cost of these programs can be mitigated by soliciting sponsorships from stores, restaurants and other retailers. They include:

    - Cash dividends for each day of bicycling, similar to a transit subsidy;
    - Monthly drawings for prizes;
    - Mileage reimbursement for city business travel by bike;
    - Discount coupons or credit at bike stores, restaurants or other retail businesses;
    - Bike purchase financing;
    - Parking cash-out program.

- **Convenience Incentives** ï One of the major obstacles to bicycle commuting is the perceived inconvenience factor. The following list of programs addresses these concerns.

    - óGuaranteed Ride Homeô (the City currently participates in a program organized by Alameda County)
    - Fleet bicycles for business travel (the City has instituted this program)
    - Trial commute bikes
    - On-site bicycle repair kits
    - On-call bicycle repair services
    - Flex hours
    - Showers and locker rooms (or gym membership)
    - Relaxed dress codes

Elements of a Citywide Bicycle Commuting Incentive Campaign

- **Bikeways -** Implementation of the bicycle network in this Plan will be critical to a successful encouragement program. Bicycle route maps and identifiable route signage systems are also necessary to support the route network.
- **Parking -** The provision of secure, protected, convenient and inexpensive bicycle parking, as identified in this Plan, is crucial to lure the commuter to the bicycle.

Elements of a City Employee Campaign to Support and Applaud Bicycle Commuting

- **"Ride with an Elected Official"** ï Sponsor a ride for city employees with an elected official and/or department heads to demonstrate their support and enthusiasm for bicycle commuting.
- **Special Programs** ï Organize Berkeley bicycle commute events for city employees to coincide with regional and national events such as Bike to Work Day, Beat the Backup Day, Earth Day and Transit Week.

Elements of a Citywide Campaign to Support and Applaud Bicycle Commuting

Efforts to support and applaud bicycle commuting to the general population of Berkeley will be primarily accomplished through the media campaigns, education programs and special events discussed above. In addition, the City of Berkeley can choose to encourage other Berkeley employers to organize bicycle commute programs of their own. In particular, the City should encourage U.C. Berkeley and B.U.S.D., two of the largest employers in Berkeley, to promote bicycling to their staff, faculty, students, and parents.

With the Cityôs Bicycle Commute Program firmly established, the City can provide valuable assistance to the employers willing to undertake this important task. An employer resource kit, most likely put together by Berkeley TRiP, could be provided to each interested employer. The kit should include:

- Text for a letter from the CEO/President explaining the Bicycle Commute Program and urging his/her employees to consider the bicycle when making commute choices;
- Articles about bicycling as a great commute alternative. These stories can be used in company newsletters, as all-staff memos, bulletin board fliers or any other outreach method in place at the company.
- A list of programs and events for use in the companyôs program. The list will provide details of existing events as well as new programs that could be implemented. City-sponsored events should be included in this list.
- A resource list detailing sample bicycle promotion programs, resource centers for bicycle promotion assistance, and local bicycle coalitions. This list will be invaluable for the companies that may not be aware of the benefits of bicycle commuting.
- Route maps showing the best bike commute routes in Berkeley to be distributed and posted. Many potential bike commuters could find the option more appealing with information about the fastest, safest and easiest routes to use.
- Bicycle Safety and Road Sharing Brochures developed through the education program discussed in Chapter 5.
- Sample bicycle promotional items such as T-shirts, water bottles, etc.

PEDESTRIAN AND BICYCLE INFORMATION CENTER, U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

Strategies to Promote Walking and Bicycling

Getting people walking and bicycling will help build support for creation of more walkable places, decrease air pollution and traffic congestion and improve physical health, among other benefits. Research reveals that creating places for walking and bicycling and other forms of physical activity may be associated with increased physical activity.

Below is a list of strategies that a walking or bicycling coalition or partnership may select from to get going. If there is not yet an established coalition in your community, then find out more about how to build a coalition. The ideas below can be used to inspire and motivate people to get out of their cars and walk.

1. Make Walking and Bicycling Part of the Business: Walk at work programs

Partner with large employers to design and publicize routes to walk or bike to work, give time for walking or bicycling during the day or foster walking or bicycling groups.

One example is Berkeley's walking groups for employees. Some employers also offer incentives for physical activity through their insurance provider. American Heart Association provides support to business-based walking programs through incentive items, printable material and recognition.

2. Offer Incentives and Buddies: Mileage clubs

Use online and community-based programs that encourage walking and bicycling and provide incentives for reaching mileage goals either individually or in groups. See the America on the Move program or a "Walk Across a State" program like this one in Texas.

3. Provide a Guide: Walking and bicycling maps

Provide maps of local attractions as well as locations of practical amenities such as restrooms. For inspiration, see examples from Feet First and Walk Arlington. Add walking routes to the Trails web site and invite community members to view them. Walking maps can also include the walking time required to reach a variety of popular destinations.

4. Plant the Seeds: Marketing campaigns

The City of Tempe's Tempe in Motion program includes a marketing campaign with signage on buses, street banners, water bill inserts, and television.

5. Build on What's There: Existing programs

Work with commute trip reduction programs to encourage walking and bicycling to work. For an example, see Pierce, Wa.'s Commute Reduction Program. Loaner car programs like Zip Car help employees get errands done without driving their own vehicle to work.

6. Make it Appealing: Special events

Hold a Car Free Day event. Hold a walk to raise money or enjoy an aspect of the community. This might be an art walk or fundraising walk. See March of Dimes Walk or the Walk for Alzheimer's program for starting ideasð there are many other worthwhile organizations that use walks to raise money. The American Volkssport Association offers organized walking routes, special walking events and a point accrual system.

7. Involve Children and Families: Walk/Bike to school day programs

Organize a Walk/Bike to School Day event to encourage children and families to walk and/or bike to school. This event can also be a way to attract media attention and involve community leaders.

8. Add a Little History: Educational and historical walks or bike tours

One example of educational and historical walking programs is run by Walk Boston, which offers educational and guided walking tours, some of which focus on historical areas of the city.

9. Jump on the Bandwagon: Partner with popular programs

For example, if environmental groups are active and successful in a community, it makes sense to find ways to partner with them to promote walking and bicycling. For many tools on how to develop programs that promote behaviors that help the environment, go to the Tools of Change web site.

Need more ideas?

For strategies to increase physical activity for entire communities, visit the Centers for Disease Control web site. Other sites have ideas on how individuals can get motivated to walk.

How do you make these ideas happen?

Having a group of people that care about increasing the safety and appeal of walking and bicycling will help make this possible. They're finding out who's making decisions regarding traffic in their hometowns and how they can be a part of the policy and planning process. They're lobbying city officials for traffic calming, more sidewalks, new bike lanes, and standardized bicycle and pedestrian facilities for the disabled. And, most importantly, they're biking and walking.

There are different ways to find strength in numbers and coalitions and to organize an effective outreach campaign so you can get your ideas acrossð and generate walkable, bikeable solutions.

Your coalition or group has the potential to be your most valuable tool in promoting walkability and bikability in your community. That's why it's so important that your group makes the most of its resources and energy, and learn to work with agencies, the private sector, and the media to gain support for your projects.

Whether you've already gathered a group together, or are simply thinking of putting together a pedestrian coalition, you'll benefit from these tips, tools, and resources designed to help you effectively organize and mobilize, initiate and grow.

Take some valuable pointers from America Walks and the League of American Bicyclists, two of the nation's largest support and advocacy groups for walking and bicycling. On their sites, you'll find plenty of helpful resources to get your own campaigns going.

The Federal Highway Administration (FHWA)'s Pedestrian Safety Toolkit & Resource Catalog is divided into these six helpful sections:

1. Making a Commitment: Motivate key decision-makers to take action in making your community safer and more walkable.
2. Getting Organized: Establish a formal Coordinating Committee and announce the program to the general public.
3. Gathering Data: Compile statistics to define the pedestrian safety problems facing your community.
4. Developing a Plan: Define communities' priorities and specify action to be taken in support of the program goals.
5. Implementing Your Program: Take action and keep the media informed about your activities.
6. Evaluation & Feedback: Figure out what works and doesn't work and make the necessary adjustments to the program.

APPENDIX F

HANFORD BIKEWAY SIGNING AND STRIPING
PRELIMINARY OPINION OF
PROBABLE IMPROVEMENT COSTS

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Estimated Pricing

Description	Unit Price	Unit
Install Bike Lane Sign-Class II	$300.00	EA
Remove Existing Stripe	$0.20	LF
Install 4" Stripe	$0.19	LF
Install 6" Stripe	$0.21	LF
Install Sharrow-Class III	$100.00	EA
Install Bike Lane Stencil - Pavement Marking	$80.00	EA
Install Bike Route Sign-Class III	$300.00	EA
Contingency	25%	EA
Construction Engineering	15%	EA

2016 Hanford Bikeway Improvements (by segment)

13th Avenue from Fargo to Grangeville - Class III Bike Route

1.00 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (8 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$3,200
				Contingencies:	$800
				Construction Engineering	$600
				Total:	**$4,600**

13th Avenue from Grangeville to Lacey - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$2,600
				Contingencies:	$650
				Construction Engineering	$488
				Total:	**$3,738**

13th Avenue from Lacey to Hanford-Armona - Class III Bike Route

1.11 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	1.11	Mile	$1,200	$1,332
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.11	Mile	$800	$888
				Subtotal:	$4,020
				Contingencies:	$1,005
				Construction Engineering	$754
				Total:	**$5,779**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

13th Avenue from Hanford-Armona to Houston - Class III Bike Route

1.19 miles 4 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	4	intersection	$600	$2,400
3	Install Share the Road Signs (4 per 1/2 mile)	1.19	Mile	$1,200	$1,428
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.19	Mile	$800	$952
				Subtotal:	$4,780
				Contingencies:	$1,195
				Construction Engineering	$897
				Total:	**$6,872**

Centennial Drive from Berkshire to Grangeville - Class II Bike Lanes

0.20 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.20	Mile	$1,056	$212
2	Install Bike Lane Signs (2 per intersection)	1	intersection	$600	$600
3	Install 6" Stripe	0.20	Mile	$2,218	$444
4	Install 4" Stripe	0.20	Mile	$2,006	$402
5	Bike Lane Stencil-Pavement Marking (2 per int.)	1	intersection	$160	$160
				Subtotal:	$1,818
				Contingencies:	$455
				Construction Engineering	$341
				Total:	**$2,613**

Centennial Drive from Grangeville to Greenfield - Class II Bike Lanes

0.45 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.45	Mile	$1,056	$476
2	Install Bike Lane Signs (2 per intersection)	1	intersection	$600	$600
3	Install 6" Stripe	0.45	Mile	$2,218	$998
4	Install 4" Stripe	0.45	Mile	$2,006	$903
5	Bike Lane Stencil-Pavement Marking (2 per int.)	1	intersection	$160	$160
				Subtotal:	$3,137
				Contingencies:	$784
				Construction Engineering	$588
				Total:	**$4,509**

Centennial Drive from Greenfield to Lacey - Class II Bike Lanes

0.60 miles 6 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.60	Mile	$1,056	$634
2	Install Bike Lane Signs (2 per intersection)	6	intersection	$600	$3,600
3	Install 6" Stripe	0.60	Mile	$2,218	$1,331
4	Install 4" Stripe	0.60	Mile	$2,006	$1,204
5	Bike Lane Stencil-Pavement Marking (2 per int.)	6	intersection	$160	$960
				Subtotal:	$7,729
				Contingencies:	$1,932
				Construction Engineering	$1,449
				Total:	**$11,110**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Centennial Drive from Lacey to 12th - Class III Bike Route

0.65 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	0.65	Mile	$1,200	$780
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.65	Mile	$800	$520
				Subtotal:	$2,500
				Contingencies:	$625
				Construction Engineering	$469
				Total:	**$3,594**

12th Avenue from Fargo to Grangeville - Class II Bike Lanes

1.00 miles 4 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	1.00	Mile	$1,056	$1,056
2	Install Bike Lane Signs (2 per intersection)	4	intersection	$600	$2,400
3	Install 6" Stripe	1.00	Mile	$2,218	$2,218
4	Install 4" Stripe	1.00	Mile	$2,006	$2,007
5	Bike Lane Stencil-Pavement Marking (2 per int.)	4	intersection	$160	$640
				Subtotal:	$8,321
				Contingencies:	$2,080
				Construction Engineering	$1,560
				Total:	**$11,961**

12th Avenue from Hume to Houston - Class III Bike Route

0.50 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.50	Mile	$1,200	$600
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.50	Mile	$800	$400
				Subtotal:	$1,600
				Contingencies:	$400
				Construction Engineering	$300
				Total:	**$2,300**

12th Avenue from Houston to Iona - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	1.00	Mile	$1,056	$1,056
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$3,656
				Contingencies:	$914
				Construction Engineering	$686
				Total:	**$5,256**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

12th Avenue from Iona to Idaho - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$2,600
				Contingencies:	$650
				Construction Engineering	$488
				Total:	**$3,738**

Fitzgerald Avenue from Fargo to Grangeville - Class III Bike Route

1.03 miles 16 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	16	intersection	$600	$9,600
3	Install Share the Road Signs (4 per 1/2 mile)	1.03	Mile	$1,200	$1,236
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.03	Mile	$800	$824
				Subtotal:	$11,660
				Contingencies:	$2,915
				Construction Engineering	$2,187
				Total:	**$16,762**

University Avenue from Grangeville to Greenfield - Class III Bike Route

0.46 miles 6 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	6	intersection	$600	$3,600
3	Install Share the Road Signs (4 per 1/2 mile)	0.46	Mile	$1,200	$552
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.46	Mile	$800	$368
				Subtotal:	$4,520
				Contingencies:	$1,130
				Construction Engineering	$848
				Total:	**$6,498**

Campus Drive from Greenfield to Lacey - Class III Bike Route

0.55 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.55	Mile	$1,200	$660
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.55	Mile	$800	$440
				Subtotal:	$2,900
				Contingencies:	$725
				Construction Engineering	$544
				Total:	**$4,169**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Campus Drive from Lacey to Glendale - Class III Bike Route

0.51 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.51	Mile	$1,200	$612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.51	Mile	$800	$408
				Subtotal:	$2,820
				Contingencies:	$705
				Construction Engineering	$529
				Total:	**$4,054**

11 1/2 Avenue/Milpas/Echo from Davis to Hume - Class III Bike Route

0.99 miles 13 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	13	intersection	$600	$7,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.99	Mile	$1,200	$1,188
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.99	Mile	$800	$792
				Subtotal:	$9,780
				Contingencies:	$2,445
				Construction Engineering	$1,834
				Total:	**$14,059**

Glacier Way from Flint to Fargo - Class III Bike Route

1.01 miles 12 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	12	intersection	$600	$7,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$9,220
				Contingencies:	$2,305
				Construction Engineering	$1,729
				Total:	**$13,254**

Glacier Way from Fargo to Cortner - Class III Bike Route

0.38 miles 7 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	7	intersection	$600	$4,200
3	Install Share the Road Signs (4 per 1/2 mile)	0.38	Mile	$1,200	$456
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.38	Mile	$800	$304
				Subtotal:	$4,960
				Contingencies:	$1,240
				Construction Engineering	$930
				Total:	**$7,130**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

11th Avenue from Flint to Fargo - Class III Bike Route

1.01 miles 10 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	10	intersection	$600	$6,000
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$8,020
				Contingencies:	$2,005
				Construction Engineering	$1,504
				Total:	**$11,529**

11th Avenue from Fargo to Grangeville - Class III Bike Route

1.01 miles 9 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	1.01	Mile	$1,056	$1,067
2	Install Bike Route Signs (2 per intersection)	9	intersection	$600	$5,400
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$8,487
				Contingencies:	$2,122
				Construction Engineering	$1,592
				Total:	**$12,201**

11th Avenue from Florinda to Ivy - Class III Bike Route

0.18 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	0.18	Mile	$1,200	$216
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.18	Mile	$800	$144
				Subtotal:	$1,560
				Contingencies:	$390
				Construction Engineering	$293
				Total:	**$2,243**

11th Avenue from Seventh to Hanford-Armona - Class III Bike Route

0.81 miles 10 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	10	intersection	$600	$6,000
3	Install Share the Road Signs (4 per 1/2 mile)	0.81	Mile	$1,200	$972
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.81	Mile	$800	$648
				Subtotal:	$7,620
				Contingencies:	$1,905
				Construction Engineering	$1,429
				Total:	**$10,954**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

11th Avenue from Hanford-Armona to Hume - Class III Bike Route

0.54 miles 5 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.81	Mile	$1,056	$855
2	Install Bike Route Signs (2 per intersection)	5	intersection	$600	$3,000
3	Install Share the Road Signs (4 per 1/2 mile)	0.54	Mile	$1,200	$648
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.54	Mile	$800	$432
				Subtotal:	$4,935
				Contingencies:	$1,234
				Construction Engineering	$926
				Total:	**$7,095**

11th Avenue from Hume to Houston - Class III Bike Route

0.49 miles 6 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	6	intersection	$600	$3,600
3	Install Share the Road Signs (4 per 1/2 mile)	0.49	Mile	$1,200	$588
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.49	Mile	$800	$392
				Subtotal:	$4,580
				Contingencies:	$1,145
				Construction Engineering	$859
				Total:	**$6,584**

11th Avenue from Houston to Iona - Class III Bike Route

1.00 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$3,200
				Contingencies:	$800
				Construction Engineering	$600
				Total:	**$4,600**

11th Avenue from Iona to Idaho - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$2,600
				Contingencies:	$650
				Construction Engineering	$488
				Total:	**$3,738**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

11th Avenue from Idaho to Jackson - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$2,600
				Contingencies:	$650
				Construction Engineering	$488
				Total:	**$3,738**

Williams/Jones Street from Davis to Hume - Class III Bike Route

0.83 miles 9 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	9	intersection	$600	$5,400
3	Install Share the Road Signs (4 per 1/2 mile)	0.83	Mile	$1,200	$996
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.83	Mile	$800	$664
				Subtotal:	$7,060
				Contingencies:	$1,765
				Construction Engineering	$1,324
				Total:	**$10,149**

Redington Street from Grangeville to Lacey - Class II Bike Lanes

1.01 miles 14 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	1.01	Mile	$1,056	$1,067
2	Install Bike Lane Signs (2 per intersection)	14	intersection	$600	$8,400
3	Install 6" Stripe	1.01	Mile	$2,218	$2,240
4	Install 4" Stripe	1.01	Mile	$2,006	$2,027
5	Bike Lane Stencil-Pavement Marking (2 per int.)	14	intersection	$160	$2,240
				Subtotal:	$15,974
				Contingencies:	$3,994
				Construction Engineering	$2,995
				Total:	**$22,963**

Irwin Street (10 1/2) from Hanford-Armona to Hume - Class III Bike Route

1.03 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.03	Mile	$1,200	$1,236
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.03	Mile	$800	$824
				Subtotal:	$3,260
				Contingencies:	$815
				Construction Engineering	$612
				Total:	**$4,687**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Mission Drive from Flint to 10th - Class III Bike Route

0.56 miles 9 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	9	intersection	$600	$5,400
3	Install Share the Road Signs (4 per 1/2 mile)	0.56	Mile	$1,200	$672
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.56	Mile	$800	$448
				Subtotal:	$6,520
				Contingencies:	$1,630
				Construction Engineering	$1,223
				Total:	**$9,373**

10th Avenue from Third to Hanford-Armona - Class III Bike Route

0.71 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	0.71	Mile	$1,200	$852
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.71	Mile	$800	$568
				Subtotal:	$2,620
				Contingencies:	$655
				Construction Engineering	$492
				Total:	**$3,767**

10th Avenue from Hanford-Armona to Houston - Class III Bike Route

1.01 miles 6 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	6	intersection	$600	$3,600
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$5,620
				Contingencies:	$1,405
				Construction Engineering	$1,054
				Total:	**$8,079**

10th Avenue from Houston to Iona - III Bike Route

1.00 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$3,200
				Contingencies:	$800
				Construction Engineering	$600
				Total:	**$4,600**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

10th Avenue from Iona to Idaho - Class III Bike Route

1.01 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$2,620
				Contingencies:	$655
				Construction Engineering	$492
				Total:	**$3,767**

10th Avenue from Idaho to Jackson - Class III Bike Route

1.01 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$2,620
				Contingencies:	$655
				Construction Engineering	$492
				Total:	**$3,767**

Neill Way from Fargo to Leland - Class III Bike Route

0.51 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.51	Mile	$1,200	$612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.51	Mile	$800	$408
				Subtotal:	$5,820
				Contingencies:	$1,455
				Construction Engineering	$1,092
				Total:	**$8,367**

9 1/4 Avenue from Leland to Grangeville- Class III Bike Route

0.51 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.51	Mile	$1,200	$612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.51	Mile	$800	$408
				Subtotal:	$1,620
				Contingencies:	$405
				Construction Engineering	$304
				Total:	**$2,329**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

9 1/4 Avenue from Grangeville to Lacey - Class III Bike Route

1.01 miles 7 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	7	intersection	$600	$4,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$6,220
				Contingencies:	$1,555
				Construction Engineering	$1,167
				Total:	**$8,942**

9th Avenue from Lacey to Hanford-Armona - Class III Bike Route

0.96 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.96	Mile	$1,200	$1,152
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.96	Mile	$800	$768
				Subtotal:	$3,720
				Contingencies:	$930
				Construction Engineering	$698
				Total:	**$5,348**

9th Avenue from Hanford-Armona to Houston - Class III Bike Route

1.04 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	1.04	Mile	$1,200	$1,248
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.04	Mile	$800	$832
				Subtotal:	$3,880
				Contingencies:	$970
				Construction Engineering	$728
				Total:	**$5,578**

9th Avenue from Houston to Iona - Class III Bike Route

1.00 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$3,200
				Contingencies:	$800
				Construction Engineering	$600
				Total:	**$4,600**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

9th Avenue from Iona to Idaho - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$2,600
				Contingencies:	$650
				Construction Engineering	$488
				Total:	**$3,738**

Flint Avenue from 12th to 11th - Class III Bike Route

1.00 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$3,200
				Contingencies:	$800
				Construction Engineering	$600
				Total:	**$4,600**

Flint Avenue from 11th to Hwy 43 - Class III Bike Route

1.00 miles 4 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	4	intersection	$600	$2,400
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$4,400
				Contingencies:	$1,100
				Construction Engineering	$825
				Total:	**$6,325**

Pepper Drive from Glacier to 11th - Class III Bike Route

0.41 miles 4 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	4	intersection	$600	$2,400
3	Install Share the Road Signs (4 per 1/2 mile)	0.41	Mile	$1,200	$492
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.41	Mile	$800	$328
				Subtotal:	$3,220
				Contingencies:	$805
				Construction Engineering	$604
				Total:	**$4,629**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Pepper Drive/Aspen from 11th to Encore - Class III Bike Route

0.36 miles 4 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	4	intersection	$600	$2,400
3	Install Share the Road Signs (4 per 1/2 mile)	0.36	Mile	$1,200	$432
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.36	Mile	$800	$288
				Subtotal:	$3,120
				Contingencies:	$780
				Construction Engineering	$585
				Total:	**$4,485**

Encore Drive from Aspen to 10th - Class III Bike Route

0.77 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.77	Mile	$1,200	$924
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.77	Mile	$800	$616
				Subtotal:	$6,340
				Contingencies:	$1,585
				Construction Engineering	$1,189
				Total:	**$9,114**

Encore Drive from 10th to Fargo - Class III Bike Route

0.50 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.50	Mile	$1,200	$600
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.50	Mile	$800	$400
				Subtotal:	$5,800
				Contingencies:	$1,450
				Construction Engineering	$1,088
				Total:	**$8,338**

Fargo Avenue from 13th to Centennial - Class III Bike Route

0.50 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.50	Mile	$1,200	$600
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.50	Mile	$800	$400
				Subtotal:	$1,600
				Contingencies:	$400
				Construction Engineering	$300
				Total:	**$2,300**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Muscat Place from 12th to Fitzgerald - Class III Bike Route

0.24 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.24	Mile	$1,200	$288
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.24	Mile	$800	$192
				Subtotal:	$2,280
				Contingencies:	$570
				Construction Engineering	$428
				Total:	**$3,278**

Cortner Street from Glacier to Kensington - Class III Bike Route

1.16 miles 12 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	12	intersection	$600	$7,200
3	Install Share the Road Signs (4 per 1/2 mile)	1.16	Mile	$1,200	$1,392
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.16	Mile	$800	$928
				Subtotal:	$9,520
				Contingencies:	$2,380
				Construction Engineering	$1,785
				Total:	**$13,685**

Leland Way from Douty to 10th - Class III Bike Route

0.51 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.51	Mile	$1,200	$612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.51	Mile	$800	$408
				Subtotal:	$5,820
				Contingencies:	$1,455
				Construction Engineering	$1,092
				Total:	**$8,367**

Leland Way from 10th to 9 1/4 - Class III Bike Route

0.69 miles 11 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	11	intersection	$600	$6,600
3	Install Share the Road Signs (4 per 1/2 mile)	0.69	Mile	$1,200	$828
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.69	Mile	$800	$552
				Subtotal:	$7,980
				Contingencies:	$1,995
				Construction Engineering	$1,497
				Total:	**$11,472**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Mustang/Berkshire from 13th to Centennial - Class III Bike Route

0.55 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.55	Mile	$1,200	$660
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.55	Mile	$800	$440
				Subtotal:	$2,900
				Contingencies:	$725
				Construction Engineering	$544
				Total:	**$4,169**

Grangeville Boulevard from 13th to Centennial - Class III Bike Route

0.51 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.51	Mile	$1,200	$612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.51	Mile	$800	$408
				Subtotal:	$1,620
				Contingencies:	$405
				Construction Engineering	$304
				Total:	**$2,329**

Grangeville Boulevard from 9th to 8 1/2 - Class III Bike Route

0.50 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.50	Mile	$1,200	$600
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.50	Mile	$800	$400
				Subtotal:	$1,600
				Contingencies:	$400
				Construction Engineering	$300
				Total:	**$2,300**

Elm Street from Greenfield to 11th - Class III Bike Route

0.14 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.14	Mile	$1,200	$168
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.14	Mile	$800	$112
				Subtotal:	$880
				Contingencies:	$220
				Construction Engineering	$165
				Total:	**$1,265**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Ivy Street from 11th to 10th - Class III Bike Route

1.01 miles 10 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	10	intersection	$600	$6,000
3	Install Share the Road Signs (4 per 1/2 mile)	1.01	Mile	$1,200	$1,212
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.01	Mile	$800	$808
				Subtotal:	$8,020
				Contingencies:	$2,005
				Construction Engineering	$1,504
				Total:	**$11,529**

Liberty Street from Centennial to 12th - Class III Bike Route

0.33 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	0.33	Mile	$1,200	$396
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.33	Mile	$800	$264
				Subtotal:	$1,860
				Contingencies:	$465
				Construction Engineering	$349
				Total:	**$2,674**

Kings County Drive from 12thto Lacey - Class III Bike Route

0.51 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.51	Mile	$1,200	$612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.51	Mile	$800	$408
				Subtotal:	$2,820
				Contingencies:	$705
				Construction Engineering	$529
				Total:	**$4,054**

Mall Drive from 12th to Lacey - Class III Bike Route

0.53 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.53	Mile	$1,200	$636
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.53	Mile	$800	$424
				Subtotal:	$2,860
				Contingencies:	$715
				Construction Engineering	$537
				Total:	**$4,112**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Lacey Boulevard from Centennial to Mall Drive - Class III Bike Route

0.60 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	0.60	Mile	$1,200	$720
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.60	Mile	$800	$480
				Subtotal:	$1,800
				Contingencies:	$450
				Construction Engineering	$338
				Total:	**$2,588**

Lacey Boulevard from Garner to Irwin - Class III Bike Route

0.65 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.65	Mile	$1,200	$780
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.65	Mile	$800	$520
				Subtotal:	$6,100
				Contingencies:	$1,525
				Construction Engineering	$1,144
				Total:	**$8,769**

Lacey Boulevard from 10th to 9th - Class III Bike Route

0.99 miles 6 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	6	intersection	$600	$3,600
3	Install Share the Road Signs (4 per 1/2 mile)	0.99	Mile	$1,200	$1,188
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.99	Mile	$800	$792
				Subtotal:	$5,580
				Contingencies:	$1,395
				Construction Engineering	$1,047
				Total:	**$8,022**

Lacey Boulevard from 9th to 8th (SR 43) - Class III Bike Route

1.03 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	1.03	Mile	$1,200	$1,236
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.03	Mile	$800	$824
				Subtotal:	$6,860
				Contingencies:	$1,715
				Construction Engineering	$1,287
				Total:	**$9,862**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Garner Avenue from Lacey to Seventh - Class III Bike Route

0.34 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.34	Mile	$1,200	$408
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.34	Mile	$800	$272
				Subtotal:	$2,480
				Contingencies:	$620
				Construction Engineering	$465
				Total:	**$3,565**

Seventh Street from Mall Drive to 11th - Class II Bike Lanes

0.75 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.75	Mile	$1,056	$792
2	Install Bike Lane Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install 6" Stripe	0.75	Mile	$2,218	$1,664
4	Install 4" Stripe	0.75	Mile	$2,006	$1,505
5	Bike Lane Stencil-Pavement Marking (2 per int.)	3	intersection	$160	$480
				Subtotal:	$6,241
				Contingencies:	$1,560
				Construction Engineering	$1,170
				Total:	**$8,971**

Sixth Street from 11th to 10th - Class II Bike Lanes

1.03 miles 11 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.18	Mile	$1,056	$191
2	Install Bike Lane Signs (2 per intersection)	11	intersection	$600	$6,600
3	Install 6" Stripe	1.03	Mile	$2,218	$2,285
4	Install 4" Stripe	1.03	Mile	$2,006	$2,067
5	Bike Lane Stencil-Pavement Marking (2 per int.)	11	intersection	$160	$1,760
				Subtotal:	$12,903
				Contingencies:	$3,226
				Construction Engineering	$2,419
				Total:	**$18,548**

Glendale Avenue from 12 1/2 (Aquifer) to 12th - Class II Bike Lanes

0.61 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Lane Signs (2 per intersection)	1	intersection	$600	$600
3	Install 6" Stripe	0.61	Mile	$2,218	$1,353
4	Install 4" Stripe	0.61	Mile	$2,006	$1,224
5	Bike Lane Stencil-Pavement Marking (2 per int.)	1	intersection	$160	$160
				Subtotal:	$3,337
				Contingencies:	$834
				Construction Engineering	$626
				Total:	**$4,797**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Third Street from 10th to 9th - Class III Bike Route

1.03 miles 4 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	4	intersection	$600	$2,400
3	Install Share the Road Signs (4 per 1/2 mile)	1.03	Mile	$1,200	$1,236
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.03	Mile	$800	$824
				Subtotal:	$4,460
				Contingencies:	$1,115
				Construction Engineering	$837
				Total:	**$6,412**

Davis Street from 11 1/2 to Williams - Class III Bike Route

0.67 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	0.67	Mile	$1,200	$804
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.67	Mile	$800	$536
				Subtotal:	$6,140
				Contingencies:	$1,535
				Construction Engineering	$1,152
				Total:	**$8,827**

Hanford-Armona Boulevard from 10th to airport entrance - Class III Bike Route

0.55 miles 2 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	2	intersection	$600	$1,200
3	Install Share the Road Signs (4 per 1/2 mile)	0.55	Mile	$1,200	$660
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	0.55	Mile	$800	$440
				Subtotal:	$2,300
				Contingencies:	$575
				Construction Engineering	$432
				Total:	**$3,307**

Hume Avenue from 12th to Jones - Class III Bike Route

1.05 miles 8 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	8	intersection	$600	$4,800
3	Install Share the Road Signs (4 per 1/2 mile)	1.05	Mile	$1,200	$1,260
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.05	Mile	$800	$840
				Subtotal:	$6,900
				Contingencies:	$1,725
				Construction Engineering	$1,294
				Total:	**$9,919**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Houston Avenue from 13th to 12th - Class III Bike Route

1.02 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.02	Mile	$1,200	$1,224
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.02	Mile	$800	$816
				Subtotal:	$2,640
				Contingencies:	$660
				Construction Engineering	$495
				Total:	**$3,795**

Houston Avenue from 12th to 10th - Class III Bike Route

2.00 miles 5 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	5	intersection	$600	$3,000
3	Install Share the Road Signs (4 per 1/2 mile)	2.00	Mile	$1,200	$2,400
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	2.00	Mile	$800	$1,600
				Subtotal:	$7,000
				Contingencies:	$1,750
				Construction Engineering	$1,313
				Total:	**$10,063**

Houston Avenue from 10th to 9th - Class III Bike Route

1.00 miles 5 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	5	intersection	$600	$3,000
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$5,000
				Contingencies:	$1,250
				Construction Engineering	$938
				Total:	**$7,188**

Iona Avenue from 12th to 9th - Class III Bike Route

3.01 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	3.01	Mile	$1,200	$3,612
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	3.01	Mile	$800	$2,408
				Subtotal:	$7,820
				Contingencies:	$1,955
				Construction Engineering	$1,467
				Total:	**$11,242**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Idaho Avenue from 12th to 9th - Class III Bike Route

3.00 miles 3 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	3	intersection	$600	$1,800
3	Install Share the Road Signs (4 per 1/2 mile)	3.00	Mile	$1,200	$3,600
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	3.00	Mile	$800	$2,400
				Subtotal:	$7,800
				Contingencies:	$1,950
				Construction Engineering	$1,463
				Total:	**$11,213**

Jackson Avenue from 11th to 10th - Class III Bike Route

1.00 miles 1 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	1	intersection	$600	$600
3	Install Share the Road Signs (4 per 1/2 mile)	1.00	Mile	$1,200	$1,200
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	1.00	Mile	$800	$800
				Subtotal:	$2,600
				Contingencies:	$650
				Construction Engineering	$488
				Total:	**$3,738**

2035 Hanford Bikeway Improvements (combined)

All 2035 Class II Bike Lanes

40.23 miles 141 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Lane Signs (2 per intersection)	141	intersection	$600	$84,600
3	Install 6" Stripe	40.23	Mile	$2,218	$89,215
4	Install 4" Stripe	40.23	Mile	$2,006	$80,718
5	Bike Lane Stencil-Pavement Marking (2 per int.)	141	intersection	$160	$22,560
				Subtotal:	$277,093
				Contingencies:	$69,273
				Construction Engineering	$51,955
				Total:	**$398,321**

All Class III Bike Routes

5.55 miles 13 intersection(s)

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Remove Existing Stripe (grind)	0.00	Mile	$1,056	$0
2	Install Bike Route Signs (2 per intersection)	13	intersection	$600	$7,800
3	Install Share the Road Signs (4 per 1/2 mile)	5.55	Mile	$1,200	$6,660
4	Add Sharrow Pavement Marking (4 per 1/2 mile)	5.55	Mile	$800	$4,440
				Subtotal:	$18,900
				Contingencies:	$4,725
				Construction Engineering	$3,544
				Total:	**$27,169**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

2016 Pedestrian Project Improvements

Estimated Pricing

Description	Unit Price	Unit
ADA curb ramps	$4,000.00	EA
Curb/gutter	$30.00	LF
Sidewalk (5 feet wide)	$40.00	LF
Traffic signs	$400.00	LF
Thermoplastic crosswalks	$1,060.00	EA
Thermoplastic markings	$8.00	SF

9 1/4 Avenue from Leland to Lacey - 18 ADA curb ramps

18 ADA ramps

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Install ADA curb ramps	18	ramp	$4,000	$72,000
				Subtotal:	$72,000
				Contingencies:	$18,000
				Construction Engineering	$13,500
				Total:	**$103,500**

Phillips Street from alley n/of Fourth to Third - sidewalk and 8 ADA curb ramps

8 ADA ramps 580 feet

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Install ADA curb ramps	8	ramp	$4,000	$32,000
2	Install sidewalk	580	foot	$40	$23,200
				Subtotal:	$55,200
				Contingencies:	$13,800
				Construction Engineering	$10,350
				Total:	**$79,350**

Phillips Street underpass @ SR 198 - improve lighting and consider murals

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Improve lighting	1	each	$10,000	$10,000
2	Add murals	1	each	$15,000	$15,000
				Subtotal:	$25,000
				Contingencies:	$6,250
				Construction Engineering	$4,688
				Total:	**$35,938**

10th Avenue from Grangeville to Terrace - 10 ADA ramps

10 ADA ramps

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Install ADA curb ramps	10	ramp	$4,000	$40,000
				Subtotal:	$40,000
				Contingencies:	$10,000
				Construction Engineering	$7,500
				Total:	**$57,500**

2016 Hanford Bikeway Signing and Striping (by segment)
2035 Hanford Bikeway Signing and Striping (combined)
2016 Pedestrian Project Improvements
PRELIMINARY OPINION OF PROBABLE IMPROVEMENT COSTS

Leland Way from 10th to 9th - 35 ADA ramps

35 ADA ramps

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Install ADA curb ramps	35	ramp	$4,000	$140,000
				Subtotal:	$140,000
				Contingencies:	$35,000
				Construction Engineering	$26,250
				Total:	**$201,250**

Irwin Street from Grangeville to downtown - 48 ADA ramps

48 ADA ramps

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Install ADA curb ramps	48	ramp	$4,000	$192,000
				Subtotal:	$192,000
				Contingencies:	$48,000
				Construction Engineering	$36,000
				Total:	**$276,000**

Monroe Elementary - add c/g, ADA ramps, sidewalk on Leoni Drive from Monre to Grangeville

26 ADA ramps 2660 feet

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Install ADA curb ramps	26	ramp	$4,000	$104,000
2	Install curb and gutter	2660	foot	$30	$79,800
3	Install sidewalk	2660	foot	$40	$106,400
				Subtotal:	$290,200
	NOTE: Does not include ROW acquisition or demolition			Contingencies:	$72,550
				Construction Engineering	$54,413
				Total:	**$417,163**

Update/refurbish signing and school crosswalks around schools

70 crosswalks 280 signs

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Thermoplastic crosswalks	70	each	$1,060	$74,200
2	Flourescent traffic signs	280	each	$400	$112,000
				Subtotal:	$186,200
				Contingencies:	$46,550
				Construction Engineering	$34,913
				Total:	**$267,663**

Restripe crosswalks and pavement markings in the Downtown area

300 crosswalks 309 pavement markings

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	Thermoplastic crosswalks	300	each	$1,060	$318,000
2	Thermoplastic markings (AHEAD text)	2	each	$248	$496
3	Thermoplastic markings (arrow)	64	each	$120	$7,680
4	Thermoplastic markings (combo arrow)	11	each	$216	$2,376
5	Thermoplastic markings (railroad crossing)	15	each	$880	$13,200
6	Thermoplastic markings (STOP text)	124	each	$176	$21,824
7	Thermoplastic markings (stop bar)	78	each	$160	$12,480
8	Thermoplastic markings (YIELD text)	15	each	$192	$2,880
				Subtotal:	$378,936
				Contingencies:	$94,734
				Construction Engineering	$71,051
				Total:	**$544,721**