SECOND DRAFT

# DUNNIGAN SPECIFIC PLAN

Yolo County, California

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# CHAPTER ONE: INTRODUCTION

## 1.1 OVERVIEW

The Dunnigan Specific Plan (DSP) directs the expansion and formation of the 3,110 acre community of Dunnigan. The overarching vision is of a vibrant and self-sustaining community that incorporates environmentally sustainable practices, distinct and walkable neighborhoods featuring complementary land uses and the integration of open space as the foundation of the community. The natural environment is the backbone of the community design and is integral to the sustainability strategies that are a foundation for the DSP.


**Vicinity Map of Plan Area and Yolo County**

The Dunnigan Specific Plan proposes a self-sustaining, mixed-use community including a broad spectrum of residential uses, employment, retail and supporting uses, recreational, open space and public uses, which are in symmetry and balance with the existing community. The projected yields, at full build out, would provide up to approximately 9,230 dwelling units and 11,300 jobs. Dunnigan will be an integrated community where residents can live, work, shop, educate, recreate and gather as a community. A detailed project description and vision statement is provided in Section 2.4.

Given the unique nature of the DSP, emphasis has been placed on creating a vibrant, comprehensively planned, sustainable community: one that generates a sense of place for residents and visitors through the use of natural and designed boundaries and landmarks. The amenities and natural resources will provide residents with an identifiable location that they can call "home" for generations to come.

## 1.2 PROJECT BACKGROUND AND HISTORY

The town of Dunnigan was founded as Antelope in 1853 by two early settlers, J. S. Copp and Jolin Wilson. An inn, known as "Dunnigan's" was opened in 1854 and another early settler, A.W. Dunnigan, built a large barn that became the Antelope Stage Depot. The community's first store was opened in 1866. In 1876, the Northern Railway, later known as the Southern Pacific Railroad, completed its roadbed through the community and the Antelope Stage Depot became the railway station. In the same year, the town plat of Dunnigan was filed for record at the county seat, formally changing the name of the community from Antelope to Dunnigan.

Dunnigan grew as a service center for the surrounding agricultural area. In 1909, eucalyptus trees were planted on large tracts of land located northwest of Dunnigan, with the intention of making furniture with the wood. When the trees were found to have no commercial value, the lots, known as the Yolo Hardwoods Subdivision, were sold as home sites. During the 1930's, many "Dust Bowl" refugees settled in the Hardwoods. After World War II, an influx of families from the San Francisco Bay Area purchased lots in the Hardwoods to build their retirement homes. The Interstate 5 freeway was completed in 1968, separating the Hardwoods from the historic Old Town.

The first formal planning for Dunnigan was completed in 1958, with the adoption of the Yolo County Master Plan. The Dunnigan Area General Plan was adopted by the County in 1981, followed by a subsequent update of the plan in 1992. The Dunnigan Community Plan was adopted by the Board of Supervisors in 2001.

The initiation of the Dunnigan Specific Plan occurred as a result of the Yolo County General Plan update, which began in May 2003. It was at this time that the Board of Supervisors gave direction to begin the process of comprehensively updating the General Plan, which had last been updated in 1983. Throughout 2004 to 2005, over 20 workshops were held to gain input and ideas from the various rural communities and a Land Use Summit was convened to develop issue and land use alternatives. During this time and into 2006, the County participated in regional modeling efforts and growth projections undertaken by the Sacramento Area Council of Governments (SACOG) to create the Blueprint scenario. From September 2006 to September 2007, the County held multiple hearings to explore and ultimately define the policy premise and Preferred Land Use Alternatives for the General Plan update process. The Preferred Land Use Alternative directed the preparation of the Dunnigan Specific Plan, providing specific targets for development capacities and community design that were an outgrowth of the community outreach process. The 2030 General Plan was adopted by the Board of Supervisors in November 2009.

During the early period of the General Plan Update, three of the largest landowners within the Dunnigan Specific Plan boundaries formed an effort to participate with the local Dunnigan Citizens Advisory Council (DCAC) in visioning for the Dunnigan community. The landowner's consultant team participated in numerous DCAC meetings and other meetings with local residents during the period of 2005 throughout the entire General Plan update process. The Plan Area boundary encompasses approximately 3,110 acres, comprised of numerous "participating" and "non-participating" landowners. The Dunnigan Landowner Group, representing "participating landowners" of approximately 58 percent of the Plan Area acreage, submitted an initial application to Yolo County in June 2009 and worked with County staff and others to refine the Specific Plan, which was officially submitted to the County in 2012.The term

"non-participating landowner" shall refer to any landowner who was not a member of the Dunnigan Landowner Group at the time that the Specific Plan was approved.

## 1.3 KEY FEATURES AND PROJECT OBJECTIVES

The Dunnigan Specific Plan represents the opportunity to implement the long-term vision of Yolo County to create a sustainable, balanced, healthy and successful community. Sustainability is measured in terms of providing infrastructure and a built environment that are coordinated to conserve resources and use renewable resources. Balance is measured by the extent to which jobs and wages are matched to housing within the community. Healthy is measured in the quality of life and the array of community services that are provided. Success will be measured by the test of time, as the community grows and emerges over the next 20 to 30 years, and then matures as a place that is vibrant, stable and a desirable place to live and work.

### 1.3.1 The Keys to Success

Key features of the DSP are:

1. **Integrated Sustainable Practices:** Metrics are established that require the project implementation to achieve defined standards for energy efficiency, water conservation, stormwater management and renewable building materials.
2. **True multi-modal living:** Innovative programs to ensure that all residents have a multitude of opportunities not to use a gas powered vehicle, which includes a comprehensive trail system, streets designed to allow neighborhood electric vehicle use throughout the community, bicycle and neighborhood electric vehicle (nev) sharing programs, organized school pools and bike pools, education and activities to promote transit and non-vehicular use as the primary choice, becoming a way of life.
3. **High quality educational facilities:** Schools will be provided as "turn-key" facilities and will follow the green schools model, providing innovative, sustainable designs and programs.
4. **Health, wellness and support of community values**: The extensive, interconnected open space, active recreation facilities and the Dunnigan community gardening program will provide ample places for physical activity and will form a unifying element of the community, providing places for residents to meet, play, grow their own food and experience natural surroundings.
5. **Integrating agriculture with community:** The project provides the opportunity for integrated agriculture and open space within the boundaries of the rural residential districts, provides buffers and educational programs to help protect/respect neighboring agriculture and promotes the use of locally grown products.

### 1.3.2 Project Objectives

The following summarizes the project objectives that guided the DSP:

1. Establish a comprehensive land use plan for the 3,110 acre Dunnigan Specific Plan Area that is compatible with the goals, policies and framework of the Yolo County General Plan and, more specifically, provide for the realization of a community scale sufficient to ensure economic sustainability with a base population large enough to support basic community services not presently available in Dunnigan.

2. Establish a mixed-use community that integrates a variety of land uses, including residential, commercial, office/professional, light industrial, recreational, public and educational land uses, and which incorporates feasible smart growth principles, provides protection of valuable environmental resources, is compatible with the existing land uses within Dunnigan.
3. Establish a land use and circulation system that promotes convenient mobility, with an emphasis on a variety of non-vehicular modes as alternatives to fossil-fuel consuming car usage within a human-scale community environment that is safe, accessible and convenient for all modes of travel.
4. Promote a diversity of housing opportunities responsive to community needs and market conditions, including housing for executives, single-family dwellings, apartments, townhouses and live-work units to serve a broad range of family incomes.
5. Provide opportunities to attract a high quality and diversified base of employers to locate within the Plan Area, resulting in a stable employment base with a wide range of job opportunities for Dunnigan and Yolo County residents, promoting in a balance of jobs to housing.
6. Provide community-wide public facilities including fire stations, sheriff substation, library, elementary schools, a middle and high school, passive open space, and neighborhood and community parks.
7. Provide a comprehensively planned and innovative infrastructure system that supports the needs of the Dunnigan Plan Area as a whole.
8. Provide for planned growth in a location that is or can be served by existing and planned infrastructure with ready access to regional transportation corridors such as Interstate 5 and 505.
9. Where feasible, preserve and enhance existing sensitive biological habitats, natural open spaces and riparian areas.
10. Create a financially viable, fiscally responsible and balanced community that is responsive to market demand and infrastructure cost requirements while generating a positive General Fund revenue flow to the County.
11. Provide for the on-going maintenance needs of the community open space areas, park facilities, public services and infrastructure through effective local governance.

## 1.4 PURPOSE AND LEGAL AUTHORITY OF THE SPECIFIC PLAN

Specific plans provide an opportunity to creatively implement the intent of the General Plan and serve as a refinement of General Plan policies. The 2030 Yolo County General Plan provided specific action (CC-A17) requiring the preparation of a Specific Plan for Dunnigan.

The Dunnigan Specific Plan is the primary land use, policy and regulatory document used to guide development of the Plan Area. The Specific Plan establishes a development framework for land use, community design and character, infrastructure improvements and a subsequent project approval structure for orderly development within the 3,110 acre Plan Area.

Preparation of a specific plan is authorized by Section 65450 et seq. of the Government Code. Government Code Section 65451 mandates that a specific plan include a text and a diagram or diagrams which specify all of the following in detail:

1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

(2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

(3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.

(4) A program of implementation measures including regulations, programs, public works projects and financing measures necessary to carry out paragraphs (1), (2), and (3).

The specific plan must also contain a statement of relationship of the specific plan to the General Plan. Consistency with the General Plan is required by state law. Furthermore, no zoning, tentative maps, parcel maps, or public works projects can be approved, adopted, or undertaken unless they are consistent with the adopted specific plan. The DSP was prepared pursuant to State Law and is compatible with the applicable policies and programs of the General Plan.

## 1.5 RELATIONSHIP TO COUNTY PLANS & REGULATIONS

### 1.5.1 Yolo County General Plan

The California Government Code requires that Specific Plans be consistent with the local jurisdiction's adopted General Plan. The General Plan is a statement of the community's land use values and is the underlying basis for its vision and direction. The General Plan serves as the long-term policy guide for the physical, economic and environmental growth of Yolo County.

The Dunnigan Specific Plan implements the goals and policies of the Yolo County 2030 General Plan, which established a growth boundary for the community of Dunnigan and directed the preparation of a Specific Plan. An analysis of the consistency of the DSP with applicable General Plan policies and actions is provided in Appendix A.

### 1.5.2 Yolo County Zoning Code

The Yolo County Zoning Code (Title 8 Chapters 1 and 2, Land Development and Zoning) establishes districts throughout the County with permitted land uses and development standards. These development standards create the framework for the physical form of the community (building setbacks, heights, etc). Upon adoption of the Dunnigan Specific Plan and the DSP Development Standards (Appendix S), the zoning for the Plan Area will be Specific Plan, with unique zoning categories applied to each land use district pursuant to the DSP.

To the extent that a component or regulation of the Specific Plan differs from a requirement of the Zoning Code, the Specific Plan will take precedence. Where the Specific Plan is silent, the Zoning Code will be used for the purpose of interpretation or applied as appropriate.

### 1.5.3 Yolo County Subdivision Ordinance

The Yolo County Subdivision Ordinance (Title 8, Chapter 1 Land Development) will regulate individual requests for land divisions within the Plan Area, unless otherwise noted herein. To the extent that a component or regulation of the Specific Plan differs from a requirement of the Ordinance, the Specific Plan will take precedence. Where the Specific Plan is silent, the Subdivision Ordinance will be used for purposes of interpretation, and/or directly applied as appropriate.

### 1.5.4 Yolo County Improvement Standards

The Yolo County Improvement Standards (adopted August 5, 2008) establish basic standards and detail sheets for construction of public infrastructure. These standards and specifications apply to all construction within the Plan Area, unless otherwise addressed herein. To the extent that a component or regulation of the Specific Plan differs from a requirement of the Standards, the Specific Plan will take precedence. Where the Specific Plan is silent, the Standards will be used for purposes of interpretation, and/or directly applied as appropriate.

### 1.5.5 Other Related Yolo County Plans

The following plans are County-wide plans that provide specific guidance for any project within Yolo County. The DSP is required to be consistent with these plans, as applicable, or these plans could be updated and/or amended to achieve consistency with the DSP:

- Yolo County Climate Action Plan
- Yolo County Bicycle Transportation Plan
- Yolo County Parks and Open Space Master Plan
- Integrated Regional Water Management Plan
- Yolo County Waste Management and Hazardous Waste Plan

To the extent that a component or regulation of the Specific Plan differs from a requirement of these plans, the more specific or stringent requirement will apply. Where the Specific Plan is silent, these plans will be used for purposes of interpretation, and/or directly applied as appropriate.

## 1.6 SPECIFIC PLAN RELATED DOCUMENTS

### 1.6.1 Environmental Impact Report

The Dunnigan Specific Plan Environmental Impact Report (EIR) was prepared and certified by the Board of Supervisors on (date) Resolution No. (XXX). The EIR identifies the potential environmental impacts of the Specific Plan and identifies mitigation measures pursuant to the requirements of the California Environmental Quality Act (CEQA).

As individual subdivision maps or other development is proposed during implementation of the DSP, the County intends to rely, to the extent legally possible, upon the statutory exemptions provided under state law including, but not limited to: 1) Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 for land use actions and development consistent (including

ordinances and community plans) with the General Plan and Zoning; and, 2) California Government Code Section 65457a and CEQA Guidelines Section 15182(a) for residential projects consistent with the Specific Plans.

CEQA Guidelines Section 15183 provides that projects consistent with development density, zoning, community planning, and the general plan for which an EIR was certified do not trigger a new environmental review unless there are new impacts that have not already been properly addressed. Section 65457(a) of the California Government Code and CEQA Guidelines Section 15182(a) provide that no EIR or negative declaration is required for any residential project undertaken in conformity with an adopted Specific Plan for which an EIR has been certified.

The EIR for the Dunnigan Specific Plan was intended to qualify subsequent projects within the Plan Area for these exemptions, assuming those projects are consistent with the adopted Specific Plan, and fulfill all applicable Zoning conditions and CEQA mitigation measures (including the completion of detailed site-specific studies, if required).

### 1.6.2 Development Agreement

The Dunnigan Specific Plan participating property owners have entered into a Development Agreement with Yolo County in accordance with Sections 65864 through 65869.5 of the Government Code. The Project Development Agreement, as it relates to the development of the Plan Area, will provide the property owner with a vested right to develop the project, implement the construction of certain infrastructure improvements, further establish the timing and method for financing improvements and other specific performance obligations of the property owners and Yolo County. The Development Agreements constitute legal and binding contracts between Yolo County, the property owners and their assigned successors in interest.

### 1.6.3 Dunnigan Specific Plan Development Standards

Concurrent with the approval of this Specific Plan, Development Standards for the DSP were adopted by Yolo County. The DSP Development Standards (Appendix S) act as the zoning regulations for the Plan Area. The Development Standards set forth the permitted uses, development standards and other regulations for the Plan Area. When conflicts occur between the provisions in the Yolo County Zoning Ordinance or the County Improvement Standards and the DSP Development Standards, the provisions of the DSP Development Standards shall apply. Where the DSP Development Standards do not address a specific provision, the County Zoning Ordinance and/or Improvement Standards requirements shall govern development in the Plan Area.

### 1.6.4 DSP Design Guidelines

Concurrent with the approval of this Specific Plan, Design Guidelines for the DSP were approved by Yolo County. The DSP Design Guidelines (Appendix B) provide specific direction for the development of all land uses to ensure quality and consistent design treatment.

### 1.6.5 Infrastructure Plans and Capital Improvement Plan

The Yolo County Capital Improvement Plan (CIP) is a list of transportation and other infrastructure projects that are intended to be funded and constructed over a five-year period. The CIP was amended to include the improvements, as described in the DSP infrastructure master plans for water, wastewater and drainage facilities, to be constructed to serve the initial phase of the DSP.

### 1.6.6 Public Facilities and Public Services Financing Plans

Concurrent with the approval of the Specific Plan, Yolo County adopted the DSP Public Facilities Financing Plan (PFFP) and the Public Services Financing Plan (PSFP). The PFFP defines the specific mechanisms which will be required to fund the capital costs of all infrastructure necessary for the full build-out of the Plan Area. The PSFP defines the mechanisms for the funding, delivery and management of the public services within the Plan Area, the analysis of the fiscal impact of the DSP to the County and the maintenance of the new infrastructure.

## 1.7 PROPOSED ENTITLEMENTS

Implementation of the Specific Plan requires approval of the following entitlements by the Yolo County Board of Supervisors:

- Certification of EIR
- Recession of 2001 Dunnigan Community Plan
- Adoption of the Dunnigan Specific Plan, including adoption of Zoning Ordinance and Map
- Approval of DSP Infrastructure Plans and CIP
- Approval of the Public Facilities and Public Services Financing Plan(s)
- Adoption of Development Agreement(s)
- Approval of a Large Lot Tentative Subdivision Map

Development of the Specific Plan requires the approval of the following actions by State, Federal and other agencies:

- Approval of the Water Supply Assessment
- US Army Corps of Engineers permits (Section 401)
- Yolo-Solano Air Quality Management District permits (Authority to Operate, etc.)
- Central Valley Flood Control Board (Encroachment Permit)
- Department of Fish and Game and US Fish and Wildlife Service (take permits)
- Public Utility Commission (utility district approval)
- Caltrans (encroachment permit)
- Regional Water Quality Control Board Permits (Section 401)
- Clean Water Act Permits (Section 404)
- Streambed Alteration agreements (Section 1602)
- Agreement pursuant to Section 7 of the Federal Endangered Species Act
- Local Agency Formation Commission (LAFCO) Change of Organization

Future approvals may include, but are not limited to, the following:

- Tentative Subdivision Maps
- Lot Line Adjustments
- Site Plan Review
- Use Permits
- Variances
- Project Development Agreements
- Environmental Health approvals
- Encroachment Permits
- Subdivision Improvement Agreements
- Rezones

# CHAPTER TWO: PLAN AREA SETTING & VISION

## 2.1 PROJECT LOCATION

The Plan Area is located in the northeastern portion of Yolo County directly adjacent to Interstate 5 at the existing town of Dunnigan, just north of the interchange between Interstate 505 and I-5. The City of Woodland is located approximately 14 miles to the south and the town of Arbuckle in Colusa County is located approximately 8 miles to the north. The site is bounded generally by Bird Creek to the south, Tehama-Colusa Canal and County Road 88 to the west, Road 99W to the east, and the north boundary is the triangular intersection of Road 88 and Interstate 5.

## 2.2 PRE-SPECIFIC PLAN SETTING

### 2.2.1 Town of Dunnigan Context


**Dunnigan General Store and Post Office**

Prior to the Specific Plan, the town of Dunnigan was primarily comprised of the Yolo Hardwoods, Old Town, the commercial uses and mobile home park near I-5 at County Road 8 The Yolo Hardwoods subdivision, located on the west side of Interstate 5, is where the majority of the pre-specific plan population resided, largely consisting of single family homes on 1-acre lots and a mobile home park The "Old Town" portion of Dunnigan on the east side of Interstate 5 is comprised of a three block square area with County Road 99W bisecting it, parallel with the Southern Pacific Railroad tracks. A small mobile home subdivision is located on County Road 99W just north of County Road 8 and several rural residential homes are located within the western portion of the Plan Area. Dunnigan contains several highway commercial uses, such as a truck stop, service stations, mini-marts, and restaurants. A large auction yard, Ritchie Brothers, is located in the southeast corner of the Plan Area. The town has no public sewer or water infrastructure, relying on groundwater wells, septic systems and small wastewater treatment facilities with ponds. The students residing within the town attend schools in Arbuckle. The existing public/quasi public facilities include a volunteer fire station, the US Post Office, several churches, the Dunnigan Water District offices and the town park.

### 2.2.2 Site Conditions

Prior to the adoption of the Specific Plan , the 3,110 acre Plan Area was zoned for residential uses (approx. 408 acres), jobs and services (approx. 280 acres) and agriculture and open space uses (approx. 2,422 acres). The residential zoning comprises the Hardwoods, Old Town and the Country Estates mobile home park on Road 99W. The existing uses within jobs and services zoning are primarily located adjacent to I-5 and Road 99W. The agricultural uses within the Plan Area are located primarily on the west side of I-5 and a small area on Road 99W south of Road 6.

Existing agricultural activities on the site include grazing, row crops, orchards and some vineyards. Numerous irrigation ditches cross the agricultural fields and there are several existing stock ponds. Natural vegetation within the undeveloped portion of the Plan Area consists of a few scattered oak and willow trees. Vegetation associated with Bird Creek, Dunnigan Creek and the irrigation ditches include oaks, willows, cottonwoods, buckeyes and other riparian vegetation. The majority of the Plan Area is generally flat to gently sloping. However, in the western third of the Plan Area, the topography dramatically changes, with rises ranging from approximately five percent and up to 20-30 percent, near the Tehama-Colusa Canal, which forms the majority of the western boundary of the Plan Area.

**North edge of Dunnigan Creek**

**Near southwestern Plan Area boundary**

### 2.2.3 Adjacent Uses

Agricultural lands abut the Plan Area on all sides. To the east, the agricultural uses are primarily row crops. To the south is Bird Creek, which is a perennial creek with moderately steep banks and scattered riparian vegetation. Agricultural uses to the south of the creek include both row crops and orchards. The southwestern edge of the Plan Area is bordered by the Tehama Colusa Canal. Beyond the canal to the west are moderate to steeply sloped grazing lands. The western edge of the Plan Area to the north of Dunnigan Creek is bounded by County Road 88 and to the west of Road 88 are 20 acre agricultural parcels, each with existing home sites. The north edge is the intersection of I-5 and Road 2, where the existing uses include row crops and orchards.

## 2.3 CONSTRAINTS & OPPORTUNITIES THAT INFLUENCE THE SPECIFIC PLAN

Primary conditions that have potential influence on the Plan Area include the distance from regional job centers, existing sensitive land uses, adjacent agricultural lands, the transportation corridors, the natural and man-made drainage ways, and sensitive environmental and habitat resources. Such conditions influence both opportunities and constraints to future development. As a result, the general layout and design of the Plan Area was guided by the following factors, which are demonstrated on the Land Use/Zoning Plan, Exhibit 3.1:

- The intent to ensure compatibility with existing uses within the Plan Area and adjacent agricultural uses through designation of similar types and intensities of land uses, buffers and setbacks.
- The opportunity to ensure preservation of significant resources including creeks, drainage ways, habitat areas and seasonal wetlands in open space areas.

- The opportunity to connect to and extend major circulation corridors, providing optimal connectivity of uses and facilitating functional travel modes.
- The opportunity to introduce clustered rural residential housing interspersed with new agricultural uses or open space in the western most portion of the Plan Area where the hilly terrain is not suitable for more dense housing or traditional agricultural crops.

## 2.4 VISION STATEMENT

Dunnigan is intended to be a simple, authentic and self-sustaining place that is connected to the past and is poised to thrive into the future. It is a community focused on environmental and social sustainability, health, wellness, connection, stewardship, and authenticity. Dunnigan embraces a broad cross-section of demographics and lifestyles. The community provides a platform for interconnectivity and future-based living while providing the slower pace of life embodied by traditional rural California. The pillars that define Dunnigan are self-sustaining, connected, and genuine.

***Self-sustaining*** means that the community supports itself with services, businesses, a variety of inclusive housing options and green technologies. The community is self-reliant, providing for its residents and resting lightly on the land.

***Inter-connected*** signifies that Dunnigan's road and trail network is a conscious and intuitive design to provide simple transport throughout the town. The community provides the ability for residents to nurture and relate to the land while also provides innovative technology to connect to the world

***Genuine*** pertains to the quality and essence of the community. It is reflected in the design of the neighborhoods, services, and infrastructure which are community oriented, rather than functioning as a cog within the region. Architecture is human-scaled, with houses near the street, walkable commercial areas that emphasize local services, attractive pedestrian and bicycle transportation, and public spaces where local residents can interact.

## 2.5 SMART GROWTH PRINCIPLES

The Dunnigan Specific Plan responds to the Yolo County 2030 General Plan, which directed the community expansion of Dunnigan and designated the boundaries for a Specific Plan. The community expansion of Dunnigan is intended to ensure the sustainability of the town, provide a base population that will support basic community services and with a mix of land uses that will provide a balanced number of homes which are priced to match the number of local jobs and wages.

The vision for the community is founded upon the principles of 'smart growth', which were adapted from the principles used by SACOG in the development of the regional Blueprint. These principles are fundamental to the community concept which achieves a balanced mix of land uses, their appropriate placement within the Plan Area and an infrastructure network that accommodates regional transportation facilities while providing integrated opportunities for pedestrian and alternative travel modes. The community will be enhanced with a strong sense of place intended to foster social cohesion, one that promotes non-vehicular modes of travel, encourages education, minimizes energy use and maximizes sustainability at all levels. Dunnigan will be a lifelong community in which people of all ages and abilities can live for as long as they choose. The DSP incorporates the following concepts in the overall vision:

### 2.5.1 Transportation Choices

The Specific Plan is designed to allow and encourage residents to live, work, shop, educate and recreate within Dunnigan. The integration of a comprehensive roadway and trail system will maximize the potential for people to walk, ride bicycles, use neighborhood electric vehicles (nev's), ride the local bus or carpool.

### 2.5.2 Compact Development

The Land Use Plan is compact and designed to use the land efficiently. The land uses are organized to encourage more walking, biking and public transit use, and shorten auto trips. The Land Use Plan is organized into six planning districts.

### 2.5.3 Mixed Use Development

The DSP integrates residential, shops and office uses in locations throughout the Plan Area to create active, vital neighborhoods. The mixed use areas allow both vertical and horizontal integration of the land uses.

### 2.5.4 Housing Choice and Diversity

The DSP provides a variety of places where people can live, including apartments, condominiums, townhouses, attached detached single-family homes with a range of sizes and prices. This creates many housing opportunities for families, singles, seniors and people with special needs. This feature is of special benefit for professionals, as well as retail employees, service workers and other people for whom living close to work can be financially challenging.

### 2.5.5 Quality Design

The DSP emphasizes quality site planning and architectural design as important factors in creating a strong sense of community and sense of place. The design details of the development, such as the relationship of the buildings to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design and the design of the public rights-of-way, are factors that influence the attractiveness of living in a compact development and facilitates the ease of walking and biking to work or neighborhood services. The DSP Development Standards detail the permitted uses and specific development standards and the DSP Design Guidelines provide design guidance for the Plan Area.

### 2.5.6 Natural Resource Conservation

The Land Use Plan incorporates open space corridors throughout the Plan Area, along with preservation of wildlife corridors and plant habitat and the promotion of environment-friendly practices such as energy efficient design, water conservation and stormwater management. In addition to conserving resources and protecting species, the conservation of natural resources improves overall quality of life by providing places for outdoor enjoyment.

### 2.5.7 Use of Existing Assets

The DSP builds upon many of the features found in the existing community. The new rural residential areas to the west are an extension of the general pattern found in the Hardwoods Subdivision. The historic buildings of Old Town form the basis for a new commercial area that emphasizes the arts and tourism. The Caltrans rest stops are re-imagined as showcases of local agriculture for the traveling public. The rail line is envisioned as a future commuter train. Most importantly, the community's natural drainages have been enhanced to provide not only improved riparian habitat, but to also serve as pathways for pedestrians and bicyclists, and conveyances for local storm water.

# CHAPTER THREE: LAND USE AND COMMUNITY CHARACTER

## 3.1 INTRODUCTION

Chapter Three sets forth the overall framework for the Dunnigan Plan Area and describes the Land Use Goals, Land Use Designations and Land Use Policies for the Specific Plan. Together, the Land Use Exhibit, the text of this Specific Plan and the Development Standards (Appendix S) represent the Zoning Map and Zoning text for the Plan Area (collectively the "Zoning") and implements the vision, goals and policies of the 2030 General Plan. However, the Zoning does not become operative until certain subsequent entitlements are approved for each phase of the DSP, in a manner which is consistent with the Specific Plan, as provided in Section 11.2.1.

## 3.2 LAND USE/ZONING PLAN

The Land Use/Zoning Plan for the Dunnigan Specific Plan is the culmination of a comprehensive collaboration between local residents, County staff and the Participating Landowners team that identified physical constraints, examined adjacent land uses and analyzed General Plan policies and influences on the land use planning process. The Land Use/Zoning Plan emerged from the strong framework provided in the Yolo County General Plan, specifically from the Land Use and Community Character Element. The Land Use Plan will guide the long-term build out of the physical community.

The Land Use/Zoning Plan, shown on Exhibit 3.1, illustrates the arrangement of land uses, transportation networks and open spaces that will comprise the complete Dunnigan community. The Land Use/Zoning Plan allocates approximately 1,444 acres of residentially zoned land, 256 acres of commercial and mixed use zoned land, 322 acres of office and industrial zoned land and 733 acres of public and open space zoned land and 203 acres of agricultural land. The Land Use/Zoning Plan and the accompanying Land Use Summary Table 3.1 allocates 8,623 dwelling units within the Plan Area, which includes the housing units that existed prior to the Specific Plan approval. In addition, the Specific Plan has anticipated the potential for 607 additional "secondary" units, which would allow the construction of up to 9,230 total dwelling units. Table 3.1 provides a detailed summary of the land use zones, acres and dwelling uses allocated on the Land Use Plan and evaluated in the EIR analysis.

## 3.3 LAND USE GOALS

This section discusses the goals and policies that guided the arrangement of Specific Plan land uses. The General Plan Land Use and Community Character Elements provided detailed, extensive guidance for the Dunnigan Specific Plan, including policies too numerous to detail in this section, however a complete list and consistency analysis of applicable General Plan goals is provided in Appendix A.

The following land use goals and policies, which are based on the goals and policies of the 2030 General Plan, are used to implement the project vision and to guide the form and character of the emerging community. Some goals and policies found here may be also found in other chapters due to their applicability in other elements of the Specific Plan.

**Goal 3.1: Foster a distinctive community with a strong sense of place**

- *Policy 3.1.1: Reinforce community image through the preservation and creation of landmarks and icons that reflect the agricultural heritage of the Plan Area and Yolo County.*
- *Policy 3.1.2: Provide a vibrant town center and civic hubs that are gathering places for the community and attractive destinations accessible via greenways and trails.*
- *Policy 3.1.3: Locate the schools and parks as focal points and gathering places within each neighborhood.*
- *Policy 3.1.4: Design neighborhoods so that most dwelling units are within one-quarter mile of an open space area such as a park, school site, greenway or other open space.*

**Goal 3.2: Provide a diverse mix of land uses**

- *Policy 3.2.1: Provide opportunities for the integration of residential uses into the local commercial and office zones as a permitted use to provide a close link between work and home.*
- *Policy 3.2.2: Designate ample mixed-use zoning in each node to reinforce civic hubs, support consumer demand for locally-based businesses, and encourage non-vehicular mode share and transit use.*
- *Policy 3.2.3: Provide a balanced mix of housing and job-generating uses to achieve a jobs to housing ratio of 1.2 to 1 and encourage close home-work linkages to reduce automobile dependence.*
- *Policy 3.2.4: Allow compatible businesses within residential areas, including home occupations, live/work spaces and neighborhood supporting services.*

**Goal 3.3: Protect and enhance the existing community of Dunnigan**

- *Policy 3.3.1: Create an overlay zone in the historic "Old Town" area to provide a process to designate and protect, where feasible, historic structures and landmarks into the new development.*
- *Policy 3.3.2: Create an expansion of "Old Town" on the west side of Road 99W between Road 6 and Dunnigan Creek to enhance the existing town core.*
- *Policy 3.3.3: Preserve and protect existing trees and vegetation along the roads in the Hardwoods and Road 99W.*
- *Policy 3.3.4: Design infrastructure and services to incorporate existing neighborhoods within Dunnigan.*

**Goal 3.4: Provide a range of housing choices and opportunities**

- *Policy 3.4.1: Provide a variety of housing options (i.e., apartments, townhouses, lofts, single family detached homes) for the variety of people desiring new housing (i.e., families, single, multi-generational, seniors and those with disabilities/special needs).*
- *Policy 3.4.2: Provide housing opportunities and choices for moderate, low and very low income persons and families.*
- *Policy 3.3.4: Design infrastructure and services to incorporate existing neighborhoods in Dunnigan.*
- *Policy 3.4.3: Provide a balanced mix of residential land use types across the Plan Area in the full range of permitted densities, from 0.2 du/acre to 40 du/acre. Strive for an overall target of 8 du/ac.*

**Goal 3.5: Encourage sustainable building and landscape designs and standards**

- *Policy 3.5.1: Create a Green Building Standards program to establish standards that promote the inclusion of measures related to the conservation of energy, water, soil, building materials and other non-renewable resources.*
- *Policy 3.5.2: Require that all new structures incorporate alternative energy production and/or rely on a "green" energy portfolio.*
- *Policy 3.5.3: Require the inclusion of recharging stations, preferred parking and other incentives for alternative energy vehicles in all non-residential zones.*

**Goal 3.6: Provide a connected, accessible open space network to enhance existing natural resources**

- *Policy 3.6.1: Expand and re-direct the natural and man-made drainages of the site into multi-purpose greenways that are signature elements of the Plan Area. Use these greenways to provide an interconnected system of both natural and created open spaces.*
- *Policy 3.6.2: Create a series of lakes that will serve as amenities for the community and provide for flood control and non-potable water storage to be used for irrigation of landscaping throughout the Plan Area.*
- *Policy 3.6.3: Preserve and protect the Bird Creek and Dunnigan Creek corridors as permanent open space and provide public access with perimeter trails and crossings, where feasible.*
- *Policy 3.6.3: Include "edible landscapes" throughout Dunnigan in parks, open space areas and schools that are aesthetically pleasing while providing residents with a direct connection to fresh healthy foods.*

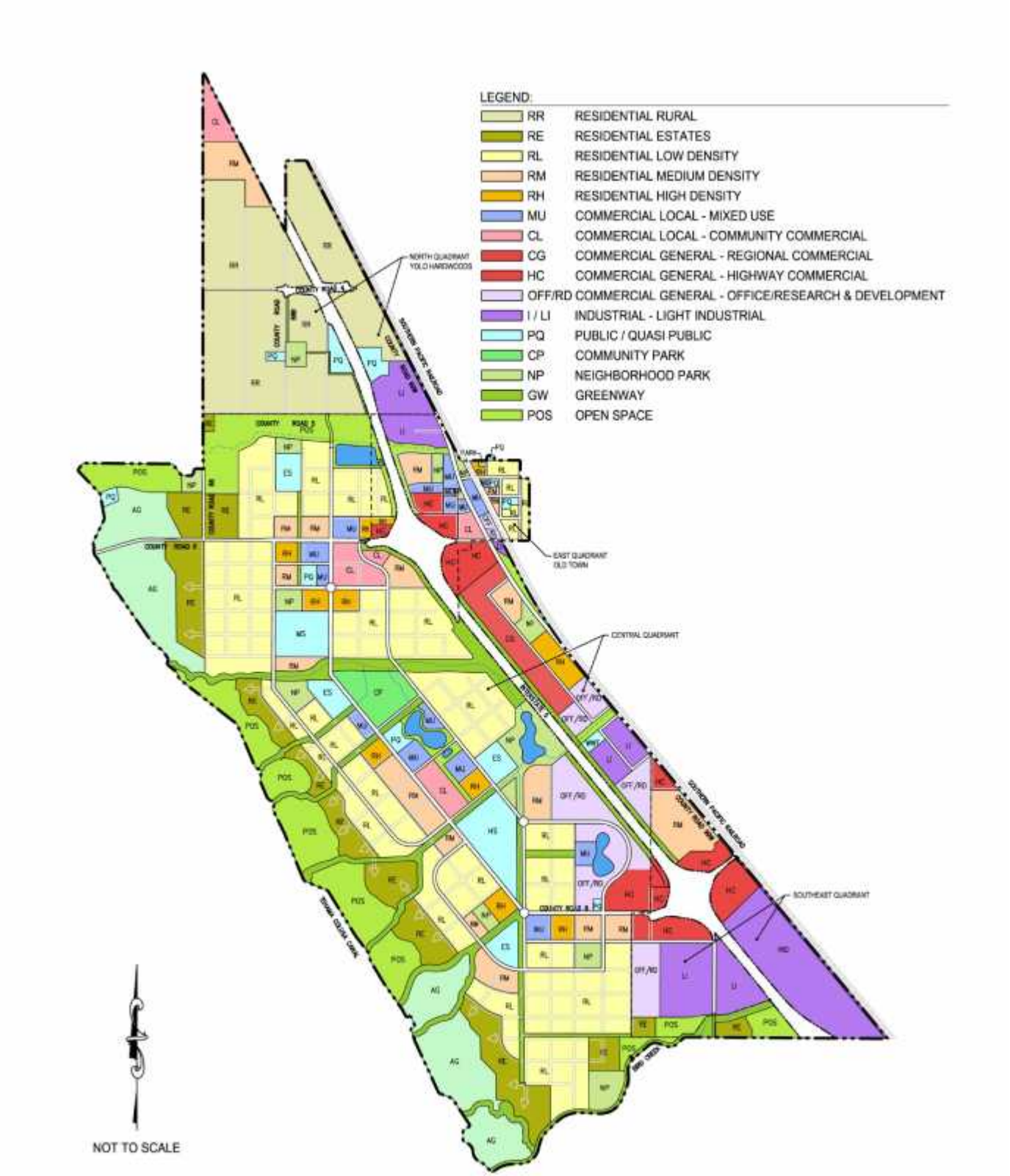



**Exhibit 3.1: Land Use/Zoning Exhibit**

| Table 3.1: Land Use Summary by Zoning Category | | | | |
|---|---|---|---|---|
| ***Residential Zones*** | ***Acres*** | ***Avg. Density*** | ***Density Range*** | ***Dwelling Units*** |
| RR -Rural Residential[2] | 332.0 | 1.0 | 0.2-0.9 | 332 |
| RE -Residential Estates | 213.0 | 1.74 | 0.9-3.5 | 371 |
| RL –Residential Low Density | 663.8 | 5.0 | 2.0-9.9 | 3,319 |
| RM –Residential Medium Density | 179.9 | 14.2 | 10.0-19.9 | 2,555 |
| RH- Residential High Density | 55.5 | 24.0 | 20.0-40.0 | 1,332 |
| **Subtotal** | **1,444.2** | | | **7,909** |
| ***Commercial + Mixed Use Zones*** | | | | |
| CL-Commercial Local | 52.1[3] | | | 237 |
| CG-Commercial General | 38.2 | | | n/a[4] |
| HC-Highway Commercial | 108.1 | | | n/a[4] |
| MU-Mixed Use | 57.5[3] | | | 124 |
| **Subtotal** | **255.9** | | | **361** |
| ***Office + Industrial Zones*** | | | | |
| OPRD-Office Park, R&D | 103.1[3] | | | 353 |
| LI-Light Industrial | 125.0 | | | n/a[4] |
| I-Industrial | 94.1 | | | n/a[4] |
| **Subtotal** | **322.2** | | | **353** |
| ***Public + Open Space Zones*** | | | | |
| PQP-Public/Quasi Public | 27.4 | | | |
| PQP-Public Facility(WWT and Water Tank) | 5.2 | | | |
| PQP-High School | 40.0 | | | |
| PQP-Middle School | 23.3 | | | |
| PQP-Elementary School | 40.0 | | | |
| POS-Community Park | 28.1 | | | |
| POS-Neighborhood Park | 89.8 | | | |
| POS-Public Open Space, Greenways, Lakes | 479.7 | | | |
| **Subtotal** | **733.5** | | | |
| ***Agricultural Zone*** | | | | |
| AG- Agriculture | **202.9** | | | |
| **Total Acres** | **2,958.7** | | | |
| Major and Minor ROW | 151.3 | | | |
| **PLAN TOTAL** | **3,110.0** | | | **8,623[5]** |
| **Residential excluding RR** | **1112.2** | | | 8,291[2] |
| **Secondary units[1] estimate** | | | | 607 |
| **Plan Total Units (for density calculation)[2]** | **1112.2** | **8.0[2]** | | 8,898 |
| **All Units (Plan total + secondary)[6]** | | | | **9,230** |

**Table 3.1 Footnotes:**

1. "Secondary" units may be constructed in residential land use zones as attached or detached second units or density bonus units as provided by State law. For the purposes of estimating necessary services and infrastructure capacity, each secondary unit represents the equivalent of 0.6 housing unit. The secondary units are evaluated in the EIR and are included in the infrastructure and services capacity for the entire DSP community but are not shown on the Land Plan, Exhibit 3-1. The secondary units are evaluated as an equivalent of 0.6 housing unit (1.6 persons per household instead of the standard 2.62 persons per household). In other words, the estimated 607 second units will equal 364 unit equivalents and 971 people in the EIR analysis (607 x 0.6 = 364 edus; 607 x 1.6 = 971 pop).
2. Plan density calculation excludes 332 units and 332 acres of existing RR development (Hardwoods) in the SPO area.
3. Refer to Table M-1 in the Phasing Master Plan Appendix for dwelling units assigned to specific MU, CL, and OPRD parcels.
4. Dwelling units are not permitted in these designations.
5. The maximum number of "base" units allowed in the General Plan and evaluated in the General Plan EIR is 8,621. The DSP would result in 8,623 units, which is substantially consistent. This number reflects units established by the Plan and does not include "secondary" units allowed by State law.
6. Population calculation is as follows: 22,592 (8,623 Plan total d.u's x 2.62 persons per household) + 971 (607 "secondary" d.u.'s x 1.6 persons per household) =**23,563 total population.**

## 3.4 RELATIONSHIP BETWEEN ZONING AND GENERAL PLAN

A summary of zoning categories applied is presented in Table 3.2. The table also lists the 2030 Yolo Countywide General Plan land use designations that are implemented by the DSP. It is important to understand the difference between General Plan land use designations and zoning districts. The General Plan land use designations define each designation in broad terms, while the zoning districts and accompanying regulations contain detailed development standards.

The assigned land use categories, along with other provisions in the Specific Plan and the Development Standards, Appendix S, constitute Zoning within the Plan Area. The Specific Plan Zoning supersedes Yolo County Land Development and Zoning Ordinance, Title 8, Article 2.

The Zoning does not become operative unless and until subsequent entitlements are approved to create developable parcels that are consistent with the Land Use Plan.

The DSP Design Guidelines, Appendix B, include additional detail to be considered in the design, review and approval of individual projects. Development within the Plan Area is required to comply with the Development Standards (Appendix S), the DSP Design Guidelines (Appendix B) and applicable County requirements.

**Table 3.2: Zoning Categories/GP Designation Consistency**

| DSP Symbol | DSP Name/Description | General Plan Land Use Designation Implemented by DSP |
|---|---|---|
| **Residential Zones** | | |
| RR | Residential Rural | Rural Residential |
| RE | Residential Estates | Residential Low |
| RL | Residential Low Density | Residential Low |
| RM | Residential Medium Density | Residential Medium |
| RH | Residential High Density | Residential High |
| **Commercial, Office and Mixed Use Zones** | | |
| MU | Mixed Use | Commercial Local |
| CL | Commercial Local | Commercial Local |
| CG | Commercial General | Commercial General |
| HC | Highway Commercial | Commercial General |
| OPRD | Office Park/Research and Development | Commercial General |
| **Industrial Zones** | | |
| LI | Light Industrial | Industrial |
| I | Heavy Industrial | Industrial |
| **Public/Open Space Zones** | | |
| PQP | Public and Quasi-Public | Public and Quasi-Public |
| POS | Parks and Open Space | Parks and Recreation, Open Space, |
| AG | Agriculture | Agricultural |

The DSP employs many of the same abbreviations for the DSP land use categories as the General Plan land use designations. For example, "RL" is the abbreviation or symbol that is used by the General Plan for the "Residential Low" designation and is also used in the DSP for the "Residential Low Density" category. However, the DSP also includes some zones and symbols that are not used in the General Plan, e.g., the "Mixed Use" and "Office Park/Research and Development".

### 3.4.1 Geographic Districts

The Plan Area is organized into six geographic districts, as shown on Exhibit 3-2. The six Districts are the Hardwoods District, the Old Town District, the Dunnigan Creek District, the Central District, the Gateway District and the Bird Creek District. Each district has a one or more nodes/ focal areas of activity. Each of the land use categories within the Plan Area are generally described in the following sections.

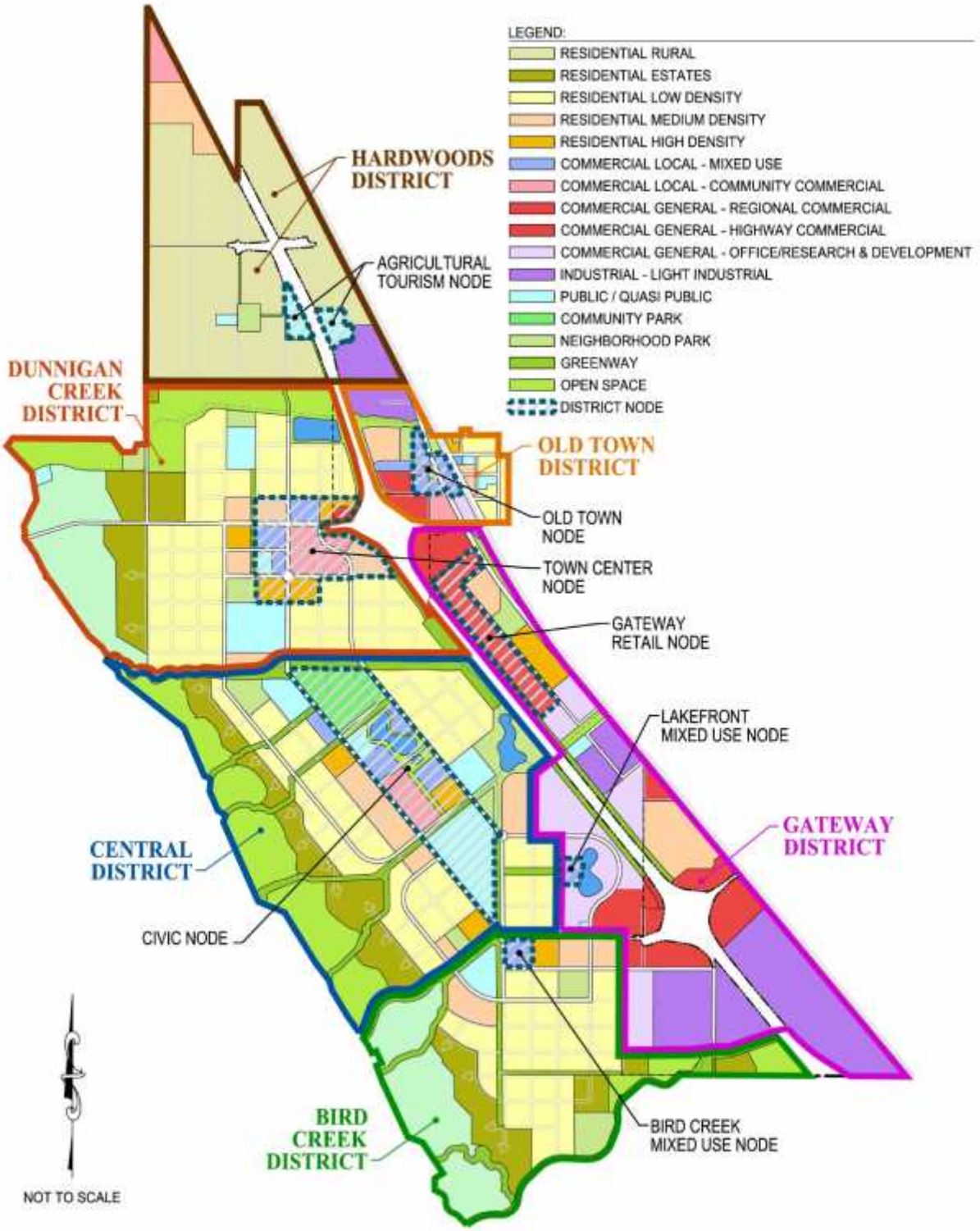



**Exhibit 3.2: Districts of Dunnigan**

## 3.5 RESIDENTIAL USES

The land use plan provides five different residential zoning categories: Residential Rural (RR), Residential Estates (RE), Residential Low (RL), Residential Medium (RM) and Residential High (RH). Density ranges, permitted uses and development standards for all residential uses are provided in the DSP Development Standards.

### 3.5.1 Residential Rural (RR)

The RR category includes large lot development with primarily single-family lots, however detached accessory dwelling units are allowed. The permitted density range is 0.2-0.9 dwelling units per acre, resulting in parcels ranging from 1 acre to 5 acres. The RR zone is located only in the Hardwoods District, in the northwestern portion of the Plan Area, which also contains the majority of the existing homes in Dunnigan as well as some undeveloped properties. The size and type of lots anticipated will range from large, rural residential parcels to executive sized lots.

### 3.5.2 Residential Estates (RE)

The RE category includes large lot traditional single family development, however detached accessory dwelling units are also allowed. The RE zone is located primarily along the west and south portions of the Plan Area, in gently rolling terrain. This zone serves as a transition to the Public Open Space in the more hilly terrain along the western and south Plan Area boundaries. The RE zone provides an opportunity for larger, estate sized parcels which are uniquely located with proximity to open space and views.
The permitted density range is 0.9 to 3.5 dwelling units per acre.

### 3.5.3 Residential Low (RL)

The RL category includes traditional single family development with primarily detached single family homes, however attached and/or detached units and duplexes are allowed. This area provides a transition between the rural and residential estates zones to the more intensive uses. The RL category provides an opportunity for a variety of housing types including cluster, zero lot line, half-plexes and other attached and detached housing products. The permitted density range is 2.0-9.9 dwelling units per acre.

### 3.5.4 Residential Medium (RM)

The RM category provides an opportunity to accommodate a variety of housing types. Design solutions may include cluster, courtyard, zero lot line, half-plexes and other attached and detached housing products. The permitted density range is 10.0 to 19.9 dwelling units per acre. Incorporation of diverse and innovative housing alternatives is encouraged to enhance the neighborhood identity and provide for-sale and rental housing opportunities at levels attainable to area residents and workers.

### 3.5.5 Residential High (RH)

The RH category accommodates attached multi-family housing, including apartments, townhouses and condominiums. The RH sites are strategically located within the Town Core and near the higher intensity uses to promote alternative transportation through the proximity to goods, services and transportation hubs. These RH sites will provide both rental and for-sale housing opportunities for the general workforce, with a density range of 20.0 to 40 dwelling units per acre.

## 3.6 COMMERCIAL AND MIXED USE

Commercial uses in the DSP consist of General Commercial (CG), Local Commercial (CL), Highway Commercial (HC) and Mixed-Use (MU). The majority of the commercial service uses are located in nodes within each of the six districts. Residential uses are permitted in the MU and select CL locations. The primary node is the Town Center node in the Dunnigan Creek District, which serves as the "downtown" for the Dunnigan community. The Civic Node in the Central District and the general commercial Gateway Node on Road 99W are secondary nodes. Five smaller nodes occur in the other districts, with each district having at least one commercial or mixed-use node. The DSP supports the concept of mixed-use (both vertical and horizontal) in order to encourage trip reduction and transit use as well as supporting a vibrant shopping and employment center. Development standards and permitted uses for each of the commercial districts are addressed in the Development Standards, Appendix S.

### 3.6.1 Dunnigan Town Center Node

The Dunnigan Town Center, located south of Road 6 along "Main" Street, is envisioned to attract a variety of neighborhood-serving retail and mixed-uses. The Town Center is located within the Dunnigan Creek District, which will be one of the primary northern gateways into Dunnigan during the early years of the community's emergence.

**Conceptual Depiction of Main Street**

### 3.6.2 Civic Center Node

The Civic Center Node is located in the center of the Plan Area and contains the majority of the community and civic uses. The community park anchors the north end of the node, the High School anchors the south end and the central section is a pedestrian–oriented village of local retail shops, restaurants, civic and mixed-uses of office, retail and residential buildings. Residential units are allocated to the MU and CL parcels in this node and are intended to locate above ground floor commercial or office uses. Separate apartment or condo units integrated with the retail component may also locate within the CL or MU sites. Residential units in addition to those allocated on Table M-1, found in the Phasing Master Plan Appendix M, may be permitted as density bonus units or through density transfer from residential parcels.

### 3.6.3 Gateway Employment and Retail Node

The Gateway District is the portion of the Plan Area with the highest concentration of employment uses, located in the vicinity of Interstate 5, Road 8 interchange and Road 99W. The Gateway District will serve as a southern entry window in to the Plan Area. The general commercial site is envisioned to accommodate larger format retailers that offer goods and services at a community and regional scale. Several office and light industrial sites are located in this node to provide additional opportunities for business to locate with excellent visibility and access from I-5. These sites are easily accessed from the freeway but also accessed from the balance of the Plan Area on the west side of I-5 via a non-vehicular bridge that will cross I-5, providing residents alternatives to taking their cars to shop and work at these locations.

### 3.6.4 Old Town Node

The Old Town node is comprised of existing businesses and new businesses that will highlight the gateway into the historic section of "old" Dunnigan along Road 99W north of Road 6. The designation of Mixed Use along Road 99W at Old Main Street is intended to accommodate a blend of local serving retail, office, civic and residential uses in an intimate scale that complements the existing uses and encourages re-use of some of the historic structures, where feasible. In

particular, the MU site with the existing mill silos along the west side of the SPRR is designated to include a rail station, to facilitate the potential for passenger rail service, which may become feasible in the future.

## 3.7 OFFICE PARK AND INDUSTRIAL USES

The primary business employment uses within DSP consist of Office Park/Research and Development (OPRD), Light Industrial (LI) and Heavy Industrial (I). The majority of these uses are found in the Gateway District along I-5, located in the southern portion of the Plan Area and along Road 99W south of Road 6 to the southern Plan Area boundary. The proximity of the employment land uses to Interstate 5 will provide optimal visibility and access to those from outside of Dunnigan; however the integration of residential uses in and near the employment centers will contribute to the ability of workers to use alternative transit modes.

The OPRD land use category will provide the opportunity for a range of users, including large employment centers, research and development campuses, office/warehouses and professional offices and services. A degree of residential development is assumed in the OPRD land use category, and a certain number of residential units are assigned to the select parcels for the purposes of estimating development potential. Residential units are intended to integrate either horizontally or vertically within the office complexes. Residential units in addition to those shown on Table M-1 Parcel Summary, found in the Phasing Master Plan Appendix M, may be permitted as density bonus units or through density transfer from residential parcels.

The majority of the Light Industrial (LI) uses are located in the southeast portion of the Plan Area and a smaller amount located north of Old Town on Road 99W. Anticipated uses in this district may include light manufacturing and assembly, warehousing and other light industrial uses. The proximity of the LI land uses to Interstate 5 and the railroad will make it attractive to industrial users while being compatible with surrounding uses. The Heavy Industrial (I) use is limited to one location at the southeast corner of the Plan Area on Road 99W along the east side of Interstate 5. This location was selected to accommodate heavy industrial users with good freeway and rail access, while also providing the necessary buffers from residential uses.

## 3.8 PUBLIC USES

### 3.8.1 Public/Quasi Public (P/QP)

A total of four (4) elementary school sites, one middle school and one high school are designated within the Plan Area. The sites have been sized in accordance with the Pierce Joint Unified School District and State of California Department of Education criteria. Each school will function as a focal point of the immediate neighborhood. The planned school sites have been centrally located within each district to be easily accessible via alternative modes of transportation.

A total of eleven (11) sites are designated for non-school public/ quasi public use. This zoning is applied to one site located within the Civic Center Node, anticipated to accommodate a number of community focused uses in this centralized location, such as the library, transit center, community center, CSA/TMA offices, satellite County services center and quasi-public uses such as a day care center, private school or religious institution. Three sites are located in Old Town and one in the Hardwoods, all which are existing public/quasi public uses, such as churches, Dunnigan fire station and the water district office.

A P/QP site is also located within the Town Center node to accommodate a new Fire Station and sheriff substation in Phase 1. A second new Fire Station site is located in the southern portion of the community, on Road 8 just west of Interstate 5. Two additional P/QP sites have been located to accommodate the public utilities needed to serve the Plan Area, one for the wastewater treatment facility in the Gateway District and one for water tanks and facilities along Tehama Colusa Canal.

Two public/quasi public sites are designated on the existing Cal Trans rest stop property, directly adjacent to Interstate 5. The DSP envisions the potential for future transition of this State of California right-of-way to a beneficial joint-use of a traveler's rest stop with an agriculture tourism focus. These sites are envisioned to be re-developed over the course of the Plan Area build out to offer a combination of public services to travelers that will support and promote Yolo County agriculture and tourism. Public/Quasi Public uses may also be allowed within other land use designations as outlined in the Development Standards, Appendix S.

### 3.8.2 Parks and Open Space (POS)

Approximately 118 acres of parks and approximately 480 acres of miscellaneous open space are designated within the Dunnigan Plan Area. All open space and public use sites have been located and sized consistent with applicable policies. Specific standards for open space and public uses are provided in the Development Standards, Appendix S.

Parks within the DSP are comprised of one Community Park and nine neighborhood parks. The 28-acre Community Park is located within the Civic Node and is easily accessible via numerous greenways linking the entire Plan Area. Facilities in the Community Park are anticipated to include significant active recreation facilities, including ball fields, soccer fields, tennis courts, basketball courts, and picnic and playground areas as well as community facilities, such as an amphitheater, a community garden and a covered gathering plaza.

The neighborhood parks are intended to serve as a focal point for each neighborhood, providing a gathering place with smaller scale recreational facilities, such as tot lots, playgrounds, multi-use turf fields and BBQ picnic areas. Many of the parks are co-located with elementary schools to provide shared facilities and to reinforce them as focal points of each neighborhood. The pocket parks are small areas, primarily to accommodate a playground or gathering area for a specific purpose. Three of the four pocket parks are in the Old Town District and one is the existing Dunnigan Community Park. More detail on the planned parks and parks program are found in Section 6.3.

The Parks and Open Space category is applied in two other uses: public open space and greenways. The public open space parcels provide passive recreation opportunities, preserve existing resources, provide floodwater conveyance and retention, storm water quality treatment and provide interfaces between land uses and along Plan Area boundaries.

A major element of the DSP is an accessible open space network that will serve to soften the built environment while performing crucial functions. The open space network contains the existing Dunnigan and Bird Creek areas, the rolling hills along the western boundary, as well as the created greenways, which will provide pedestrian and bicycle travel within the Plan Area. The open space network links the residential neighborhoods, schools and parks to the retail shopping and employment areas. The open space drainage system also provides opportunities for seasonal and riparian habitat. The corridors are designed to pass drainage flows within a meandering channel, creating upland areas for re-vegetation, and to provide for multiple passive and active recreation uses. Trails are provided for pedestrian and bicycle uses as well as interpretive trails through the upland areas for uses such as bird watching and photography. The "green modes" network of trails is shown in Section 4.6.

## 3.9 AGRICULTUAL USES

Agricultural zoning has been applied to approximately 203 acres of the Plan Area. The parcels are located along the western boundary abutting the Tehama-Colusa canal; two parcels in the northwest corner of the Plan Area and three parcels in the southwest corner of the Plan Area. These parcels were used for grazing, dry land farming and vineyards at the time of the Specific Plan preparation. The purpose of the agriculture zone is to provide for the continued use of agriculture within the Plan Area in a location that is compatible with the Specific Plan and to serve as a transition between the adjacent Residential Estates and the agricultural lands outside the Plan Area. Examples of uses allowed in this zone are farming, grazing, pasturage, orchards, horticulture, viticulture, raising of crops or trees, as well as recreational uses such as walking, hiking and bike trails and wildlife habitat. Permitted uses are detailed in Appendix S, Development Standards.

## 3.10 DENSITY TRANSFER PROVISIONS

Dwelling units have been allocated to all residentially zoned parcels (RR, RE, RL, RM and RH) and dwelling units have been allocated to selected MU, CL and OPRD parcels. Each parcel has been allocated a certain number dwelling units, based on the average density per the parcel zoning. Table M-1, Parcel Summary, found in the Phasing Master Plan Appendix M, in conjunction with the Land Use Plan, Exhibit 3-1, provides a detailed summary of the land use, zoning and unit allocation on a parcel-by-parcel basis.

It is the intent of the Specific Plan to permit limited flexibility in transferring units between certain parcels in response to market demand, subdivision design, permanent open space preservation or other considerations. Pursuant to the transfer process detailed below, allocated dwelling units may be transferred to and from any RR, RE, RL or RM parcel and to and from any RH parcel. Units allocated to MU, CL and OPRD may be transferred between any other MU, CL or OPRD parcel and from any RR, RE, RL or RM parcel.

### 3.10.1 Density Transfer Process

Density transfers, if consistent with the following criteria, are consistent with the Specific Plan and the DSP EIR and will not require an amendment to the Specific Plan or the General Plan. Requests for transfers which exceed the following criteria shall require a Specific Plan Amendment.

**Transfer Criteria:**

- A density transfer may involve two parcels or more, provided that the transferring and receiving parcels are within the DSP and the total maximum number of approved units for the entire Plan Area is not increased.
- The transfer of units from any parcel is reflected in the subsequent entitlements for that parcel (i.e.; tentative subdivision map or site plan review).
- The cumulative increase or decrease in units resulting from the density transfer does not change by more than fifteen-percent (15%) the number of pre-transfer units allocated to any one parcel as established by Table M-1 found in Appendix M. Notwithstanding the foregoing, the number of units allocated to a Rural Residential parcel cannot be increased by more than thirty percent (30%).

- The transfer complies with density transfer provisions in the affordable housing program as set forth in Section 7.8 of this Specific Plan (or other form as approved by the County). Any units located on a parcel designated for affordable development under an Affordable Housing Development Agreement are not eligible for unit transfers except to another parcel designated for affordable development.
- The transfers will not adversely impact planned infrastructure, roadways, schools, other public facilities or Plan Area fee programs and assessment districts.
- To request a density transfer, the owner or owners of both the transferring and receiving parcels shall submit a Density Transfer application to the Zoning Administrator identifying the impacted parcels, designating the number of units being transferred and providing other documentation as required by the Planning Director to determine compliance with the above criteria. The applicant shall also provide a revised Table M-1, Parcel Summary, reflecting the adjusted unit counts and densities. The revised table will be the official record used for tracking unit allocations to each large lot residential parcel.
- If, in the opinion of the Zoning Administrator, such a density transfer satisfies the above criteria, it is consistent with the intent of this Specific Plan and EIR and will not require an amendment to the Specific Plan. If the Zoning Administrator determines that the density transfer is not consistent with the criteria, the transfer shall require an amendment to the Specific Plan. The applicant may appeal such a determination to the Planning Commission.

# CHAPTER FOUR: CIRCULATION & TRANSPORTATION

## 4.1 OVERVIEW

This chapter provides a discussion of the existing and proposed circulation system for the Dunnigan Specific Plan (DSP). The circulation system includes a hierarchy of roadways, green modes circulation and public transit. The green modes circulation includes bicycles, Neighborhood Electric Vehicles (NEVs) and pedestrians. Emphasis is placed on ensuring connectivity between uses and on creating a safe and efficient circulation system that complies with Yolo County policies and allows for multiple transportation options. The circulation system has been designed to link with existing local Dunnigan and regional Yolo County systems.

## 4.2 CIRCULATION AND TRANSPORTATION GOALS

The *2030 General Plan* contains a number of goals and policies related to the DSP. These goals and policies guide development of the DSP land use and circulation components. The General Plan Circulation Element establishes ten goals, seven of which are relevant to the DSP and are identified below.

1. Comprehensive and coordinated transportation systems (Goal CI-1)

2. Mode and user equity (Goal CI-2)

3. Service thresholds (Goal CI-3)

4. Environmental impacts (Goal CI-4)

5. System integration (Goal CI-5)

6. Accessible transit (Goal CI-6)

7. Truck and rail operations (Goal CI-7)

These goals and their supporting policies influence land use and circulation network design in an effort to increase travel choices such as walking and bicycling by locating land uses in close proximity with a highly connected network. The basic concept is to create compact, mixed-use development forms that make it easier to access jobs, schools, shopping, entertainment, etc. without traveling long distances that require vehicles. For example, Policies CI-1.2, CI-3.2(C), and CI-3.15 require new development to utilize a grid pattern for roadways while Policy CI-2.3 requires that public transit, walking, and bicycling are viable and attractive travel choices. The DSP fulfills these requirements by keeping the overall development footprint compact with a fine-grained multi-modal grid network that makes it convenient to travel throughout the project by walking, bicycling, or NEV.

Some supporting policies of the General Plan are more challenging to meet because compliance cannot be fully determined at this time due to the need for ongoing monitoring of the project per the General Plan and the *Yolo County Transportation Impact Study Guidelines*. Policy CI-3.19, CI-3.20, and CI-3.21 address vehicle miles of travel (VMT) and mode split goals that must be measured over time. The DSP will build out over multiple years and these policies require monitoring of mode split and household VMT generation to ensure compliance with the following goals.

- VMT Target = 44 miles generated per household per weekday
- Mode Split[1] Goal = 20 percent non-auto

Chapter 4.10 describes the VMT reduction strategies in more detail.

Table 4.1 identifies key project features that substantiate General Plan consistency for each of the seven relevant goals.

| Table 4.1: Key Project Features Consistent with the 2030 General Plan | |
|---|---|
| Comprehensive and Coordinated Transportation Systems (Goal CI-1) | • Fully-connected grid-based circulation system<br>• I-5 / CR 6 interchange improvements and I-5 / CR 8 Interchange modifications<br>• Comprehensive pedestrian, bicycle and NEV networks<br>• Transportation Management Association (TMA) or County Service Area (CSA) formation<br>• Speed management through design |
| Mode and User Equity (Goal CI-2) | • Consistent treatment to all modes of travel<br>• Attractive and convenient transit, pedestrian and bicycle systems |
| Service Thresholds (Goal CI-3) | • Upgrade County roadways to be consistent with current standards<br>• Roundabouts, multimodal connections and traffic calming<br>• Intermodal station and transit center<br>• VMT reduction strategies |
| Environmental impacts (Goal CI-4) | • VMT reduction through project design and commitment to additional VMT reduction strategies<br>• Low emission or no-emission transportation options |
| System Integration (Goal CI-5) | • Off-street trail system<br>• Integrated multi-modal facilities<br>• Pedestrian design features and enhanced intersection treatments |
| Accessible Transit (Goal CI-6) | • Intermodal station and transit center<br>• Upgraded transit amenities<br>• Yolo County Transit District (YCTD) system expansion<br>• Park and ride locations convenient for transit |
| Truck and Rail Operations (Goal CI-7) | • Accommodation of passenger and freight rail service<br>• Preserve and enhance truck transportation corridors |

[1] "Mode Split" is the percentage distribution of person travel by mode. The modes include autos, transit, bicycle, walk, and neighborhood electric vehicle (NEV).

## 4.3 EXISTING LOCAL AND REGIONAL TRANSPORTATION NETWORK

The Dunnigan project is located adjacent to a four and a half mile stretch of I-5 which will provide regional site access. I-5 is a four-lane freeway (two lanes in each direction) with two interchanges connecting to County Road (CR) 8 and CR 6 and one connection to a rest stop located north of CR 5. CR 99W forms the eastern boundary of the Plan Area. CR 5 forms the northern boundary for the majority of the new development. However, the existing rural area of Dunnigan north of CR 5 is included within the limits of the Specific Plan, which consists of various local roads with connection to CR 6 and CR 2. CR 6, a two-lane local road, bisects the northern portion of the Plan Area and extends from CR 99W west to the Tehama-Colusa Canal. Lesser paved and unpaved County and private roads exist throughout the remainder of the site.

This network does not include any dedicated features for public transit or bicycling. Sidewalks exist along portions of CR 6, CR 8, CR 99W, and Johns School Road within the Plan Area. The sidewalk system is discontinuous with most of it installed as part of frontage improvements to developed parcels.

## 4.4 INTERSTATE FREEWAY INFRASTRUCTURE

Two interchanges provide regional access for the DSP. The CR 6 and CR 8 interchanges are slightly less than two miles apart. Both interchanges operate acceptably now; however, proposed DSP build out will increase volumes and add bicycle and pedestrian trips to the interchanges, which will require interchange and mainline improvements. The General Plan anticipated that I-5 would ultimately be widened with northbound and southbound auxiliary lanes between CR 6 and CR 8 interchanges, which would not be precluded by the DSP. The need and timing for these lanes will depend on interchange improvements at CR 6 and CR 8. Capacity expansion at these interchanges will be needed to accommodate planned highway commercial uses near the interchanges plus new trips from the DSP community.

### 4.4.1 Interchange Modifications

#### 4.4.1.1 I-5 / CR 8

The I-5/CR 8 interchange does not fully comply with current Caltrans design standards because of its close spacing to the I-505/I-5 freeway-to-freeway interchange, which is located approximately one mile south of the CR 8 interchange. This distance is less than the Caltrans standard of three miles between a local interchange (CR 8) and a system interchange (I-505) to provide adequate distance for weaving vehicles to complete merge and diverge movements. As a result, only minimal capacity-enhancing modifications to the CR 8 interchange are feasible. Potential improvements associated with the DSP are anticipated to Include signalizing the ramp terminals, isolated ramp widening, and enhancing bicycle and pedestrian movements across the interchange.

#### 4.4.1.2 I-5 / CR 6

Given the constraints at CR 8, project vehicle traffic will be focused on the CR 6 interchange where more extensive capacity improvements are feasible. This interchange will also be designed for bicycles and pedestrians although the DSP includes a separate bicycle, pedestrian,

and NEV crossing of I-5 in the central portion of the plan that is intended to be the preferred crossing for these modes as explained in more detail below. Several interchange designs have been considered for I-5 / CR 6 including those presented in Exhibit 4.1. All current designs require widening or replacing the existing structure over I-5.

Concept 1: Diamond Interchange with Southbound Loop On-Ramp

Concept 2: Tight Diamond Interchange

Concept 3: Diverging Diamond Interchange

Source: Planning Company Associates and Kimley-Horn, 2009

**Exhibit 4.1: Initial I-5/CR 6 Interchange Concepts**

The ultimate interchange configuration will need to balance a variety of design objectives given that this interchange will serve passenger vehicles, heavy trucks, bicycles, and pedestrians. At a minimum, the following Caltrans design standards and guidelines will govern the design process.

- *Highway Design Manual*, Caltrans (http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm)
- *Design Information Bulletins*, Caltrans (http://www.dot.ca.gov/hq/oppd/dib/dibprg.htm)
- *Design Memoranda,* Caltrans (http://www.dot.ca.gov/hq/oppd/design/index.htm)
- *Deputy Directive (DD)-64-R1 – Complete Streets – Integrating the Transportation System* (http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets_files/dd_64_r1_signed.pdf)

Key issues will include conflict areas where vehicles interact with pedestrians and bicyclists. The DSP places a priority on pedestrian and bicycle travel but recognizes the need to balance operational and safety tradeoffs for all interchange users.

For the CR 8 interchange, the DSP was designed to minimize traffic using this interchange with the intent to limit the potential improvements to minor ramp widening, signalization of the

ramp terminal intersections, and upgrades necessary to comply with the Americans with Disabilities Act (ADA). Some enhancements for bicyclists and pedestrians may also be included at this interchange although bicyclists and pedestrians needing to cross I-5 will be encouraged to use the separate bicycle and pedestrian crossing of I-5 located north of CR 8 and described in more detail below.

### 4.4.2 Pedestrian and Bicycle Connectivity

The DSP proposes a bicycle and pedestrian overcrossing between the two interchanges. The overcrossing will also be designed to accommodate shared use with NEVs. This connection will provide direct access between general commercial land uses east of I-5 and the proposed town center west of I-5. The overcrossing is strategically located as a direct continuation of a Class I bikeway and will greatly reduce pedestrian and bicycle travel times to and from the central plan area compared to travel across the CR 6 and CR 8 interchanges. While these interchanges will be upgraded from their current condition for bicyclists and pedestrians to comply with Caltrans guidelines such as *Deputy Directive 64-R1: Complete Streets – Integrating the Transportation System* and anticipated revisions to the *Highway Design Manual*, the bicycle and pedestrian overcrossing is an integral feature that maximizes mobility choices by increasing the convenience of bicycling, walking, or using an NEV. The crossing will be approximately one mile from the CR 6 and CR 8 crossings, which is similar to other bicycle and pedestrian friendly communities such as the City of Davis for connectivity across I-80.

## 4.5 ROADWAY INFRASTRUCTURE

Exhibit 4.2 displays the DSP roadway circulation plan, which includes primary, collector and local roadways. The circulation plan reflects the use of 17 different street cross-sections or designs, which were developed to accommodate multi-modal use and compliment adjacent land use. Exhibit 4.3 contains each of the street sections (Sections "A" through "Q") identified on the circulation plan. Roadway construction will be phased as described in the DSP Development Agreement(s). Landscaping standards, enhanced bridge designs and other design details are included in the DSP Design Guidelines. Key features of the street network are described below.

### 4.5.1 Primary Roadways

Primary streets are the backbone circulation routes that provide critical linkages between the existing town of Dunnigan, the DSP and the regional circulation system, including I-5. These roadways are typically four lanes with six-foot wide on-street bike lanes and landscape-separated sidewalks. The street section may have a landscaped center median. Parking is prohibited on primary roadways and access is controlled with limited driveway interruptions as allowed by County design standards. Applicable street sections are Sections A, B, C, D, E and Q with right-of-way requirements ranging from 81.5 feet to 130 feet. CR 6, CR 8 and CR 99W are all primary roadways. The main north-south roadway through the project is also a four-lane primary roadway near CR 6. Street Section P is specific to CR 99W as it transitions back to a rural roadway section.

The Yolo County General Plan identifies portions of CR 6 and CR 99W as potentially requiring up to four lanes. CR 6 was designated for a four-lane section between CR 99W and the Tehama Colusa Canal and CR 99W was designated for four lanes between CR 2 and CR 8. The DSP does not require four lanes throughout the full length of these sections to comply with the General Plan's LOS threshold. Sufficient right-of-way exists to accommodate four lanes if they are required in a timeframe beyond build out of the DSP.

### 4.5.2 Collector Streets

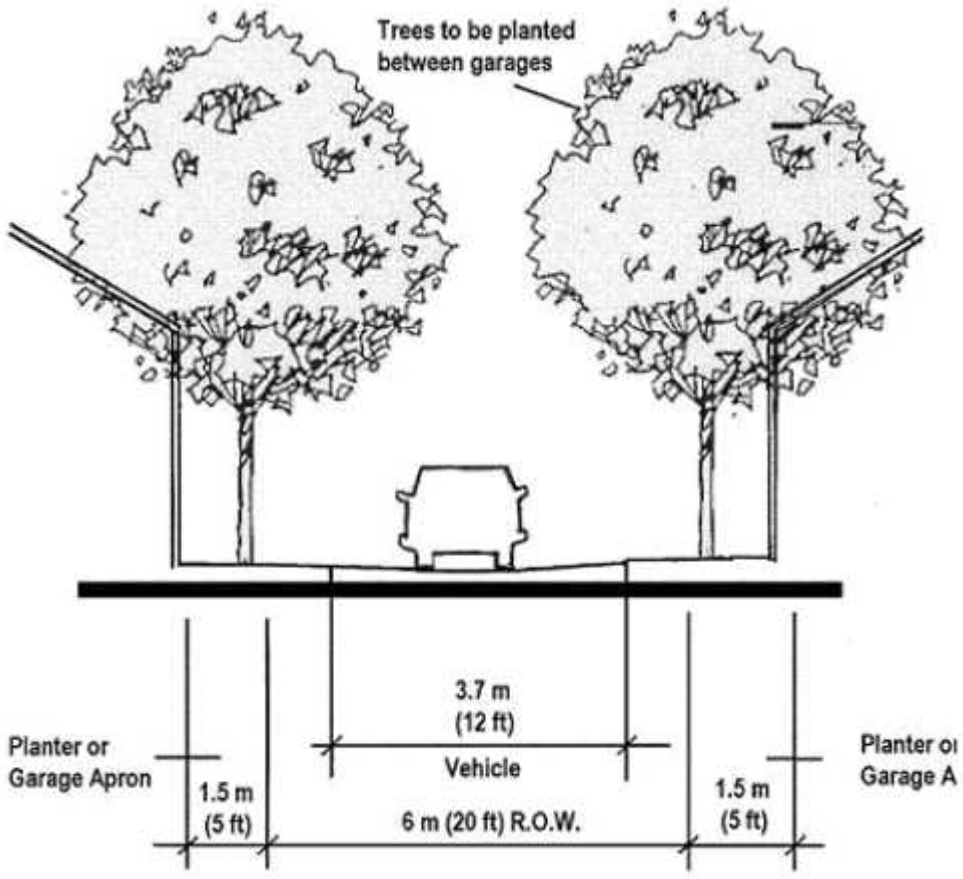
Collector streets are secondary circulation routes that distribute trips from the arterial or primary street system to the local street network. Collector streets are two-lane roadways with or without on-street parking and landscaping. All have sidewalks and vertical curbs. In some cases, landscaped parkways between the travel lane and sidewalks are replaced with intermittent parallel parking. The DSP also proposes back-in angled parking on roadway segments near the proposed town center and mixed-use development. Back-in angled parking is generally more bicycle-friendly than front-in angled parking (see picture below). Applicable street sections are Sections F, G, H, I, J and K.

### 4.5.3 Local Streets

Local streets provide direct access to adjacent land uses and connections to collector streets. These streets are integrated with the arterials and collectors as well as the Green Modes Network discussed in Section 4.6 to create a complete network that promotes walking, bicycling, NEV use and accommodate the movement and parking of vehicles. Local streets are loaded with driveways, include two travel lanes, and may include on-street parking and attached or detached sidewalks. Local streets do not contain bike lanes but in some instances will have Class III bike routes as depicted in Exhibit 4.4. Street Sections L, M, N and O are local streets.

Consistent with General Plan Policy CC-2.16G, the DSP requires the use of detached sidewalks and includes modified residential development standards to ensure their use. In addition, the DSP requires the use of single loaded roadways (i.e., parking only on one- side of the street) adjacent to walkways and open space areas, and the inclusion of entry elements at intersections with collector or arterial roadways. The pattern of local streets is largely bound by the detailed Circulation Plan layout in Exhibit 4.2, which is based on a grid pattern with short block lengths (i.e., less than 600 feet per General Plan Policy CC-2.16I), and will be finalized through the subdivision map for individual projects. The local street pattern should maximize connectivity and, to the extent feasible, eliminate barriers among residential uses and parks, schools, open space and service uses.

Where feasible, alleys may also be used to facilitate local circulation and access. If utilized, alleys will be identified through the subdivision map for individual projects. Alley cross sections can vary widely depending on whether they are used in residential, commercial, or mixed-use areas. The subdivision map shall provide cross-section details that will include the minimum specifications provided in the example below.




Source: http://www.fhwa.dot.gov/publications/research/safety/pedbike/05085/chapt5.cfm

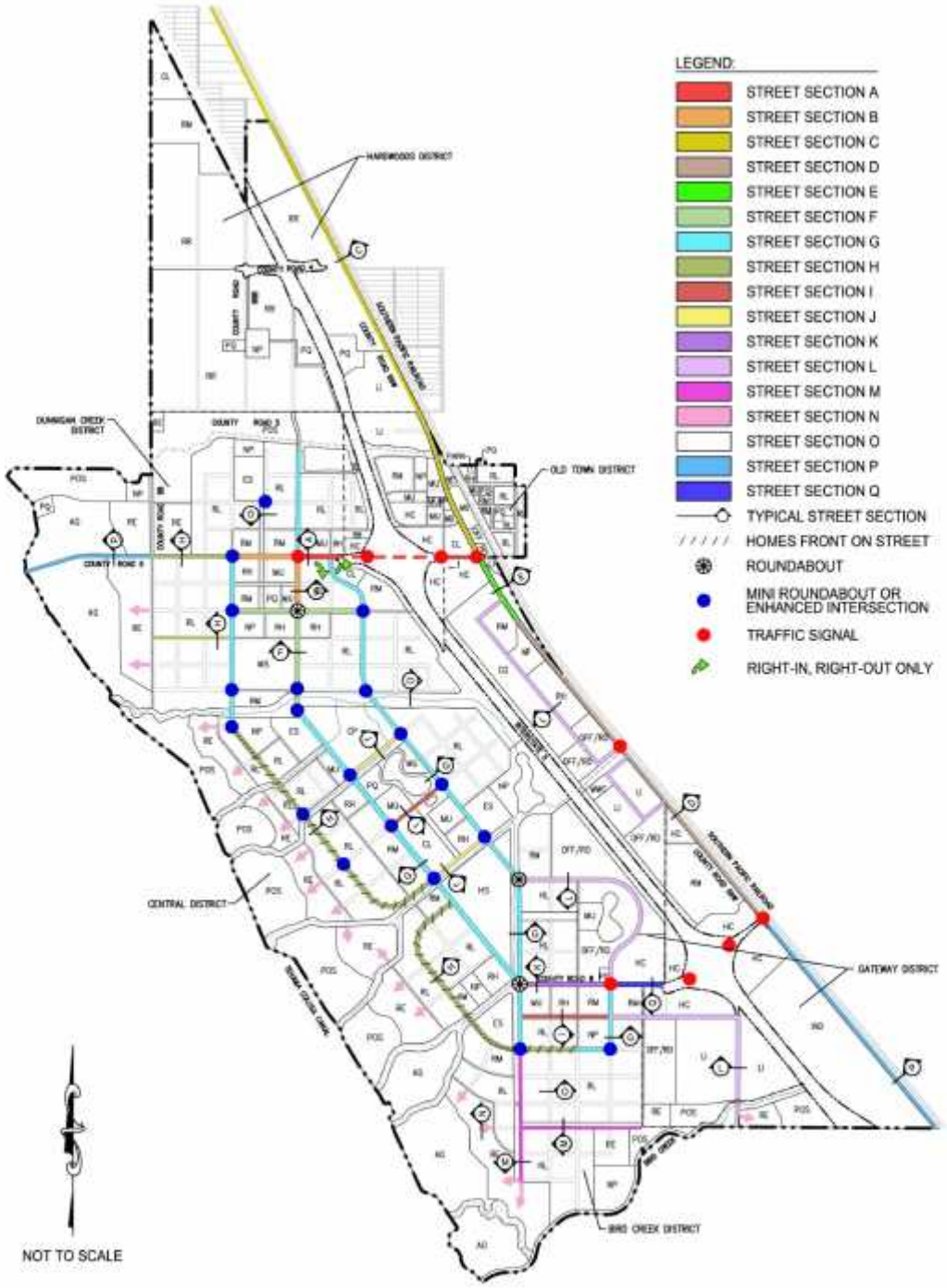
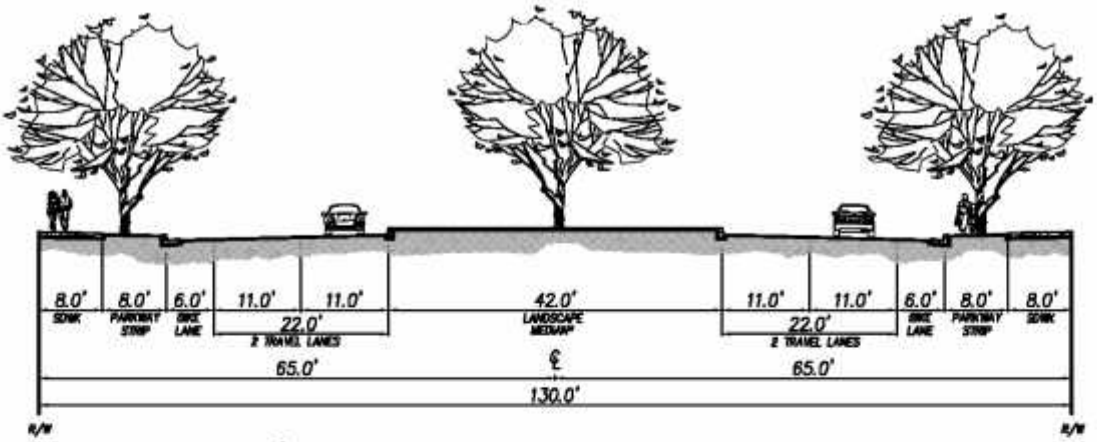
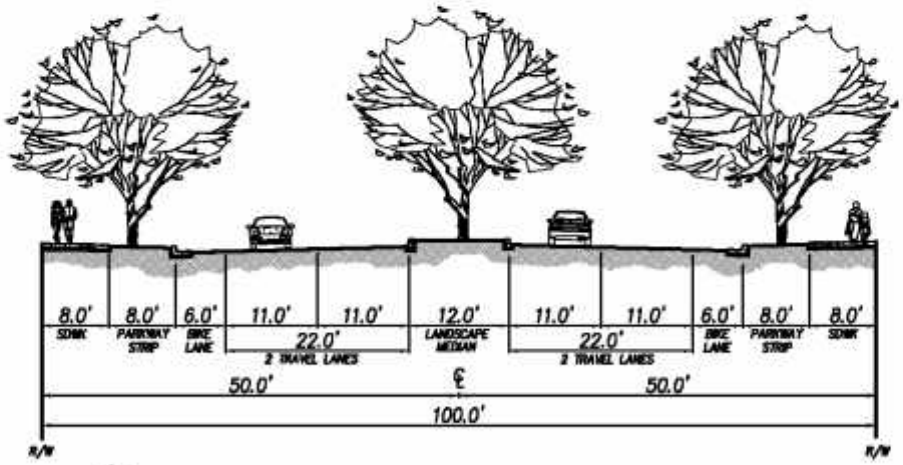



**Exhibit 4.2: Circulation Plan**

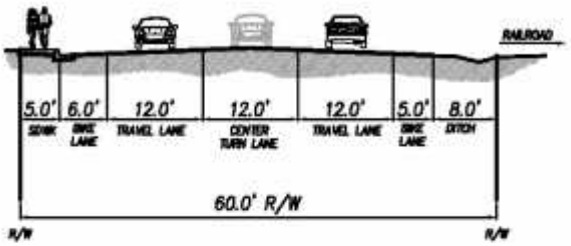



A COUNTY ROAD 6 AT INTERSTATE 5
SEPARATED SIDEWALKS, CL II BIKE LANES, MEDIAN*
NOT TO SCALE
* MEDIAN RESERVED FOR TURN LANES




B 4 LANE - DISTRICT CENTER
SEPARATED SIDEWALKS, CL II BIKE LANES, LANDSCAPE MEDIAN
NOT TO SCALE

**Exhibit 4.3: Street Sections**

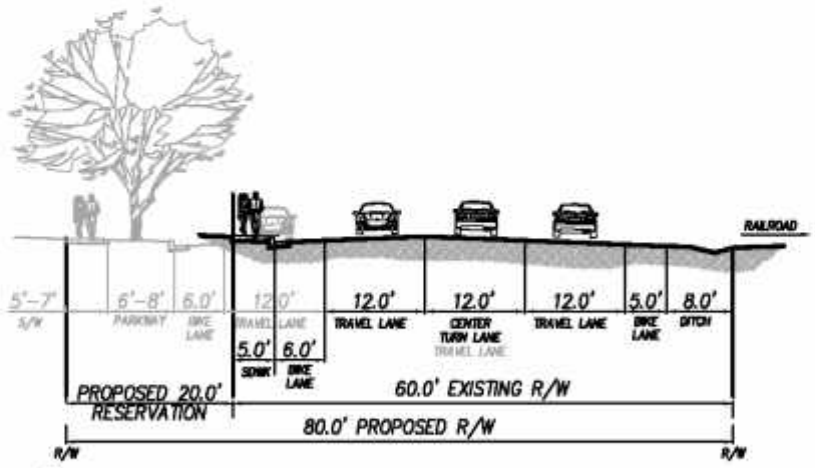



C

3 LANE - COUNTY ROAD 99W

ATTACHED SIDEWALK, CLASS II BIKE LANES, CENTER TURN LANE

NOT TO SCALE



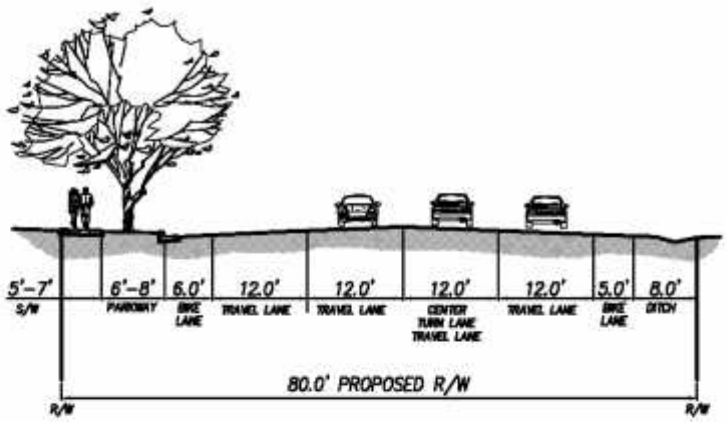

D

3 LANE - COUNTY ROAD 99W W/RESERVE

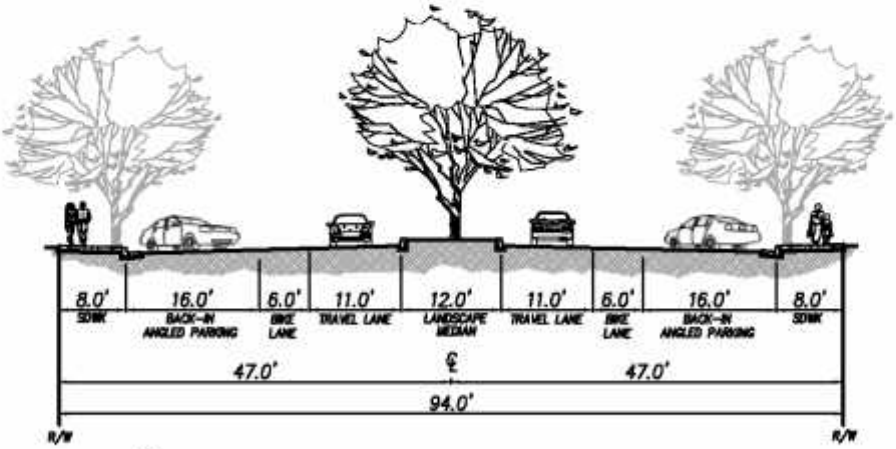
ATTACHED SIDEWALK, CLASS II BIKE LANES, CENTER TURN LANE
20' ROW RESERVATION FOR FUTURE 4-LANE EXPANSION

NOT TO SCALE

**Exhibit 4.3: Street Sections**

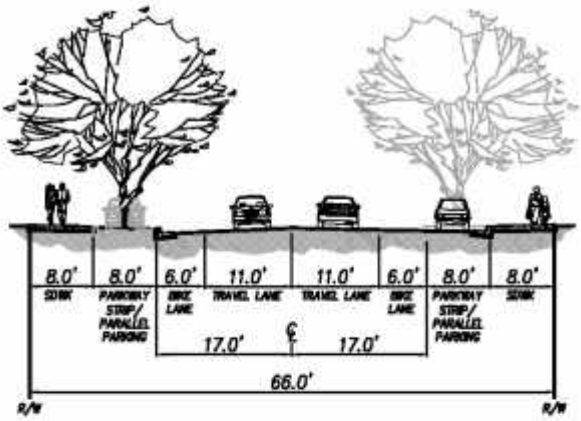



E **4 LANE - COUNTY ROAD 99W**
SEPARATED SIDEWALK, CL II BIKE LANES
NOT TO SCALE

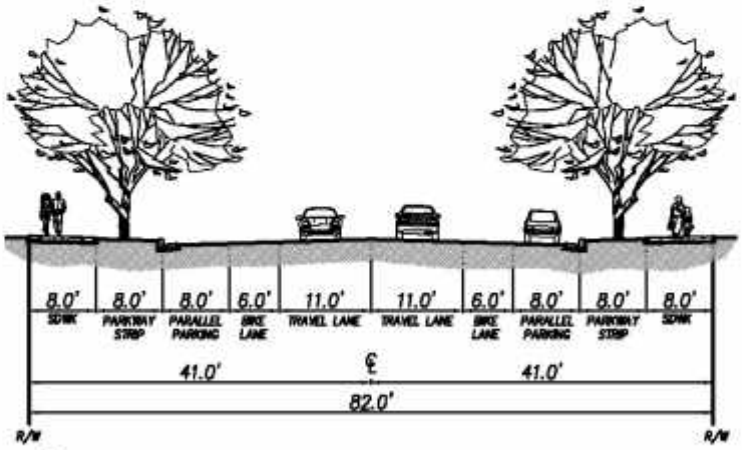



F **2 LANE - DUNNIGAN CREEK DISTRICT**
ATTACHED SIDEWALKS, CL II BIKE LANES,
BACK-IN ANGLED PARKING, LANDSCAPE MEDIAN
NOT TO SCALE

**Exhibit 4.3: Street Sections**

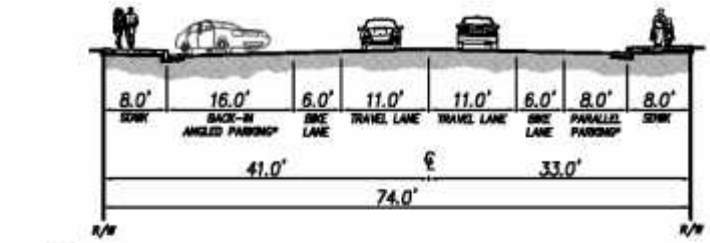



G 2 LANE - MAIN CORRIDOR
ATTACHED & DETACHED SIDEWALKS, CL II BIKE LANES, PARALLEL PARKING
NOT TO SCALE




H 2 LANE - MAIN RESIDENTIAL CORRIDOR
DETACHED SIDEWALKS, CL II BIKE LANES, PARALLEL PARKING
NOT TO SCALE

**Exhibit 4.3: Street Sections**



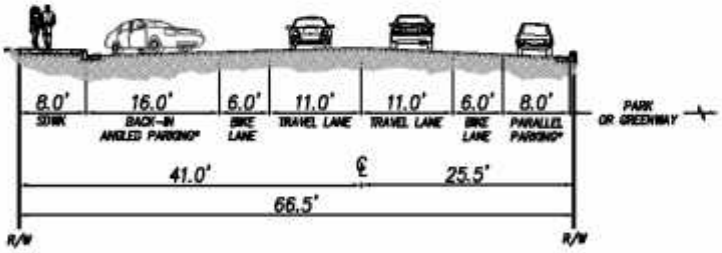

I

## 2 LANE - DISTRICT CENTER

ATTACHED SIDEWALKS, 6' BIKE LANE AND ON-STREET PARKING

NOT TO SCALE

* NO PARKING ADJACENT TO POS OR NP LAND USE.
BACK-IN ANGLED ADJACENT TO MU, RH, RM EXCEPT AT POS.




J

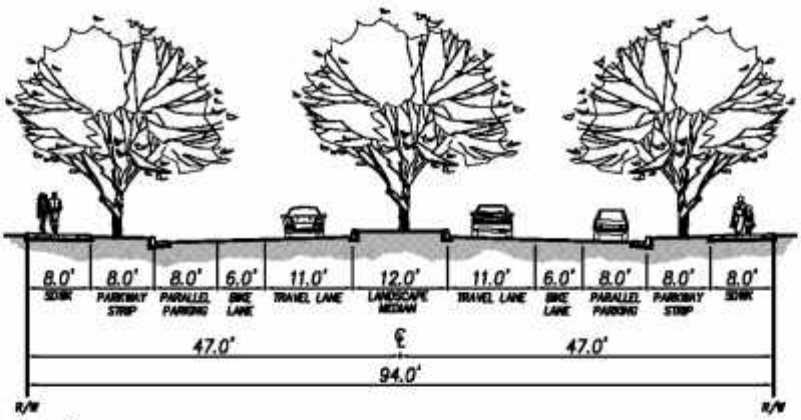
## 2 LANE - DISTRICT RECREATION

ATTACHED SIDEWALKS, CL II BIKE LANES,
BACK-IN ANGLED PARKING

NOT TO SCALE

* BACK -IN ANGLED PARKING ADJACENT TO MU,PQ,CL AND RH LAND USES
PARALLEL PARKING ADJACENT TO PARKS OR GREENWAYS

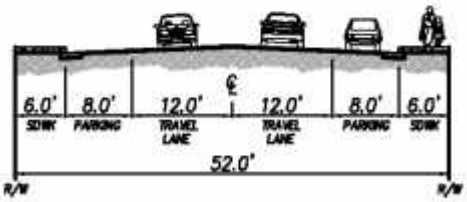
**Exhibit 4.3: Street Sections**




K 2 LANE - GATEWAY DISTRICT

SEPARATED SIDEWALKS, CL II BIKE LANES, PARALLEL PARKING, LANDSCAPE MEDIAN

NOT TO SCALE

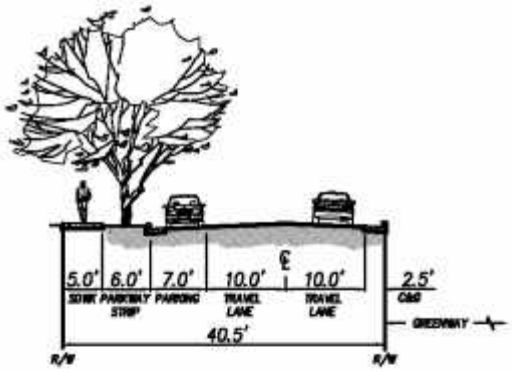



L 2 LANE -OFFICE/COMMERCIAL/INDUSTRIAL

ATTACHED SIDEWALKS, PARALLEL PARKING

NOT TO SCALE

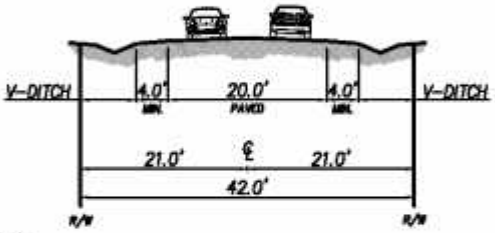
**Exhibit 4.3: Street Sections**




M

2 LANE - GREENWAY

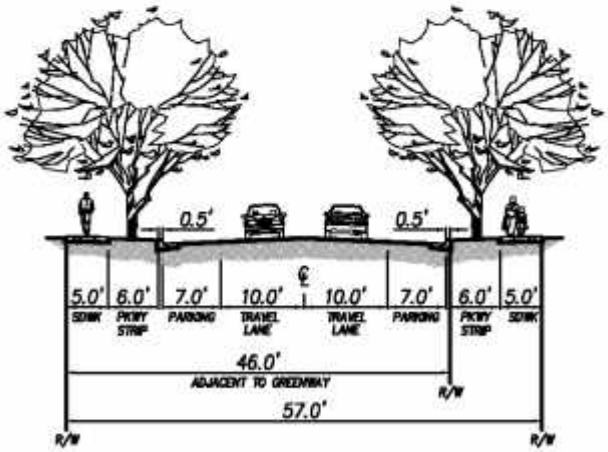
ATTACHED SIDEWALK , PARALLEL PARKING
ADJACENT TO NEIGHBORHOOD PARKS AND GREENWAYS
NOT TO SCALE




N

2 LANE - RURAL RESDIENTIAL

UNPAVED SHOULDERS
NOT TO SCALE

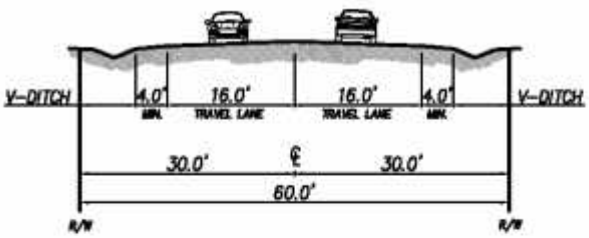



O

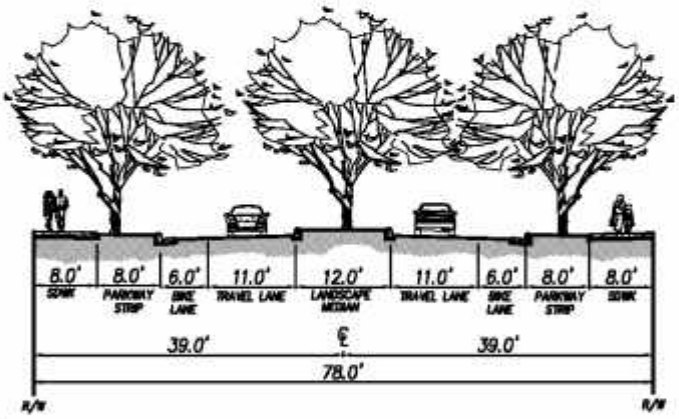
2 LANE- RESIDENTIAL

SEPARATED SIDEWALKS, PARALLEL PARKING
NOT TO SCALE

**Exhibit 4.3: Street Sections**




P 2 LANE YOLO CO. RURAL STREET SECTION
PAVED SHOULDERS
NOT TO SCALE




Q COUNTY ROAD 8 AT INTERSTATE 5
SEPARATED SIDEWALKS, CL II BIKE LANES, LANDSCAPE MEDIAN
NOT TO SCALE

**Exhibit 4.3: Street Sections**

## 4.6 GREEN MODES NETWORK

Exhibit 4.4 displays the DSP's "green modes" network, which consists of designated corridors for bicycles and pedestrians and compliments the street network where vehicles, NEVs, bicycles, and pedestrians will all mix. This multimodal network is an important component for connectivity and promoting non-vehicular travel in the DSP. The green modes network has been designed to allow intuitive and efficient movement throughout the Plan Area and provide linkages to the existing Dunnigan community and includes the following features.

- Sidewalks
- On-street Class II and Class III bikeways
- Off-street Class I bike paths
- Trails

As described in Section 4.6.3, NEVs will be accommodated within roadway travel lanes, which are intended to be posted for speeds of 35 miles per hour or less to allow full NEV access throughout the Plan Area.

### 4.6.1 Pedestrian Network

A primary objective of the DSP is the provision of a pedestrian-friendly, walkable community. Mobility for pedestrians is provided through a complete network of sidewalks and paths throughout the Plan Area. Nearly all street sections accommodate pedestrians with either attached or landscape-separated sidewalks. Exceptions occur for rural roadway sections where limited pedestrian activity is anticipated. Where attached, sidewalks are adjacent to vertical curb, which offers a higher degree of safety than rolled curb. Sidewalk width varies from five to eight feet, depending on the propensity of adjacent land uses to attract pedestrian trips. The DSP is designed with a consistent 600-foot grid roadway network intended to provide superior access for all modes and balance vehicle traffic across multiple streets. Pedestrians will also have full access to Class I bikeways described in Section 4.6.2. Pedestrian access will be focused across I-5 at the CR-6 interchange and via an exclusive pedestrian / bicycle / NEV overcrossing mid-way between the two interchanges.

### 4.6.2 Bicycle Network

Bikeways are classified as one of three categories illustrated in Exhibit 4.5. The Class I bikeway system provides off-street connectivity within the Plan Area for both cyclists and pedestrians. In addition, the paths accommodate emergency and maintenance vehicle access to open space areas. The Class I system has been designed to minimize barriers and reduce potential travel disruptions. The DSP promotes frequent connections between the Class I system and adjacent uses. Where a street is adjacent to open space, a park or a walkway, the Class I bike path (separated from the street) may replace the standard sidewalk. Where a cul-de-sac or loop street, multi-family or non-residential project is adjacent to the Class I path, a paved connection will be provided. The Class I system within an open space area may meander to minimize environmental impacts and create visual interest. Barriers (e.g., bollards, rail fence, post and cable, posts, etc.) will be provided along bike paths within open space areas. The barriers shall comply with any federal or state permits regarding use of the open space area, and with Yolo County design, maintenance and public safety requirements. Bicycle access will be focused

across I-5 at the CR-6 interchange and via an exclusive pedestrian / bicycle / NEV overcrossing mid-way between the two interchanges.

Class II bike lanes are designated on-street bike routes, six-feet wide delineated with signage and striping. Bicycle traffic is allowed along all local streets, with some designated as Class III bicycle routes. The figure below provides photos of each bikeway classification.

Class I Bikeway (Bike Path)

Class II Bikeway (Bike Lanes)

Class III Bikeway (Bike Route)

**Bikeway Examples**

### 4.6.3 Neighborhood Electric Vehicles

NEVs are small, electric-powered personal vehicles, and are suitable vehicles for short local trips. While they may look like a golf cart, NEVs are actually motor vehicles that can be driven on public streets with certain restrictions which include: a driver's license, Vehicle Identification Number (VIN), registration, insurance, and adherence to vehicle safety standards. In 1994, the Federal Department of Transportation defined the street-legal Low Speed Vehicle (LSV) in the Code of Federal Regulations. NEVs are a federally-recognized sub-class of LSV. NEVs are limited to 25 miles per hour (mph) by federal requirements, and may be driven on streets with speed zones of 35 mph or less. NEVs do not produce vehicle emissions and trips are considered as "green" VMT. The energy required to operate an NEV is less than one-fifth when compared to a conventional vehicle.

The NEV concept is not new to Yolo County. In 2009, The County of Yolo, the City of Davis, and the City of Woodland sponsored a public outreach and planning process to jointly develop the Davis-Woodland Alternative Transportation Corridor Feasibility Study which evaluated pedestrian, bicycle and NEV alternatives.

The DSP encourages NEV use within the DSP by providing infrastructure consistent with NEV travel and amenities that make travel convenient. Specific design standards that shall apply to the DSP are listed below.

a) All DSP roadways are intended to have posted speeds at or below 35 mph (exceptions may include portions of CR 6 and CR 99W).
b) The pedestrian and bicycle I-5 overcrossing described in Section 4.4.2 will be designed to accommodate NEVs.
c) A minimum of three charging stations capable of charging NEV and electric passenger vehicles will be provided within the Plan Area as shown in Exhibit 4-4. Since vehicle and charging technology is evolving quickly, the charging station could use fixed equipment as in the example above or possibly wireless technology that relies on pads or in-pavement components such as the example, which may also create the opportunity for more locations.
d) All charging stations shall conform to applicable Yolo County electrical design standards.

**Typical NEV Charging Station**

**Example of Wireless Charging Station**

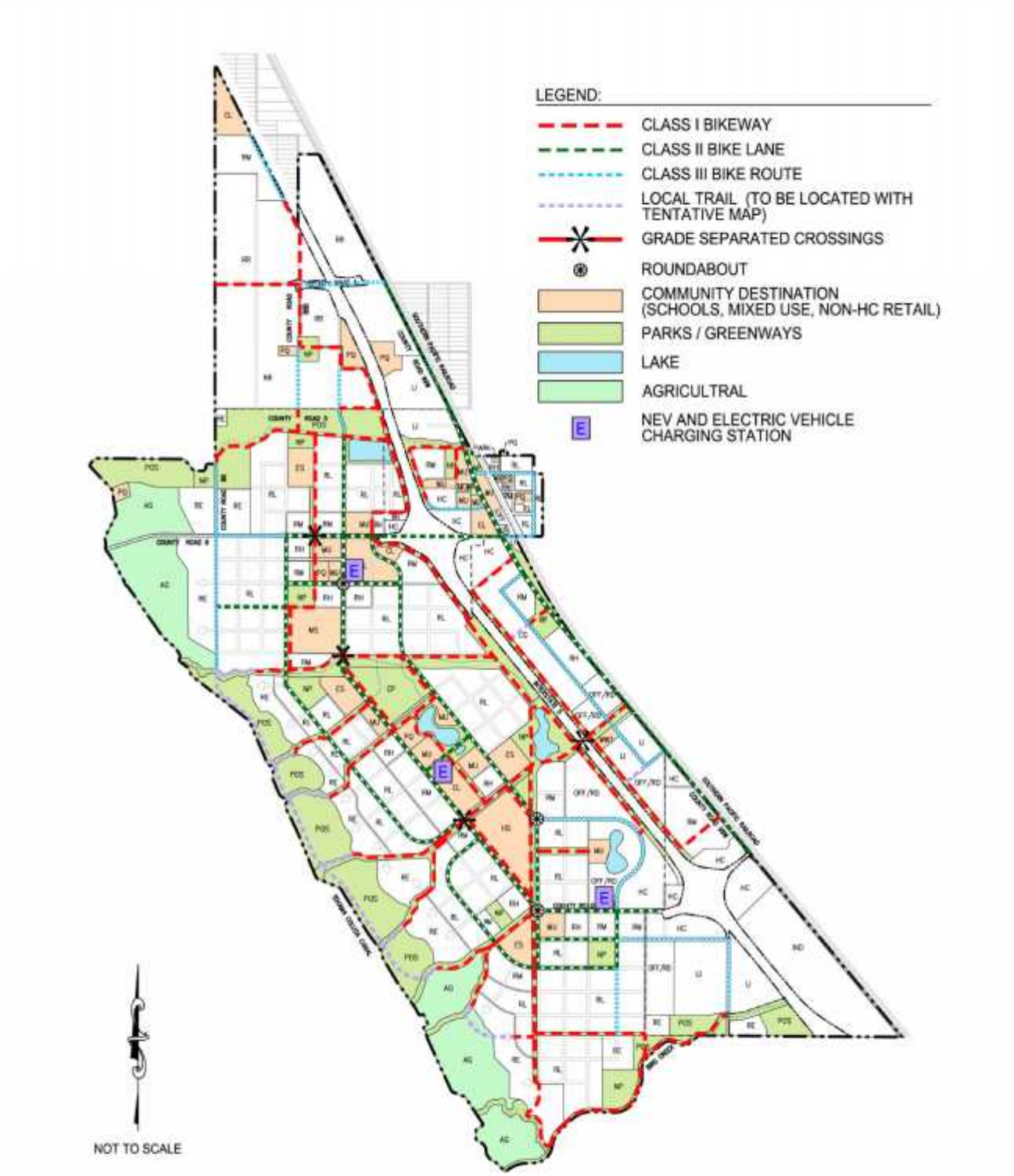
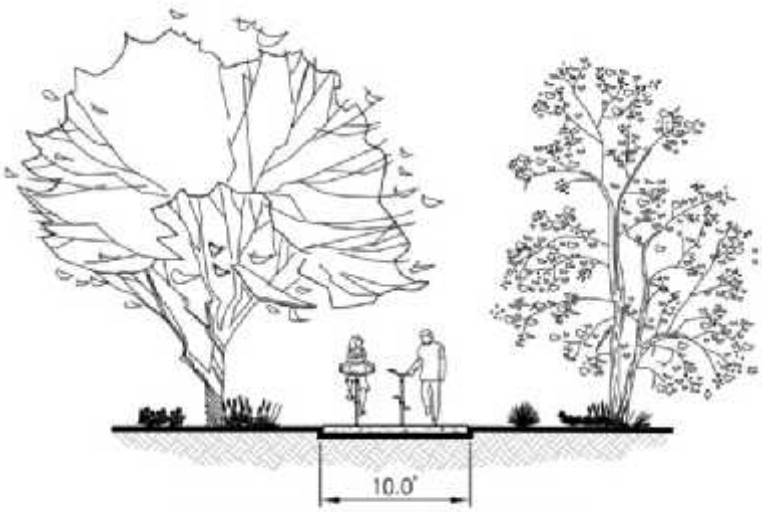



**Exhibit 4.4: Green Modes Plan**



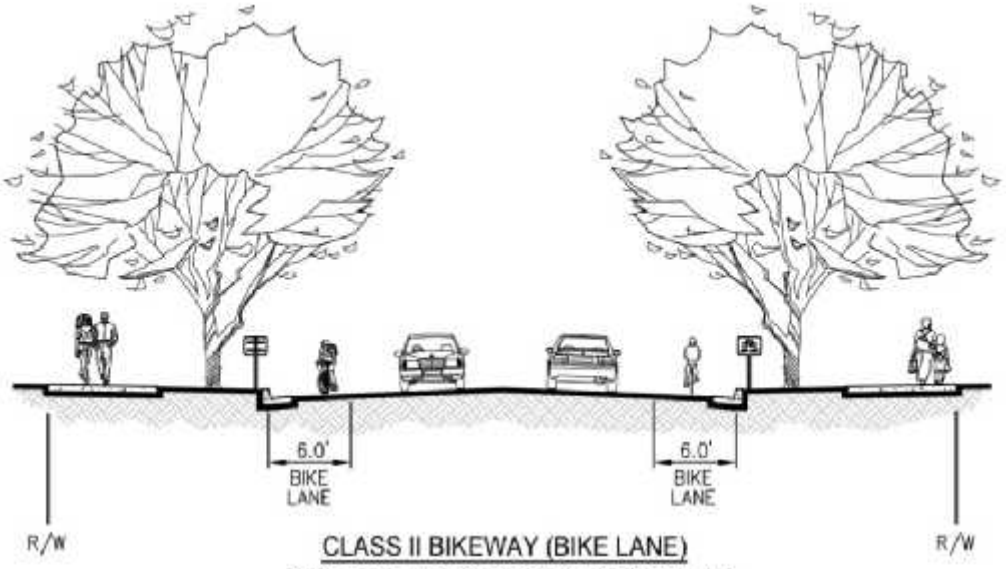





**Exhibit 4.5: Bikeway Classifications**

## 4.7 INTERSECTION DESIGN AND OPERATIONS

Intersections within the DSP rely on a variety of traffic controls and design features to accommodate all users. For key intersections, the traffic controls include traffic signals, roundabouts, mini-roundabouts, and stop signs. Where possible, the DSP will limit the use of all-way stop control and traffic signals in favor of roundabout control. All-way stop control will be considered as a temporary measure before traffic signal installation, or permanently, at locations where roundabout control is not desirable due to constraints such as geometrics, site constraints, or costs. Installing unwarranted stop controls can lead to non-compliance. For this reason, the DSP proposes to leave the majority of internal intersections within low-density residential areas as uncontrolled intersections until actual conditions suggest that control is warranted. Side-street stop controls will be used on minor street approaches to major roadways not otherwise controlled by a roundabout or signal.

### 4.7.1 Signalized Intersections

Based on the proposed roadway cross-sections and planning-level traffic analysis, ten signalized intersections are proposed within the DSP. At build out, these locations are expected to experience the highest levels of conflicting traffic volumes and require signalization. All signalized intersections will be constructed in accordance with Yolo County Improvements Standards or as otherwise required by the Public Works Director for specific projects. During initial project phases, it is reasonable to install temporary all-way stop control at some locations until the traffic signal operation is warranted.

### 4.7.2 Enhanced Intersections

Select intersections, which are identified on Exhibit 4.2, shall have enhanced streetscape treatments. The actual intersection treatment will be location-specific in response to traffic volumes, adjacent land use, and the physical environment. Roundabouts and mini-roundabouts will be used to serve the dual purpose of traffic control and traffic calming through speed management. These and other intersection treatments are described below.

#### 4.7.2.1 Roundabouts

Exhibit 4.2 identifies three standard roundabout intersections and up to 19 other intersections that qualify for mini-roundabouts or enhanced treatments. At locations where roundabouts are proposed, adequate right-of-way, which is typically more than at traditional intersection, must be provided in the initial planning stages. The roundabout design shall include all the features displayed in the sample layout shown in Exhibit 4.6. Roundabouts, as opposed to mini-roundabouts described in the next section, shall be used for major roadways where traffic demand and potential truck traffic necessitates enhanced treatment and where consistent maneuvering speed is essential for safe and efficient travel through the intersection.


**Exhibit 4.6: Typical Compact Roundabout**
Source: Fehr & Peers, 2011

- The final roundabout designs shall conform to Yolo County design standards.

Intersections near schools and other land uses associated with high pedestrian traffic should be designed with traditional roundabout features including non-mountable splitter islands with an adequate pedestrian refuge area and landscape-separated sidewalks adjacent to the roundabout. Roundabouts are also an effective treatment at skewed-angle intersections or locations were a geometric design issue may not be resolved with convention intersection design.

The preference for roundabouts within the DSP is due to research indicating that roundabouts are both safer and more efficient than conventional intersection control (e.g., traffic signals or stop signs). The following benefits have been realized and are supported by extensive research on U.S. roundabouts:

- *Safety* – Research indicates that collisions occur less frequently and are less severe than at signalized intersections.

  - The number of possible conflict points between vehicles decreases from 32 at a four-way intersection, to 8 conflict points at a roundabout.
  - Vehicle speeds at roundabouts are much lower, generally less than 20mph. Lower speeds equate to shorter required braking distances.
  - Roundabout design eliminates right angle and head-on collisions, which are typically the most severe.
- *Cost Savings* – Construction costs are generally less than or equal to a signalized intersection. Maintenance costs are typically lower.
- *Reduced Delay* – By yielding at the entry rather than stopping, vehicle delay is typically reduced.
- *Capacity* – A roundabout may accommodate more vehicles than a signal given the same right-of-way. In particular, intersections with a high volume of left turns may be accommodated better by a roundabout than a multi-phased traffic signal.
- *Environment* – Roundabouts generally operate with fewer delays. A reduction in delay corresponds to a decrease in fuel consumption, air pollution, and greenhouse gases.
- *Aesthetics* – The central island and splitter islands provide an opportunity to provide landscaping. Roundabouts can also serve as gateway features.

#### 4.7.2.2 Mini-roundabouts

Mini-roundabouts can generally fit within typical intersection right-of-way footprints when street cross sections (measured from the face of curb) are 34 feet or larger. It is possible to accommodate a mini-roundabout on a narrow street; however, intersection widening or curb realignment may be required. With the exception of DSP street Sections M, N and Q, all local street cross sections can accommodate a mini-roundabout strictly based on dimension. According to *Roundabouts: An Informational Guide*, FHWA, 2000, mini-roundabout feasibility should not just be based on physical dimensions but should also consider traffic volumes. The mini-roundabouts are feasible at locations with a total entering daily volume of 15,000 or less, which would apply to all the proposed intersections shown in Exhibit 4.2. Also, the minor street traffic needs to provide at least 10 percent of the daily volume so that major street drivers do not become conditioned to no cross traffic. The mini-roundabout design shall include all the features displayed in the sample layout shown in Exhibit 4.7.

#### 4.7.2.3 Other Intersection Streetscape Enhancements

The DSP will benefit from other enhanced streetscape treatment, which can aid in reducing pedestrian crossing times, lowering vehicle speeds, and improving intersection visibility. The intersection treatments illustrated in Exhibit 4.8 are examples of roadway narrowing (e.g., curb extensions, medians), pedestrian safety (e.g., refuge islands, enhanced crosswalks) and aesthetic treatments (e.g., colored/textured roadway) that all signify a special roadway condition warranting slower speeds and driver attention. All measures are intended to compliment intersection traffic controls and provide traffic calming.

Many of the measures described previously as intersection streetscape enhancements can be augmented for use at mid-block locations. Raised crosswalks are also effective traffic calming measures that provide additional emphasis at key crossings. Chicanes or lateral shifts in the

roadway are useful for visually "breaking up" long stretches of roadway. Both strategies may be appropriate to use in the DSP, especially near greenway Class I bike trail crossings. Care must be taken to assess the impact such features may have on parking and drainage.

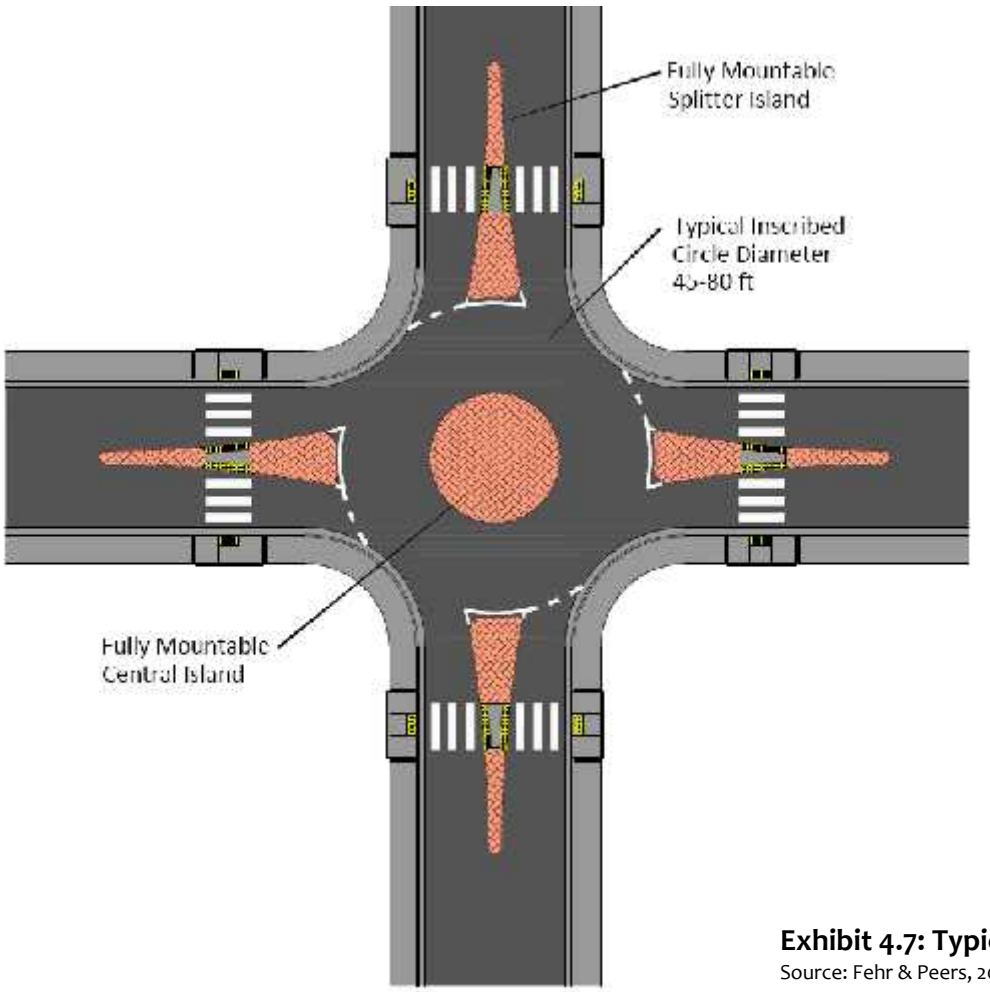



**Exhibit 4.7: Typical Mini Roundabout**
Source: Fehr & Peers, 2011

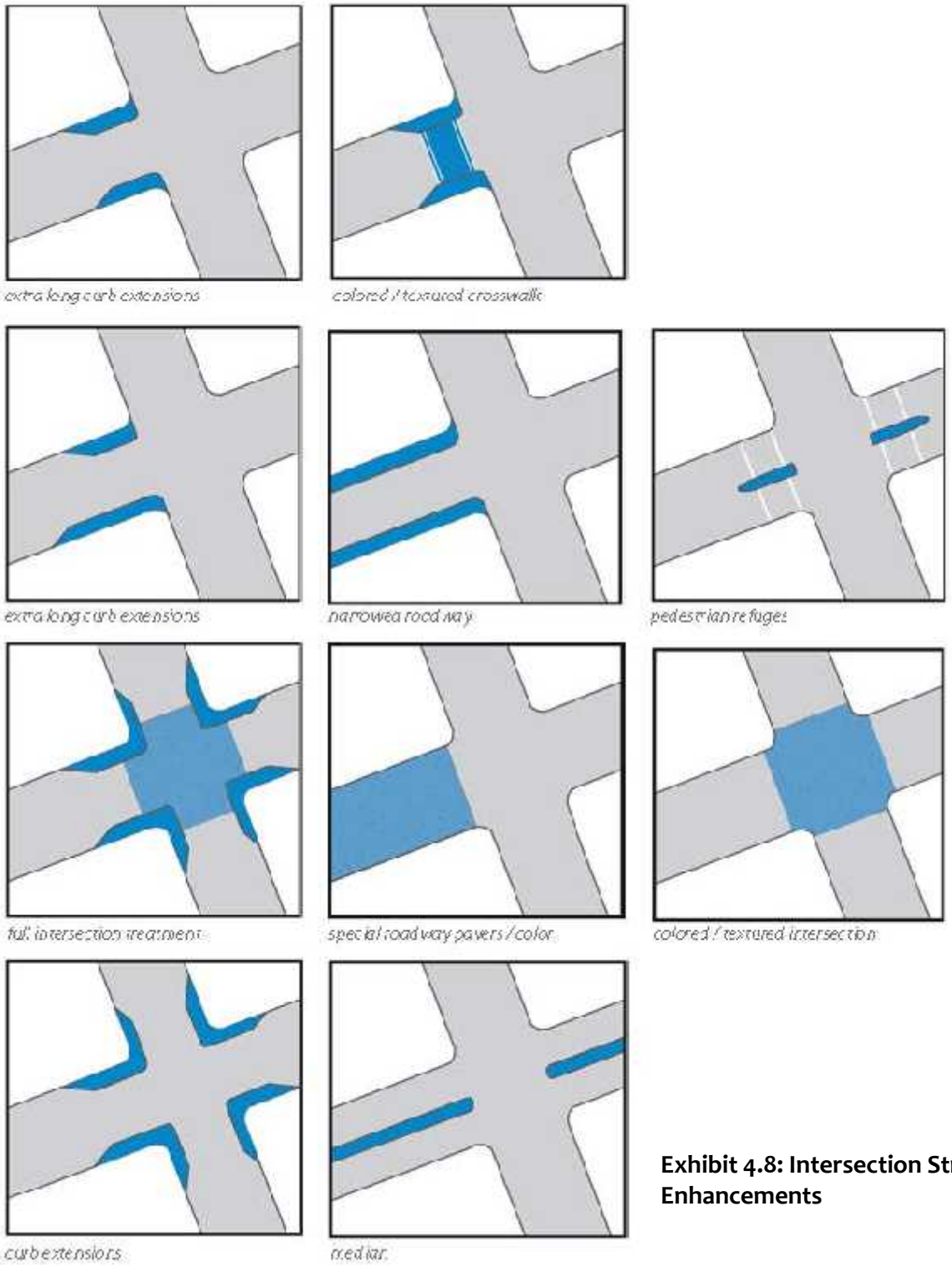



**Exhibit 4.8: Intersection Streetscape Enhancements**

Source: Good Design. Urban Design, Streetscape, and Sustainable Development, Best Practices for Downtown Olympia, April 2009.

## 4.8 PUBLIC TRANSIT

The Yolo County Transit District (YCTD) is the sole provider of public transportation (Yolobus) in the area and presently offers limited serve to Dunnigan. The current Yolobus route 217, operates between the County Fair Mall Transit Center in Woodland, located on East Street, and Campers Inn Golf Resort in Dunnigan, located on County Road 88 north of County Road 4. There are two other stops in Dunnigan along County Road 99W - at the Dunnigan Mobile Home Park and the Dunnigan Post Office. Route 217 provides one morning and one afternoon trip Monday and Thursday only. The DSP transit plan is based on an evolving expansion of YCTD service to Dunnigan as the DSP develops over time and transit funding allows. As required by the Yolo County General Plan Action CI-A6, the key transit service targets are as follows:

- Target 1 – Offer vanpool service.
- Target 2 - Expand current transit service to daily service with hourly headways.

Targets will be assessed for each phase of the DSP and through household travel surveys as specified by General Plan Action CI-A6.

To facilitate the expansion and use of transit, the highest intensity land uses in the DSP have been located within close proximity to major transportation corridors and are prime locations for potential transit stops. These uses include high density residential and employment supported by a comprehensive pedestrian network.

For transit to best serve Dunnigan as a reliable and attractive transportation mode, the following investments will be required: increase frequency of intercity service; expand routing through the DSP; provide strategic connections to existing multimodal transit centers and, present attractive transit amenities and fleet vehicles. Providing effective transit service is important to the DSP and consistent with YCTD Draft Short Range Transit Plan top priorities: to increase service to primarily infill and new development areas; ensure service levels and improvement projects are fiscally sustainable; and, to meet special transportation needs, especially those of senior and disabled citizens.

Residents and businesses with the Plan Area will provide transit funding through the payment of sales and fuel taxes. To provide additional support for transit service within the DSP, the project financing plan will include a special district or similar financing mechanism to cover the costs of capital, operations, and maintenance consistent with Yolo County General Plan Policies CI-3.3B5, CI-3.12, CI-4.3, CI-6.1, CI-6.4, and Action CI-A22. The project's contribution towards transit service financing should consider the contribution project residents and businesses will make through conventional transit funding programs that rely on gas or sales taxes.

### 4.8.1 Initial Transit/Vanpool Service

Section 4.8.2 describes the ultimate transit service plan envisioned for the DSP. This system will evolve over time as the project phases are completed. During the earliest phases of the project, YCTD is expected to provide a phased, demand-based approach for providing transit services within the DSP. The routing would be similar, but service would be offered less frequently and possibly using vans or shuttles until demand warranted additional capacity.

According to YCTD, offering vanpool service will be a likely first step in developing full-service daily transit. This service would be supported by development in the initial phases and would be provided in coordination with the SACOG vanpool incentive program. This program currently (June 2012) pays $300 per month for six consecutive months (up to $1,800) for each qualifying vanpool. To qualify for the incentive program, one of two authorized vanpool vendors must be used: Enterprise or VPSI and a minimum of 6 passengers (including the driver) are required. The total annual cost depends on the number of passengers and number of vanpools, but would range from about $7,000 to $18,000 per vanpool. To ensure this service is promoted and understood by residents, a local Transportation Management Agency (TMA) or County Service Area (CSA) will be created within the Plan Area.

### 4.8.2 Intercity Service with Community Circulator (Ultimate Service Plan)

The DSP intends to mimic both intercity and local transit service currently offered within the Cities of Woodland and Davis. As Dunnigan grows as a regional population center, intercity service will link Dunnigan residents through YCTD service with major regional employment centers and Sacramento International Airport. For intercity service to be attractive to potential riders, travel times and convenience must be competitive with private vehicles. The ultimate intercity transit service will meet the following performance standards.

- Based on current transit service, existing Yolobus routes 42 and 42R (or their future equivalent) will be augmented to offer a direct connection between Dunnigan and the County Fair Mall Transit Center in Woodland. This service would likely replace or expand upon the existing route 217 with ultimate service being provided daily with hourly headways.
- Intercity routing will be based on Exhibit 4.9: Transit Plan and will utilize the CR 6 / I-5 interchange.
- One major transit center will be constructed as shown in Exhibit 4.9. The center will include a bus turnout adjacent to the roadway lane that includes sufficient space for at least three buses or a minimum of 200' with a concrete parking apron. The center will include a shelter, a minimum of five bicycle lockers, and lighting in compliance with Yolo County and YCTD design guidelines.

The intercity service route will be developed to also act as a community circulator within Dunnigan. Within Dunnigan, this local portion of the intercity service follows a clockwise route that is approximately five miles as shown in Exhibit 4.9: Transit Plan. This routing is subject to refinement especially with regards to the feasibility of left-turn movements onto Jones School Road that will be determined as part of future CR 6 interchange design studies. This local bus service will link residential neighborhoods to local trip generators such as retail, office and school uses. Neighborhood-oriented transit routes will provide convenient access to the new town center, Old Town Dunnigan, major office / research & development centers and commercial properties east of I-5. Operating similarly to a traditional community circulator, bus service within Dunnigan will utilize collector streets in addition to primary roadways. Medium- to high-density residential developments constitute the target market for this service. Bus stops will be conveniently located within these target areas with the majority of the Plan Area, having access to a route within ¼ mile as shown in Exhibit 4-9.

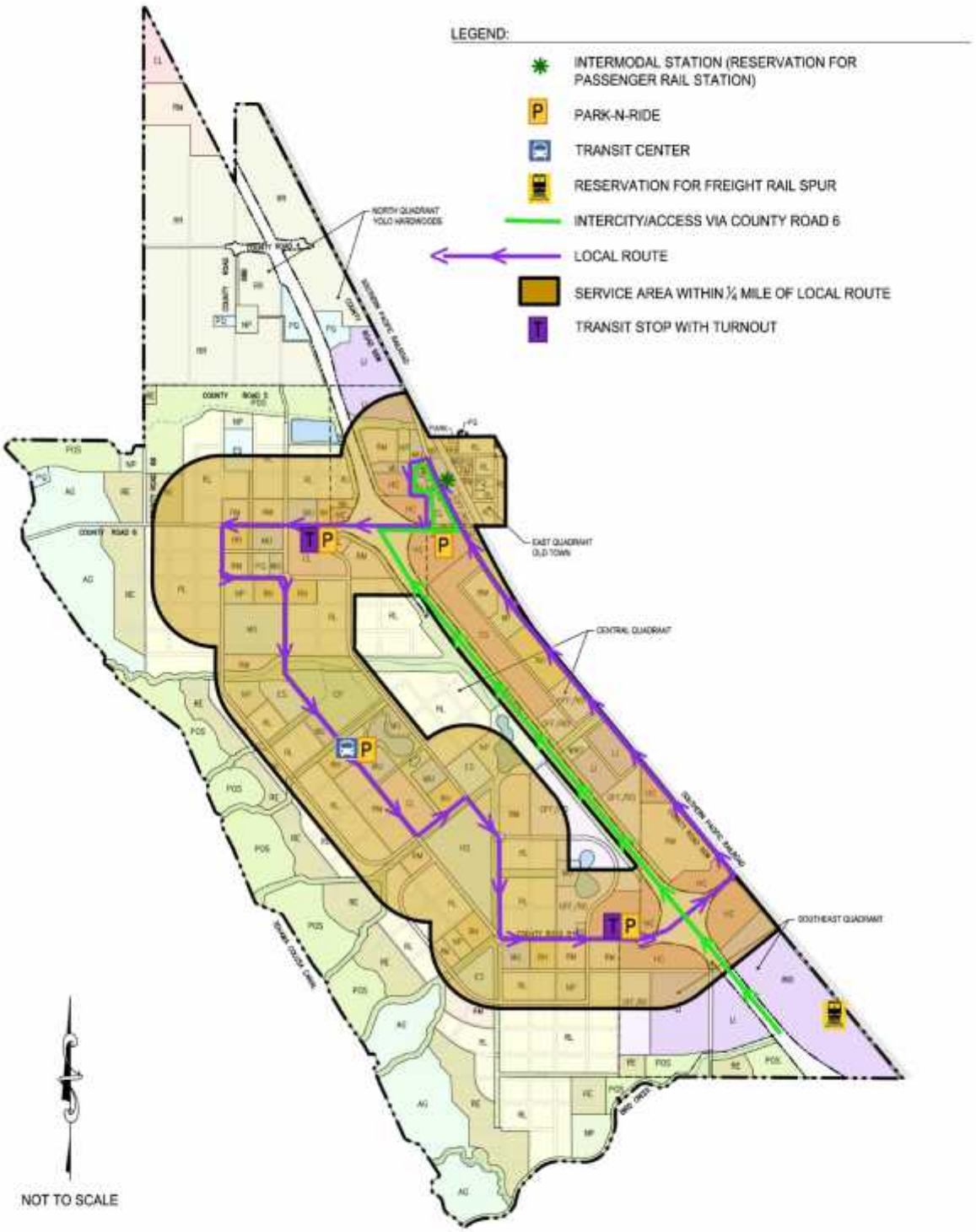



Exhibit 4.9: Transit Plan

### 4.8.3 Intermodal Station and Transit Center

The DSP provides convenient transit connections to local and regional multimodal facilities. Within Dunnigan, the historic downtown site is proposed as an intermodal station with the potential for passenger rail service and a transit center is proposed at the town center. Both facilities are intended to serve higher transit demand than a typical bus stop; therefore, more extensive infrastructure is required. The intermodal station will be designed to facilitate transfers between modes including commuter rail and bus transfer activity.

Both locations will be designed to accommodate bus layovers and passengers comfortably. Both locations are adjacent to mixed-use properties which have a high likelihood of providing attractive, supporting services. Long-term, secure bike parking should be provided at both locations. NEV charging stations shall also be prominent and convenient. Both locations will be in close proximity to park and ride lots and designed with passenger drop-off areas.

### 4.8.4 Bus Stops

Bus turnouts and bus stops shall be located consistent with General Plan Policy CI-6.11 (such as near neighborhood focal points and activity centers) and constructed in accordance with Yolo County Improvements Standards, YCTD requirements, or as otherwise required by the Public Works Director for specific projects. At a minimum, the project will construct the one major transit center and the two transit stops shown on Exhibit 4.9. These locations were identified in consultation with YCTD. Additional stops may be added and the locations of these stops are subject to change if future development patterns change. All stops will provide upgraded amenities including shelter, seating and lighting. Examples of an existing YCTD transit center and bus stop are shown below.

YCTD Bus Stop

YCTD Transit Center

### 4.8.5 Fleet Vehicles

A combination of vanpools, shuttles and full-size buses will be utilized. Vanpools have space for 9 to 15 passengers while shuttles typically accommodate 16 passengers, and full-size buses have room for up to 50 passengers. All newer vehicles have similar features, including low floors for easy boarding and wheelchair lifts or ramps.

### 4.8.6 Park and Ride

Park and ride lots provide parking for commuters to leave their vehicles to meet carpools, vanpools or access transit. In the DSP, a total of four formal park and ride lots are dispersed throughout the Plan Area in strategically-located commercial and office locations with freeway and transit access while also be adjacent to transit stops (refer to Exhibit 4.9: Transit Plan and Table 4.2). A Park and ride lot needs to be clearly visible from the surrounding area and major transportation access routes to encourage use, alleviate personal security concerns and decrease the potential for theft and vandalism.

Each of the following designated locations assumes the inclusion of joint-use park and ride spaces and a minimum of 5 secure bicycle lockers. Park and ride lots and spaces will be installed with project development and designed in accordance with Yolo County standards. Park and ride lots shall be available from sun-up to sundown on a daily basis. Caltrans offers maintenance and leasing agreements with local entities or private land-owners through the District 3 Park-N-Ride Program.

| **Table 4.2: Park and Ride Locations** | |
|---|---|
| PNR1: | Commercial Local (CL) near CR 6 west of I-5 |
| PNR2: | Highway Commercial (HC) adjacent to CR 6 east of I-5 |
| PNR3: | Office/Research Development (O/RD) adjacent to CR 8 east of I-5 |
| PNR4: | Urban Core Transit Center |

## 4.9 RAIL TRANSIT

The DSP accommodates both commuter passenger and freight rail to enhance mobility and facilitate economic development. The DSP will reserve right-of-way for a passenger rail station on the east side of CR 99W in Old Town Dunnigan near the proposed mixed-use development. The DSP will also reserve right-of-way for a freight rail spur for future industrial development south of CR 8.

## 4.10 VEHICLE MILES OF TRAVEL (VMT) REDUCTION STRATEGIES

The DSP includes the objective to achieve the 44 VMT generated per household per weekday target set by Policy CI-3.19 of the General Plan through a combination of project design features and vehicle trip reduction programs. By providing an integrated and "complete" community, the DSP envisions a high degree of trip internalization (i.e., multiple trip types can be satisfied locally as opposed to requiring travel outside the Plan area) as a key strategy in achieving this target. In addition to designing a complete community that provides a full range of opportunities for employment, schools, shopping, and recreation, the project seeks to have a relatively high percentage of residents working within the project, telecommuting, or using transit.[2]

[2] The American Communities Survey (2007-2011) estimated that less than forty percent (40%) of residents in the cities of Gilroy, Hollister, Los Banos, Orland, and Williams (and less than thirty percent (30%) of residents in Dixon and Winters) were employed within the City limits. In the Cities of Corcoran, Davis and Woodland, less than fifty percent (50%) of residents were employed within the City limits. (See Appendix Q, Table 3.)

Proximity to jobs and regional retail significantly impact VMT. For rural communities like Dunnigan, the distance to employment and shopping centers presents a significant challenge to achieving a lower VMT. The estimate of current weekday VMT generated by existing households in the Dunnigan-Knight's Landing area is approximately 88.[3] This is largely due to the long distance to the nearest major employment and regional shopping centers in Woodland, Davis, and Sacramento. Similar VMT rates can be expected in the DSP in early phases until sufficient employment plus local and regional shopping destinations are available within the Plan Area.

The DSP will allow future population and employment growth in northern Yolo County to occur in close proximity and within a community that has been designed to emphasize and encourage walking, bicycling, NEV use, and transit use. Table 4.3 compares year 2035 projections of VMT per household for DSP and communities throughout the region. These forecasts account for variety of urban design variables such as density, diversity of land use, and network design that help to reduce VMT. A contributing VMT factor is also the project's location. While being located farther away from other urban areas creates longer trip lengths for trips that leave the community, this longer distance also discourages people from making those longer distance trips if they can satisfy their desired activity within the community. The DSP has been designed as a full service community to reduce the need for external travel off-site. Similar communities in California were evaluated to determine how this combination of factors influenced the community's ability to internally capture trips. According to Census and American Community Survey (ACS) travel data, rural, isolated communities internalized between about 20 and 50 percent of their home-to-work trips. The actual performance of DSP is expected to be at the higher end of this range by build out but a variety of economic factors outside the control of the project and the County will influence performance over time. Hence, it is not possible to guarantee the project's VMT performance but the following outcomes have a relatively high level of confidence.

- The DSP will improve current weekday household generated VMT performance (88) for the larger Dunnigan-Knight's Landing area.
- The DSP will have less household generated VMT over time as the project matures and becomes a full service community.
- Trip reduction strategies can help to reduce DSP household generated VMT, but these strategies should be evaluated over time as part of ongoing monitoring or as part of each project phase. The most effective VMT reduction strategies for achieving the General Plan target of 44 will likely depend on specific circumstances associated with future conditions such as fuel costs and other factors that are outside of the County's regulatory control and would be difficult to predict at this time.

[3] Source: SACSIM07 regional travel demand simulation model, SACOG, 2009.

| Table 4.3 Year 2035 Projected Weekday VMT Generated Per Household without DSP Vehicle Trip Reduction Programs (1) | |
|---|---|
| ***Dunnigan Specific Plan (DSP) (2,3)*** | **53** |
| Dunnigan–Knights Landing (without DSP) | 84 |
| Woodland | 44 |
| Davis | 44 |
| Winters | 52 |
| North Natomas | 49 |
| Elk Grove | 57 |

Source: SACOG, 2009 and Fehr & Peers

DSP forecast is based on the Dunnigan Travel Forecasting Model developed by Dowling Associates and modified by Fehr & Peers. All other forecasts are based on SACSIM07 regional travel demand simulation model for SACOG 2007 Regional Analysis Districts.

Notes:

(1) DSP forecast is based on the Dunnigan Travel Forecasting Model developed by Dowling Associates and modified by Fehr & Peers. All other forecasts are based on SACSIM07 regional travel demand simulation model for SACOG 2007 Regional Analysis Districts

(2) This forecast accounts for the location and urban design characteristics of the DSP, but not potential program-related VMT reduction strategies. A variety of VMT reduction strategies has been included in the DSP, but which ones are implemented and their level of effectiveness will depend on conditions in the future that cannot be accurately predicted at this time.

(3) This forecast does not account for differences in future vehicle fleet or fuel mix that have occurred since the VMT target was created in the Yolo County General Plan.

As noted above, the DSP forecast of 53 VMT generated per household is largely the result of strategies that are reflected in the project's physical design and represented by the land use and circulation plans of the DSP. The project's isolated location is also a contributing factor. A summary of key design features that contribute towards the DSP forecast are listed in Table 4.4.

| Table 4.4: VMT Reduction Strategies Included in the DSP Through Project Design Features | |
|---|---|
| **VMT Gap Reduction Measure** | **Description** |
| ***Land Use Diversification*** | |
| Balanced mix of residential and non-residential land uses to minimize the potential for residents to travel off-site | Residential development in the DSP are designed to meet the demand that would be generated from non-residential development; Sufficient retail land use is provided to accommodate all local serving retail needs plus community-level retail needs; Schools are sized to accommodate all the K-12 students that would be generated by the project |
| ***Community Enhancement*** | |
| Pedestrian Network Improvements | Comprehensive pedestrian network consisting of paths, sidewalks, and roadway crossing treatments; Well-connected internal network linking land use and free of barriers; Connections to pedestrian facilities external to the site |
| Traffic Calming Measures | Roadway environments designed to promote reduced speeds and encourage pedestrian and bicycle trips; Project may include curb extensions, speed humps or tables, raised intersections, median islands, traffic circles and tight corner radii |
| Neighborhood Electric Vehicle Network | Comprehensive neighborhood electric vehicle network provided through a combination of roadways with a maximum posted speed limit of 35mph and designated off-street paths |
| Bike Parking in Non-Residential Projects | Short-term and long-term bicycle parking; Project may include a combination of bike racks, bike lockers, or secure, bike stations |
| Bike Lane Street Design (On-Site) | Comprehensive bicycle network consisting of bicycle lanes, routes and shared-use paths; Well-connected internal network linking land use and transit facilities; Connections to bicycle facilities external to the site |
| Bike Parking in Multi-Unit Residential Projects | Short-term and long-term bicycle parking; Project may include a combination of bike racks, bike lockers, or secure, bike stations |
| Electric Vehicle Parking | Provision of accessible electric vehicle parking |
| Dedicated Land for Bike Trails | Designated right-of-way for planned off-street bikeways consist with adopted comprehensive bicycle master plan |
| Complete Streets | Policy and design directing access and accommodation for all modes of travel and ability levels |
| Park and Ride Lots | Designated parking lots and spaces within larger lots intended as a convenient place to leave one or more vehicles for rideshare purposes; Location is usually proximate to freeway access |
| Live-Work Design and Zoning | Live-work elements in housing products; High-speed internet access; Permit and build secondary or accessory development units; Access to business services within neighborhoods. |

| Table 4.4: VMT Reduction Strategies Included in the DSP Through Project Design Features | |
|---|---|
| **VMT Gap Reduction Measure** | **Description** |
| End of Trip Facilities | Provision of showers, changing rooms, lockers and secure bike parking |
| Preferential Parking | Convenient, reserved parking for employees who rideshare |
| ***Transit System Improvements*** | |
| Transit Network | Comprehensive transit network with convenient and proximate access to project site; Well-connected internal network linking land use and activity centers; Connections to transit facilities external to the site |
| Bike Parking Near Transit | Short-term and long-term bicycle parking; Project will include a combination of bike racks, bike lockers, or secure, bike stations |
| Transit Access Improvements | Pedestrian and bicycle facilities are planned to connect to high quality transit stops and centers |

To reach the General Plan target of 44 VMT generated per household, the DSP will provide transportation services through a Transit Management Agency (TMA) or as a community service provided by the CSA. Depending upon VMT performance, the DSP may also need to implement other programs such as those listed in Table 4.5. These programs are designed to reduce vehicle trips that leave the Plan Area beyond what would be expected through the project's design features alone. Whether these programs will be required will be determined by market acceptance, feasibility, and VMT monitoring that will occur over time as required by Policy CI-3.19 and Action CI-A67. Monitoring is important because VMT can be influenced by market forces and a number of other factors outside the control of the project proponents or Yolo County. Further, a number of the strategies cannot be quantified at this time based on available data and research.

| Table 4.5: Strategies for the DSP to Reduce the Projected VMT Gap | |
|---|---|
| **VMT Gap Reduction Measure** | **Description (2)** |
| Jobs – Housing Programs | An employee-based housing program within the plan area that includes residential units that are dedicated for employees that work within the plan area. (1) |
| Employer-Based Transit | A dedicated transit service that connects DSP residents to major employers such as Cache Creek Casino and UC Davis. This service would be provided by DSP in cooperation with the major employers (1). |
| Car Sharing | On-demand access to a fleet of shared-vehicles; User fees are typically collected through an annual membership, mileage and hourly rates |

| Table 4.5: Strategies for the DSP to Reduce the Projected VMT Gap | |
|---|---|
| **VMT Gap Reduction Measure** | **Description (2)** |
| Transportation Management Association (TMA) (3) | Formalized organization to oversee transportation options and incentives; TMAs typically provide service within a specific geographic area and are supported by a member fee |
| Voluntary Commute Trip Reduction Program (3) | Employee assistance and incentives to reduce single occupant vehicle travel; Program consists of ride-matching, preferential carpool parking, flexible work schedules for carpools, part-time transportation coordinator; bike end of trip facilities; Program does not require monitoring or reporting |
| Mandatory Commute Trip Reduction Program | Employee assistance and incentives to reduce single occupant vehicle travel; Program consists of ride-matching, preferential carpool parking, flexible work schedules for carpools, part-time transportation coordinator; bike end of trip facilities; Program requires monitoring and reporting |
| Subsidized Transit Program | Discounted daily or monthly public transit passes |
| Telecommuting and Alternative Work Schedules | Flexible schedules, compressed work weeks or working remotely at or closer to home; Strategies to reduce the number of commute trips |
| Employer Sponsored Vanpool/Shuttle | Purchased or leased vans for commute use and the formation of vanpools; Shuttles providing employees direct access to transit stations and other primary destinations |
| Ridesharing Programs (3) | Formal rideshare matching service within organization or through TMA; Designated preferential parking |
| Trip Reduction Marketing (3) | New employee orientations, event promotions and publications regarding commute trip reduction measures |
| School-Pool Program | Incentivized rideshare matching for students |
| School Bus Program | Restore or expand school bus service |

Notes:
(1) The actual number of housing units or resident participants in the transit service will depend on VMT performance of the DSP based on monitoring
(2) More information regarding each of these measures, including their potential effectiveness in reducing VMT, is provided in the California Air Pollution Control Officers Association (CAPCOA), *Quantifying Greenhouse Gas Mitigation Measures*, August 2010
(3) Proposed as an early implementation measure

Many of the strategies in Table 4.5 focus on home-based work trips, which tend to be the most easily defined and predictable daily VMT generator. However, VMT is most often affected by home-based "other" trips. For example, home-to-work trips represent only about 20 percent of all daily travel. Home to shopping and other destinations such as school, recreation, etc., represent a much higher percentage ranging from 50-60 percent of all daily trips. Therefore, it is imperative to look at the effect of all trip types on VMT during the monitoring process and suggest relevant reduction strategies that can be most effective and suitable to the project.

Unique to the DSP, the project will also reduce regional VMT by satisfying unmet demand for housing and services along the I-5 corridor. For example, a resident in Arbuckle may currently need to travel to Woodland for shopping. By offering comparable services in the DSP, this trip can be intercepted resulting in a VMT reduction for a trip originating outside the Plan Area. The DSP will also provide opportunities for existing workers in Yolo County who commute long distances to reside closer to their jobs. For example, many Cache Creek Casino and UC Davis employees live far outside of Yolo County often due to affordability issues. By providing a range of housing in the DSP, current long distance work trips may be shortened.

# CHAPTER FIVE: PUBLIC UTILITIES

## 5.1 OVERVIEW

The goal of the Public Utilities chapter is to identify the necessary utilities required to serve the Dunnigan Specific Plan (DSP). This section provides an overview of the existing and future public utilities and identifies the backbone infrastructure necessary to serve the Plan Area. The intent of this chapter is to ensure the timely implementation of public utilities and services to maintain the specified levels of service for the Plan Area. Phasing of infrastructure improvements and funding obligations are detailed in the Public Facilities Financing Plan and the DSP Development Agreement.

### 5.1.1 Utility Services

The 3110 acre Dunnigan Specific Plan Area does not currently have the urban services or facilities that are required for development to occur. The intent is to form a County Service Area (CSA) for basic municipal utilities such as water, sewer, recycled water, and storm drain for new and existing communities. Table 5.1 lists the utility entities that will serve the Plan Area.

**Table 5.1 – Utility Providers**

| Utility | Provider/ Authority |
|---|---|
| Sanitary Sewer Collection | Dunnigan CSA |
| Sanitary Sewer Treatment | Dunnigan CSA |
| Water | Dunnigan Water District or Dunnigan CSA[1] |
| Recycled Water Wholesaler<br>Recycled Water Distribution | Dunnigan CSA |
| Drainage and Flood Control | Dunnigan CSA |
| Electric Service | Pacific Gas & Electric |
| Natural Gas | Pacific Gas & Electric |
| Telephone & Communications | To be determined |
| Cable TV and Broadband | To be determined |

[1] See discussion in Section 5.3 below pertaining to the water authority for the Dunnigan Specific Plan

## 5.2 GOALS AND POLICIES

It is the intent of the Plan Area to comply with the Yolo County 2030 General Plan Goals and Policies to ensure abundant, safe and sustainable public utilities and infrastructure to support the needs of existing and future generations, pursuant to the following principles:

- The Plan Area, through this document and future efforts, will coordinate with the water purveyors and water users to manage supplies to avoid long-term overdraft, water quality degradation and land subsidence. This will be accomplished by providing reliable

and sustainable water sources via surface water from the Tehama-Colusa canal paired with supplemental groundwater for the planned development demands.

- The Plan Area will incorporate the use of recycled water to reduce the demand on the ground water aquifer and for distribution and use to mitigate irrigation demands. Where feasible, water efficiency standards for appliances and fixtures higher than required by the minimum County regulations will be incorporated, offsetting the plan wide water demands.
- Future efforts in planning the water distribution system will include water quality education for the water users.
- The Plan Area will promote innovative and efficient options for sewage treatment and encourage the use of compact wastewater treatment facilities. The sewer service infrastructure will be extended to the existing developments within the Dunnigan Specific Plan Area boundary to reduce the potential for widespread septic system problems. The sewer infrastructure system will be designed for 200-year flood protection for the wastewater treatment facility.
- The Plan Area will increase the availability and reliability of power to rural areas and encourage expanded coverage and enhanced quality for communication technologies.

## 5.3 WATER SUPPLY AND DISTRIBUTION SYSTEM

This section describes the proposed water infrastructure plan for the Plan Area, in conformance with the intent of the following principles and guidelines:

- Prior to approval of the first tentative map or other development in the Plan Area, a comprehensive final Water Master Plan for the Plan Area will be completed to identify the final treatment, storage, and delivery systems, address well locations, phasing, and financing of water infrastructure. The water infrastructure plan will be consistent with the County's General Plan, and will meet the County's standard specifications or an acceptable alternative.
- In order to provide adequate fire flow to the service area, the water distribution system installed throughout the Plan Area will meet the requirements of the County including 3,500 gpm for two hour duration. Fire hydrants and water mains will be installed to meet applicable fire protection standards and County design standards.
- The final design will seek to reduce operational complexities and maintenance requirements of the system. The design will also seek opportunities for energy efficiency in the treatment and distribution of water.

### 5.3.1 Existing Water Supply and Distribution

The Plan Area is predominately included within the water service area of the Dunnigan Water District (DWD). Portions of Plan Area, primarily the Hardwoods and several smaller parcels are not within the pre-specific plan DWD service area. The District's service area, overlaid with the Plan Area boundary, is indicated on Exhibit 5.1. DWD's surface water supply is delivered via the Tehama-Colusa canal, which is a US Bureau of Reclamation (USBR) facility. DWD withdraws water from the canal via three existing turnouts and one existing pumping station. Two of the turnouts are located within the Plan Area boundary with the third located just north of the Plan Area. The DWD distributes the canal water via an existing distribution system within the District's service area. The DWD distribution system pulls water from the existing turnouts in the

Tehama-Colusa canal and distributes to the east, through existing canals to properties on the east side of Interstate 5. Deliveries are predominantly to agricultural users, with a nominal percentage (less than 10%) to industrial users.

The

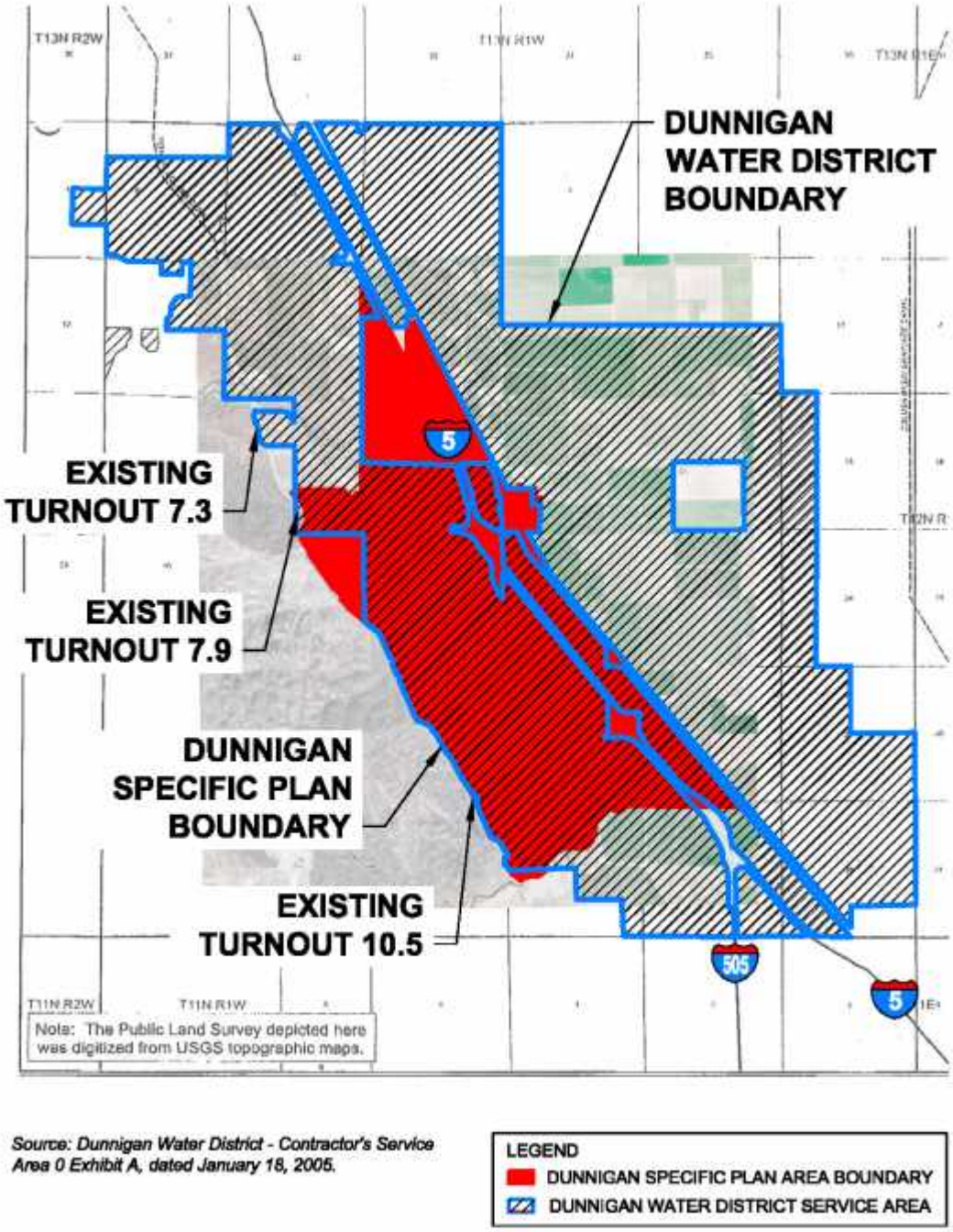



**Exhibit 5.1 Existing Water District Boundary**

primary source of potable water for the Plan Area will be supplied by DWD surface water allocation, withdrawn from the Tehama-Colusa Canal. DWD holds a contractual entitlement of 19,000 acre-feet per year of Central Valley Project (CVP) water, valid through 2025, with a right to renew. Actual deliveries have historically been less than the full contract amount because of lower demand. The existing agricultural water demand within the District is typically in the range 14,000 to 18,000 acre-feet of water per year. Decreases in agricultural demand will be offset by an increase in demand from new domestic and industrial uses within the Plan Area. By maximizing the use of surface water under DWD's existing CVP contract, potential impacts on local groundwater overdraft may be reduced. The annual per acre allocation of water supply available within the District at 100% CVP supply is 1.67 acre feet per acre, which amounts to a 5,194 acre foot annual allocation to the 3,110 acres Plan Area within the District in the post-annexation condition. In years when the full CVP allocation is available, surface water provided using the DWD pro rata allocation will be sufficient to meet 100% of Plan Area water demands at full-build out.

Existing residences and businesses in the Plan Area (including Old Town and the Hardwoods Area, together referred to as Existing Phase or "X") are served by private domestic wells not in the DWD. The existing mobile home park development, Country Fair Estates, located east of I-5 is served by its own community water system, not within the DWD, and an independent wastewater system.

### 5.3.2 Planned Water Supply and Distribution

The Plan Area water system will consist of a new potable municipal water system for domestic and municipal use and a non-potable system for the irrigation of landscape areas.

#### 5.3.2.1 Water Supply Assessment

The California Water Code requires coordination between land use lead agencies and public water suppliers to ensure that prudent water supply planning has been conducted and that planned water supplies are adequate to meet both existing and planned future project demands. Senate Bill 610 (Chapter 643, Statutes of 2001) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. The statute requires detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The statute also requires this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects.

California Water Code Sections 10910-10915 (amended by SB 610) require land use lead agencies to identify the public water system that may supply water for a proposed development project and to request from said public water system a water supply assessment ("WSA") for the project. The purpose of the WSA is to demonstrate that the public water system has sufficient water supplies to meet the water demands associated with the proposed project in addition to meeting the existing and planned future water demands projected for the next 20 years. The DSP WSA is included as an appendix to the EIR and was considered in the analysis of the project's potential impacts on water supply, as discussed in the EIR.

#### 5.3.2.2 Potable Water Supply

The Plan Area will be serviced by a new municipal water system. The Plan Area boundary includes areas outside of the current Dunnigan Water District boundary. Approximately 573 acres of the Dunnigan Specific Plan lie outside of the pre-Specific Plan Dunnigan Water District service area, including approximately 385 acres of the Hardwoods subdivision. Properties not within the DWD service area are required to be annexed to Dunnigan CSA prior to development.

The pro rata allocation of water available from DWD in a year when 100% of its contract supply is available is 5,194 acre feet, which is adequate to meet the Plan Area potable water demand after wastewater recycling and conservation, estimated to be 4,621 acre feet annually. Based on the 29 year historical period, DWD receives 100% of its CVP supply in approximately 75% of years. In the remaining 25% of years, the Plan Area will supplement surface water supplies by using groundwater wells within the Plan Area.

The intake point from the Tehama Colusa Canal for Dunnigan CSA may utilize existing canal turnout 7.9 or a new turnout. The raw water will be pumped from the turnout to a new treatment, storage, and distribution pump station site near the turnout for treatment and distribution to the Plan Area. The location of the existing turnouts and the proposed tank(s) and treatment facility site are shown on Exhibit 5.2, Backbone Potable Water System. A larger version of this exhibit is provided in Appendix D.

Estimates of domestic demand have been prepared based on the land use plan using adjusted Yolo County unit demands approved by the Yolo County Planning and Public Works Department in 2012, as described in Appendix D, Water Supply Technical Appendix. Unit demands have been reduced based on an assumption of the use of efficient fixtures resulting in the adjusted water demands. A summary of the total water demand by phase is shown below in Table 5.2.

**Table 5.2 Water Demand By Phase**

| Phase | Total Water Demand[1] (gpd)[3] | Total Average Day Demand [1] (ADD) (ac-ft/yr) | Total Maximum Day Demand [2] (MDD) (gpd) [3] |
|---|---|---|---|
| Phase 1 | 1,383,000 | 1,549 | 2,766,000 |
| Phase 2 | 1,124,000 | 1,259 | 2,248,000 |
| Phase 3 | 1,048,000 | 1,174 | 2,096,000 |
| Phase 4 | 1,386,000 | 1,552 | 2,772,000 |
| Phase Existing (X) | 477,000 | 534 | 954,000 |
| **Total [3]** | **5,418,000** | **6,069** | **10,836,000** |

The water infrastructure plan is based on a water model of the backbone water infrastructure. This model utilizes the water demands calculated in Appendix D, applied to the nodes associated with each land use type. The infrastructure system has been sized to account for the Maximum Day Demand (MDD) throughout the Plan Area and the minimum required fire flow at any single node within the Plan Area. A map identifying the water infrastructure, the skeleton distribution nodes and the preliminary pipe sizes is in Appendix D, Figure 9.

The Plan Area will also utilize recycled water for distribution to landscape areas as described in Section 5.4. The available recycled water will be applied to the areas shown on Exhibit 5.3. As a result of this recycled water component of the Plan Area, the domestic demand associated with these green spaces has been eliminated, reducing the overall domestic water demand within the Plan Area. The demands in Tables 1 and 2 in Appendix D for each land use have been reduced based on the amount of recycled water used for irrigation as identified in Section 5.4. Table 5.3 summarizes the net potable water demand, accounting for the reduction in the total water demand from the use of recycled water in the Plan Area. The net potable water demand is the total water demand from Table 5.2 above minus the recycled water demand. Appendix D provides additional information and data related to potable and recycled demands.

**Table 5.3: Net Potable Water Demand Summary By Phase**

| Phase | Total Water Demand[1] (gpd)[3] | Recycled Water Demand [2] (gpd)[3] | Net Potable Average Day Demand[1] (gpd)[3] | Net Potable Average Day Demand [4] (ADD) (ac-ft/yr) |
|---|---|---|---|---|
| Phase 1 | 1,383,000 | 312,000 | 1,071,000 | 1,200 |
| Phase 2 | 1,124,000 | 378,000 | 746,000 | 836 |
| Phase 3 | 1,048,000 | 329,000 | 719,000 | 805 |
| Phase 4 | 1,386,000 | 274,000 | 1,112,000 | 1,246 |
| Phase Existing (X) | 477,000 | 0 | 477,000 | 534 |
| **Total [3]** | **5,418,000** | **1,293,000** | **4,125,000** | **4,621** |

[1] Reduction to County standard demands based on 2.6 pph for the Dunnigan Specific Plan Area & the use of E friendly fixtures throughout the Dunnigan Specific Plan Area.
[2] Recycled Water Demand based on the irrigation use factors identified in Table 5.4.1 below.
[3] Gallons per day rounded to the nearest 1000 gallons.
[4] Net Potable Water Demand = Total Adjusted Water Demand – Recycled Water Demand

The sizing of the water treatment plant is a function of maximum-day domestic demand. Surface water treatment will involve screening, possibly using pressurized strainers, clarification possibly using dissolved air flotation, filtration possibly using microfilter membranes, and disinfection possibly using chlorine contact tanks. Water quality testing of the canal water will be conducted in order to determine the specific water treatment requirements. To the extent feasible, it is anticipated that the water treatment plant will be built in multiple phases to accommodate the phased build out of the Dunnigan Specific Plan Area.

The required water tank storage volume is a function of operational storage, fire flow storage and emergency storage. The water storage capacity will be phased in increments as the project builds out, as described in Appendix D. The projected operational storage, the fire flow storage and the emergency storage sums to 4.54M gallons. It is anticipated that the water tanks will be constructed in two phases based on the ultimate storage volume that will be required. Each phase of the water tank construction is planned to be sited at a single location, as indicated on Exhibit 5.2.

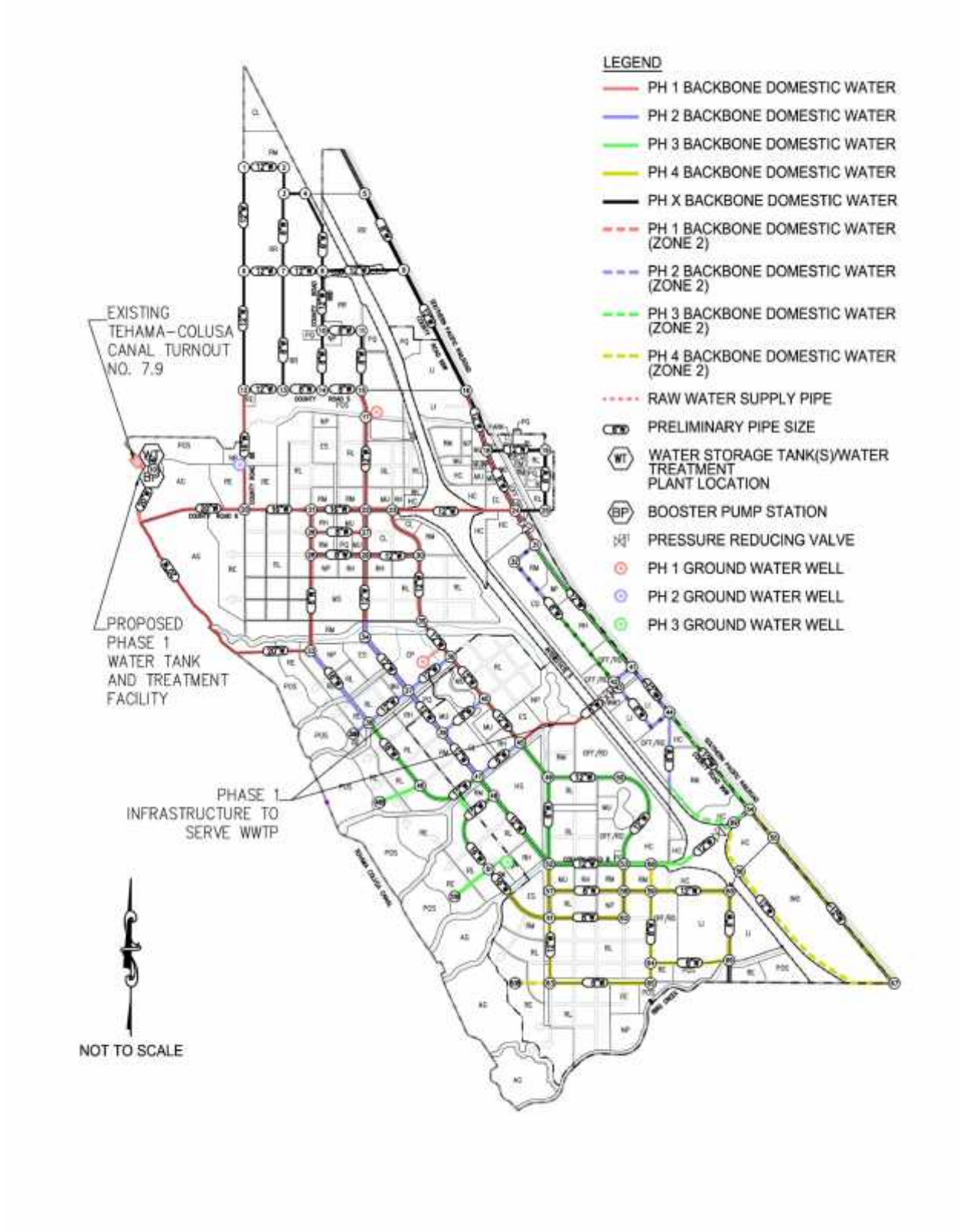



**Exhibit 5.2: Backbone Potable Water System**

The Plan Area will require new wells to supply supplementary water. The proposed well construction will be phased following completion of the well analysis study, including the installation of test wells to assess the water quality and aquifer production and drawdown. A program of water quality testing of samples from the test wells will inform the treatment requirements for well water. Appendix D describes the potential water quality anticipated to be encountered, potential well-head treatment, potential size of the proposed wells, and potential locations. As build out of the Plan Area progresses, demand projections may be periodically updated. The final number of new wells and storage volume required at full build out of the Plan Area may be adjusted per revised water demand projections.

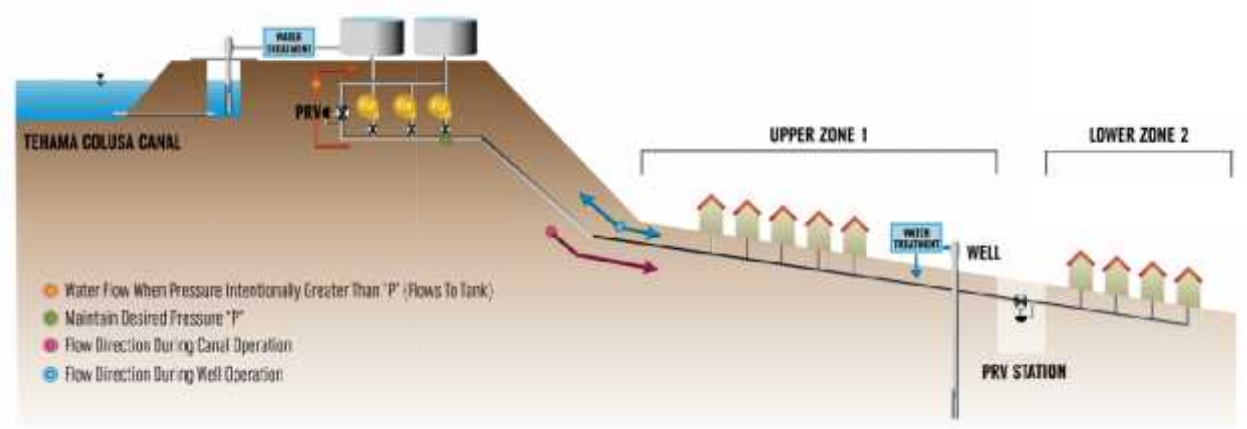
#### 5.3.2.3 Potable Water Distribution System

A new municipal water distribution network will be provided in the Plan Area. The general arrangement of the proposed, phased water distribution piping is shown on Exhibit 5.2. A detailed Water Master Plan will be prepared after adoption of the Specific Plan and prior to development. The initial pressures and flows planned for the individual phases are included in the preliminary analysis, and will be finalized with the detailed Water Master Plan. Upon application for each Tentative Map, each project will be reviewed for consistency with the Water Master Plan. The Water Master Plan will identify adequate pressure and flows in accordance with the Yolo County standards and the water conservation provisions of the Dunnigan Specific Plan.

Distribution facilities are sized to provide delivery to meet water demands during peak hour conditions and at the same time meet fire protection needs. Peaking factors, fire flow requirements and a normal pressure range (typically 45 to 100 psi) are considered in planning and designing the distribution pipe network, as required by the County's Standard Specifications.

New "backbone" water lines will form the basis of a grid extending through the Plan Area as main roads are built. Within neighborhoods, it is anticipated that local distribution lines will typically be 8-inch diameter; "backbone" distribution lines in major roadway corridors will be larger. Looping of water mains will be required as individual neighborhoods are built out. As identified on the Exhibit 5.2, Backbone Potable Water System, multiple pipe crossings of Interstate 5 are necessary. These crossings will be accomplished through trenchless technology. The determination of which trenchless technology and the number of crossings required for any one development will be determined at the time of the Tentative Map application.

The Plan Area spans ground elevations from about elevation (EL) 50 at the southeastern limit, to around EL 190 near the Tehama-Colusa Canal. This elevation difference of approximately 140 feet corresponds to a static water pressure difference of about 55 psi. Because of this, the Plan Area requires two pressure zones. The upper zone (covering the higher ground elevations) will require booster-pumping to achieve the required flow and pressure. The required booster pump for the upper pressure zone would result in static pressures in the lower elevation that exceed the normal pressure range. As a result, a separate water infrastructure loop (lower pressure zone) will be required for the lower elevations. In order to provide adequate fire flows in the northern and southern portions of the lower pressure zone, this zone may require booster-pumping, but to a lesser extent than the upper zone. Groundwater will be connected to the upper zone with a connection to the water storage tanks through a pressure relief valve, as shown in the Pressure Zone Diagram on Page 5-10.




**Pressure Zone Diagram**

## 5.4 RECYCLED WATER SUPPLY AND DISTRIBUTION

The intent for the recycled water system is to irrigate landscape areas, including public landscaped medians, parks, greenways and landscaped front yards of the lower density residential areas. The source of water for the recycled water system is tertiary treated effluent from the Wastewater Treatment Plant (WWTP). The areas identified to receive recycled water are shown on Exhibit 5.3.

### 5.4.1 Existing Recycled Water Supply and Distribution

A recycled water system does not currently exist within the Plan Area.

### 5.4.2 Planned Recycled Water Supply and Distribution

In addition to the potable water system, it is envisioned that the areas identified in Exhibit 5.3 will be supplied with non-potable irrigation water. There are up to three potential sources of non-potable irrigation water: recycled water, untreated surface water from the Tehama-Colusa Canal or untreated groundwater. The primary source for the non-potable irrigation supply will be recycled water from the Wastewater Treatment Plant. Supplemental water will be provided using untreated water from the Tehama-Colusa Canal or untreated groundwater.

The use of recycled water in the Plan Area will reduce the use of potable water for irrigation water demand and reduce demands on the groundwater aquifer. The Sequential Batch Reactor (SBR), as described in Section 5.5.2, is capable of producing recycled water exceeding California's Title 22 standards for recycled water use.

The non-potable irrigation system is planned to distribute recycled water to the areas shown on Exhibit 5.3. The total water demand, including both indoor and outdoor land uses, is based on adjusted Yolo County standards, as shown in Appendix D. The portion of the total demand used for irrigation is based on the assumptions shown in Table 5.4 and further described in Appendix D.

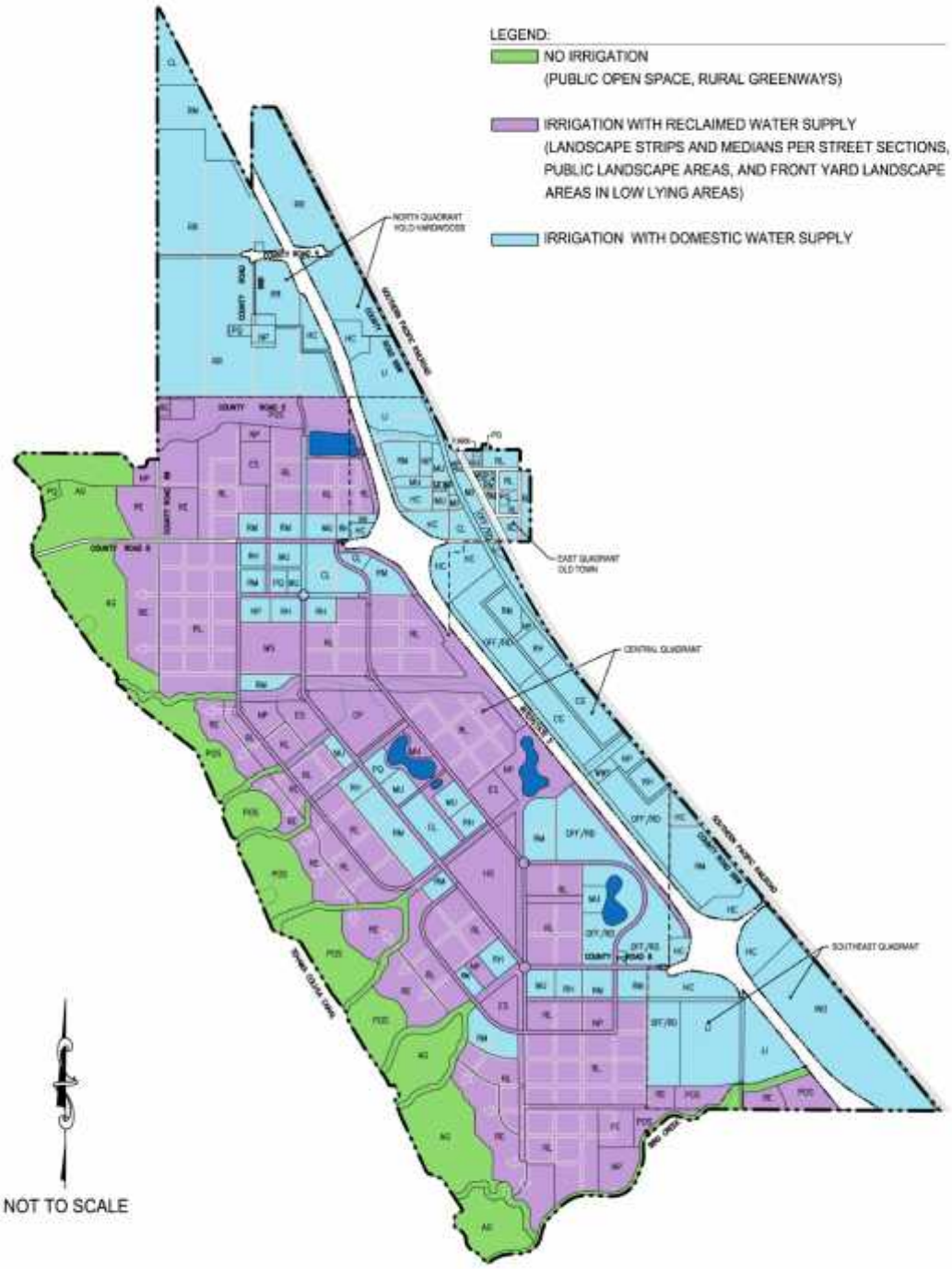



**Exhibit 5.3: Distribution Areas for Non-potable Irrigation Water**

It is anticipated that the approval of a discharge permit from the Regional Water Quality Control Board will be obtained following approval of the Specific Plan. The amount of storage required for the non-potable irrigation system will be a function of the rate of development relative to the time required to obtain a discharge permit. Prior to receipt of the discharge permit, interim wet weather storage will be required during the winter months for the flows associated with any portion of Plan Area development. An on-site temporary location for wet weather storage basin(s) has been identified and an analysis of the possible storage scenarios is described in detail in Appendix D. Appendix D also presents alternatives based on the timeframe of discharge permit approval. These scenarios are presented as Alternative 1 and Alternative 2.

Once the discharge permit is acquired, the storage of the recycled water for irrigation is proposed to be in Lake #2, which is the located adjacent to the Community Park. This lake is centrally located for efficient distribution throughout the Plan Area. Recycled water will be pumped from the WWTP to Lake #2, and then pumped from the lake as needed into a non-potable water distribution system (purple pipe) for use as landscape irrigation water.

**Table 5.4: Outdoor Water Consumption by Land Use**

| Land Use | % of Permeable Area For Irrigation |
|---|---|
| RE-Rural Estates | 35%[1] |
| RL-Residential Low Density | 30%[2] |
| Parks (POS) | 95-100%[3] |
| Open Space Areas (Greenways) | 75% |
| Public Uses (ES, MS, HS) | 50%[4] |

[1] Assumed: Average net lot size 20,000 s.f.; Max. lot coverage: 35%= 8,800 s.f. house footprint, other impervious areas:; 30%=6,000, remaining pervious area **35**%=7,000 s.f./RE du

[2] Assumed: Average net lot size: 5,500 s.f.; Max. lot coverage: 40%=2,200 s.f. house footprint, other impervious areas:; 30%=1650, remaining pervious area **30**%=1,650 s.f./RL du

[3] Assumed: Nearly all area is permeable

[4] From the UC Davis Center For Water and Land Use

Based on these percentages, irrigation use of non-potable water will result in a reduction to the total potable water demand of approximately 23.9%. This irrigation use will require approximately 1.30M gallons per day of recycled water.

## 5.5 WASTEWATER COLLECTION AND TREATMENT

This section describes the proposed wastewater collection and treatment plan for the Plan Area, in conformance with the intent of the following principles and guidelines:

- Prior to approval of the first tentative map or other development in the Plan Area, a comprehensive final wastewater infrastructure plan will be completed identifying an acceptable wastewater collection, treatment, and reuse/discharge system. The wastewater infrastructure plan will be consistent with the County's General Plan, and will meet the County's standard specifications or an acceptable alternative.

- The final design will seek to reduce operational complexities and maintenance requirements of the system. The design will also seek opportunities for energy efficiency in wastewater collection, treatment and reuse/discharge.

### 5.5.1 Existing Wastewater Collection and Treatment

The Plan Area is not served by a public wastewater collection and treatment system. The existing Old Town, Hardwoods, the Country Estates mobile home development and highway commercial areas were served by either, private onsite wastewater treatment systems (septic tanks) or one of nine small private wastewater pond treatment systems, which do not receive any secondary treatment.

### 5.5.2 Planned Wastewater Collection and Treatment

The Plan Area will be served by a municipal wastewater collection system and central Wastewater Treatment Plant (WWTP). The general arrangement of the planned collection system is indicated in Exhibit 5.4. A larger version of this exhibit is provided in Appendix E, Wastewater Technical Appendix. It is estimated that the Plan Area, including the existing development, will generate an average daily wastewater flow of approximately 2.2M gallons per day at build out, as shown in Table 5.5.

**Table 5.5 :Wastewater Demand Summary By Phase**

| Phase | Average Daily Flow (ADF) [2] (gpd) [5] | I & I (gpd) | Average Daily Flow (ADF) [2] with I&I (gpd) [5] | Peak Daily Flow[4] with I&I (gpd) [5] | Peak Daily Flow[4] with I&I (AF/yr) |
|---|---|---|---|---|---|
| Phase 1 | 600,800 | 357,480 | 958,300 | 2,159,900 | 2,419 |
| Phase 2 | 416,300 | 299,940 | 716,200 | 1,548,800 | 1,735 |
| Phase 3 | 180,600 | 254,520 | 435,100 | 796,300 | 892 |
| Phase 4 | 366,200 | 264,240 | 630,400 | 1,362,800 | 1,526 |
| Phase Existing (X) | 553,600 | 357,360 | 911,000 | 2,018,200 | 2,261 |
| **Total** | **2,117,500** | **1,533,540** | **3,651,000** | **7,886,000** | **8,833** |

[1] Reduction to County standard demands based on 2.6 pph for the Dunnigan Specific Plan Area & the use of E friendly fixtures throughout the Dunnigan Specific Plan Area
[2] Average Daily Flow (ADF) = Average Day Demand x Wastewater Reclamation Facility Peaking Factor (1.0)
[3] Inflow and Infiltration (I & I )= Service Area x 600 gpd/acre (Yolo County Improvement Standards, Section 7)
[4] Adjusted Peak Daily Flow = ADF x Pipe Sizing Peak Factor (3.0)
[5] Gallons per day rounded to the nearest 100 gallons
[6] See Appendix E Tables 1 through 5 for more detailed information

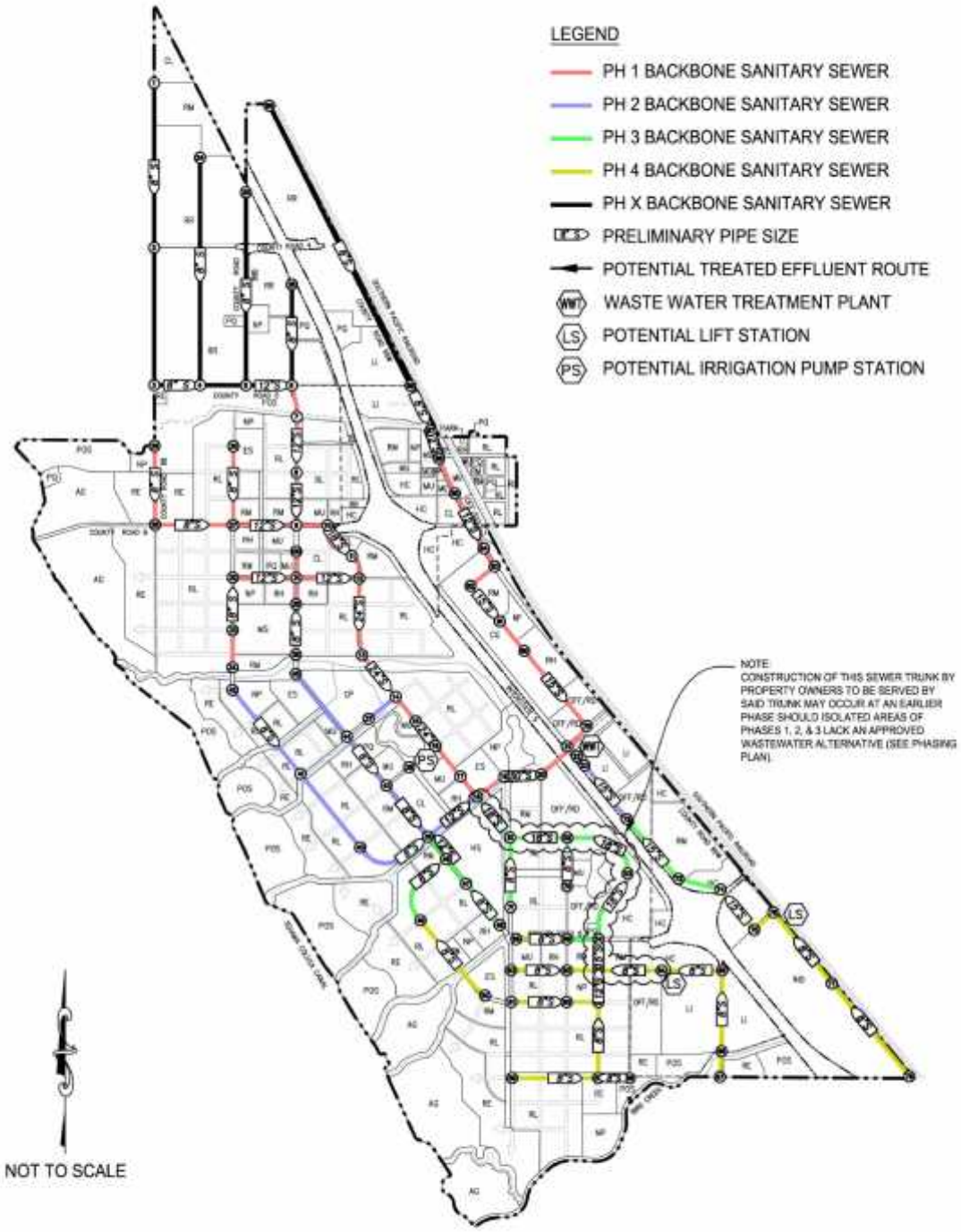



**Exhibit 5.4: Backbone Sanitary Sewer System**

Effluent that exceeds California Title 22 treated effluent standards can be achieved with an SBR Plant with ultraviolet (UV) treatment. In addition, due to essentially no exterior odors produced by the SBR system, it can be sited within the limits of the Plan Area to maintain consistency with the County General Plan. A Customized Design Report (CDR) will be prepared to provide details regarding the components, conceptual layout, architectural renderings, and phasing of the SBR plant subsequent to DSP approval and prior to approval of the first Tentative Map. The SBR plant will be constructed in stages which correlate to the wastewater flows from the phases of the development. The first stage will develop a 0.75 mgd plant, which allows for 0.15 MGD additional treatment capacity for phase 1. Two subsequent construction stages for the waste water treatment plant are anticipated, with a total capacity of the ultimate waste water flows of 2.2M gallons per day, as projected in Table 5.5.

## 5.6 DRAINAGE AND FLOOD CONTROL

The proposed Plan Area drainage infrastructure and stormwater management system addresses the existing flood hazard constraints/drainage limitations of the area while mitigating hydrologic impacts and providing the required stormwater quality treatment. In addition, the proposed drainage infrastructure elements have been creatively planned to provide aesthetic benefits and integrate elements of sustainability while adding long term value to the community.

### 5.6.1 Watershed Description

The Plan Area is encompassed by three regional watersheds associated with the existing drainage systems which generally drain from west to east and include (1) Bird Creek to the south, (2) Azevedo Drain in the central portion, and (3) Dunnigan Creek to the north. These watersheds, illustrated on Exhibit 5.5, Regional Watershed Map, originate west of the Plan Area in the Hungry Hollow and Dunnigan Hills, which have significant topographic relief. The watersheds drain to the east into the relatively flat Colusa Basin and ultimately the Colusa Canal. These watersheds are primarily undeveloped and the majority of the soils are composed primarily of hydrologic soil group C and D, which are less permeable and have a higher runoff potential. Exhibit 5.6 depicts the Regional Hydrological Soils Map. The corresponding tributary drainage area of each watershed at the I-5 freeway crossing is approximately 5.38 square miles to Dunnigan Creek, 4.58 square miles to Azevedo Drain, and 18.80 square miles to Bird Creek. The distribution of the Plan Area acreage and the relative percentage is approximately 856 acres to Dunnigan Creek (27%), 1978 acres to Azevedo Drain (64%), and 333 acres to Bird Creek (11%). The average annual weighted precipitation in Dunnigan is approximately 20.20 inches, the estimated 100-year 24-hour precipitation is approximately 4.99 inches, and the 200-year 24-hour precipitation is 5.41 inches (an increase of 8.4% between 100-year and 200-year). A detailed regional hydrology analysis was prepared using HEC-1 and XP-SWMM watershed models to establish the baseline 100-year and 200-year flows, consistent with Yolo County standard hydrology procedures and guidelines. The results are summarized in Appendix F, Hydrologic and Hydraulic Analysis and Impacts Assessment. In addition, some of the regional watershed hydrology results are presented in Table 5.6.

### 5.6.2 Existing Drainage and Flood Control

The current drainage facilities in the Plan Area are relatively minor, with limited hydraulic capacity, and generally consist of earthen channels that have been constructed as part of the commercial agricultural operations for Dunnigan Creek, Bird Creek, and Azevedo drain within the Colusa Basin area. There are existing culvert crossings on these regional drainages for the I-5, County Road 99, and the California Northern Railroad which are hydraulic restrictions because they have insufficient hydraulic capacity associated with the limited flow area of culverts/bridges. These drainage crossings influence the Plan Area because they limit the amount of flow to the downstream channel system, and create floodplains well outside the existing channel limits upstream of the crossing location because of the hydraulic restrictions. Improving these restrictions through increasing the hydraulic capacity or constructing new expanded culvert/bridge facilities would result in relocating flooding downstream and increasing flows to the downstream channels which had not been previously experienced. Table 5.6 summarizes the approximate hydraulic capacity estimate from the hydraulic study prepared on the creeks and estimated 100-year and 200 year flowrates for each of the regional drainage crossings.

**Table 5.6: Baseline 200 & 100 year Flow Rates for Pre-Specific Plan Conditions**

| | **Existing Regional Drainage Crossings Hydrology & Capacity** | | | | | |
|---|---|---|---|---|---|---|
| Watershed | I-5 Freeway Crossing Flowrate | | | Culvert/Bridge Hydraulic Capacity (cfs) (Estimated per Hydraulic Analysis) | | |
| | Area (sq. miles) | 200-year Flowrate (cfs) | 100-year Flowrate (cfs) | I-5 | County Road 99 | Railroad |
| Dunnigan Creek | 4.95 | 1,989 | 1,759 | 1,350 | 750 | 700 |
| Azevedo Drain | 3.77 | 1,953 | 1,7323 | 2,900 | 1,950 | 3,500 |
| Bird Creek | 18.57 | 5,116 | 4,500 | 2,850 | 3,450 | 3,600 |

The existing earthen embankment for Tehama Colusa Canal blocks direct surface drainage from the smaller tributary watersheds to the west of the Plan Area, but a series of 13 culverts convey the flows corresponding to the existing drainage courses under the canal, as shown on Exhibit 5.7, Existing Drainage Facilities. These culverts for the canal undercrossings are generally small diameter pipes ranging from 18-inch to 30-inch, but the largest is a 4-4'x4' RCB for the Dunnigan Creek crossing. A summary of all the existing drainage facilities which surround and influence the Plan Area are illustrated in Table 5.2 found in Appendix F and correspond to the locations indicated on Exhibit 5.7, Existing Drainage Facilities.

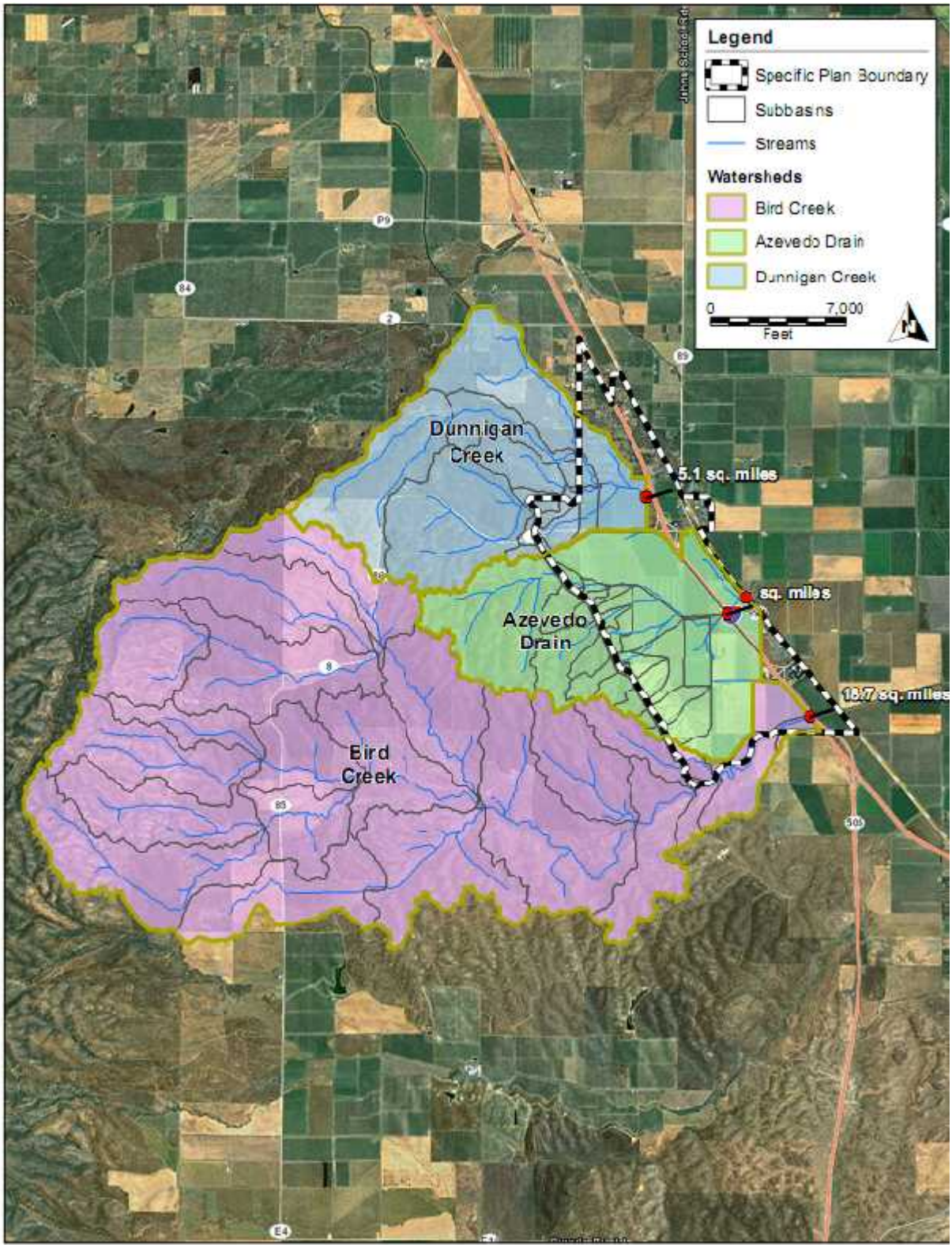
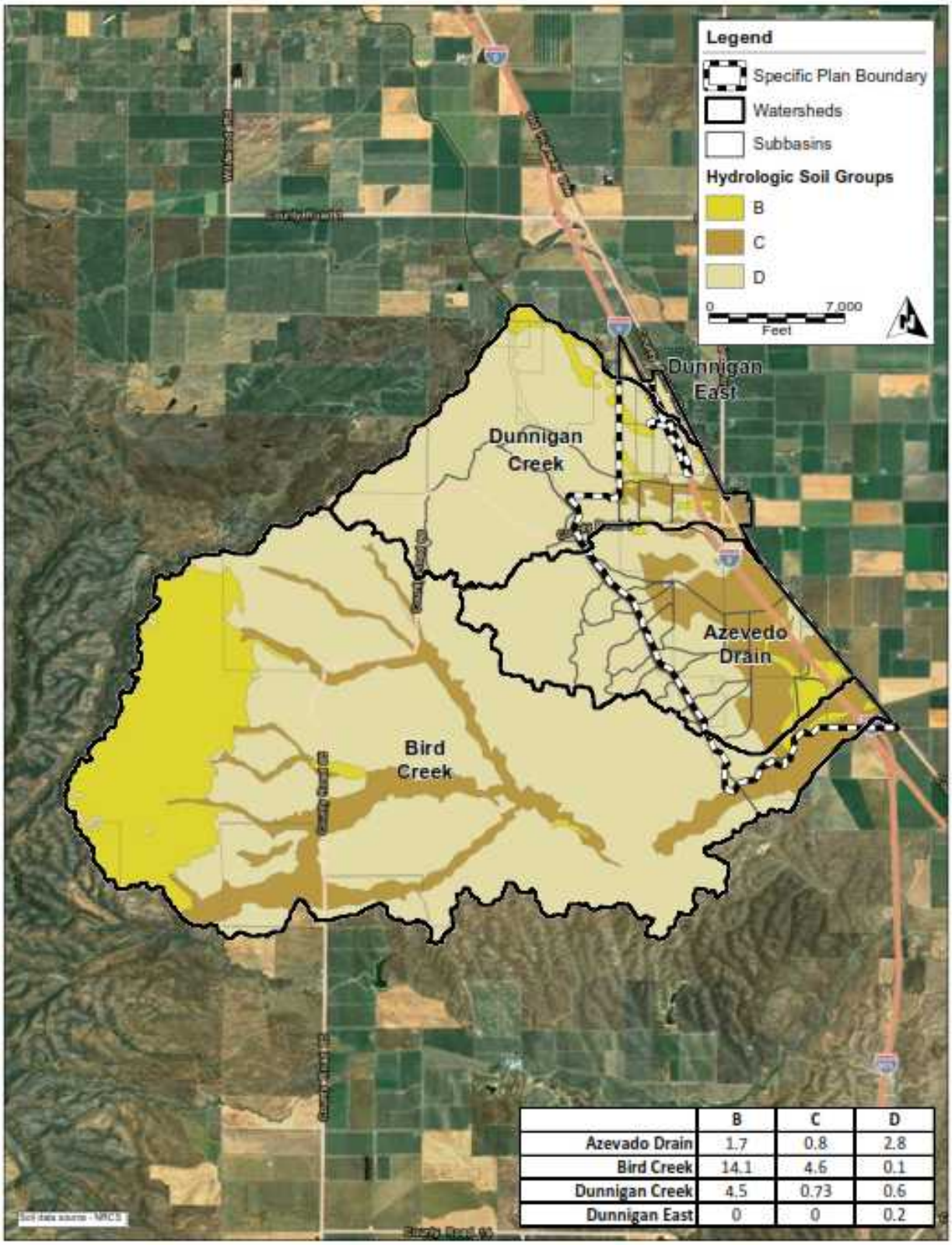



**Exhibit 5.5 Regional Watershed Map**




| | B | C | D |
|---|---|---|---|
| Azevado Drain | 1.7 | 0.8 | 2.8 |
| Bird Creek | 14.1 | 4.6 | 0.1 |
| Dunnigan Creek | 4.5 | 0.73 | 0.6 |
| Dunnigan East | 0 | 0 | 0.2 |

**Exhibit 5.6- Regional Hydrologic Soils**

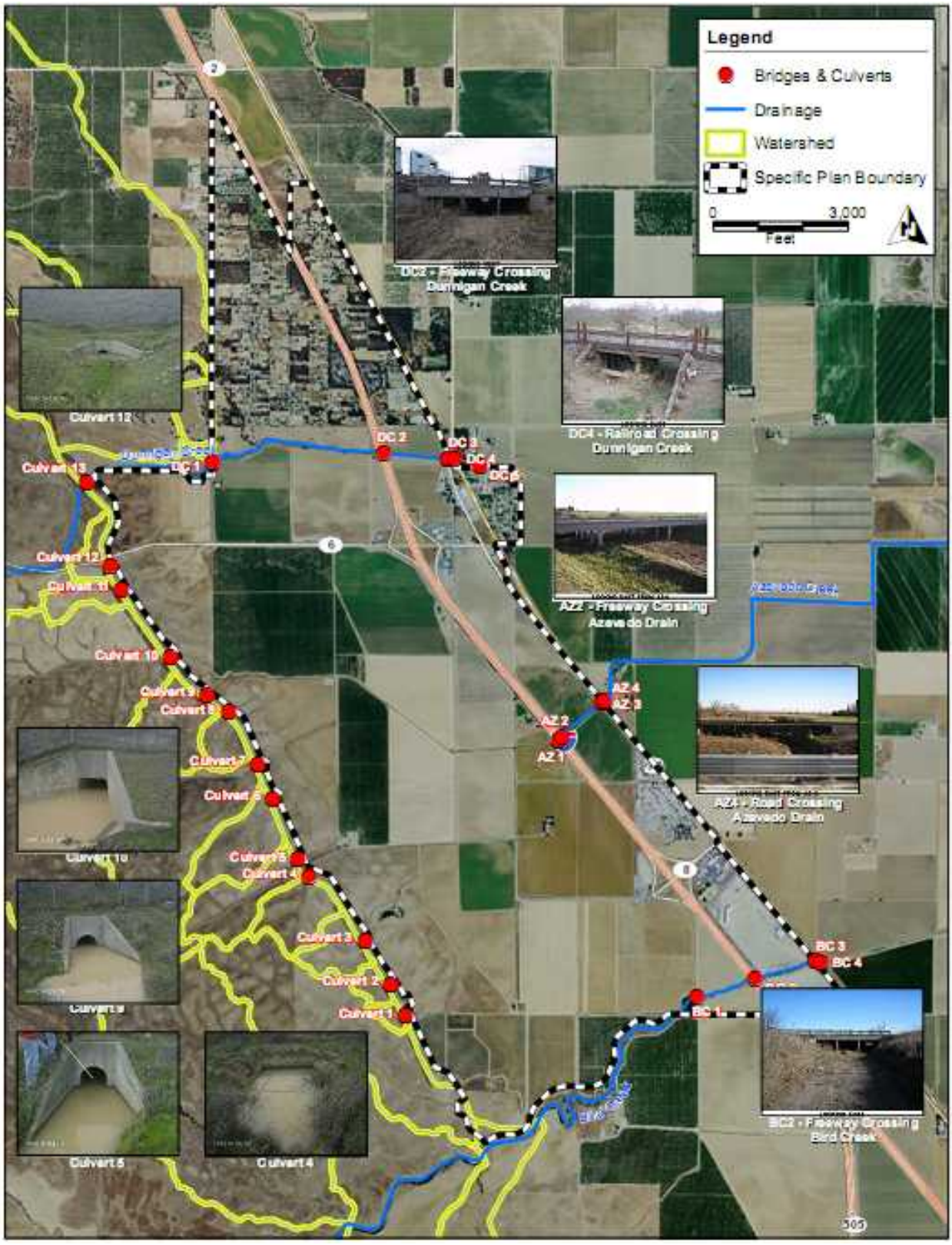



**Exhibit 5.7 Existing Drainage Facilities**

### 5.6.3 Existing Regional Floodplain

The Federal Emergency Management Agency (FEMA) has mapped flood hazards for the 100-year floodplain which encumber portions of the Plan Area, corresponding to the primary regional drainage courses, Dunnigan Creek and Bird Creek, with Zone A. These are illustrated on Exhibit 5.8 FEMA Flood Hazard Zones representing the current published Flood Insurance Rate Maps (FIRM) for Yolo County (FIRM panels 06113C00125G and 06113C0275G) which have been revised and became effective June 2010. Yolo County is a participant in the National Flood Insurance Program (NFIP) and must adopt / enforce minimum floodplain management standards including identification of flood hazards and flooding risks. In addition, California has adopted a 200-year level of flood protection requirement under Section 50465 of the Health and Safety Code for urbanizing areas in the Central Valley which has also been incorporated in the Yolo County drainage criteria.

The published FIRM for the Plan Area does not necessarily depict the most accurate 100-year floodplain boundaries and a more detailed hydrologic / hydraulic analysis was conducted to more accurately establish the baseline floodplain limits for the specific plan. Regional hydrologic watershed models were generated utilizing HEC-1/ HEC-HMS while the detailed floodplain hydraulic models were generated in HEC-RAS/Geo-RAS utilizing digital topography as well as field surveyed information of the existing drainage facilities. These detailed hydraulic analyses of the regional channel floodplains for Bird and Dunnigan Creeks indicated that both the engineered channels and the culvert/bridge crossing for the roadways/railroads do not have sufficient capacity for the existing 100-year flows, resulting in large floodplains outside the channel limits upstream of the hydraulic restrictions.

The detailed hydraulic analysis of these Plan Area floodplains, shown on Exhibit 5.9, Bird Creek Floodplain and Exhibit 5.10, Dunnigan Creek Floodplain, illustrate portions of the northern and southern areas within the Plan Area, west of the I-5 freeway. These areas are encumbered by the 100-year floodplain, but it is generally shallow flooding from flows overtopping the existing channel near the freeway. In addition, the existing engineered earthen channels or drainage canals for the three major regional systems downstream of the Plan Area boundary do not have sufficient capacity for either the existing 100-year or 200-year flows because of the relatively small channel geometry and the topography in the valley floor of the Colusa Basin is extremely flat. These characteristics result in a wide shallow floodplain in the valley floor extending from the Colusa Canal and this regional flooding trend is illustrated on the FIRM as shown on Exhibit 5.8, FEMA Flood Hazard Zones.

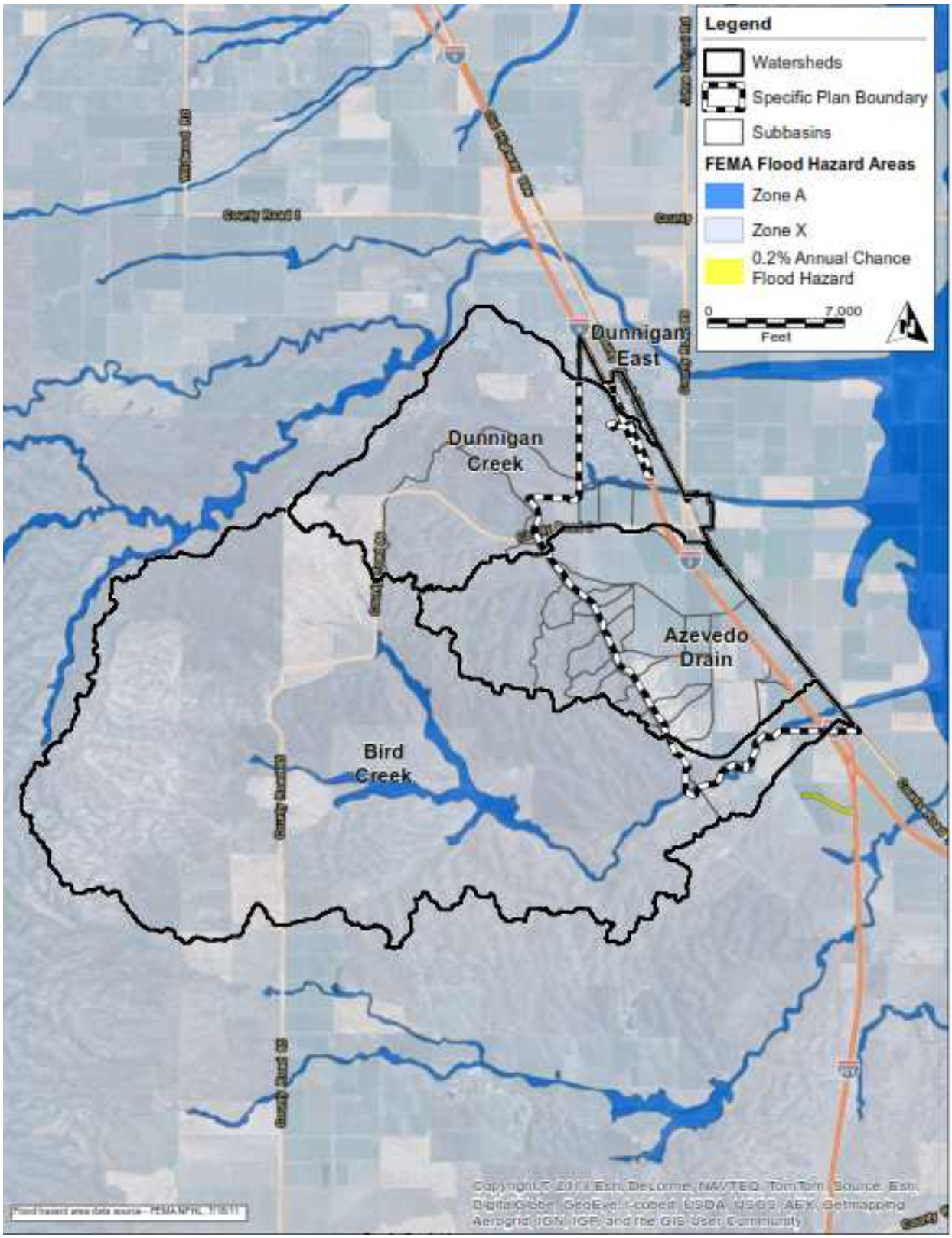



**Exhibit 5.8 FEMA Flood Hazard Zones**

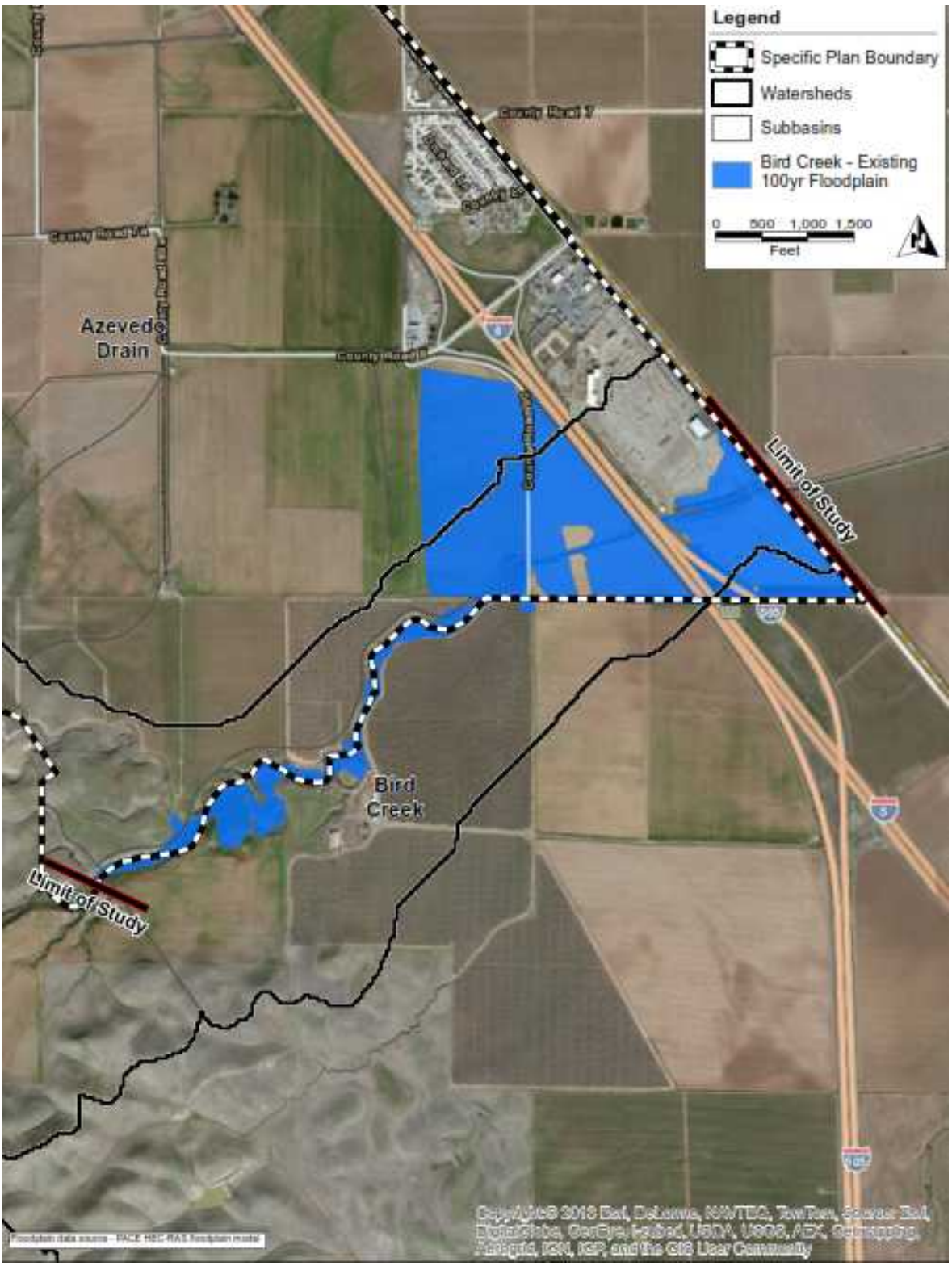



**Exhibit 5.9 Bird Creek Existing Floodplain**


**Exhibit 5.10 Dunnigan Creek Existing Floodplain**

### 5.6.4 Planned Drainage Improvements

The proposed drainage system improvements can generally be divided between onsite stormwater collection/conveyance/treatment facilities for urban runoff and regional flood protection from the existing creek floodplains. The regional flood protection improvements consist of stormwater storage facilities that detain flows in order to meet the limiting capacity of the existing hydraulic restrictions. The onsite drainage improvements consisting of underground storm drain pipe, landscaped drainage corridors, combined water quality/flow attenuation detention basins, and manmade lake systems. The onsite drainage infrastructure correspond to the three regional watersheds; Dunnigan Creek, Azevedo Drain and Bird Creek. The onsite drainage infrastructure has been designed to achieve significant inherent stormwater

management benefits which will: (1) mitigate increases in peak flowrate from the development to below the existing conditions, (2) direct all stormwater to pass through treatment facilities (3) mitigate existing flood hazards within the Plan Area and improve existing downstream flooding through peak flow reduction from onsite temporary runoff storage, (4) collect and recycle nuisance and dry-weather urban flows, and (5) provide aesthetic and natural elements through integration of manmade open water bodies and natural manmade stream corridor systems that can provide a passive recreational feature. The proposed drainage improvements, stormwater management facilities, and flood protection for the project will be designed to meet the Yolo County requirements outlined in the *County of Yolo – Improvement Standards* (2008), *Yolo County City/County Drainage Manual (Volume 1)* (rev. February 2010), and *Yolo County City/County Drainage Manual – Storm Water Treatment Measures (Volume 2)* (rev. February 2010). These guidelines address requirements from FEMA flood protection as well as State Floodsafe minimum standards and minimum NPDES / RWQCB standards for stormwater water quality.

### 5.6.5 On-site Drainage Infrastructure

The onsite drainage facilities, shown on Exhibit 5.11, Proposed Onsite Drainage Facilities, illustrate the preliminary infrastructure plan to accommodate the storm runoff generated within Plan Area. The drainage facilities are divided between the three major regional watersheds and maintain the same tributary drainage areas. A larger version of this exhibit is provided in Appendix F. The proposed onsite drainage plan includes the following:

(1) Conventional underground storm drain pipe for collection of localized urban runoff;
(2) constructed landscaped drainage corridors which provide the primary drainage conveyance through the project and also integrate multi-function stormwater basins along both sides of the corridors for treatment and detention;
(3) manmade lake systems used as for drainage conveyance and temporary stormwater storage in some of the development areas; and
(4) preservation and enhancement of the upstream natural drainage corridors entering the Plan Area.

The development of stormwater mitigation depicted in Figure 5.11, Development Stormwater Mitigation Facilities, will include a variety of treatment system including the combined water quality treatment basins as well as the manmade lake systems, various low impact development (LID) features for stormwater control and stormwater detention facilities to attenuate the peak discharge from the development to avoid impacting existing downstream hydraulic restrictions. A separate detailed hydrologic/hydraulic model utilizing XP-SWMM was generated for preliminary design and analysis of the onsite drainage facilities consistent with the Yolo County requirements. Refer to Appendix F for detailed information on the modeling and resulting sizing of the backbone drainage system. Results from the onsite XP-SWMM model are illustrated in the different facility sizing of the onsite backbone drainage system and the runoff storage volume requirements as part of stormwater mitigation for both water quality and flood protection.

Localized surface runoff generated from the development areas and streets from the local watershed areas, illustrated on Exhibit 5-12, Onsite Watershed Map, will be initially intercepted by surface inlets and collected in an underground storm drain pipe system that will be primarily located within the street right-of-way. The storm drain system will be designed with a minimum

for 10-year flow capacity, while checking the systems function to provide both a minimum of a 100-year and 200-year level of flood protection within the development areas using the streets for overland flow. The intent is to limit the amount of underground pipe (secondary system) and rely on landscaped drainage corridors (primary system) as the major hydraulic conveyance system within the Plan Area which will provide both 100-year and 200-year level of flood protection with different freeboard (safety factor) per Yolo County standards.

The layout of the storm drain collection system is intended to convey surface runoff to the closest landscaped stream corridor channel or lake system. The stormwater collected in the storm drain pipes will outlet at either a combined detention/water quality basin or a manmade lake for treatment and stormwater peak attenuation. All stormwater runoff generated within the Plan Area will be treated prior to discharging into the landscaped drainage channel corridors or existing regional drainage courses.

The multi-function detention/water quality basins will be located on either side of the landscape drainage corridor and provide storage for both water quality treatment as well as peak flow attenuation. The basins would be designed to meet the minimum Yolo County requirements for detention basin facilities as well as meeting the primary objective of attenuating the peak 100-year development flowrate to below the hydraulic capacity of the smallest downstream regional culvert/bridge restriction. The channel geometry and grading design of the site provide the 200-year level of protection with the minimum freeboard criteria outlined in the Yolo County standards as well as other incorporating the additional design requirements for open channel systems including maintenance and access features. This ensures that the development runoff peak flowrate will be mitigated to a level below the existing condition values as well as improving the existing downstream flooding issues associated with the hydraulic limitations. The stormwater attenuation uses the combined onsite storage from the landscaped corridor detention basins and temporary surcharge storage of the manmade lake systems.

The underground storm pipe system will collect surface stormwater generated from the smaller local planning development areas based on the 10-year storm event and convey it to one of the storm water mitigation facilities which include the primary drainage corridors that contain the combined attenuation/treatment basins or manmade lake systems.

Manmade naturalized drainage corridors will serve as the primary drainage conveyance for urban runoff collected in the Azevedo Drain watershed and are designed based on County Improvement Standards to provide the 100-year and 200-year protection with the corresponding appropriate freeboard. This open channel corridor will be a relatively wide landscaped drainage channel that will be designed with geomorphic features resembling natural stream systems including meandering alignment, variable widths, and alternating variable terraces. Onsite roadway culverts/bridges will be provided at all locations where the onsite road system crosses the open channels and these facilities are designed to hydraulically convey the 200-year flowrate so that the maximum water surface is contained within the channel.

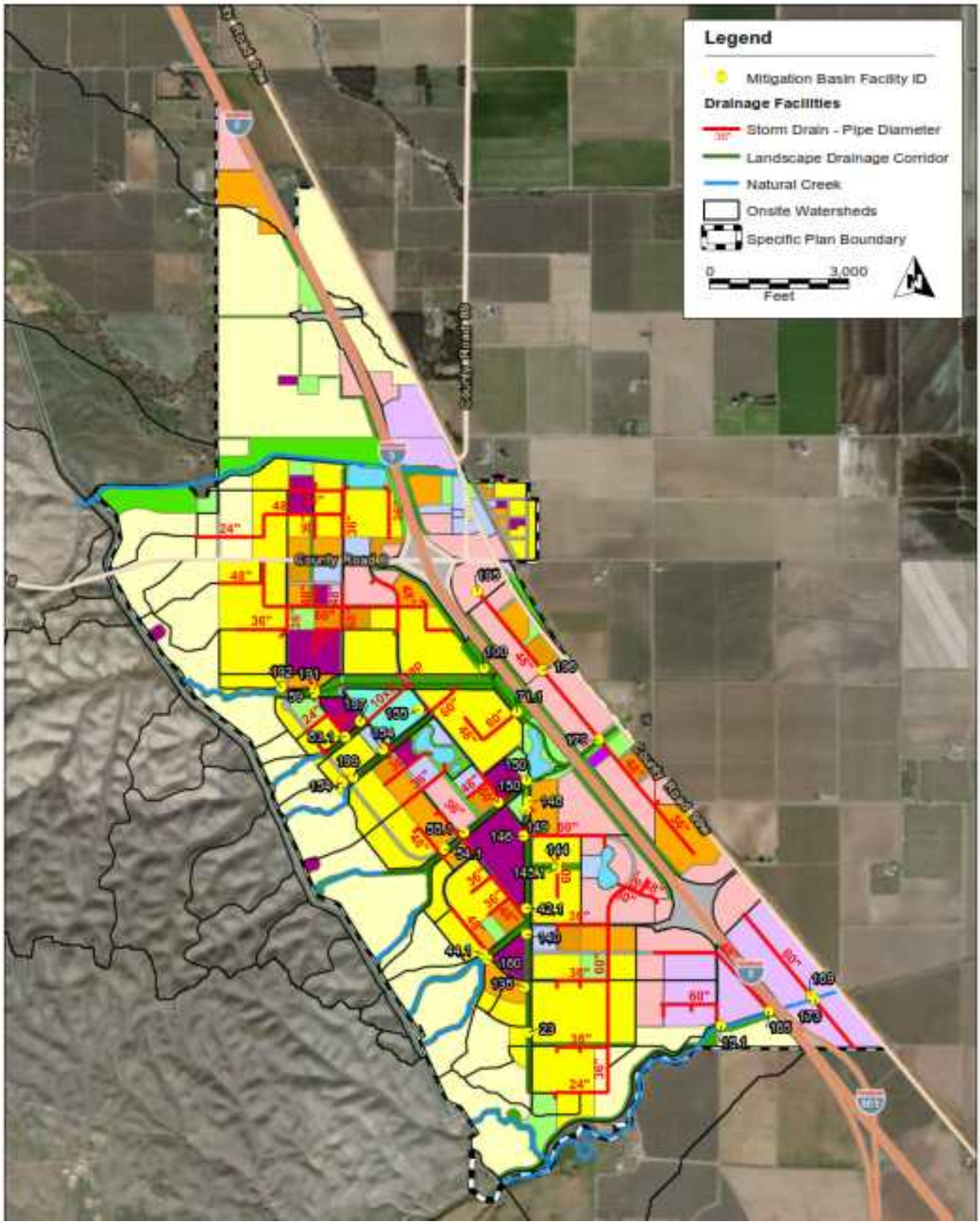



**Exhibit 5.11 Proposed On-Site Drainage and Stormwater Mitigation Facilities**

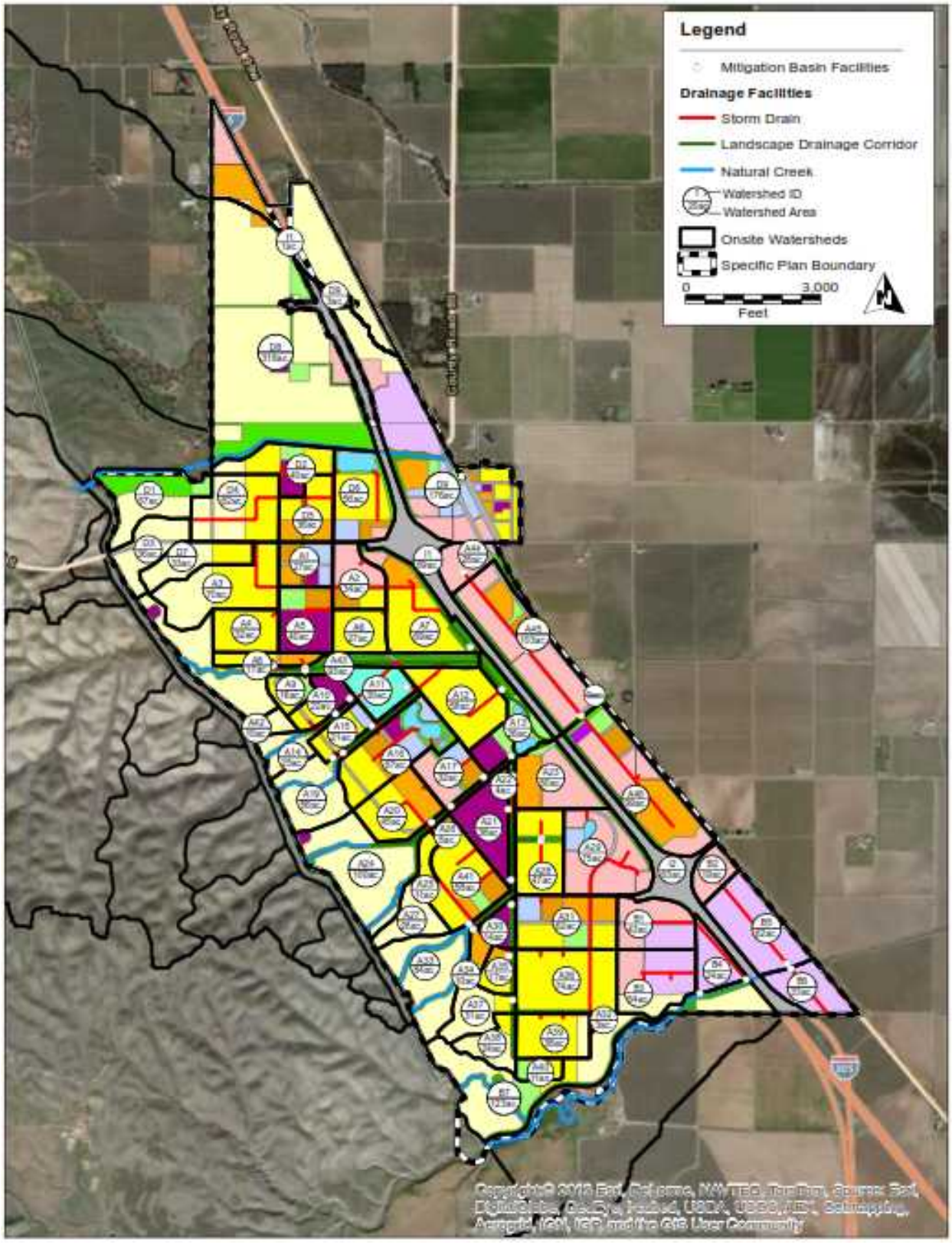



**Exhibit 5.12 On-site Watershed Map**

The landscape drainage corridors will also include multi-function stormwater mitigation basins integrated along the fringes of the corridors that will provide treatment for all the storm drain outfalls prior to discharging from the development. These basins will have sufficient storage to provide volume for stormwater quality treatment and peak flow attenuation. Specialized features will be provided in the basin for water quality treatment with extended detention outlets and vegetative features to accommodate dry weather flows. The basins will provide the necessary flood peak storage above the water quality storage volume corresponding to the 85% annual rainfall capture volume.

Manmade lakes will be utilized to provide stormwater conveyance and temporary storage for peak attenuation within different development areas. In addition, the manmade lakes will provide offline storage to alleviate the hydraulic restriction at the existing Azevedo Drain freeway culvert crossing. Lake 1 is located within the Dunnigan Creek watershed and Lakes 2, 3, and 4 are located in the Azevedo watershed. Lake 2 is proposed to be utilized for recycled water storage.

**Table 5.7 Summary of Proposed Drainage Improvements**

**Onsite Drainage Infrastructure Facility by Watershed**

| Item | Unit | Dunnigan Creek | Azevedo Drain | Bird Creek | Total |
|---|---|---|---|---|---|
| Storm Drain 24" RCP | LF | 100 | 600 | - | 700 |
| Storm Drain 36" RCP | LF | 1,600 | 10,600 | - | 12,200 |
| Storm Drain 48" RCP | LF | 6,900 | 17,900 | 1,300 | 26,100 |
| Storm Drain 60" RCP | LF | - | 26,300 | 6,600 | 35,300 |
| Landscape Drainage Corridors | LF | 3,700 | 36,000 | 2,400 | 42,100 |
| Lakes (area) | AC | 8.2 | 20.6 | - | 28.8 |
| Total Basins & Lakes | EA | 1 Lake | 3 Lakes/33 Basins | 4 Basins | 4 Lakes/ 37 Basins |

### 5.6.6 Regional Drainage Improvements

Regional drainage improvements will include creation of an "off-channel" detention basin for Dunnigan Creek immediately upstream of the I-5 freeway to remedy the existing downstream hydraulic restrictions. This facility will be a "flow-by" regional basin that will provide offline storage to attenuate the 100-year/200-year peak flowrates to an amount so that it does exceed the hydraulic capacity of the downstream railroad culvert/bridge. The estimated existing 200-year flowrate in Dunningan Creek at the I-5 freeway bridge is 2,220 cfs while the estimated hydraulic capacity of the downstream railroad bridge is approximately 700 cfs.

The basin will be located in the open space area north of the existing creek which already forms a natural depression with significant storage volume shown on Exhibit 5.13 (Dunnigan Creek Regional Detention Basin Facility). Additional grading will be required to develop the basin

configuration/geometry to provide sufficient volume as well as a 200-foot long lateral side-weir for scalping channel flows and a low-level outlet to meter return flows to the creek. HEC-1/HEC-RAS models were utilized to analyze the hydrologic routing of the detention basin based on a preliminary grading design concept with a maximum available storage volume of 184 acre-feet with a gravity outlet from the basin. The proposed design would attenuate the peak 200-year flowrate (Qin = 389cfs and Qout = 37 cfs) with a resulting combined flowrate at the I-5 to approximately 1,746 cfs with a maximum 200-year storage in the basin of 88 acre-feet.

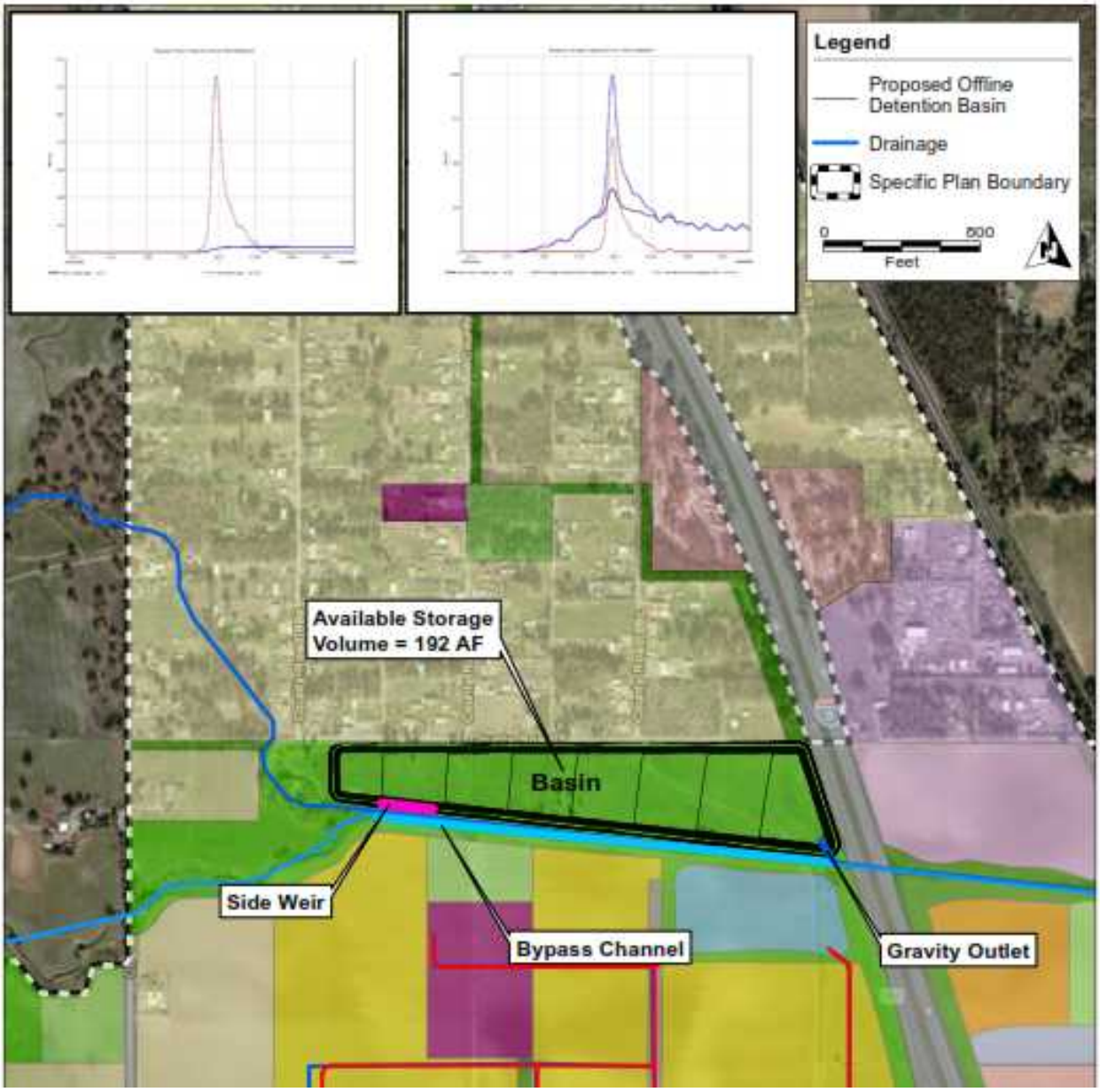



**Exhibit 5-13: Dunnigan Creek Regional Detention Basin Facility**

### 5.6.7 Stormwater Quality/ Treatment / Water Conservation and Reuse

A variety of specialized natural systems and facilities have been integrated into the overall stormwater management plan which will assist in providing stormwater quality treatment and the ability to reclaim urban runoff for recycling within the project as a valuable water resource. The detailed design for the majority of these facilities will be performed during the tentative map process since the layout for many of these facilities is dependent on the local site planning in the individual development areas. Facility sizes were estimated during preparation of the drainage master plan.

#### 5.6.7.1 Open Space Landscape Drainage Corridors

The primary drainage conveyance through the Azevedo watershed will be in landscaped drainage corridors, generally referred to as greenways. Exhibit 5.14 provides a conceptual cross section of the landscaped drainage corridors and example photos. Effective flood control is the primary underlying objective to ensure public safety. However, non-conventional techniques which incorporate restoration of natural systems which will result in more opportunities for the public and benefits to the community. The landscape channel hydraulic characteristics become a key design factor which will provide the ability to replace conventional flood control infrastructure and focus on the natural forms, tendencies, and characteristics of restoring natural stream geometry. Recreating these landforms with the channel geometry increases long-term stability and opportunity for successful establishment of riverine landscaping. These channels will function to provide the 100-year level of flood conveyance in a stabilized landscaped corridor rather than a conventional engineered channel system and with multiple layers of water quality treatment elements. Some of the elements involved in the landscaped drainage corridors include:

- Combined landscape and flood control conveyance facilities.
- Restored naturalized stream systems and waterway corridors.
- Reclamation/reuse of urban runoff nuisance flows.
- Multi-function natural stormwater basins and combined aesthetic hydraulic structures.
- Stream stabilization involving vegetative systems and re-created natural hydraulic structures.
- Stormwater quality through continuous restored biological process

### 5.6.7.2 Low Impact Development (LID)

Low Impact Development (LID) features will be implemented through site design techniques distributed within the land plan as design elements for stormwater management. The LID approach combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID takes the approach of integrating natural vegetation and small-scale treatment systems into development to treat and infiltrate stormwater runoff close to where it originates. The appropriate techniques would be evaluated as part of the site planning process based on hydrologic suitability and physical constraints (i.e. infiltration). Some of the general LID integrated management techniques that can be considered include increased local surface infiltration, reducing directly connected impervious surfaces, vegetated buffers, vegetated swales, and increasing surface drainage flow paths. The EPA has developed policies and guidance encouraging the use of LID as well as new requirements within the stormwater regulations.

### 5.6.7.3 BMPs and Treatment

Stormwater quality treatment and mitigation will be accomplished through the use of manmade lakes and multi-function detention/water quality treatment basins. All urban runoff generated from the site will pass through one of these facilities types prior to being released downstream. The preliminary locations, as well as the approximate treatment volumes of these stormwater facilities, are identified on Exhibit 5.12.

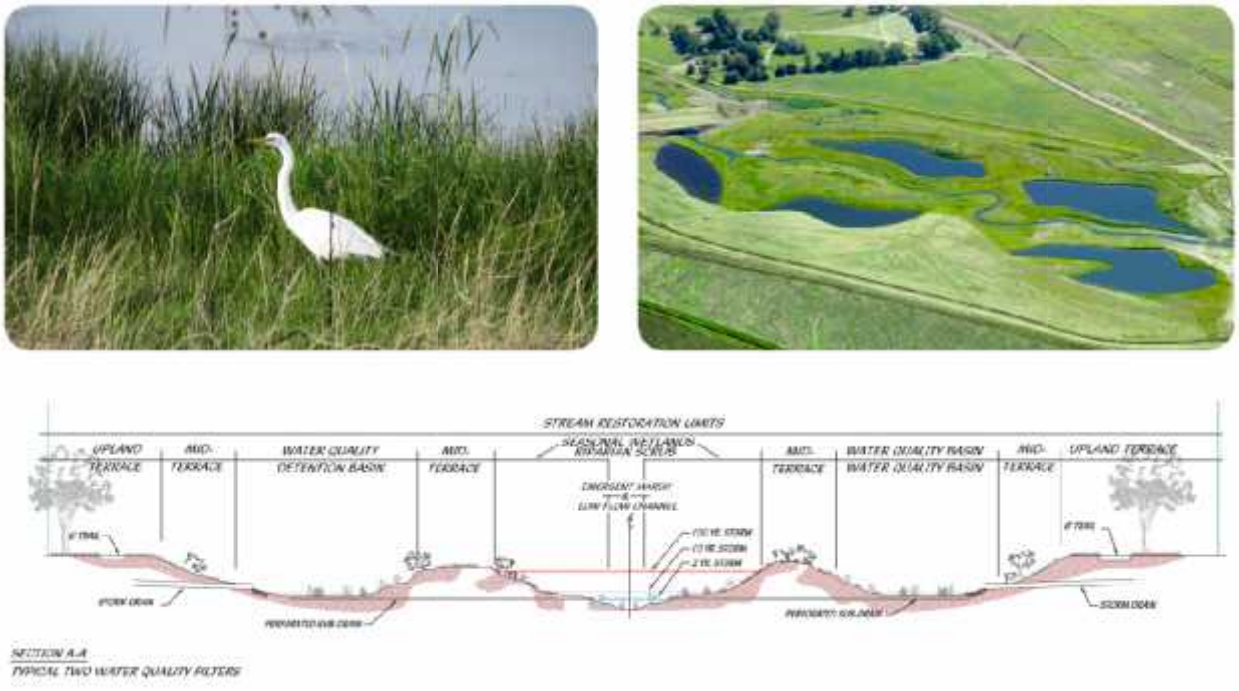



**Exhibit 5-14: Conceptual Landscaped Drainage Corridor and Example Photos**

#### 5.6.7.4 Detention Basins

Detention basins will provide for onsite mitigation of peak runoff values and water quality treatment. Detention basins will be located along the fringe of the landscaped corridors at the termination of every storm drain outlet to the channel. These facilities will be combined flow control systems that will achieve the hydrologic mitigation and water quality requirements that follow County requirements for treatment as well as address hydraulic restrictions downstream. The proposed flow control system will include one or more of the following components which are illustrated in the schematic above and include: (1) duration control / water quality treatment basin; (2) pretreatment wetlands; (3) retention/infiltration basin; and (4) extended detention and primary outlet to the landscaped channels. Stormwater detention provides the most common means of meeting flow control requirements of the downstream hydraulic restriction/limitations which ensures that the runoff amounts released from the project will be less than the existing conditions to account for downstream deficiencies. The reduced flow release rate requires temporary storage of the excess volumes in a basin. The flow control basin will incorporate extended detention to provide water quality treatment for storm flows. Extended detention is designed with outlets that detain the runoff volume from the water quality design storm ($85^{th}$ percentile 24-hour events) for a minimum detention time (48-hours) to allow particles to settle. The flow control basin will also incorporate wetland vegetation in a pre-settling area in order to provide additional treatment and mitigate nuisance / dry-weather flow.

#### 5.6.7.5 Manmade Lakes

Four different manmade lakes are provided in the land plan as a primary element of the stormwater management infrastructure. The lakes range in surface from 5.6 to 8.2 acres and have minimum normal year round operating water depths ranging from 8 to 12 feet. The lakes are lined with an impermeable membrane and has a constructed lake edge system designed specifically to provide a more natural appearance of an actual native lake environment rather than an engineered bulkhead through the use of embedded boulder and rubble into a concrete shoreline veneer and wetland planter.

The manmade lakes are specially designed with features to anticipate the long-term operating requirements through ensuring the optimum health of the lake. The manmade lakes create a sustainable natural aquatic environment that functions to provide an aesthetic and passive recreational landscape feature for the community, runoff storage/attenuation/conveyance, a functioning "natural ecosystem" for a lake water quality and urban stormwater runoff treatment facility. The lakes also provide the ability to completely reuse and recycle urban nuisance flow that were originally consider waste but now can become a valuable non-potable water resource for landscape irrigation. The lake allows for surcharge storage above the normal lake operating water level for water quality treatment and significant peak flood storage attenuation.

Critical issues involved in the design of a lake system include the ability to maintain long term water quality which generally focuses on algae control, nutrients, alkalinity, and temperature. All water bodies will experience the natural eutrophication process related to the depletion of the available supply of dissolved oxygen from increased nutrients and minerals. However, the

manmade lake is a unique dynamic natural treatment system that relies on natural processes in the aquatic environment through the establishment of an active ecosystem with wetlands, active water processes, and open water body. Design features intended to remove mosquito habitats are also integrated into the manmade lakes, effectively preventing mosquitoes from reproducing. Properly designed lakes offer very little shallow water habitat favored by mosquitoes, contain clean, moving water, and support abundant predators.

The proposed lake system employs the use of multiple layers of treatment to facilitate water quality improvement through lake water quality measures (biofilters and aeration), urban stormwater runoff controls (water quality filters and wetland planter areas), and lake retention of runoff. These three elements work either through management of urban stormwater runoff or through lake water quality maintenance to ensure that the water within the lakes and any discharge from the development is of the same or better quality than that discharged prior to development. Exhibit 5-15 through 5-19 show examples of the lake elements.

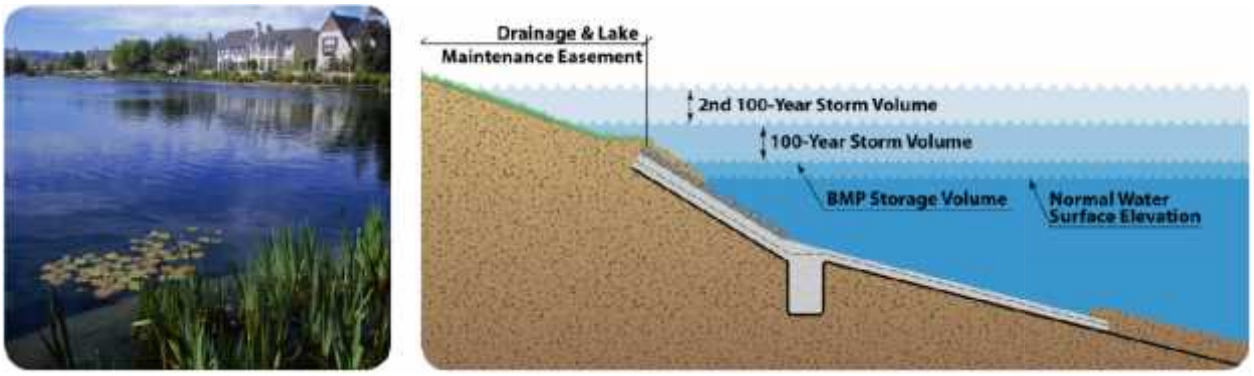



**Exhibit 5-15: Manmade Lakes**

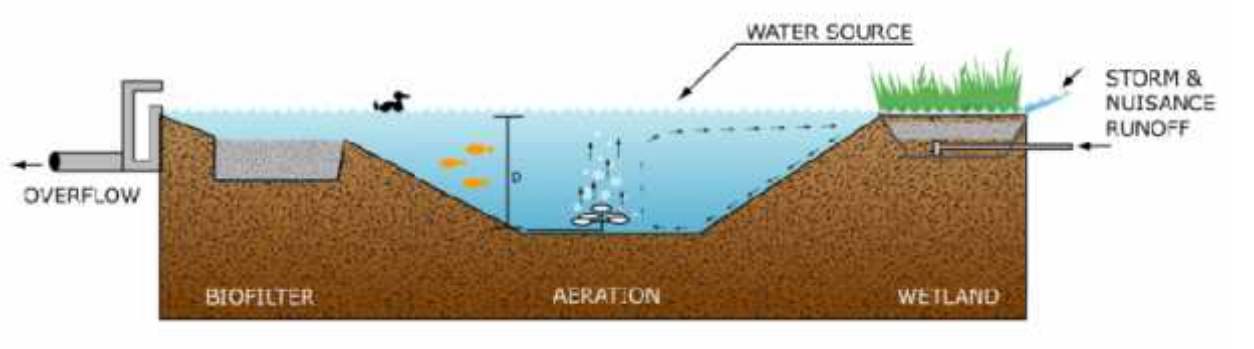



**Exhibit 5-16: Schematic Diagram of Manmade Lake Elements**

**Exhibit 5-17: Example photos of lake aeration system**

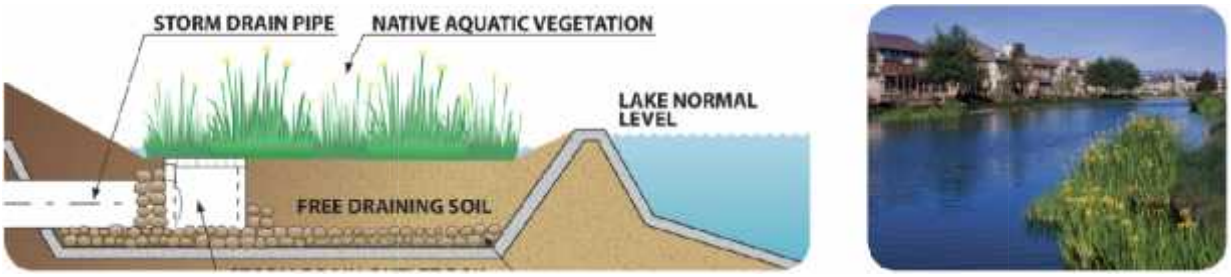
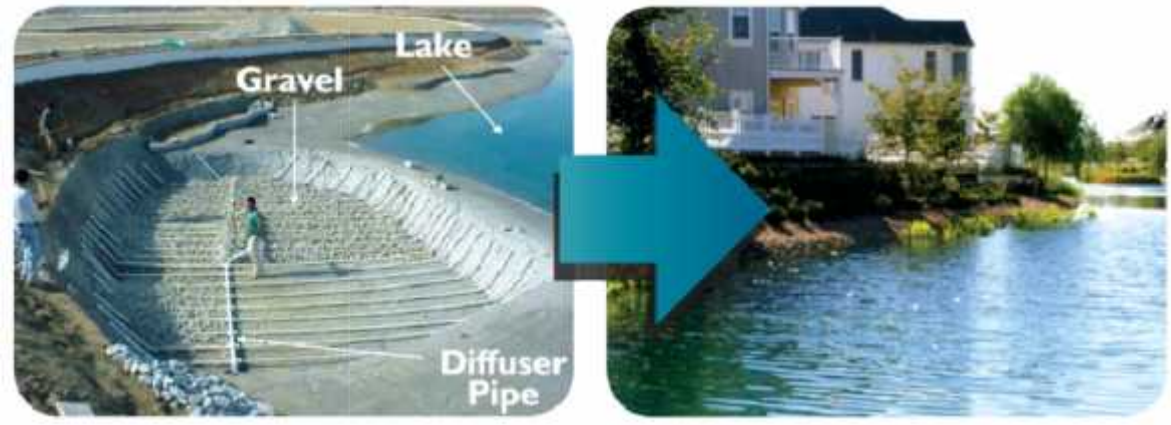



**Exhibit 5-18: Example of Submergent and Emergent Wetland Vegetation**




Under Construction | Construction Completed

**Exhibit 5.19: Example Photos of Biofilter (submerged gravel bed)**

## 5.7 ELECTRICAL SERVICE

Electric service will be provided by PG&E. A summary of existing and proposed facilities are described below. Although the DSP will include alternative energy sources such as solar, the substation upgrades and/or new construction will be designed such that the peak demand can be supplied in the event that alternative sources are offline or underperforming. Demand estimates for electric service assumes redundancy with alternative energy sources.

### 5.7.1 Existing Electrical Facilities

There are two substations in the vicinity of the Dunnigan Specific Plan (DSP) Area. The Dunnigan Substation is located approximately 2.3 miles north of County Road 4 and approximately one-quarter mile east of Interstate 5. It serves the specific plan area consisting of the old town of Dunnigan, several mobile home parks, residences and agricultural properties east and west of Interstate 5. The Dunnigan Substation has a 12 kV rated primary distribution systems and is currently close to full capacity.

The Zamora Substation is also rated 12kV and operates close to full capacity, and is located on County Road 14, east of Interstate 5 approximately 7 miles south of CR 9. This location does not make the Zamora Substation a viable current option for serving the DSP.

Two overhead transmission alignments are located in the general vicinity of the DSP Area. A 115 kV transmission line traverses in a general northeast/southwest alignment south of the Zamora Substation and through Knights Landing. A 230 KV transmission alignment is located in the hills west of the Tehama Canal, approximately 4 miles from the west edge of the DSP. Overhead distribution lines are present along some of the internal existing County roads providing service to agricultural properties for wells and residential use.

### 5.7.2 Proposed Electrical Facilities

Electric service could be provided to the Dunnigan Specific Plan Area either by upgrading the existing Dunnigan Substation or adding a new substation. If utilized, the Dunnigan Substation will require significant upgrades and expansion. Additional transformer banks would need to be installed, existing distribution systems reinforced, and new distribution systems added. If Dunnigan Substation is chosen to serve DSP, PG&E would install an additional backup transmission circuit (looping the 60 kV). Dunnigan is a 60 to 12 kV substation, so service would likely remain 12 kV.

Alternatively, a new substation could be constructed to serve the Plan Area. The new substation would provide service at 21 kV and could be fed from any of three transmission lines: 1) a new 230 kV to 21kV could be built within the existing 230 kV transmission corridor west of the Tehama Canal, or 2) PG&E could extend a radial 230 or 115 kV transmission line east to the site and construct the substation at or within the central quadrant, or 3) the 60 kV line serving the Dunnigan Substation could be extended south to the project and a substation constructed in the northern portion of the project.

If a new substation is located onsite, it will be centrally located in an industrial or commercial zone. General requirements for the site are minimum 1.5 acres, served by overhead transmission lines and an access road capable of transporting a 200,000 pound distribution transformer and transportation trailer.


**Exhibit 5.20: Electrical Substation and Transmission Options**

If a new substation were added, PG&E would determine the timeframe for upgrading from the current 12 kV service to the ultimate 21 kV service based on economic factors. While upgrading to 21 kV service would ultimately occur, PG&E could serve the first phase (the first 2500 units in the northern portion) at 12 kV, before adding a substation to serve the balance of the project at 21 kV. The estimated average electric demand for the DSP is 37.7 megawatts (MW) and the peak electric demand estimate is 87.4 MW. See Appendix K for additional information regarding load estimate calculations.

## 5.8 NATURAL GAS SERVICE

Gas service will be provided by PG&E. A summary of existing and proposed facilities are described below.

### 5.8.1 Existing Gas Facilities

PG&E currently has two independent gas distribution systems within the Dunnigan Specific Plan Area. The Old Town Dunnigan area is served through a 2" distribution piping supplied by a regulation station located at 2nd & Main Streets. The supply for the regulation station is a 1 ¼" feeder main tapped into a 20" steel transmission line. The 1 ¼" feeder main, regulation station, and existing distribution piping can support minimal growth.

At County Roads 7 & 8 the mobile home park and commercial developments, between Highway 99W and Interstate 5, are served through 2" and 4" distribution piping. The supply source is the 20" gas transmission line and a regulation station located east of the development on County Road 7. This regulation station and piping also can support only minimal growth. None of the gas facilities currently cross Interstate 5.

### 5.8.2 Proposed Gas Facilities

PG&E anticipates the need for a new distribution regulation station fed from the 20" transmission line via a steel distribution feeder main to be located west of I-5 and ideally somewhat centered in the plan area. This will require a freeway crossing. Requirements for a new regulation station site are 20' x 100' Public Utility Easement with year round access.

Distribution mains will consist of high density polyethylene (HDPE) pipe (i.e., poly) and range in size from 2" to possibly 8" in diameter. Peak demand for natural gas is estimated to be 831 million cubic feet per hour (MCFH). See Appendix K for additional information regarding load estimate calculations.

## 5.9 TELEPHONE AND COMMUNICATIONS SERVICE

Telephone service to the DSP will be determined prior to the approval of the first tentative tract map. The communication facilities located in the streets of the development will include a mix of fiber optic and copper cable and their supporting facilities. Although the trench layout has not been specified at this time, it is generally consist of multi-duct lines within the backbone area and duct plus buried lines within the secondary areas of the project.

Communications for the DSP will be part of a larger community connectivity infrastructure platform. This platform will provide the hardware for community connectivity and is discussed in greater detail in Chapter 9.

# CHAPTER SIX: PUBLIC SERVICES

## 6.1 OVERVIEW

The Dunnigan Specific Plan (DSP) describes the public services provided to ensure a complete community, one that provides educational, recreational, public safety and civic/government services for the residents. This chapter describes the services necessary to meet the needs of Plan Area, in accordance with the policies of the Yolo County General Plan. Phasing and financing obligations relating to public services are outlined in the Specific Plan development agreements and in Implementation Section 10 of the Specific Plan. Table 6-1 summarizes the public service providers to the Plan Area.

| **Table 6-1 DSP Service Providers** | |
|---|---|
| Parks and Recreation | Dunnigan County Service Area (CSA) |
| Fire Protection | Dunnigan Fire Protection District |
| Law Enforcement and Protection | Yolo County Sheriff's Department |
| Government Services | Yolo County (through Dunnigan CSA) |
| Library | Yolo County Library |
| School District | Pierce Joint Unified School District |
| Solid Waste | Yolo County Division of Integrated Waste Management |

## 6.2 PUBLIC SERVICES GOALS

The Public Services Element provides information and policy guidance to ensure that services are sufficient to support new development in the DSP. Policies supporting community-based schools, parks, open space, child/dependant care and libraries, law enforcement, fire protection, government services and waste management are essential to sustain and support the residents of Dunnigan and surrounding residents that may derive benefit. The applicable General Plan policies and goals for each public service area are summarized in each subsection of this chapter.

## 6.3 PARKS, RECREATION AND OPEN SPACE

The extensive parks and open space system provided for Dunnigan is a key feature required in order to meet the health, wellness and support of community values envisioned for the specific plan area. The parks and open space will help shape the visual character of the community, providing places for residents to gather, recreate and take ownership of the community in which they live. The extensive, interconnected open space and active and passive recreation facilities within the parks will not only provide ample places for physical activity, but will also provide places for residents to meet, socialize, play and experience natural habitat and wildlife. The intent of this section is to ensure sufficient and timely improvement of the parks and open space system, which is an integral part of the overall community framework. Together, the park and open space amenities provide a full range of active and passive recreational opportunities to help form a healthy and unifying element of the community. The following are the relevant General Plan policies that helped to guide the parks and open space program for the Plan Area:

- *Policy PF-3.1: Establish a service threshold of 5 acres of community (neighborhood) park per 1,000 people in each unincorporated town.*
- *Policy PF-3.2: Design sustainable parks and recreational facilities that complement nearby land uses and serve all segments of the community.*
- *Policy PF-3.3: Design community parks to ensure equal opportunities for access for all residents, including the handicapped and senior populations.*
- *Policy PF-3.4: Create greenbelts to connect schools, community parks, and residential areas in unincorporated communities wherever possible. Connect community parks to existing trails, walkways, and bikeways where feasible.*
- *Policy PF-3.5: Include buffers, hedgerows, directional lighting, and other features to ensure the compatibility of recreational activities with surrounding land uses.*
- *Policy PF-3.6: Construct neighborhood and community parks within walking and bicycling distance of residential areas.*
- *Policy PF-3.7: Ensure that community parks and recreational facilities have stable and self-sufficient funding resources paid by those who derive benefit.*
- Policy CO-1.1: Expand and enhance an integrated network of open space to support recreation, natural resources, historic and tribal resources, habitat, water management, aesthetics, and other beneficial uses.
- *Policy CO-1.2: Develop a connected system of recreational trails to link communities and parks throughout the county.*
- *Policy CO-1.3: Create a network of regional parks and open space corridors that highlight unique resources and recreational opportunities for a variety of users.*
- *Policy CO-1.4: Provision of an appropriate level of public facilities and infrastructure shall be a priority for all County park facilities.*
- *Policy CO-1.5: Establish future resource parks close to population centers, where feasible.*
- *Policy CO-1.9: Promote the conservation of environmental resources in new and existing park and open space facilities.*
- *Policy CO-1.10: The target threshold for resource parks (regional and open space parks) shall be 20 acres per 1,000 total County population (both unincorporated and incorporated).*
- *Policy CO-1.11: Coordinate the development of recreation areas and public open space with regional trail planning.*
- *Policy CO-1.22: Emphasize the use of native grasses, shrubs and trees as the primary focus of restoration within resource parks and other open spaces.*
- *Policy CO-1.30: Require clustering and creative site planning in new development areas to preserve and enhance areas of contiguous open space to the extent feasible.*

### 6.3.1 Overall Parks and Open Space Vision

A comprehensive and unifying vision for the parks and open space system for Dunnigan is one of community pride, recreational opportunities, health and wellness and connectivity. Parks and open space have consistently been rated among the most important "quality of life" benefit that contributes to a vibrant community and establishes a unique identity. The vision recognizes the importance of all types of parks and open space amenities are required to meet the recreational needs and demands of the community.

The guiding principles for the parks and open space system throughout Dunnigan are as follows:

- Establish a unique community character which is respectful of the agrarian history of Dunnigan
- Provide a wide variety of recreational opportunities and amenities conveniently located for intended users
- Promote health and wellness within the community
- Establish an organized trail network with a strong connectivity to promote pedestrian and bicycle circulation
- Provide human scale and create a sense of place for community gathering
- Establish a unique personality, form and character with high aesthetic quality
- Develop with a sensitivity to ecology and sustainability principles
- Create a safe outdoor environment that is efficiently serviceable and maintainable
- Limit impact landscape amenities to important focal areas to appropriately manage maintenance financial impact
- Promote joint-use facilities between schools and parks
- Integrate "permaculture" (permanent agriculture) throughout the parks and open space system
- Ensure accessibility to all users

### 6.3.2 Proposed Park and Open Space System

The DSP parks and open space system provides for a range of active and passive recreational opportunities that satisfies the Yolo County General Plan requirement of 5 acres of parkland per 1000 residents and 20 acres of open space per 1000 total County population. Table 6.2 provides the calculations of the acreage needed to meet the minimum acreage requirement.

The DSP includes active community and neighborhood park sites, public open space and greenways as depicted in the Parks and Open Space Exhibit 6.1. The system is comprised of one community park site of 28.1 acres, thirteen neighborhood parks totaling 89.8 acres and numerous open spaces totaling 479.7 acres. Open space is comprised of natural open space, greenways and lakes. Refer to section 6.3.4 for more description of the various open space categories within the Plan Area. Construction of park and recreation facilities shall be performed in accordance with the DSP Development Agreement and in consultation with the County.

| **Table 6.2 : Parks and Open Space Calculations** | |
|---|---|
| **8623 base d.u.'s x 2.62 pph + 607 second units x 1.6 pph[1]** | **23,563** |
| **Park area requirement (5 acres/1000 pop.)** | **117.8 acres** |
| **Park area provided** | **117.9 acres** |
| **Open Space area requirement (20 acres/1000 pop)** | **471.2 acres** |
| **Open Space provided** | **479.7 acres** |


**6.1: Parks and Open Space Exhibit**

### 6.3.3 Active Park Facilities

The placement and sizing of parks is reflective of community need, General Plan policy, proximity to users, ability to promote joint-use activities, and existence of natural resources. Parks are generally located within neighborhoods and create a local focal point and activity amenity. In addition, when feasible, park sites are located adjacent to or connected with open space areas to create the desired interconnectivity within the community. Table 6.2 lists the types of parks provided, the size range for each and the total in each category. The construction of the community and neighborhood parks within the Plan Area are proposed to be turn-key, meaning that the park facilities will be constructed by the Plan Area developers in consultation with the County. Details relating to dedication, operation, funding, phasing and construction of the parks are included in the Specific Plan development agreements.

| Table 6.3 : Park Types/ Sizes | # Provided |
|---|---|
| **Community Park:** 28.1 acres | 1 |
| **Neighborhood Parks:** 3.0 acres-27.4 acres | 10 |
| **Mini-parks:** 2.0 acres or less | 3 |

#### 6.3.3.1 Community Park

The Dunnigan Community Park is approximately twenty-eight (28) acres and is located near the center of the Dunnigan Specific Plan (DSP) area. This location provides for efficient connectivity and accessibility to the entire community. The park is bound by primary collector streets to the west and east, a secondary collector street to the south and greenway along the northerly edge. As a prominent and well-appointed outdoor space, the community park will serve as a vital focal point and community gathering center for DSP area.

The Community Park program will provide recreational opportunities and amenities to be used as the primary community recreational amenity for Dunnigan. The objective of this element is to establish a wide range of amenities that provide citizens diverse recreational opportunities with flexibility in present and future programming. Design emphasis on sustainability and creation of an outdoor space in which the community

**Example of Community Park amenities**

will take ownership of is paramount. The Community Park will "stand the test of time" and be a true asset and benefit to the community. The Dunnigan Community Park will be structured to be predominantly active recreation amenities with passive elements, such as picnic areas and community gardening space, at a smaller scale. Community Park planning will be coordinated with Neighborhood Park level programming to ensure an overall cohesive recreational element. An illustrative depiction of the community park is shown below in Exhibit 6.2.

**Exhibit 6.2: Illustrative Depiction of Community Park**

#### 6.3.3.2 Neighborhood Parks

The neighborhood parks within Plan Area are the core facilities of the park system and are planned to provide a balance between passive and active recreation uses as well as creating a sense of place for the adjacent neighborhood. The neighborhood park system features park sites totaling 89.8 acres. Evenly distributed throughout the DSP, the parks are designed to serve as both the recreational facilities and social gathering spaces for the residential neighborhoods. Many of the neighborhood parks are located adjacent to schools to provide joint-use facilities and to reinforce them as focal points for the neighborhoods. Neighborhood parks will be easily accessible to the surrounding neighborhood through the use of pedestrian trails, bikeways, sidewalks or residential streets.

**Example of Neighborhood Park Play Area**

As with the Dunnigan Community Park, the neighborhood park system will be designed with flexibility in programming and sustainability practices. A range of recreation is planned, including play areas for children, open turf areas, areas for organized sports, picnic areas and flexible opportunities for small groups of people to gather and recreate.

The Neighborhood Park system will provide continuity of quality and programming throughout the Plan Area, yet provide the opportunity to develop each park as a unique element to provide special identity to each neighborhood. Providing for parks and recreation opportunities to be closer to residences, pedestrian accessible, environments for neighborhood children to safely play in and for neighbors to gather is the vision of the Neighborhood Park system.

### 6.3.4 Public Open Space (POS)

Public open space within the Dunnigan Specific Plan (DSP) has been organized into three (3) different types: natural open space, greenways (which include the I-5 corridor/buffer) and lakes, for a total of 479.7 acres. This network of "green infrastructure" is equally significant as the park system in providing for community wellness and establishing the landscape / recreational character of the community.

| **Table 6.3 Public Open Space** | |
|---|---|
| Natural Open Space | 280.0 |
| Greenways | 171.1 |
| Lakes | 28.8 |
| **TOTAL** | **479.7 acres** |

Open space allows for multi-use functions including passive recreation opportunities, wildlife habitat, corridors for pedestrian and bicycle trails, storm water conveyance and water quality treatment. In addition, open space is used to help define the Plan Area boundaries and the neighborhood edges, as well as providing a buffer corridor along Interstate 5. The entire open space system for the Plan Area will be developed with the overall vision and goals of ecological and resource management enhanced by cultural, community and recreational amenity benefit.

### 6.3.4.1 Natural Open Space

Areas designated for natural open spaces comprise the largest portion of the Public Open Space (POS) system in the DSP. These areas, totaling approximately 280 acres, as shown on Exhibit 6.1, include the Dunnigan Creek corridor along the southern boundary of the Hardwoods, the rolling terrain along portions of the western boundary, and miscellaneous areas along the Bird Creek boundary and the Azevedo drainage outfall. These large areas of land serve as transitions from the adjacent agricultural areas, as buffers and as visual open space to define the community boundaries. In the pre-Specific Plan setting, these areas were primarily grazing land, dry farmland, degraded creek corridors, natural grassland and or fallow fields.

**Natural open space along western boundary**

**Low maintenance, native landscaping as edge treatment in natural open space**

The natural open spaces area along Dunnigan Creek is to be enhanced to provide a bio-diverse setting. Any restoration activity will be completed in compliance with the applicable permit. In addition to this enhancement, the creek corridors also provide passive recreation and trails. The large expanses of natural open space along the western edge of the Plan Area and along portions of the southern edge near Bird Creek are to be left in primarily the natural condition with minimal enhancement at the edges with adjacent new development. Detail of the required open space treatment and enhancement is provided in the Design Guidelines. Preservation and management of the natural open space areas will be regulated by the Operations and Management Plan.

#### 6.3.4.2 Greenways

Numerous greenways are disbursed throughout the Plan Area, totaling approximately 171 acres. Some greenways are located to follow existing drainage courses yet the majority of the designated greenways are developed features. These open space elements vary in width, with most ranging from approximately 40 feet to 100 feet in width.

**Example of Greenway Trail**

Most of the greenway parcels include a pedestrian and/or bicycle circulation trail system that connects the open space network, parks, schools, commercial and employment areas to the residential neighborhoods. The greenways which include pedestrian/bicycle circulation elements are designated on the Green Modes Exhibit 4.3.These trail/pathways shall meet the bicycle path specifications as shown in Exhibit 4.5A permeable and/or recycled material for surfacing is encouraged to promote the Dunnigan ecological and sustainability goals. Trail/pathway systems will be designed to function as maintenance/service access where appropriate. Alignments shall be a gentle meander to create a soft informal appearance. Pedestrian/bicycle trail nodes will be integrated at important/appropriate locations. Parkways will be used to extend the trail/pathway system into individual neighborhoods and non-residential developments. They may also be used as access into larger greenways and as connections between greenways. Parkways are an important part of the open space network; however their precise locations will be identified on tentative subdivision maps.

Many greenways will function as multi-purpose drainageways. These drainageways will primarily function as hydrological features (i.e. storm water collection ways, retention/detention facilities, water quality bio-swales, etc). Refer to Section 5.4 for more detail on the design and functions of the drainageways. Recreational amenities within greenways will be minimal. Select amenities are warranted where greenways adjoin a parks and other open space parcels or prominent pedestrian/bicycle connections. These amenities would be used to identify access points, rest stops and key intersections of the trail system. Possible amenities include benches and picnic tables, drinking fountains, lighting and trail system wayfinding signage. The DSP Design Guidelines further define specific development requirements for the greenways.

#### 6.3.4.3 Lakes

Four different manmade lakes, totaling approximately 28.8 acres, are provided in the land plan as a primary element of the stormwater management infrastructure. The lakes create a sustainable, natural aquatic environment that have both stormwater management functions as well as providing open space and an aesthetic landscape feature for the community. Detail about the lakes in provided in Section 5.6.7.5.

#### 6.3.4.4 I-5 Corridor Buffer

The Dunnigan Specific Plan (DSP) is planned to include a variable width (50' minimum) landscape corridor/buffer along both sides of Interstate Highway 5 between Dunnigan Creek undercrossing and Road 8. The I-5 corridor/buffer will be the public's initial visual experience when arriving to the Plan Area. Along the west side of I-5, approximately midway between the County Road 6 and County Road 8 interchange, the pedestrian bike overpass, lake and a park are located, which will provide a dramatic visually open vista and spatial experience to the I-5 corridor/buffer zone. By including a natural and sensitive open space element, an articulate greenway landscape and an active recreational park space, the I-5 corridor will positively portray how the Dunnigan Specific Plan community lives and feels.

Dense hedgerow type plantings will provide protection for adjacent land uses from the highway and will soften edges to residential, office/research development, light industrial, and highway commercial land uses. The DSP Design Guidelines further define specific development requirements for the I-5 corridor/buffer.

**Example of hedgerow buffer**

### 6.3.5 Community Gateways

Community gateways will be visually prominent elements, with thematically consistent design, that contribute toward the establishment of the community identity and character envisioned for the Plan Area. Sited at key locations throughout the community, these gateways will utilize consistent elements, creating a strong sense of place and character. Consistency and continuity will be achieved through a common palette of plant materials, community identification signage, hardscape elements, iconic elements and accent materials. A hierarchy of community gateways will be developed, each of which is designed to have a different level of scale and visual emphasis depending each gateways purpose and location. The DSP Design Guidelines further define specific development requirements for the community gateways.

**Example of Community Gateway Signage**

## 6.4 FIRE PROTECTION

The Dunnigan Fire Protection District (DFPD) provides fire protection, suppression, emergency medical services and hazardous materials management to the Plan Area. This District serves an area of approximately 112 square miles and protects residential, agricultural, commercial and industrial uses, as well as wildland interface. Prior to adoption of the specific plan, the area was served by a volunteer fire department, with a fire station, Station #14, located on Main Street in the Old Town section of Dunnigan. The applicable General Plan policies for the provision of fire protection services in Dunnigan are summarized as follows

- *Policy PF-5.3: Require assertive fire protection measures in all development to supplement limited rural fire district resources.*
- *Policy PF-5.4: Encourage fire districts and other emergency medical service providers to achieve National Fire Protection Association standards of an average response time for emergency calls of nine minutes at least 90 percent of the time in the unincorporated communities, et seq.*
- *Policy PF-5.5: Encourage fire districts to maintain an overall fire insurance (ISO) public protection classification (PPC) rating of Rural 7 or better for fire protection service within the unincorporated communities.*
- *Policy PF-5.6 Work with each community to upgrade its water system to meet sprinkler requirements. Support/require improvements to water infrastructure to achieve appropriate water pressure to adequately fight fires and operate sprinkler systems.*
- *Policy PF-5.7: Encourage fire districts to support narrow streets and other desirable community design features promoted by this General Plan.*
- *Policy PF-5.8: Anticipate and adapt to potential changes in frequency and severity of wildfires resulting from the predicted affect of global warming.*

### 6.4.1 Proposed Fire Facilities

In order to meet the needs of the Plan Area, two new fire stations are provided. The Dunnigan Fire Protection District has identified the needed resources, which are fully detailed in Section 10. Proposed fire station sites are depicted on Public Institutions Exhibit 6.3. The first station is needed to serve the development on the west side of I-5 near Road 6, where the first development phases are expected. A 2.6 acre P/QP site is designated on the new"Main Street" south of Road 6. This site will accommodate the main fire station, fire administration and also be shared with the sheriff substation. This station is known as Station #12. Existing Station #14 will continue to serve the area east of I-5 in the early phases of Plan Area development.

A second fire station site has been located at the northwest corner of County Road 8 and Road "A". This station will serve the portion of the Plan Area south of existing Road 7, generally from the High School to the south boundary. This new station is to be known as Station # 14 and will replace the existing Station #14, which will be non-staffed once the new station # 14 is operational. Public uses, such as a fire station, are permitted by right in all zones. Construction and staffing of the fire station will be consistent with the Fire Department Standards of Response Coverage Study.

## 6.5 LAW ENFORCEMENT AND PROTECTION

The Yolo County Sheriff-Coroner provides law enforcement services to Dunnigan. This department patrols the County, administers the County jail and work program, provides animal control services and serves as the County Coroner. The Sheriff/Coroner facilities are located on East Gibson Road in the city of Woodland, approximately 20 miles from the Plan Area. The applicable General Plan policies related to law enforcement services in Dunnigan are as follows:

- *Policy PF-4.1: Ensure the provision of appropriate law enforcement service and facilities to serve existing and planned land uses.*
- *Policy PF-4.3: Maintain a minimum ratio of 1.75 sworn officers per 1,000 service population, which is defined as both the number of residents and employees located solely within the unincorporated area, et seq.*

### 6.5.1 Proposed Law Enforcement Facilities

The County's goal for staffing standards is 1.75 sworn officers per 1000 service population. This standard requires that the unincorporated areas of the County, such as Dunnigan, provide staffing that considers both residents and employees of the Plan Area. Due to the required match of housing and jobs within the Plan Area, the staffing ratio will be estimated based on resident population only. Based on 1.75 officers/1000 residents and the estimated resident population of 23,563 the estimated number of officers required to serve Dunnigan is 41.

A satellite Sheriff's station is planned to be located within the DSP to serve the Plan Area with the appropriate level of law enforcement services and facilities. The co-location of the sheriff substation with the main fire station (Station #12) is proposed, based on input from the Sheriff and Fire Department. The designated site is shown on Exhibit 6.3.

## 6.6 GOVERNMENT SERVICES

As an unincorporated community within the County, the residents of Dunnigan are provided with general County services from various County offices locations within Woodland, approximately 15 to 20 miles away. Dunnigan will be the largest unincorporated community within Yolo County. The applicable General Plan policies for the provision of government services in Dunnigan are summarized as follows:

- *Policy PF-12.1: Design, construct, and operate County facilities to be environmentally sustainable and beneficial to the community and/or region.*
- *Policy PF-12.4: Encourage the development of governmental and civic facilities (e.g. school yards, special district meeting rooms, etc.) that can accommodate multiple community uses.*
- *Policy PF-12.11: Centralize government facilities in consolidated satellite service centers when community populations reach appropriate thresholds.*
- *Policy PF-12.12: Work to ensure that Community Service Districts' facilities to serve new development are constructed concurrent with the need, to the extent allowed by State law.*

The provision of selected County government offices within the Plan Area is anticipated in order to best serve the residents and provide a more sustainable community model. The types of government services that could best serve the growing Plan Area are development services such

as a building and public works permit center as well as employment and social services. In order to accommodate the needs of County government services, a portion of the 4.6 acre civic center site is planned to accommodate these government services, as shown on Exhibit 6.3. This site is located in the hub of the Dunnigan community, directly across from the Community Park and is intended to accommodate other community uses, such as the community library, the County Service Area (CSA) office and the Community Association/Transportation Management Agency (TMA) office, if formed. Details relating to operation, funding, phasing and construction of the government services are included in the Specific Plan development agreements.

## 6.7 CHILD/DEPENDANT CARE

The availability of adequate child/dependant care facilities in close proximity to homes and employment centers is a priority for the Plan Area to achieve trip reduction and reduce greenhouse gas emissions. The applicable General Plan goals and policies related to child/dependant care in Dunnigan are as follows:

- *Policy PF-8.1: Encourage the location of dependent care facilities in areas with compatible land uses and character, such as employment centers, homes, schools, community centers, places of worship and recreation facilities.*
- Policy PF-8.2: *Require mitigation for the impact of development on the available supply of dependent care.*

In order to encourage and promote a good balance of child/dependant care facilities to locate within the Plan Area, the Specific Plan incorporates several mechanisms. The first mechanism is the flexibility of the development regulations so that child care facilities are allowed in as many zones as possible. In addition to small family day care homes that are permitted by right in all residential zones, the DSP Development Standards allow large family day care homes with a minor use permit in RR, RE, RL and RM zones. Child day care facilities allowed by right in the P/QP, MU, CL, OPRD and LI zones. The density bonus program described in Section 7.8 incentivizes the construction of child care centers in the Plan Area. The Dunnigan CSA coordinator will also work with large employers to provide on-site child care, facilitate a child/dependant care community- based needs survey and implement a marketing program to day care corporations.

## 6.8 LIBRARY FACILITIES

The Yolo County Library system provides library services throughout the County and is the provider for Dunnigan. The library administrative center and County archives are located in Woodland. The applicable General Plan policies related to library services in Dunnigan are as follows:

- *Policy PF-7.1: Develop and maintain library facilities and/or services in every city and community where services are not otherwise provided. New public library service should be established in communities with populations 5,000 or more.*
- *Policy PF-7.2: Locate library facilities in areas easily accessible by motorized vehicles, bicycles and other non-motorized vehicles, pedestrians, and public transportation, such as downtown shopping areas or neighborhood business districts.*

The County's goals for library facility standards include a building square footage ratio, as well as ratios for actual library products, such as volumes, computers, etc. Based on the library building size standard range of .75 to 1.0 square feet per capita, the Dunnigan branch library is planned to be approximately 17,000-23,000 square feet in size. For comparative purposes, the Arthur F. Turner Community library in West Sacramento, which opened in 2009, is approximately 18,200 square feet.

A permanent library site is designated within the Plan Area. The designated site for the library is as a part of the 4.6 acre civic center site located within the Central District. This site is located in the hub of the Dunnigan community, directly across from the Community Park and is intended to accommodate other community uses, which may include a County government services office, the Community Service Area (CSA) office and a Community Association/TMA office, if formed. A temporary library facility may be located in a different location in an earlier phase of the project. The designated site of the permanent library is shown on Exhibit 6.3.

## 6.9 SCHOOLS

The Plan Area is located within the Pierce Joint Unified School District, which serves Colusa County and the northern portion of Yolo County. In addition, the Yolo County Office of Education operates eight special education schools and three alternative education schools. The Pierce JUSD offices are located in Arbuckle, approximately 8 miles to the north of Dunnigan. Prior to the DSP, approximately 250 students residing in Dunnigan attended schools in Arbuckle. The applicable General Plan policies related to schools in Dunnigan are as follows:

- *Policy PF-6.1: Encourage school districts to service each community with local schools, where feasible.*
- *Policy PF-6.2: Work to ensure that schools serving new development are constructed concurrent with the needs of the community, to the extent allowed by State law.*
- *Policy PF-6.4: Identify appropriate locations for school sites within community growth boundaries, in consultation with the local school district, as early in the planning process as possible.*
- *Policy PF-6.5: Support infrastructure and programs that encourage children to safely walk or ride a bicycle to school.*

### 6.9.1 Student Generation and School Requirements

The DSP provides school sites to accommodate the students living within the Plan Area. The demand for school facilities, sizing, locations and generation rates have been based on information provided by Pierce JUSD, the District's consultant Schreder and Associates and State of California criteria. Table 6.4 summarizes the anticipated number of students within the Plan Area, based on student generation factors provided by Schreder and Associates.

Table 6.5 provides the calculations of estimated student yield and number of sites needed to accommodate the anticipated students within the Plan Area. The site sizes, as shown in Table 6.5 are generally 10 acres for elementary schools with capacity for approximately 600 students, 23 acres for the middle school with capacity of approximately 1000 students and 40 acres for the high school with capacity of approximately 1600 students. Based on the anticipated student generation, a total of four (4) elementary schools, one (1) middle school and one (1) high school have been designated on the land plan. The designated school sites are depicted on Exhibit 6.3.

A tentative location for a 5th elementary school, if determined by PJUSD to be needed, will be located in consultation with the School District prior to any Phase 4 tentative map approval.

| Table 6.4 Student Generation Factors per Dwelling Unit | | | |
|---|---|---|---|
| Residential Land Use | K-5 student/d.u. | 6-8 student/d.u. | 9-12 student/d.u. |
| RR/RE | **0.38** | **0.21** | **0.20** |
| RL | **0.35** | **0.13** | **0.18** |
| RM | **0.35** | **0.08** | **0.18** |
| RH (Market rate) | **0.19** | **0.09** | **0.20** |
| RH (Affordable) | **0.64** | **0.37** | **0.33** |

Source: Schreder and Associates, October 2011

| Table 6.5 Estimated Total Student Yield | | | |
|---|---|---|---|
| **Total students/grade** | **K-5** | **6-8** | **9-12** |
| **RR,RE,RL, RM** | 2,323 | 783 | 1,198 |
| **RH/AFF** | 370 | 199 | 301 |
| **Total students** | 2,693 | 982 | 1,499 |
| **School capacity** | 600 /10 acres | 1050 /23 acres | 1600 /40 acres |
| **Total sites needed** | **4.5** | **1** | **1** |

Source: Schreder and Associates, October 2011

School sites are co-located with neighborhood park sites to encourage joint uses of the facilities. In addition, the school sites are centrally located within each district to serve as a focal point and gathering area for the neighborhood and each school is situated approximately ½ mile walking distance from most of the residences. The sites are also linked on the greenway system to maximize the non-vehicular modes of travel to these frequented locations, as depicted on the Greens Modes Exhibit 4.3. The schools will be designed as high performance schools (HPS). High performance schools join together the best available design strategies and building technologies. An HPS school provides a healthy and comfortable indoor environment, conserve energy, resources, and water, serves as a community resource for neighborhood meetings and functions and provide a safe and secure educational atmosphere.

The construction of the public schools within the Plan Area will be turn-key, meaning that the school facilities will be constructed by the Plan Area developers in consultation with the District, the California Department of Education (CDE) and the Division of the State Architect. This approach will help accelerate the first elementary school's opening to serve the existing students within Dunnigan and the initial residents of the first phases of new development, planned to be in the area north of Road 6 west of I-5. In addition, the turn-key schools should be developed jointly with each co-located neighborhood park to expedite the timing of these joint-use facilities. Facility planning and sequencing of school sites shall be determined by PJUSD, however the DSP Phasing Plan has anticipated the phasing of the needed sites in order to ensure

that the appropriate number of sites are available in concurrence with project development. All sites designated on the land plan shall be reserved for the Pierce Unified School District in accordance with the development agreement. Refer to Section 10.3 for additional information on the DSP Phasing program.

## 6.10 SOLID WASTE

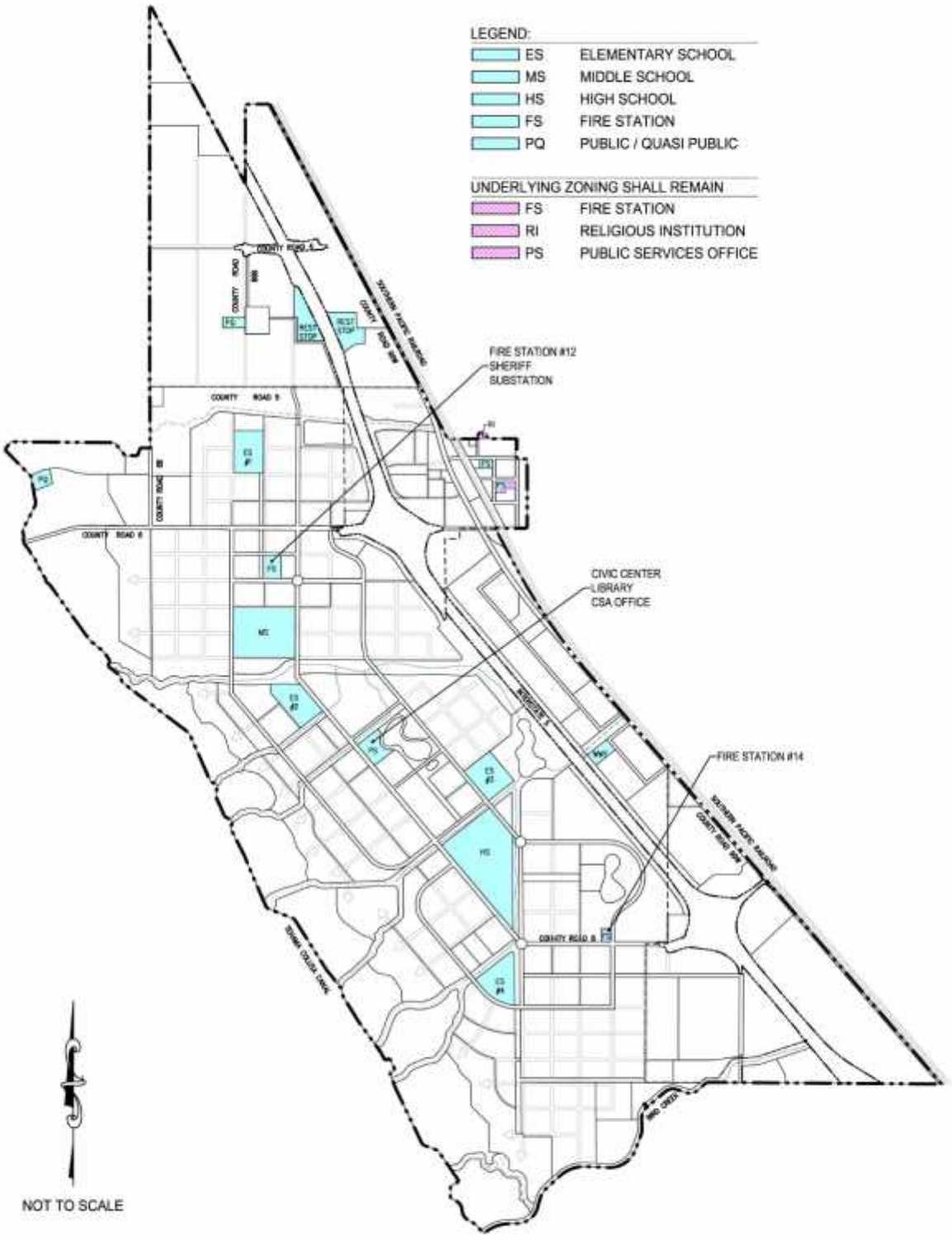
The Yolo County Integrated Waste Management Division (DIWM) is responsible for solid waste collection, recycling and the operation of the County landfill. The IWM utilizes a franchise agreement with a waste and recycling hauler that will serve the Plan Area. At the time of Specific Plan application, the County franchise agreement was with Waste Management Inc. which serves Area 1C- Yolo/Zamora/Dunnigan. The applicable General Plan policies related to solid waste services in Dunnigan are as follows:

- *Policy PF-9.1: Meet or exceed State waste diversion requirements.*
- *Policy PF-9.3: Employ innovative strategies to ensure efficient and cost-effective solid waste and other discarded materials collection, disposal, transfer and processing.*
- *Policy PF-9.7: Solid waste franchisees shall support the smart growth policies for community design contained in this General Plan. This may result in restrictions on collection vehicle size in order to support narrow streets and other desirable community features.*
- *Policy PF-9.8: Require salvage, reuse or recycling of construction and demolition materials and debris at all construction sites.*
- *Policy PF-9.9: Encourage use of salvaged and recycled materials in construction.*

### 6.9.1 Proposed Waste Services

The Plan Area will generate municipal solid waste, green waste and short term construction debris waste. The solid waste service includes weekly residential curbside trash collection, bi-weekly recycling collection and annual bulky item collection at the curbside, which includes up to four cubic yards of waste to include one appliance, tires, and bulky items such as furniture. It is anticipated that services such as weekly recycling and/or green waste collection will also be provided. Services to multi-family, commercial, office, public/quasi public (such as schools) and industrial uses is also a franchise service. Service to these land uses includes, at a minimum, weekly solid waste and recycling collection. The service also includes collection of source separated commercial cardboard and office paper. A community based recycling program is also provided, details are provided in the Sustainability Chapter 9.

The County's Construction and Demolition Debris Recycling and Diversion Ordinance requires the diversion of 50% of construction debris waste from the landfill. Pursuant to the Ordinance, ach construction project shall be required to provide an on-site area to sort and separate recyclable construction materials. The Ordinance requires a construction waste recycling program to be implemented for every building permit and fees are collected by the County to ensure monitoring and reporting.




**6.3: Public Institutions Exhibit**

# CHAPTER SEVEN: JOBS AND HOUSING

## 7.1 OVERVIEW

The Dunnigan Specific Plan (DSP) is structured to provide a range and balance of jobs and a wide range of housing opportunities. This chapter summarizes the estimated population for the Plan Area, the anticipated job growth, the programs and policies to implement the required relationship between jobs and housing and the programs to implement affordable housing within the DSP.

## 7.2 JOBS/HOUSING GOALS AND POLICIES

The General Plan Land Use and Housing Element provide several goals and policies that are directly applicable to the provision of jobs and housing in Dunnigan, as follows:

***Policy CC-3.7:*** *Ensure that jobs are created concurrent with housing to the greatest extent feasible. Include requirements to ensure a reasonable ongoing balance between housing and jobs by phase. Strive to match overall wages to home prices.*

***Policy CC-3.8:*** *For areas within Specific Plans, the amount of land designated for residential and job-generating uses shall be evaluated during the Specific Plan process, and land uses must be "re-balanced" within each phase in order to achieve a jobs/housing balance of 1.2 jobs per household. A jobs/housing monitoring program shall be established as part of each Specific Plan for its planning area. The jobs/housing relationship (balance, phasing, and match) for each Specific Plan area shall be monitored by phase. If, at the end of any phase, the required jobs/housing relationships are not achieved, the County shall require immediate and effective actions to be taken by the developer to ensure that the required jobs/housing relationship is achieved as a part of any subsequent phase. Such actions may include, but are not limited to, the following: changes in the amounts of land uses in remaining phases; financial/regulatory incentives to accelerate the development of underdeveloped land uses; smaller phases; limitations of permits for overdeveloped land uses; and/or other actions as may be required.*

***Policy CC-2.11****: Strive to achieve a match between the prices of dwelling units and the salaries of the jobs provided within each unincorporated community.*

***Policy HO- 1.1:*** *Include a mix of housing types, densities, affordability levels and designs.*

***Policy HO-1.3:*** *Promote live/work uses, such as home occupations, employee housing, and caretaker accommodations.*

***Policy HO-1.4:*** *Protect mobile home parks as an important source of affordable housing.*

***Policy HO-1.9:*** *As a part of every project with a significant residential component, ensure that measures are taken that contribute to providing a range of new home prices, including both for-sale and rental units, that are affordable to families at all household income levels within each community.*

***Policy HO-1.12:*** *Encourage use of the State density bonus law for affordable housing, senior housing, childcare facilities, and other special needs groups, as allowed.*

***Policy HO-1.13:*** *Encourage the development of large rental and for-sale units (containing three or more bedrooms) that are affordable for very-low and low-income households.*

***Policy HO-3.2:*** *Ensure that County policies, codes, development review procedures, and fees do not represent unjustified constraints to the development of new housing.*

***Policy HO 4.2****: Encourage the development of housing for senior households.*

***Policy HO-4.3****: Allow group homes with special living requirements in residential areas, consistent with the County's land use regulations.*

***Policy HO-4.4:*** *Provide for housing to meet the needs of extended, multi-generational, and/or large families.*

***Policy HO-4.5:*** *Encourage new residential developments to include adequate provisions for families with children, including amenities such as tot lots, playgrounds, and childcare facilities.*

***Policy HO-4.6:*** *Encourage the removal of architectural barriers in the rehabilitation of existing residential units and ensure that new units comply with visitability standards so that homes can be occupied by, or visited by, people who have trouble with steps or use wheelchairs or walkers.*

***Policy HO-4.7****: Encourage the inclusion of single room occupancy units and efficiency apartments in multifamily and mixed use areas.*

***Policy HO-4.13****: Expand housing opportunities for farmworkers.*

***Policy HO-4.14****: Defer or waive development fees for housing projects that provide farmworker housing.*

***Policy HO-5.1****: Plan communities to avoid the concentration of affordable housing, while ensuring that affordable housing has access to needed services and amenities.*

***Policy HO-5.2****: Require design standards to ensure that affordable units are visually indistinguishable from surrounding market rate units.*

***Policy HO-5.3:*** *Strengthen neighborhoods through the maintenance and rehabilitation of the existing housing stock.*

***Policy HO-5.4****: Encourage well-designed mixed use residential/non-residential development where residential use is appropriate to the setting and development impacts can be mitigated, such as in and around downtown areas.*

***Policy HO-5.5:*** *Require that design plans for multifamily development projects break up the bulk and minimize the perceived height and size of new structures, including the use of upper story setbacks and landscaping. Ensure a human scale in new development and, when possible, create multiple unit buildings that have the appearance of single family homes.*

***Policy HO-6.3****: Encourage affordable housing development to locate near existing and proposed transit routes, employment centers, shopping facilities, schools, medical facilities, and other services.*

## 7.3 JOBS/HOUSING RELATIONSHIP

Dunnigan is planned to maximize the number of workers who live in the community by having a strong correlation between wages and housing prices. Considering its distance from the existing job centers in the region, a larger percentage of Dunnigan workers may choose to live within the community than in other cities in Yolo County. It is expected that up to half of all workers will live within the Plan Area. This would be higher than neighboring communities and the regional norm. The following four job-housing principles are expected to encourage workers to live within the Plan Area and reduce travel to destinations outside of the community.

1. The land use plan designates the appropriate amount of job-generating land uses to meet or exceed the overall requirement of 1.2 jobs per household within the Plan Area at build out.
2. The phasing plan maintains an approximately equal balance between new job-generating uses and new housing units developed within each phase. The Phasing Plan (Exhibit 10.1) and the Phasing Summary & Jobs/Housing Ratio (Table 10.1) are found in Chapter 10.3.
3. The Specific Plan includes an Economic Development Strategy designed to attract job producing development in targeted industries in each phase of development. A summary of this strategy is provided in Chapter 7.7 and the complete Economic Development Strategy report by Applied Development Economics (ADE) is Appendix Q.
4. The Specific Plan includes a sufficient population base to support a wide range of destinations for school, shopping, services, and recreation.

### 7.3.1 Job-Housing Proximity and Rates of Commuting

The DSP is planned to meet the jobs-housing target of approximately 1.2 jobs per housing unit. Many factors contribute to an individual's decision to live and work in the same city or zip code. Typically, households in one community support jobs in another. The jobs that employ a community's workforce, and the homes that provide their shelter, are not necessarily all present in the same city or place.

The American Communities Survey (ACS) includes various labor statistics, including rates of commuting. Fehr & Peers Transportation Consultants examined the 2007-2011 ACS data for ten cities, including cities near Dunnigan, and cities with an economic profile similar to that projected for the DSP. The percentage of workers who work in their place of residence range from less than thirty percent (30%) to almost fifty percent (50%) for these ten cities, according to the ACS. The ACS shows that Woodland has the highest percentage of workers living and working in the same city, at forty-nine percent (49%). Corcoran, Davis and Williams have between forty-three percent (43%) and forty five percent (45%) of workers living in the city limits. In Orland, Gilroy, Hollister and Los Banos, rates are lower, between thirty seven percent (37%) and forty percent (40%). In Winters and Dixon, only twenty-seven percent (27%) and twenty-nine percent (29%) of workers live in the city, respectively. ACS data is presented in Table 3 of Appendix Q.

Communities with higher percentages of residents employed within the community tend to have local jobs at the same economic level as the housing stock, are located a greater distance from other accessible job centers, and have less of the highly specialized, higher paying jobs that would attract workers from other locations.

From its inception, the DSP has been envisioned as a community with a balance of jobs and homes. The job-housing principals identified in Section 7.3 are expected to increase the extent to which residents choose to work in Dunnigan. Development of the DSP will benefit the existing Dunnigan community by supporting "quality of life" amenities that would otherwise not be available. These include grocery stores, basic medical services, schools, as well as municipal services such as law enforcement, fire and emergency medical services, municipal water, sewer, and stormwater services. The ability to provide most, if not all, these community benefits will be contingent on having enough scale of new residential development to create adequate demand for these facilities and services as well as the ability to feasibly fund the capital and ongoing operating costs.

## 7.4 POPULATION AND JOBS SUMMARY

Table 7-1 is a summary of the number and type of residential units and estimate of the total population for the Plan Area. At full build out of allocated units, the Plan Area is expected to contain approximately 22,600 residents.

**Table 7-1: Population Projections**

| Land Use | Allocated Dwelling Units (DU) | % of Total DU | Household Size (pph) | Estimated Population |
|---|---|---|---|---|
| **Residential Uses** | | | | |
| RR- Residential Rural | 332 | 4% | 2.62 | 870 |
| RE-Rural Estates | 371 | 4% | 2.62 | 972 |
| RL- Residential Low | 3,319 | 38% | 2.62 | 8,696 |
| RM- Residential Medium | 2,555 | 30% | 2.62 | 6,694 |
| RH- Residential High | 1,332 | 16% | 2.62 | 3,490 |
| **Subtotal** | **7,909** | **92%** | | **20,722** |
| **Commercial Uses** | | | | |
| CL- Commercial Local | 237 | 2.6% | 2.62 | 621 |
| MU- Mixed Use | 124 | 1.4% | 2.62 | 325 |
| **Subtotal** | **361** | **4%** | | **946** |
| **Office/ Industrial Uses** | | | | |
| OPRD- Office/R & D | 353 | 4.0% | 2.62 | 925 |
| **Subtotal** | **353** | **4%** | | **925** |
| **TOTAL** | **8,623** | **100%** | | **22,593** |

The General Plan categorizes jobs as private employment from onsite non-residential development. Employment from these sources is based on the DSP land use plan and on the County's jobs per acre factors provided in Policy CC-3.11 of the General Plan Land Use and Housing Element.

Table 7-2 estimates the potential jobs that will be available in the Plan Area based on the full build out of the assigned land uses and based on the jobs per acre ratio for each employment

type as well as the assumptions for the public/quasi-public uses and home-based employment shown in the footnotes at the bottom of Table 7-2. The job estimates include jobs generated by land use, according to job generation factors in the General Plan. However, the job generation estimates do not include construction jobs, even though construction activity is anticipated to remain a major source of employment within the DSP for a length of time, and with an economic impact that is comparable to jobs in other categories. Public employment is based on onsite job-generating public land uses, including schools, library, sheriff substations, and fire stations. At full build-out, the private and public jobs estimate is 11,358, which is a ratio of 1.3 jobs per housing unit.

**Table 7.2: Jobs Estimate**

| Land Use Designation | Land Use | AC | Jobs/AC[1] | Jobs |
|---|---|---|---|---|
| **Private Employment** | | | | |
| Residential High Density | RH | 55.5 | 3.0 | 168 |
| Mixed Use | MU | 57.5 | 23.0 | 1,324 |
| Regional Retail- Commercial General | CG | 38.2 | 23.0 | 879 |
| Retail-Commercial Local | CL | 52.1 | 23.0 | 1,197 |
| Highway Commercial | HC | 108.1 | 23.0 | 2,485 |
| Office/Research & Development | OFF/RD | 103.1 | 20.0 | 2,062 |
| Light and Heavy Industrial | LI & I | 219.1 | 10.0 | 2,191 |
| ***subtotal:*** | | **633.6** | | **10,306** |
| **Public Employment** | | | | |
| Public/ Quasi Public[2] | PQ | | | 59 |
| Elementary School[3] | PQ | | | 240 |
| Middle School[3] | PQ | | | 76 |
| High School[3] | PQ | | | 172 |
| ***subtotal:*** | | | | **547** |
| Home-based employment[4] | n/a | | | 505 |
| **Total Jobs:** | | | | **11,358** |

1 Source: General Plan Policy CC-3.11

[2] Public PQ Job Generation: Total of 59, Sheriff staff substation (10), Parks and WWTP maintenance staff (25), one Fire station (10), County administrative satellite offices (10), Library, 1 librarian, 3 assistant (4)

[3] Educational Job Generation: Factor of 1.0 job/ 10.5 students; Elementary school capacity 600 x 4 schools=240; Middle school capacity 800 x 1 school=76; High School Capacity 1,800 x 1 school=172

[4]Home based employment is calculated as 5% of the total labor force.

## 7.5 JOBS/HOUSING/WAGE MATCH

The basic tenet of Policy CC-3.7 is that specific plan areas like the DSP should provide an appropriate range of land uses which will generate jobs with wages that enable workers to afford housing within the Plan Area, therefore reducing the extent that workers will commute from outside the community. The Economic Development Strategy for Dunnigan seeks to draw new employers to Dunnigan within certain key industry sectors. The potential for higher wage jobs varies among these sectors, with retail jobs typically paying lower wages and office and industrial employers offering higher salaries. ADE estimated job generation and estimated

wages and salaries from these job projections to estimate household income levels. These household income levels were compared to projected home prices within the DSP in Appendix L, Income and Housing Match Analysis.

This income housing match analysis shows that for-sale market-rate homes are anticipated to be affordable to workers employed within the Plan Area. Moreover, approximately twenty (20%) of all residential units are assumed to be offered as multi-family units, which are expected to be affordable to lower income households. Therefore, to the greatest extent feasible, DSP home sales prices are matched to the wages of the jobs created in the DSP. Appendix L contains detailed tables that identify assumptions and calculations used to prepare the analysis.

## 7.6 JOBS/HOUSING PROGRAM IMPLEMENTATION

General Plan Policy CC-3.8 seeks to synchronize the production of housing with job creation within the DSP. As stated earlier in this Chapter, the DSP includes an Economic Development Strategy (Section 7.7) that will be implemented to draw new employers to Dunnigan, as detailed in Appendix Q. New homes within the DSP are anticipated to be affordable to wage-earners, as discussed in Appendix L. The jobs/housing balance in the DSP will be monitored by phase to ensure that it conforms to the County's General Plan and the requirements set forth in this document. However, the County does not propose to restrict employment to Dunnigan residents, or require homebuyers to work within a certain geographic area. Rather, the synchronization of jobs and housing is planned to occur as a result of voluntary decisions by those who see the benefit of living and working in Dunnigan. The Plan also emphasizes various indirect factors to attempt to influence these decisions and encourage living and working in the community. Prior to the end of residential development in each DSP phase, the jobs/housing balance will be measured using the steps identified below:

1. County staff will quantify the total number of housing units by summing the number of constructed housing units for which a Certificate of Occupancy (COO) has been issued, excluding those that are deed restricted for senior or active adult populations. Senior/active adult unit(s) shall be excluded from the housing unit count that will be used to calculate the DSP's jobs/housing balance.
2. County staff will quantify the total number of jobs using the following steps:
    a) The minimum amount of private employment will be determined by multiplying the gross acreage of nonresidential land uses (with a completed certificate of occupancy) by the jobs per acre factor by land use category identified in Table 7-2.
    b) Public employment will be based on established public uses and will be calculated using factors identified in Table 7-2.
    c) Credit for home-based employment will be based upon the percentage of the total DSP population in home-based employment using County or Regional average persons per household factors for each unit for which a certificate of occupancy has been completed, excluding deed restricted senior units.
    d) Credit for construction employment will be based upon the amount of construction activity that has occurred within the most recent development phase, using accepted industry standards based upon construction valuation.

e) All jobs, regardless of the development phase in which they are located, will be included in the jobs/housing calculation at the time of monitoring.

3. The County's Jobs/Housing policy will not constrain the development of affordable housing units in the DSP. The County will allow development of affordable units in any DSP phase that can be served adequately by necessary infrastructure.

This jobs-housing monitoring program does not require any particular jobs-housing relationship at the end of Phase 1 of the DSP. If, by the end of the residential construction within each subsequent phase, the DSP has not achieved the targeted average County's jobs/housing goals, the following steps will be undertaken:

1. DSP developers will meet with County staff to identify and quantify the jobs/housing imbalance. This quantification will identify the amount of nonresidential acres required to achieve the targeted jobs/housing balance for, at least, the remainder of the current phase plus the next phase.
2. In coordination with County staff, DSP developers will hire a consultant to perform a Business Survey to analyze the relative strengths, weaknesses, opportunities and threats affecting business development in the DSP, with written findings. This Business Survey will include recommendations for changes to the EDS based on its findings.
3. Based on the results of the Business Survey, DSP property owners/developers and County staff will prepare a detailed implementation plan demonstrating how the targeted jobs/housing balance can be achieved during implementation of subsequent development phases.

## 7.7 ECONOMIC DEVELOPMENT STRATEGY (EDS)

The economic development strategy for the DSP is an aggressive program to attract a variety of employers to locate in Dunnigan, which is summarized in this Section and stated more fully in Appendix Q. An important factor in the jobs/housing balance is to facilitate an earlier influx of new businesses than is typical in new development. A number of actions are anticipated to help identify, attract and then expedite the formation of new business in Dunnigan, including programs and incentives from the landowners as well as actions by Yolo County.

The DSP Landowners will target specific employers and industries that would be attracted to the DSP's location, such as retailers that could serve interstate travelers and the surrounding population, and businesses that could be attracted to the DSP's proximity to the Interstate 5 and Interstate 505 interchange, as well as its adjacency to heavy rail facilities. The County will strive to incentivize employer location in the DSP through the implementation of related County Economic Development Policies, as described in the Economic Development Element of the County's General Plan. These include policies to support new industries, create local business incentives, and collaborate with other area organizations to promote the creation and growth of local businesses. Targeted industries include hospitality, transportation and warehousing, and agriculture-related businesses.

Related County General Plan Economic Development Element Policies are listed below. The DSP landowners will collaborate with the County to promote these policies and develop incentives to stimulate nonresidential development.

- Policy ED-1.3: Encourage businesses that promote, provide services, and support farming, with an emphasis on value-added agriculture, agri-tourism, food processing and agricultural suppliers.
- Policy ED-1.9: Target biotechnology development, including the development of high-tech research and development campuses, regional offices, and business parks and light manufacturing nodes.
- Policy ED-1.10: Target life science, biotechnology, and related research uses in proximity to UC Davis or elsewhere as appropriate along the highway system within the County.
- Policy ED-1.11: Support local efforts to create new products, services, and businesses that will expand the wealth and job opportunities for all social and economic levels.
- Policy ED-1.13: Develop and expand agricultural businesses within Agricultural Districts, including industrial processing facilities, commercial sales and agricultural tourism, through the use of targeted regulatory streamlining, financial incentives and specialized marketing efforts.
- Policy ED-2.5: Create local incentives to support business development without compromising the County's financial capacity.
- Policy ED-2.7: Encourage the retention and expansion of existing businesses and attract new businesses into the County.
- Policy ED-2.8: Coordinate with other agencies and organizations to offer technical assistance to businesses, including targeted funding such as economic development grants, local and other federal, State, and private sources.

### 7.7.1 Economic Development Incentives and Strategies

Retail, service commercial, and office developments typically lag behind residential construction in new growth areas. This lag occurs because adequate household purchasing power is needed to support the financial viability of retail land uses. Office uses tend to develop in outlying areas to be closer to their employees or because of the unique advantages that are found in the particular location. Dunnigan offers advantages based upon its proximity to major highways and the surrounding agricultural economy. However, the marketing of new business opportunities in Dunnigan will not occur in isolation; similar opportunities exist in Vacaville, Woodland, and elsewhere in the surrounding communities, much of which is available in existing building stock. To attempt to make non-residential land in the DSP more marketable, and expedite the development of job-generating land uses in targeted market sectors, the following actions are proposed:

1. Create a brand for the Dunnigan community and market the brand using key messages that promote the competitive advantages within the Plan to target industries using the internet, social media and conventional trade publications and media.
2. Ensure that all nonresidential development sites within a given phase are adequately served by major backbone infrastructure.
3. Consider grants and other mechanisms to create a competitive profile for land designated for non-residential use that features reduced development and other costs.

4. Collaborate with the County's Economic Development department to aggressively promote and implement supportive policies in the County's General Plan Economic Development Element.
5. Aggressively market nonresidential land uses locally, regionally, and nationally through the brokerage community. The property owners will create and periodically update a marketing strategy for the DSP nonresidential property specifically designed to attract job-generating land uses to Dunnigan.

It is in the County's and landowner's mutual interests to expedite development of residential and nonresidential development within the DSP, in order to promote economic growth and generate sources of new revenue from increased business activity. Development of a complete community that includes a mix of housing, schools, services, retail, commercial and other development will allow residents to meet a greater percentage of their needs within the Plan Area, and will discourage vehicle trips to destinations in other areas. Generating more destinations within the DSP will help lower vehicle miles traveled (VMT) and thereby reduce greenhouse gas emissions.

## 7.8 AFFORDABLE HOUSING PROGRAM

### 7.8.1 Overview

The Housing Element of the Yolo County General Plan was updated in 2013, during the timeframe in which the DSP was prepared. The Housing Element covers the planning period from January 1, 2013 through October 31, 2021. As a mandatory element under state law, the Housing Element documents the existing housing conditions and constraints in Yolo County, projects the future housing needs for the planning period, and establishes a policy framework to meet those needs.

The Housing Element emphasizes a diverse palate of policy directives to promote housing options to meet the needs of County residents. The Element contains certain goals pertaining to affordable housing. The single goal that is most applicable to the Dunnigan Specific Plan is Goal HO-1:

> **Goal HO-1 Housing Mix:** *Provide housing to meet the social and economic needs of each community, including both existing and future residents, as well as employers.*

The policies within the Element that are applicable to the DSP are outlined in Section 7.2, which reinforce the need to provide a wide variety of housing types to meet the needs of a diverse community. The DSP supports and implements these goals and policies through the provision of a well-balanced land use plan that will provide a range of affordable housing units that are attainable for both Dunnigan residents and workers, are of quality design and are well integrated into the community form.

### 7.8.2 Housing Affordability

Housing affordability is based upon household income categories defined by the U.S. Department of Housing and Urban Development (HUD). The standard measure of affordability is the median household income calculated for the Yolo County Primary Metropolitan Statistical

Area. Income levels for the affordable categories are summarized in Table 7-3. Median income levels for Yolo County are published annually by HUD.

| Table 7-3: Household Income Categories | |
|---|---|
| **Income Category** | **Percent of Median Income** |
| Moderate Income | 81%-120% of Median |
| Low Income | 51%-80% of Median |
| Very Low Income | Less than 50% of Median |

The strategies and mechanisms available to provide affordable housing within California are changing. Historically, some cities and counties required homebuilders to set aside units within otherwise market-rate developments at below-market prices (for rent and for sale). These prescriptive measures have come under scrutiny, with courts restricting the use of such requirements in cases involving both rental and for-sale housing. For these reasons, the Inclusionary Housing Ordinance does not apply to the DSP. Instead, the DSP provides its own Affordable Housing Strategy, which requires the production of low-income and very-low income housing, and relies on presumptions and incentives in the Housing Element to provide housing for a range of household income levels.

Rather than mandating the sale of a certain percentage of units within the Plan Area to households within the income levels specified in Table 7-3, the DSP has established a range of housing density, and has allocated sufficient units in the RM and RH zones to provide for market-rate housing that is affordable to low and very-low income households. These measures are in addition to the effort, discussed in Section 7.5, to match overall housing prices to the wages and salaries projected within the DSP.

The 2030 General Plan identified the DSP as a potential new growth area, and allocated over 8,000 new residential units to Dunnigan in the planning horizon of the General Plan. However, because the DSP was not approved for housing development (i.e., with appropriate zoning) during the preparation of the Regional Housing Needs Plan by the Sacramento Area Council of Governments (SACOG), this new growth was not considered in the allocation of affordable units to Yolo County in the Regional Housing Needs Allocation (RHNA) for the current Housing Element (2013-2021). In the next RHNA cycle (i.e., 2022-2030), SACOG will allocate affordable units to Yolo County based on the prospective development of the DSP.

### 7.8.3 Affordable Housing Strategy

The Affordable Housing Strategy for the DSP requires the preparation of an Affordable Housing Plan to be approved prior to the approval of each Phase of development within the DSP. This Affordable Housing Plan must identify residential zoning at sufficient densities to ensure the provision of affordable housing within each Phase. As discussed in the Housing Element, Yolo County presumes that multi-family housing is capable of producing housing affordable to lower income households. Larger apartment projects (i.e., 40 units and above) on large (4+ acre) and medium (2-4 acre) parcels are presumed to be affordable to very-low income households. These are typically provided in the DSP in the RH parcels, and in those non-residential parcels where residential units have been allocated. Multi-family projects that are developed on small (under 2 acre) parcels, and medium density (RM) developments on medium and large parcels,

are presumed to provide housing for low-income households. Therefore, each Affordable Housing Plan will identify a certain amount of land in these land use categories to promote the production of affordable housing. The County will also provide incentives to encourage the construction of the affordable housing units.

The Affordable Housing Strategy for the Dunnigan Specific Plan is embodied in the following Goals and Policies. These Goals and Policies complement the Land Use Goals and Policies listed in Chapter 3.

**Goal H1** **Promote the Production of Affordable Housing**

**Policy H1.1** Very Low-Income Housing Sites. Provide adequate sites for very low-income housing within the Plan Area. Based upon the density and income presumptions described in this Section 7.8.3, each phase shall identify sufficient acreage to generate the equivalent of ten percent (10%) of all new units proposed within the Phase for very low-income households. Any sites that are capable of producing very low-income housing units in excess of the requirement of this Policy H1.1 may be counted toward the requirement to designate sites for low-income housing units in Policy H1.2. The following land use types are presumed to provide housing for very low-income households:

a. A multi-family housing (RH) site of at least two (2) acres, and

b. A mixed use (MU), commercial local (CL) or office park/R&D (OPRD) parcel of at least four (4) acres.

**Policy H1.2** Low-Income Housing Sites. Provide adequate sites for low-income housing within the Plan Area. Based upon the density and income presumptions described in this Section 7.8.3, each phase shall identify sufficient acreage to generate the equivalent of ten percent (10%) of all new units proposed within the Phase for low-income households. The number of units proposed for development shall be specified for each of the identified low-income housing sites. The following land use types are presumed to provide housing for low-income households:

a. A multi-family housing (RH) site of less than two (2) acres,

b. A medium density housing (RM) site of at least two (2) acres, and

c. A mixed use (MU), commercial local (CL) or office park/R&D (OPRD) parcel of less than four (4) acres.

**Policy H1.3** Low-Income Housing Incentives. Incentivize the construction of housing units for lower income households through the granting of density bonuses as provided in this Chapter. Incentives or concessions should be sufficient to incentivize the construction of housing for very-low and low-income households, consistent with Policies H1.1 and H1.2 of this Chapter.

**Goal H2** **Provide Diverse Housing Options**

**Policy H2.1** Second Units. Incentivize the production of second units by waiving or modifying the application of otherwise applicable fees, requirements and standards, as provided in this Chapter. Table 3.1 estimates 607 secondary units may be provided within the DSP, with 57 second units in the RE zone, and 550 second units in the RL zone.

**Policy H2.2** Senior Citizen Housing. Incentivize the production of senior citizen housing by offering density bonuses and/or reductions in otherwise applicable fees, requirements and standards.

**Policy H2.3** Child Care Facilities. Incentivize the production of child care facilities by offering density bonuses and/or reductions in otherwise applicable fees, requirements and standards.

### 7.8.4 Second Units

Among the objectives of the Housing Element is the production of housing for a diverse population. The DSP furthers this objective by providing a range of housing options, including the inclusion of a certain number of second housing units within areas designated for single-family residential use. Second units increase density within single-family neighborhoods, thereby promoting compact development patterns and a more efficient use of land. This increased density furthers the Community Planning Objectives for Dunnigan established in the 2030 General Plan. Second units also provide housing options for larger families and multi-generational households, which the Housing Element encourages.

Provisions for second units are well established in state law. Second units may be attached to a single-family home, included within the living space of a single-family home, or detached and located on the same lot with a single-family home. In no case is the second unit sold apart from the main housing unit, but it may be rented or made available to whomever the homeowner desires, within the limits of state and federal housing laws. Often the second unit houses a member of the homeowner's family, such as an elderly relative or disabled person. In other cases, the unit is rented to a student or other low-income individual. A unit may also be rented to a couple or family, but this is not a typical scenario. Because the size of a second unit is smaller than a standard single-family unit, the DSP attributes 0.6 EDU to each second unit, and counts the 607 second units within the DSP as 364 EDUs. Development standards for second units are provided in Appendix S, DSP Development Standards.

### 7.8.5 Density Bonus

The density bonus is well-established in state law as a method to increase the production of affordable housing. Essentially, the density bonus allows a developer to exceed the maximum density permitted by the applicable General Plan and Zoning, in exchange for the inclusion of a certain percentage of units affordable to low or very-low income households. The developer is allowed to exceed the maximum density by a percentage that is set in state law, and which is determined by the percentage of low and very-low income units provided within the project. The County also must offer certain development incentives or concessions in order to further

entice the inclusion of low and very-low income units. Because the provision of these units is voluntary, the legal restrictions applicable to inclusionary housing requirements do not apply. A density bonus also must be offered to a developer who proposes a senior-citizen housing development, or who proposes to include a child-care center within the project.

As it applies to the DSP, a density bonus would permit the developer of a project in any residential land use district within the DSP to exceed the maximum density established for the district. This would allow a development of 3.6 units or more per acre in the RE district, 10 units or more per acre in the RL district, 20 units or more per acre in the RM district and 41 units or more per acre in the RH district. A developer may also receive a density bonus for a project in the CL, MU or ORPD districts, which would allow units over and above the units assigned to the parcel in Land Use by Parcel Table M-1, Phasing Master Plan Appendix M.

A developer who requests a density bonus may also submit an application for certain incentives, which are intended to reduce the cost of the project to the developer. One of the following incentives shall be awarded to a developer who agrees to provide ten percent (10%) of the units within the project to low-income households, or five percent (5%) of the units to very-low income households:

- Exemption from specified county planning and zoning requirements
- Exemption from specified building standards that exceed the state building code
- Fee waivers or deferrals as specified by the Planning Department
- Modification of public works standards

The Planning Department shall maintain a list of concessions available to applicants for density bonuses. Policy H1.3 requires these concessions to be sufficient to incentivize the development of the low and very-low income housing identified pursuant to Policies H1.1 and H1.2. The Director of Planning shall approve or deny applications for density bonuses; the decision of the Director may be appealed to the Planning Commission. The County will periodically review its fee structure and development standards and requirements to determine whether additional incentives, in addition to those listed above, may be necessary to encourage the production of low and very-low income units, senior citizen units and child care centers.

### 7.8.6 Affordable Housing Program Implementation

Before each Phase within the DSP is developed, an Affordable Housing Plan must be approved by the County. The Affordable Housing Plan will demonstrate compliance with this Chapter and the General Plan Housing Element. In particular, the Plan must designate sites for very-low and low-income housing as required by Policies H1.1 and H1.2. The Plan may also propose incentives or concessions for the granting of density bonuses sufficient to incentivize the construction of very-low and low-income housing, as specified in Policy H1.3. Finally, the Plan will allocate the pro-rata number of second units to RE and RL land uses within the Phase.

The Affordable Housing Plan shall be approved by the Planning Director concurrently with or prior to any discretionary approval of a project that proposes to construct residential units, such as a Tentative Subdivision Map or Design Review Permit. The decision of the Planning Director may be appealed to the Planning Commission.

# CHAPTER EIGHT: ENVIRONMENTAL RESOURCES

## 8.1 OVERVIEW

This chapter identifies the environmental conditions and sensitive resources found in the Plan Area. Goals and policies contained in the Dunnigan Specific Plan (DSP) shall guide the conservation, protection or mitigation of existing environmental conditions and sensitive resources. The DSP will implement sustainable practices through compliance with established policies, actions, design requirements and implementation strategies as presented in various chapters in the Specific Plan. This chapter addresses seven keys areas: wetland resources, special status species, cultural resources, vegetation and wildlife, soils, biotic conservation and agricultural mitigation.

The existing environmental conditions in the Plan Area were taken into account during the development of the land use plan. The land use plan is designed not only to protect significant sensitive resources and to minimize the impacts of development on the existing and natural communities in the Plan Area, but also to utilize these features in the overall sustainability program.

## 8.2 GOALS AND POLICIES

The sustainability of the Plan Area's ecological and natural resources plays a large part in the fundamental guiding principles of the DSP, which are outlined in Chapter 2.5. This section outlines the overall goals and policies applicable to the environmentally sensitive resources found within the Plan Area. These goals and policies guide the conservation, protection and mitigation of these resources. Sustainability measures and preservation are prevalent in this chapter and certain goals and policies may be cross referenced from other chapters due to applicability in several areas.

The following are the relevant General Plan policies that help to guide the Environmental Resources program for the Plan Area:

**Policy CO-2.1**: Consider and maintain the ecological function of landscapes, connecting features, watersheds, and wildlife movement corridors.

**Policy CO-2.3**: Preserve and enhance those biological communities that contribute to the county's rich biodiversity including blue oak and mixed oak woodlands, native grassland prairies, wetlands, riparian areas, aquatic habitat, agricultural lands, heritage valley oak trees, remnant valley oak groves, and roadside tree rows.

**Policy CO-2.9**: Protect riparian areas to maintain and balance wildlife values.

**Policy CO-2.10**: Encourage the restoration of native habitat.

**Policy CO-2.11**: Ensure that open space buffers are provided between sensitive habitat and planned development.

**Policy CO-2.16**: Existing native vegetation shall be conserved where possible and integrated into new development if appropriate.

**Policy CO-2.22**: Prohibit development within a minimum of 100 feet from the top of banks for all lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams. (et seq.)

**Policy CO-2.31**: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat and vernal pools in land planning and community design.

**Policy CO-2.32**: Protect wetland ecosystems by minimizing erosion and pollution from grading, especially during grading and construction projects.

**Policy CO-2.42**: Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status species by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with local, State, and Federal requirements.

**Policy CO-2.43**: Projects that would impact Swainson's hawk foraging habitat shall participate in the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HCP/NCCP Joint Powers Agency, or satisfy other subsequent adopted mitigation requirements consistent with applicable local, State, and Federal requirements.

**Policy CO-2.44**: Projects that have the potential to impact California tiger salamander breeding or terrestrial habitat in the Dunnigan Hills area shall conduct a project-level biological assessment to determine the potential impact to California tiger salamander upland or breeding habitat (et. seq.)

## 8.3 SUMMARY OF EXISTING RESOURCES

The following is an overview of the key existing resources of the Plan Area: wetland resources, special status species, cultural resources, vegetation and wildlife and soils. Detailed studies of many of these resources are included in Appendices G and H.

### 8.3.1 Wetlands

Approximately 15.424 acres of potentially jurisdictional waters of the United States (U.S.) were mapped within the 2,850 acre study area of the entire 3,110 acre DSP area. The developed portion of Dunnigan in the northern portion of the Specific Plan area (referred to as the Hardwoods Subdivision) was not delineated during this effort, but is the subject of a separate assessment-level investigation (ECORP, 2009e) The delineated portion of the Plan Area includes approximately 0.550 acre of "wetlands" and approximately 14.874 acres of "other waters", for a total of approximately 15.424 acres (ECORP, 2009d). Any impacts to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act; Section 1600-1616 of the California Fish and Game Code (Lake and Streambed Alteration Agreement); and/or the Porter-Cologne Water Quality Control Act regulating waters of the State.

A wetland delineation was conducted for the Plan Area to determine the relative distribution and extent of areas potentially subject to jurisdiction of the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. The site was delineated by ECORP Consulting, Inc. (ECORP) in 2009 and will be submitted to the Corps for verification. The wetland delineation was conducted in accordance with the Corps'

Wetland Delineation Manual (Environmental Laboratory, 1987) and the Interim Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region (Arid West Region Supplement) (U.S. Army Corps of Engineers, 2006). The boundaries of potential waters of the U.S. were delineated through aerial photograph interpretation and standard field methodologies (e.g., paired data set analyses). The potential waters of the U.S. types, including Seasonal Wetlands, Seasonal Wetland Swales, Marsh, Ponds, Ephemeral Drainages, Irrigation Ditches, Drainage Ditches, Roadside Ditches, and Intermittent Creeks, detailed below were identified in the 2009 wetland delineation performed by ECORP for the DSP Area, shown on Exhibit 8-1.

### 8.3.2 Seasonal Wetlands

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be short and these wetlands are commonly dominated by non-native annual or perennial hydrophytic species. Fourteen seasonal wetlands totaling approximately 0.256 acre are scattered throughout the site. Dominant plants identified within the seasonal wetlands included Bermuda grass (*Cynodon dactylon*), hyssop (*Lythrum hyssopifolium*), barley (*Hordeum murinum*), and curly dock (*Rumex crispus*).

### 8.3.3 Seasonal Wetland Swales

Seasonal wetland swales are linear wetland features that convey water during rainfall events, but do not have an ordinary high water mark. Three seasonal wetland swales totaling approximately 0.068 acre were mapped on-site. These features are located within on the sloped dry-farmed western portion of the site. Common plants observed in these features included Bermuda grass, barley, and curly dock. To be identified as a wetland, three criteria need to be satisfied: (a) a majority of dominant vegetation species are wetland associated species; (b) hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and (c) hydric soils are present. Wetland hydrology indicators observed within seasonal wetland swales in the study area predominantly included primary hydrology indicators such as drift lines, evidenced by deposition of debris in a line on the wetland surface.

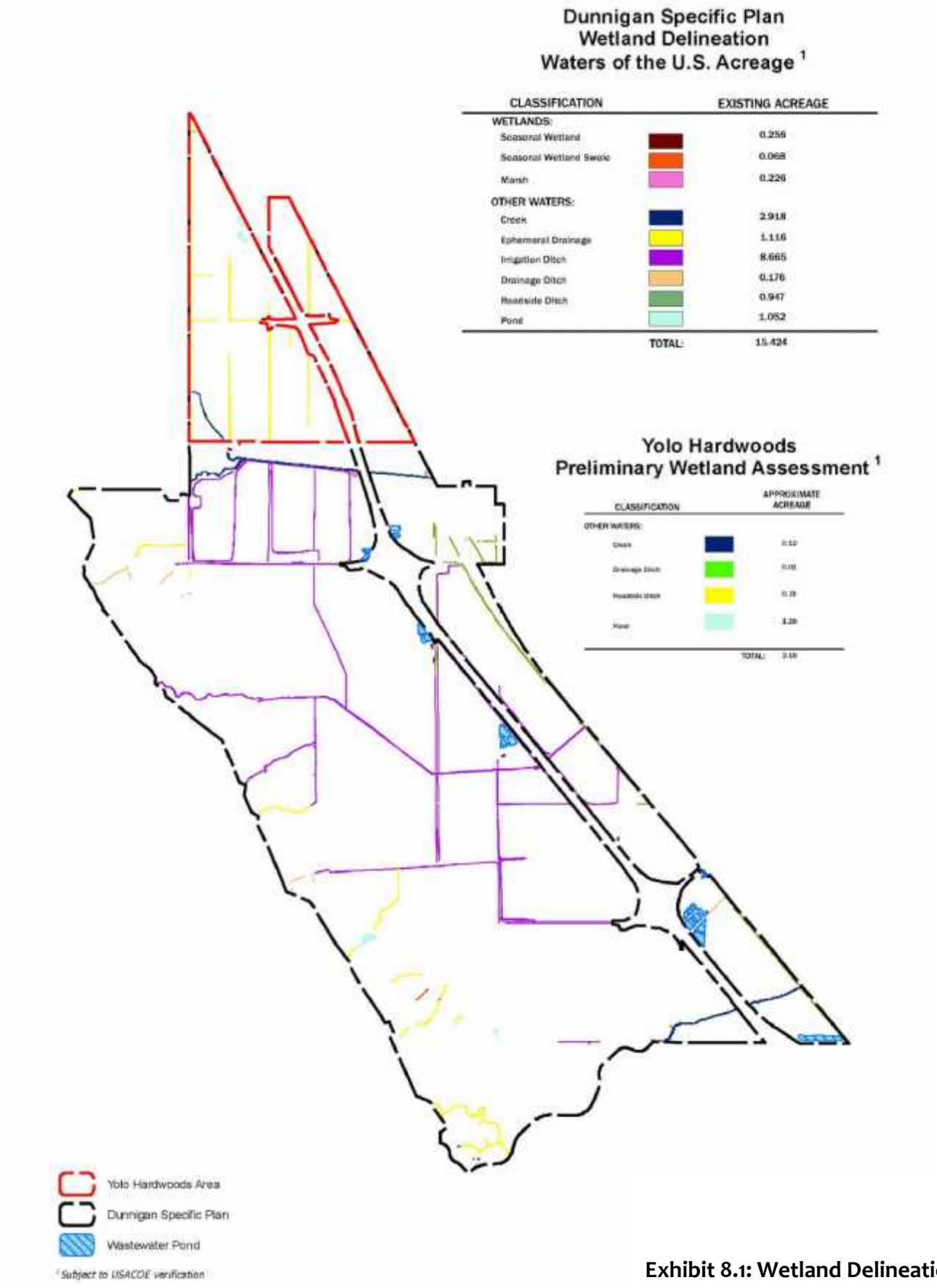



**Exhibit 8.1: Wetland Delineation Exhibit**

### 8.3.4 Marsh

Marshes are seasonally or permanently inundated features characterized by an abundance of emergent herbaceous vegetation such as cattails (*Typha* sp.), bulrush (*Scirpus* sp.), and spikerush (*Eleocharis* sp.). Two marshes totaling approximately 0.226 acre were mapped in the planning area.

### 8.3.5 Ponds

Ponds are perennial impoundments and absent of flow. Two ponds totaling approximately 1.052 acres were mapped on-site. The limits of the ponds were delineated in the field according to the presence of ordinary high water marks (e.g., distinct vegetation breaks). Vegetation was dominated by cattail, with a trace of curly dock.

### 8.3.6 Ephemeral Drainage

Ephemeral drainages are linear features that exhibit an ordinary high water mark. They are seasonal features that typically convey runoff for short periods of time, usually during and immediately following rain events, and they are not influenced by groundwater. The channel tends to be unvegetated due to the scouring effects of flowing water. A total of approximately 1.116 acres of ephemeral drainages were mapped. Plants are limited in distribution to the upper limits of the drainage and included wheat (*Triticum aestivum*), hairy hawkbit (*Leontodon taraxacoides*), and lupine (*Lupinus* sp.).

#### 8.3.6.1 Irrigation Ditch

Irrigation ditches are (usually) linear, manmade water conveyance features that transport water within an agricultural setting. They are usually adjacent to unpaved roads and may or may not be maintained to control the growth of vegetation. A total of approximately 8.665 acres of irrigation ditches were mapped on-site. Azevedo Drain is a major irrigation ditch that runs west to east through the middle of the planning area.

#### 8.3.6.2 Drainage Ditch

Drainage ditches are linear manmade features constructed to convey storm-water runoff. They are usually adjacent to paved or unpaved roads and in low-laying areas. A total of approximately 0.176 acre of drainage ditches were mapped in the planning area.

#### 8.3.6.3 Roadside Ditch

Roadside ditches are linear manmade features constructed to drain stormwater runoff from paved roadways. They were a common feature in the planning area, and occurred along many roadways east of Highway 5. A total of approximately 0.947 acre of roadside ditches were mapped in the planning area.

#### 8.3.6.4 Intermittent Creek

Two creeks totaling approximately 2.918 acres have been mapped within the DSP boundaries. In the field, these features were delineated at the ordinary high water mark, which was identified based on water marks, scour, and shifts in vegetation. Dunnigan Creek flows from west to east in the northern one-third of the planning area. It appears

to have been channelized or maintained to drain adjacent farm lands. Bird Creek is located along the southern boundary of the planning area. Dunnigan Creek and Bird Creek are mapped on USGS topographic maps as intermittent streams. During the field surveys, both creeks were dry.

### 8.3.7 Special Status Species

The vegetation communities and current conditions observed on-site represent suitable habitat for several regionally occurring special-status species.

#### 8.3.7.1 Plants

Special-status plants with the potential to occur on-site include Ferris's milk-vetch, brittlescale, San Joaquin spearscale, round-leaved filaree, palmate-bracted bird's-beak, Colusa layia, Heckard's pepper-grass, woolly-headed lessingia, Baker's navarretia, and Wright's trichocoronis. No special-status plant species were identified during focused surveys conducted in 2008 (ECORP, 2009a) (refer to *Special-Status Plant Survey for Dunnigan Specific Plan* in Appendix G). Determinate special-status plant surveys have not been conducted within the Hardwoods portion of the Plan Area which has been the subject of an assessment-level investigation to date (ECORP 2009)

#### 8.3.7.2 Invertebrates

Based on the project's Biological Resource Assessment (ECORP, 2009), the site supports suitable habitat for a variety of regionally occurring special-status invertebrates. Special-status invertebrates with the potential to occur on-site include the Valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*) and several vernal pool branchiopods (e.g. vernal pool fairy shrimp (*Branchinecta lynchi*)). A focused investigation mapping and cataloguing elderberry shrubs on-site has been conducted (ECORP 2009c) (Appendix G). To date, no field surveys for special-status vernal pool invertebrates have been conducted on-site, however the developed nature (e.g. agricultural history) of the potential habitat for these invertebrates reduces the likelihood of their occurrence.

#### 8.3.7.3 Fish

There are no apparent special-status fish habitat issues within the site, as the agricultural ditches, ephemeral drainages, and intermittent creeks do not support suitable habitat. The USFWS special-status species list for the region indicates that green sturgeon, delta smelt, Central Valley steelhead, Central Valley spring-run Chinook salmon, and winter-run Chinook salmon have the potential to occur in the general region. The Sacramento River, which is located approximately seven miles east of the site, represents critical habitat for those special-status fish.

#### 8.3.7.4 Amphibians

Special-status amphibians with the potential to occur on-site include the California tiger salamander (CTS, *Ambystoma californiense*), Western spadefoot (*Spea hammondii*, California species of concern), California red-legged frog (*Rana aurora draytonii*), and foothill yellow-legged frog (*Rana boylii*). While they are known to occur in the region,

they are not expected to occur on-site. A CTS larval survey and habitat assessment have been completed (ECORP, 2008, and 2010, respectively, Appendix G). According to the CNDDB, there is one historical occurrence of California tiger salamander in the western portion of the site, which is now considered extirpated, and several relative recent occurrences adjacent to the site.

#### 8.3.7.5 Reptiles

Special-status reptiles that may occur in the vicinity are those species that are typically associated with intermittent creeks, ephemeral drainages, ponds, and ditches. These species include Western pond turtle and giant garter snake.

#### 8.3.7.6 Birds

Vegetation communities and environmental conditions observed within the site provide suitable nesting habitat for a variety of special-status bird species, including common raptors. Suitable habitat also occurs on-site for non-nesting special-status bird species that could be present, but do not nest in the region (i.e., migrants or winter visitors). Potential nesting and/or wintering habitat is present for numerous special-status birds including colonial nesting water birds, white-tailed kite, bald eagle, northern harrier, Cooper's hawk, Swainson's hawk, ferruginous hawk, golden eagle, merlin, American peregrine falcon, prairie falcon, California black rail, mountain plover, long-billed curlew, burrowing owl, short-eared owl, loggerhead shrike, grasshopper sparrow, "Modesto" song sparrow, tricolored blackbird, yellow-headed blackbird, and yellow-billed magpie. In addition, potential nesting habitat for common raptor species is present throughout the site.

#### 8.3.7.7 Mammals

The trees, barns, almond orchard, and abandoned buildings in the Plan Area provide suitable roosting habitat for the following special-status bat species: Yuma myotis, hoary bat, Western red bat, Townsend's big-eared bat, and pallid bat. In addition, the annual grassland and aquatic features (e.g., intermittent creeks and ponds) represent potential foraging habitat for these species. Undeveloped and uncultivated lands may support suitable habitat for American badger. None of these species are listed and protected pursuant to either the California or federal ESA; however, they are considered to be CDFG species of special concern. Project specific field surveys will be conducted for these species in Spring 2013.

### 8.3.8 Cultural Resources

In 2009, ECORP Consulting, Inc. (ECORP) conducted a cultural resources records and literature search for the Specific Plan Area. This information was gathered from the California Historical Resources Information System's Northwest Information Center, located at Sonoma State University. This records search level of analysis included: a review of cultural resource records and literature; an examination of cultural resource maps for the Plan Area; and a sacred land file search by the California Native American Heritage Commission.

The records and literature search completed in 2009, served to identify any historic properties in the Specific Plan area. In particular, the Specific Plan Area plus a one-quarter mile buffer zone was examined for the existence of any known recorded cultural resources. Among the regulatory databases reviewed were the National Register of Historic Places, California Register, California Historical Landmarks, the California Places of Historical Interest, and the California Historical Resources Information System (HRI: file dated May 27, 2009).

In addition, Michael Brandman Associates (MBA) completed further cultural resources assessment in 2011 which included a review of Yolo County Assessor data using ParcelQuest, which included a structures evaluation, in conjunction with a pedestrian field survey. The ParcelQuest structures evaluation searched all parcels in the Specific Plan Area to gain insight on the amount of acreage in each parcel; this search also identified whether or not structures existed on any of the properties in the Specific Plan Area and provided the age of the structures. The ParcelQuest data was taken into the field with the previously completed records search completed in 2009 in order to assist the inventory team during the pedestrian survey.

Following a supplemental records search with the Northwest Information Center, MBA surveyed for Specific Plan Area for the existence of cultural resources by professionally qualified MBA archaeologists between October 7 and October 17, 2011. Of the 3,110 acres in the Plan Area, staff had direct access to roughly 1,220 acres that could be directly examined following standard archaeological survey protocols. The remaining acreage was either composed of crops or active orchards, were fallow fields covered in grass, or inaccessible. The summary findings of the comprehensive cultural resources evaluation identified one isolated prehistoric artifact and 49 buildings constructed on or before 1966, of which the majority are existing in the "Old Town" portion of the Plan Area on the east side of I-5.

Potential cultural and historic resources identified during both the 2009 and 2011 evaluation will need to be evaluated for eligibility for the CRHR and the NRHP related to the project's phasing plan as part of the DSP Environmental Impact Report. If determined eligible and thereby requiring mitigation the DSP will evaluate either avoidance by preserving them in open space or by carrying out data recovery efforts prior to project implementation, or construction.

### 8.3.9 Vegetation and Wildlife

#### 8.3.9.1 Plant Communities and Habitat Types

Seven dominant vegetation communities were identified on-site including wheat (approximately 22 acres), alfalfa (approximately 187 acres), unknown crop (approximately 1,293 acres), almond orchard (approximately 329 acres), vineyard (approximately 125 acres), annual grassland (approximately 263 acres), and developed (approximately 58 acres) (ECORP 2009b) (refer to the *Biological Resource Assessment for Dunnigan Specific Plan* in Appendix H).

Multiple land uses occur in the planning area including wheat and alfalfa fields, almond orchards, vineyards, farm/rural residences, and annual grassland. Wheat fields are

located throughout the site, and alfalfa fields are limited to the eastern portion. Other weedy plant species interspersed within the fields and at the edges, fence lines, and boundaries included filaree, ripgut brome, morning glory, ryegrass, chickweed, barley, pineapple weed, wild oats, and arroyo lupine. At the time of the surveys, many of the fields were harvested and/or disked and not planted with any row crop. Wildlife species associated with agricultural fields include a variety of common species including house mouse, brown rat, western kingbird, and Brewer's blackbird. The state-threatened Swainson's hawk, and other raptors, commonly forage within harvested agricultural, particularly alfalfa fields.

The almond orchards had a weedy understory with scattered filaree, geranium, ryegrass, chickweed, fiddle-neck, pineapple weed, common mallow, and wild oats. Vineyards were dominated by cultivated wine grape, with understory plants including strawberry clover, morning glory, ryegrass, soft brome, pineapple weed, pepper grass, morning glory, vetch, barley, and filaree. Approximately 58 acres of farms and rural residences were scattered among agricultural fields and included farm facilities, residences, roads, staging and disturbed areas. Wildlife species typically observed in orchards, vineyards, and rural residential settings include common species such as raccoon, mourning dove, American crow, house finch, and house sparrow.

Annual grassland community occurs in scattered areas throughout portions of the planning area, but are most common in the western and southwestern portion of the site, east of the canal and north of Bird Creek. Trees are largely absent from these areas, with the exception of scattered individual trees such as Valley oak, cultivated walnut, gum, and tree of heaven. Plants occurring in the annual grasslands included slender wild oats, soft brome, bur clover, wild radish, black mustard, bicolored lupine, winter vetch, common vetch, cut-leaved geranium, medusahead grass, Mediterranean barley, yellow star-thistle, brodiaea, filaree, Rancher's fireweed, and dock. Other non-native weedy plants have become well-established in disturbed areas, including wild oat, ryegrass, ripgut brome, prickly lettuce, bindweed, filaree, curly dock, and chicory. Wildlife species commonly found in grassland communities include western fence lizard, deer mouse, California ground squirrel, mourning dove, savannah sparrow.

### 8.3.10 Soils

According to the Soil Survey of Yolo County, California (U.S. Department of Agriculture, Soil Conservation Service 1990), 14 soil units, or types, have been mapped within the site (refer to the *Biological Resource Assessment for Dunnigan Specific Plan* in Appendix H). These are: (AaA) Arbuckle gravelly loam, 0-2% slopes; (Ca) Capay silty clay; (CtD2) Corning gravelly loam, 2-15% slopes; (HcA) Hillgate loam, 0-2% slopes; (HdA) Hillgate loam, moderately deep, 0-2% slopes; (Ms) Myers clay; (Rg) Rincon silty clay loam; (SkF2) Sehorn clay, 30-50% slopes, eroded; (SmD) Sehorn-Balcom complex, 2-15% slopes; (SmE2) Sehorn-Balcom complex, 15-30% slopes, eroded; (Sv) Sycamore complex, drained; (TaA) Tehama loam, 0-2% slopes; (TaB) Tehama loam, 2-5% slopes; and (Ya) Yolo silt loam. Soil types (Ca) and (Sv) contain hydric inclusions. Soil type (Sv) also contains hydric components (U.S. Department of Agriculture, Soil Conservation Service 1990). Average annual rainfall is approximately 16.5 inches per year (NCDC data).

## 8.4 BIOTIC CONSERVATION STRATEGY

### 8.4.1 Wetlands Avoidance, Preservation, and Mitigation

As noted above, the delineated portion of the Plan Area includes approximately 0.550 acre of wetlands and approximately 14.874 acres of "other waters", for a total of approximately 15.424 acres. Any impacts to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act; Section 1600-1616 of the California Fish and Game Code (Lake and Streambed Alteration Agreement); and/or the Porter-Cologne Water Quality Control Act regulating waters of the State.

The Plan will avoid approximately 2.010 acres of potential waters of the U.S. and create drainages and ponds totaling approximately 30.676 acres. The avoided and created features will occur within natural open space and greenways located throughout the Plan Area. In addition, approximately 2.750 acres of potential waters of the U.S. will be preserved within the Plan Area. Per the Corps' guidelines, this will likely require the placement of a conservation easement and the development of an Operations and Management Plan.

Impacts to potential "waters of the U.S." within the Plan Area are estimated to be approximately 10.664 acres. This will include impacts to 0.213 acre of seasonal wetland, 0.063 acre of seasonal wetland swale, 0.219 acre of marsh, 0.518 acre of creek, 0.258 acre of ephemeral drainage, 7.236 acres of irrigation ditch, 0.158 acre of drainage ditch, 0.947 acre of roadside ditch, and 1.052 acres of pond. It is expected that impacts to the waters of the U.S. will be mitigated through the creation of the features noted above and/or purchase of mitigation credits through an agency-approved mitigation bank. A summary of the proposed avoidance, preservation, impact and mitigation strategy is shown in Table 8.1

**Table 8.1 Wetlands/Water of U.S. Avoidance and Preservation Summary**

| **Existing Features** | **Acres** |
|---|---|
| Wetlands | 0.055 |
| Other Waters of the US | 14.874 |
| **Total Existing Acres** | **15.424 acres** |
| | |
| Proposed Avoidance | 2.010 |
| Proposed Preservation | 2.750 |
| Approximate Impact | 10.664 |
| **Total** | **15.424 acres** |

### 8.4.2 Special-Status Species Habitat Avoidance and Mitigation

The Yolo County Natural Heritage Program Plan is planned to provide a take permit for most, if not all, of the anticipated development impacts associated with the Yolo County General Plan as well as the growth plans for the cities of West Sacramento, Winters, Woodland and Davis. A take permit for the DSP is expected, but not required, to be in

place prior to any individual land division or project development. In the event that the Natural Heritage Program Plan is not finalized prior to development, implementation of the Mitigation Monitoring or Reporting Plan (MMRP) will ensure that development occur without causing the take of any protected species. The following sections summarize the mitigation measures detailed in the MMRP. In the event of any conflict between this Chapter and the MMRP, the provisions of the MMRP shall control.

#### 8.4.2.1 Plants

To date, no special-status plants have been identified on-site. Should any special-status plants be found during subsequent field surveys, mitigation for impacts would follow the Yolo County Natural Heritage Program Plan, once enacted, to be consistent with Yolo County General Plan Policy CO-2.4. The Yolo County Natural Heritage Program Plan is planned to provide a take permit for most (if not all) the anticipated development impacts associated with the Yolo County General Plan (which includes the DSP) as well as the growth plans for the cities of West Sacramento, Winters, Woodland and Davis.

In the event that the Yolo County Natural Heritage Program Plan is not complete, in order to prevent take of special-status plant species, standard pre-construction surveys shall be performed in portions of the Plan Area which not have been previously surveyed but contain appropriate habitat for these species to adequately document existing conditions and determine any necessary mitigation, as provided in the MMRP. If these species are found in the Plan Area, the population and supporting habitat will be preserved if feasible. If preservation is not feasible, populations will be transplanted to suitable habitat in the natural open space portions of the Plan Area and monitored. Transplantation of populations may be accomplished by relocating individual plants or through seed collection and dispersal, or a combination of both, to be determined based on species habitat requirements and best known science.

#### 8.4.2.2 Invertebrates

Protocol surveys for aquatic vernal pool invertebrates (e.g. vernal pool fairy shrimp) have not been conducted to date. In the event that following the project-specific biological assessment, the U.S. Fish and Wildlife Service (USFWS) considers any ephemeral wetlands on-site to represent potentially occupied habitat, determinate protocol surveys using the 1996 USFWS Interim Vernal Pool Branchiopods Survey Guidelines may be warranted. To be consistent with Yolo County General Plan Policy CO-2.4 and CO-2.42, if found to occur, mitigation for impacts to these features would follow the Yolo County Natural Heritage Program Plan and/or as stipulated in the USFWS' biological opinion resulting from consultation pursuant to Section 7 of the Federal Endangered Species Act.

Elderberry shrubs were identified on-site during the biological surveys. All elderberry shrubs on-site represent suitable habitat for the Valley Elderberry Longhorn Beetle (VELB). An elderberry survey was conducted by ECORP during the summer of 2009. To be consistent with the Yolo County General Plan Policy CO-2.42, until federal delisting of the VELB is finalized, elderberry shrubs will be avoided, to the extent possible, and any impacts to elderberry shrubs will be mitigated according to the Yolo County Natural Heritage Program Plan and/or as stipulated in the USFWS' biological opinion resulting from consultation pursuant to Section 7 of the federal Endangered Species Act.

#### 8.4.2.3 Riparian Areas

To be consistent with the Yolo County General Plan Policy CO-2.22, and avoid impact to special-status amphibians and reptiles, development would be prohibited within a minimum of 100 feet from the top of banks for all pre-existing lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams. As stated in the Policy, "*The setback will allow for fire and flood protection, a natural riparian corridor (or wetland vegetation), a planned recreational trail where applicable, and vegetated landscape for storm water to pass through before it enters the water body. Recreational trails and other features established in the setback should be unpaved and located along the outside of the riparian corridors whenever possible to minimize intrusions and maintain the integrity of the riparian habitat. Exceptions to this action include irrigation pumps, roads and bridges, levees, docks, public boat ramps, and similar uses. In all cases where intrusions into the riparian buffer are made, only the minimum amount of riparian vegetation necessary to construct the feature shall be removed.*"

#### 8.4.2.4 California Tiger Salamander

The DSP will avoid impacts to potential California tiger salamander (CTS) breeding or terrestrial habitat in the project area based on a CTS Habitat Assessment and negative larval sampling results. If the USFWS determines, prior to the development of a particular project (i.e., subdivision or site development) that the species will be directly or indirectly impacted, mitigation will be provided in accordance with the NCCP/HCP or MMRP, and may consist of two components: 1) habitat preservation and enhancement of suitable upland habitat, and 2) preservation and construction of new breeding habitat.

#### 8.4.2.5 Raptors (including Swainson's hawk) Nesting and Foraging Habitat

In the Spring of 2013, approximately 1,451 acres of Swainson's Hawk Foraging Habitat was identified within the Plan Area by reviewing Yolo Natural Heritage Program Vegetation Series mapped for the Yolo County NCCP/HCP. Appendix R, Master Habitat Conservation Strategy, provides an overview of the habitat types found within the Plan Area and surrounding area. For the purposes of the review, suitable foraging habitat was assessed on the basis of broad agricultural land use categories identified by the Yolo Natural Heritage Program, rather than specific cover types, recognizing that the agricultural crop pattern mosaic is dynamic in the DSP area and is subject to change annually and seasonally (with the general exception of more static deciduous fruit and nut crops or vineyards). In agricultural landscapes, Swainson's hawks respond with fluctuating home range size and configuration throughout the breeding season as the foraging landscape changes as vegetation grows and is harvested. Together, alfalfa hay, field crops, irrigated pasture, and grasslands provide a relatively constant source of suitable foraging habitat throughout the season. Impacts to Swainson's hawk foraging habitat, i.e., the development of foraging habitat, shall follow the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HCP/NCCP Joint Powers Agency, using lands identified as sufficient for foraging.

Preconstruction surveys will be conducted by a qualified biologist during the nesting season (February through August) to identify nest sites on or adjacent to the project site where ground disturbing activities or vegetation removal will occur. If active nests are identified, exclusion zones of a size sufficient to avoid disturbing the nest occupant will be established and maintained until the young have left the nest and are foraging independently or construction has been completed.

#### 8.4.2.6 Other Special-Status Birds and Mammals

Special-status bird field or mammal surveys will be completed in Spring 2013. Should any special-status bird nests or mammals be found during subsequent field surveys, mitigation for impacts would follow the impending Yolo County Natural Heritage Program Plan to be consistent with Yolo County General Plan Policy CO-2.4.

## 8.5 AGRICULTURAL LAND MITIGATION PROGRAM

A primary defining characteristic of Yolo County is its agriculture and open spaces. As stated in the Agricultural Element of the 2030 General Plan; *"The County's long-standing emphasis on farming and compact communities, as well as its abundant natural resources, has positioned it well to take advantage of the opportunities created by an era of rising food and energy costs."*

The 2030 General Plan continues the County's commitment to agriculture, open space and smart growth by designating the Dunnigan Specific Plan Area to accommodate urban growth on a compact footprint, while minimizing impact on surrounding farmlands. Approximately 75% of the DSP Plan Area was either zoned for agriculture or was in agricultural production prior to the Specific Plan, therefore mitigation is required to offset the farmland that will be taken out of production as development occurs.

Through its Agricultural Land Conservation Ordinance, Title 8, Chapter 2, Sec. 8-2.2416 of the Yolo County Code, the County requires mitigation when farmland is converted to non-agricultural uses for development purposes. The ordinance requires dedication of one acre of proximate (within two or four miles) and equivalent agricultural soils for each acre of agricultural land converted. However, some land uses are exempt from this requirement, including affordable housing projects, public uses such as parks, schools, and cultural institutions. The ordinance outlines the soil, irrigation and other requirements of land that can qualify as agricultural mitigation. The ordinance also prohibits "stacked mitigation," which would allow credit for agricultural mitigation and habitat or other mitigation on the same property.

The high cost of acquiring mitigation land may warrant a departure from the strict application of the Agricultural Land Conservation Ordinance to the DSP. By strictly limiting urban growth within the County, the Board of Supervisors has prevented the widespread urbanization that has occurred elsewhere in the Sacramento Valley. Moreover, while the DSP contains approximately 1,535 acres of prime farmland, there are significant areas within the Plan Area that are of more marginal quality (including areas of Class III and IV soils). To compensate for the conversion of agricultural land, developers will comply with the Agricultural Land Conservation Ordinance, or secure alternative mitigation as specified in the Development Agreement.

## 8.6 HABITAT MITIGATION PROGRAM/HCP COORDINATION

The environmental resources identified will be regulated pursuant to the Yolo County 2030 Countywide General Plan (2009). In addition, environmental resources will be regulated in conjunction with the Yolo Natural Heritage Program, Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP), upon its adoption. The NCCP/HCP, will provide guidelines governing open space designation, impacts to and mitigation for special-status species and unique natural communities, including farmland. As stated earlier in this Chapter, the NCCP/HCP is intended to provide an incidental take permit for development of the urban uses of the DSP as contemplated by planned for in the County General Plan. In the event the NCCP/HCP has not been adopted prior to the issuance of building/construction/ground disturbance permits, mitigation shall be implemented in accordance with the MMRP.

# CHAPTER NINE: SUSTAINABILITY

## 9.1 OVERVIEW AND VISION

This chapter identifies sustainability principles and implementation measures. Goals and policies contained in the Dunnigan Specific Plan (DSP) guide the conservation, protection and mitigation of natural resources through a sustainable approach to development. The DSP implements sustainable practices through policies, actions, design requirements and implementation strategies as presented in various chapters in the Specific Plan. This chapter addresses four keys areas: community connectivity, energy efficiency/renewable energy, water conservation/quality, and recycling. The discussion of energy efficiency/renewable energy includes an overview of the Countywide Climate Action Plan (CAP) and describes how the DSP is consistent with and implements the CAP. This chapter also provides an overview of the sustainability measures which are contained within the Dunnigan Green Building Site Standards (DGBSS), Appendix C.

## 9.2 GOALS AND POLICIES

Goals and policies from the General Plan guide the sustainability principles and implementation strategies set forth in this chapter. The following is a partial list of key goals and policies that emphasize the sustainability strategies for Dunnigan as outlined in this chapter. General Plan policies related to green building measures and design criteria are more fully addressed in the DGBSS. Goals and policies may be cross referenced from other chapters due to applicability in several areas.

**Goal CC-4: Require project design that incorporates "smart growth" planning principals and "green" building standards that reflect the County's commitment to sustainable development.**

- *Policy CC-4.1: Reduce dependence upon fossil fuels, extracted from underground metals, minerals and other non-renewable resources by requiring projects to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use, encourage projects to use regenerative energy heating and cooling source alternatives to fossil fuels encouraging projects to select building materials that require less energy-intensive production methods and long distance transport, in compliance with LEED or equivalent standards.*
- *Policy CC-4.4: Encourage new construction to be zero net energy by combining building energy efficiency design features with on-site clean distributed energy so as to result in no net purchases from the electricity or gas grid.*
- *Policy CC-4.5: Encourage individual and community-based wind and solar energy systems.*
- *Policy CC-4.6: Encourage all new residences to exceed Title 24 energy standards by at least 15%, and encourage all new commercial buildings to exceed Title 24 by at least 20%.*
- *Policy CC-4.7: Require energy efficient design for all buildings.*
- *Policy CC-4.10: Require project design to demonstrate adherence to sustainable and neo-traditional design as described in the Ahwahnee Principals and as provided in the SACOG Blueprint, including any amendments or successor documents thereto.*
- *Policy CC-4.12: Require "green" design, construction and operation.*

**Goal CO-7: Promote energy efficiency and conservation.**

- *Policy CO-7.4: Require the use of Energy Star certified appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units where feasible.*
- *Policy CO-7.6: Encourages the use of building materials and methods that increase energy efficiency a minimum 15% beyond State Title-24 standards for residential buildings and 20% beyond State Title 24 standards for commercial buildings.*

## 9.3 SUSTAINABILITY THRESHOLDS

The DSP has incorporated an extensive number of sustainability concepts and practices in the approach to land use, circulation, public utilities, public services and environmental resources. The compilation of sustainable concepts has resulted in the DSP land use design and framework which embodies the 5 D's of smart growth: design, diversity, density, destination accessibility and distance to transit, as more fully discussed in Chapters 3 and 4. Building upon the foundation of this "smart" growth land use plan, the addition of the following measures and programs will result in a sustainable, eco-aware community which grows responsibly while enhancing and respecting the local, County-wide, State and global efforts to reduce the impacts of climate change.

### 9.3.1 Community Connectivity

A strong sustainability attribute of the DSP is the incorporation of the community-wide connectivity principal. Significant emphasis has been made to ensure that the community is linked by the physical framework of the buildings and the infrastructure, which is reflected in the proximity of uses to each other, the trail and bikeway network, street system and transit system. In addition, Dunnigan will operate a community-based telecommunications network platform, which will provide internet hardware throughout the DSP. This "smart connectivity system" (SCS) will network the community on three levels: in homes, workplaces, and public/governmental facilities. The SCS enhances sustainability by supporting the technology for many of the energy and water efficiency monitoring systems, such as smart meters and irrigation controllers, weather stations, as well as providing the platform for residents, business owners, workers and students to share and obtain information such as community activities, carpools, bike-pools, ride-sharing and bus schedules. The platform will aid in energy and fuel efficiency, VMT reduction and enhance sustainability by connecting people to people, people to machines, and machines to machines.

The DSP will provide the communications hardware as backbone infrastructure, and once in place, existing and future connectivity applications can simply be added and run by this backbone system. The SCS will be operated by the Dunnigan County Service Area (CSA). Homes, offices, commercial buildings, schools, governmental/ public agencies and other permitted entities can then connect to either the residential or commercial platform. These platform applications can then be programmed to support many of the sustainable components as discussed in greater detail in the sub-sections below.

### 9.3.2 Energy Efficiency/Renewable Energy

The DSP incorporates advanced energy efficiency measures and renewable energy resources, which will reduce dependence on non-renewable energy and energy-related greenhouse gas (GHG) emissions. Specifically, GHG emissions will be reduced by lowering energy demand, improving water and energy efficiency, and increasing the amount of electricity and heat generated from renewable energy sources. The Yolo County Climate Action Plan (CAP), adopted in March 2011, is a program of strategies and measures that are expected to reduce GHG emissions and contribute to regional and State climate protection efforts. These strategies have been incorporated into the Dunnigan Specific Plan, predominantly in the areas of energy efficiency, as shown in Table 9.1.

All new buildings constructed in Dunnigan will feature smart energy meters, photovoltaic systems, solar hot water heaters, Energy Star appliances, and green design and construction methods. The DGBSS (Appendix C) were developed to comprehensively implement the sustainability goals of the Specific Plan, as well as the mandatory measures of the CAP. Application of the DSP building and site standards, along with the updated portions of the County Building Code, will result in a smart, green community. In addition, the Dunnigan CSA will advance the County's efforts to launch a Community Choice Aggregation program for supplying renewable energy to users within the Dunnigan and the County at large. While commercial wind energy generation is not specifically proposed within the DSP, the Development Standards allow small-scale wind energy systems as permitted uses within some zones of the Plan Area.

### 9.3.3 Water Conservation/ Quality

Water conservation is an important element of sustainability and has been addressed at all levels of development of Dunnigan. The specific conservation measures related to water conservation in building construction and site work are addressed in the DGBSS, Appendix C. The goal of this program is to reduce water use through a combination of measures, including use of advanced plumbing fixtures, high efficiency irrigation systems, water use monitoring systems for building use, and rain water harvesting systems. Recycled water from the Title 22 wastewater treatment plant will provide irrigation to public parks and open space, private front yards of single family lots and landscape medians. Refer to Appendix C for the specific water conservation implementation measures.

**Example of an LID swale**

Water quality is an equally important measure for a sustainable community. The comprehensively designed drainage system, lakes and low impact design (LID) methods are key components of long-term sustainability to reduce levels of sediment and pollutants in

stormwater and to reserve areas for ground water recharge. Wetland water quality features are designed to collect urban runoff and retain it long enough for the majority of the pollutants to be removed. Lake water quality is further enhanced by the use of submergent and emergent wetland vegetation located along the lake edge and bio-filters. Refer to Section 5.6 for the details of the drainage system and lakes and to the DGBSS Appendix C for LID measures.

### 9.3.4 Recycling

The Dunnigan Community will reduce the amount of solid waste by promoting aggressive waste prevention and recycling activities. The Dunnigan CSA shall promote the development of environmentally and economically sound practices regarding the collection, processing and end-use of recyclable material and compostable material. The principles of the DSP Recycling Program are as follows:


**Typical Recycling Station**

- To promote community awareness in order to achieve high rates of participation in the solid waste and recycling collection system.
- To target reductions in toxic waste, to minimize its harmful effects and to reduce greenhouse gas emissions.
- To ensure the safe and sanitary collection, transportation and recovery of solid waste, recyclable and compostable materials.
- To provide Dunnigan residents and businesses the opportunity to recycle more materials through convenient on-site, curbside and depot collection programs and through the addition of recyclable materials to the curbside collection program as appropriate.
- To establish and enforce solid waste, recyclable and compostable material collection standards to ensure uniform, cost-effective and high-quality service delivery to all residential customers.
- To enhance solid waste reduction and recycling in the multifamily, commercial, institutional and industrial sectors by ensuring that comprehensive recycling systems are provided at every establishment not covered by the residential franchise, and to encourage extensive use of those systems by all employees.

The Dunnigan CSA will prepare and implement a community recycling program in cooperation with Yolo County Integrated Waste Management Division (DIWM). The recycling plan outline will be submitted and approved by DWIM prior to recordation of the first final map. The concepts for a community-based recycling program include "free-cycle" fairs and rummage sales for commonly needed items such as: clothes; tools; home repair/gardening equipment; books, toys and children's items; and electronic waste collection/fundraisers. Recycling will include composting collection and mulch distribution as part of the community gardening program. The recycling program shall be in place before the start of Phase 2.

### 9.3.5 Climate Action Plan (CAP)

The 2030 Yolo County General Plan includes Action CO-A117, which directed the County to develop a Climate Action Plan in order to reduce greenhouse gas (GHG) emissions and to address economic and social adaptations to the effects of climate change. Yolo County seeks to reduce GHG levels to the following levels by implementing the CAP:

- 1990 levels by 2020 (mandatory target)
- 27% below 1990 levels by 2030 (goal)
- 53% below 1990 levels by 2040 (goal)
- 80% below 1990 levels by 2050 (goal)

#### 9.3.5.1 CAP Implementation Program

The DSP implements the Yolo County CAP through the smart growth principles described in this Specific Plan. In particular, the Transportation and Land Use Measures of the CAP are implemented by the VMT Reduction Measures described in Section 4.10 of Chapter 4.

In order to comply with the CAP, the DSP incorporates applicable strategies and measures as requirements of development. Table 9-1 identifies the measure and the implementing tool that will be used to verify compliance with each of the applicable measures. Most of the measures apply to new development and are mandatory, while some measures that apply to existing development are voluntary. If a measure or measures are determined to be infeasible, then the applicant/landowner shall propose alternative design components, operational protocols and/or verifiable and enforceable offsets to achieve the targeted GHG reductions. Compliance with the CAP shall be monitored by the Planning and Public Works Department.

### 9.3.6 Green Buildings and Site Standards

General Plan goals and policies provide significant guidance for achieving a high standard of sustainable development for Dunnigan. With guidance from the General Plan, the CAP and available technologies, the Dunnigan Green Building and Site Standards (DGBSS) were developed as a comprehensive tool to guide new construction. In summary, these standards incorporate the mandatory provisions of the Cal Green 2010 State Building Code, the mandatory provisions of the CAP and additional measures specific to the DSP. The DGBSS, found in Appendix C, address planning and design, energy efficiency, water efficiency and conservation, materials conservation and resource efficiency and environmental quality.

## Table 9-1 Applicable Climate Action Plan (CAP) Measures

| Measure # | Measure/Action | New(N) or Exist'g(E) | Mandatory (M) or Voluntary(V) | Comp-liance Tool[1] |
|---|---|---|---|---|
| T-1 | Reduce VMT in Dunnigan | | | |
| | Achieve GP threshold of 44 VMT or less, per weekday, per household | N | M | MM |
| E-2 | Reduce energy consumption in existing residential and non-residential buildings | | | |
| | Residential and commercial buildings complete energy efficiency retrofit with average energy improvement of 15-20% | E | V | PG&E |
| E-3 | Reduce energy consumption in new residential and non-residential buildings | | | |
| | All new residential and non-residential buildings to exceed Title 24 by 15% (Tier 1) (Policies E1.1, E1.4, E2.1, and E2.4) | N | M | YCBC |
| | All new residential homes over 3,500 s.f. achieve exemplary (Tier 2) performance (2020) (Policy E1.2), and at least 12% of residential units achieve exemplary performance (2030) (Policy E2.2) | N | M | YCBC |
| | At least 0.5% of residential units are zero-net energy (2020) (Policy E1.3), and at least 2% of residential units are zero-net energy (2030) (Policy E2.3) | | | YCBC |
| | Encourage commercial users to exceed Title 24 by 30% (Tier 2) or higher by selling credits for emissions reductions | N/E | V | YCBC |
| E-4 | Increase on-site renewable energy generation to reduce grid demand | | | |
| | Require solar hot water heaters for all new residential (excl. affordable) and commercial bldgs. | N | M | YCBC |
| | Require rooftop photovoltaic (pv) for all new residential (excl. affordable) and commercial bldgs. | N | M | YCBC |
| E-6 | Reduce water consumption in existing residential and commercial buildings | | | |
| | Encourage water efficiency for existing buildings thru technical assistance, efficiency audits, rebates | E | V | DG |
| E-7 | Reduce landscape water consumption thru use of weather based irrigation and water management | | | |
| | All irrigation controllers to be weather based | N | M | YCBC |
| | Limit turf to maximum of 25% of front yards of new residential development | N | M | YCBC |
| Support Measures | Additional measures from the CAP to be considered in the DSP | | | |
| Energy-1 | Pursue a district energy program in high density mixed use developments | N | V | PG&E |
| Energy-2 | Encourage Industrial Process Energy Efficiency | N/E | V | PG&E |
| Waste-1 | Increase natural stormwater retention thru LID | N | M | DG |

1. Key for compliance tool: YCBC- Yolo County Building Code, DS- DSP Development Standard, DG- DSP Design Guidelines, MM- DSP Mitigation Measure, PG&E- Pacific Gas & Electric Co.

# CHAPTER TEN: IMPLEMENTATION

## 10.1 OVERVIEW

This chapter outlines the methods by which the Specific Plan will be implemented and includes discussion on the desired governance structure, phasing, sequencing and financing programs. California Government Code Section 65451 requires that Specific Plans include programs of implementation strategies related to regulatory changes, programs, financing strategies and public works projects needed to carry out the proposed land use, infrastructure and development standards outlined in the Specific Plan.

The DSP is projected to be built-out over at least a 20 to 30 year period. Clear implementation strategies and actions are necessary to ensure development in the Plan Area occurs in an efficient and orderly manner and is consistent with the vision, goals and phasing plan established in the DSP. The goal of this chapter is to describe how infrastructure and public facilities will be constructed and how public services will be delivered in a timely manner, concurrent with the provision of housing, employment and the other land uses of the DSP.

## 10.2 IMPLEMENTATION APPROACH

In response to the vision of the 2030 General Plan, the intent of the community expansion of Dunnigan is to ensure the sustainability of the town and to provide a larger base population in the community which will support sufficient, locally-provided community services. In addition, as the DSP develops over time, new residents and employees will expect higher levels of public services, benefiting both existing and future residents and employees.

The Specific Plan implementation approach responds to the need for a higher level of services, which will reflect an urban level of service, rather than the rural level of service typically encountered in the unincorporated area. Current and proposed service providers for community services and infrastructure, both pre- and post-Specific Plan, are identified in Chapter 5, Public Facilities and Chapter 6, Public Services. The public services and service levels required for the build-out of the community are discussed in these chapters. The Preliminary Phasing Master Plan, Appendix M, describes how the infrastructure will be constructed in phases to match the development as it progresses. The Public Facilities Financing Plan (PFFP), Appendix N, describes the methods by which the infrastructure identified in Appendix M will be financed. The Public Services Financing Plan (PSFP), Appendix P, addresses the manner in which the public services delivery will be managed and financed.

## 10.3 PHASING AND SEQUENCING

The DSP provides for a comprehensively planned infrastructure system with coordinated phasing and construction of facilities. A total of 5 phases are proposed in the Plan Area. The geographic boundaries of each phase are reflected on Exhibit 10.1, with land use by phase summarized in Table 10.1. In general, the phasing plan has been structured to ensure that the improvements in each phase can support associated development in compliance with County policies and standards, that a targeted jobs to housing ratio of 1.2 to 1 is maintained and that the development in each phase can support the costs of the required improvements. Phases 1-4 are aligned in generally a north to south direction. Development within Phase Existing (X), which

contains the already developed Hardwoods subdivision and the Old Town quadrant, may move forward independently of Phases 1-4 provided that parcels can meet the public services requirements and the sequencing policies outlined below to the satisfaction of Yolo County Planning and Public Works. The phase boundaries are conceptual and may be adjusted as development progresses, pursuant to the process outlined in Section 11.4 for Specific Plan Amendments and Minor Revisions.

### 10.3.1 Phasing Approach

Infrastructure requirements for each phase of development include on-site backbone infrastructure and off-site facilities necessary for each phase to proceed. Each phase of improvements include roadway, sanitary sewer, water, recycled water, storm drainage, dry utilities, other facilities and improvements. A full listing of improvements and specific details relating to those improvements are included in Appendix M, Phasing Master Plan, and the Specific Plan development agreements. All in-tract sewer, storm drain, water and dry utilities will be installed as part of individual project improvements.

### 10.3.2 Development Sequencing

Phasing of the DSP is intended to follow the geographic boundaries as shown in Exhibit 10.1. In addition, sub-phases may be developed. Selected infrastructure items, roads and public services may be needed prior to the phase it is contained within, while some items may be deferred to a later phase. The general sequencing policies are as follows:

- Two points of access are required for each phase or sub-phase

- Interim water and drainage facilities may be permitted in accordance with Yolo County Public Works standards. A looped water system is required.

- Major roadways may be phased based on the number of traffic lanes required to meet a minimum level of service (LOS) E during peak travel periods. Exceptions to the LOS E threshold will be permitted on a short term basis, upon approval by Yolo County Public Works, to enable cost effective implementation of joint utilities by constructing roadway expansion concurrent with other infrastructure, such as sewer and water lines.

- All roadways, pedestrian facilities, bike routes and bikeways shall be constructed in logical and complete segments, connection from intersection to intersection, to provide safe and adequate access with each phase of development as identified for each Phase by the Phasing Plan or as conditioned with the approval of tentative maps.

- Neighborhood Parks: Each phase has two or more neighborhood parks. The initial park site within each phase to be targeted for construction shall be determined at the time of the first Tentative Subdivision Map within that phase. The dwelling unit triggers for neighborhood park construction shall be identified in the tentative map conditions. Developers shall pay neighborhood park fees and receive fee credits for neighborhood park construction.

- Community Park: The Community Park shall be planned, financed, and constructed by the CSA, through the administration of a community park fee.

- Fire Stations: The timing for the two fire stations is specified in the Development Agreements and is tied to the anticipated response times. Timing of construction and staffing of the fire station will be consistent with the Fire Department Standards of Response Coverage Study.

- The timing of site improvements for those sites designated for schools, library, sheriff and other public uses shall be in accordance with the conditions of approval in the Zoning and/or individual Development Agreements.

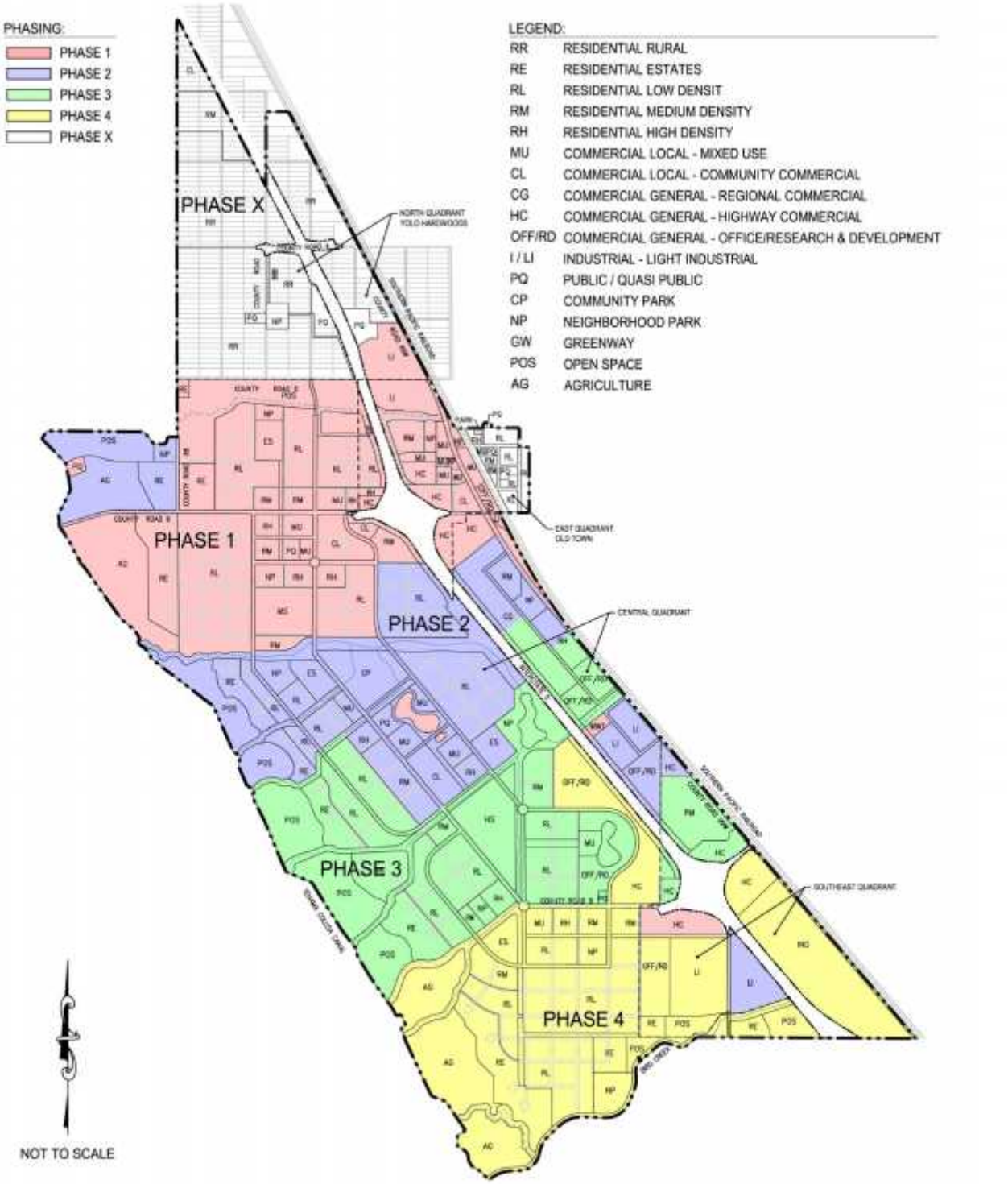



**Exhibit 10-1 Phasing Plan**

**Table 10.1: Summary of Land Use and Estimated Jobs by Phase**

| LAND USE | | PHASE 1 | | | PHASE 2 | | |
|---|---|---|---|---|---|---|---|
| | | ACRES | UNITS | JOBS[1] | ACRES | UNITS | JOBS[1] |
| RR | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RE | | 51.1 | 89.0 | 0.0 | 38.7 | 67.0 | 0.0 |
| RL | | 217.2 | 1086.0 | 0.0 | 131.4 | 67.0 | 0.0 |
| RM | | 40.6 | 577.0 | 0.0 | 30.6 | 435.0 | 0.0 |
| RH | | 19.3 | 463.0 | 60.0 | 16.1 | 386.0 | 48.0 |
| MU | | 28.6 | 39.0 | 658.0 | 17.7 | 53.0 | 408.0 |
| PQ/WWT | | 7.8 | 0.0 | 40.0 | 4.6 | 0.0 | 19.0 |
| SCHOOLS | Elementary | 10.0 | 0.0 | 60.0 | 20.0 | 0.0 | 120.0 |
| | Middle | 23.3 | 0.0 | 76.0 | 0.0 | 0.0 | 0.0 |
| | High | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CG/RC | | 0.0 | 0.0 | 0.0 | 17.7 | 0.0 | 407.0 |
| CL/CC | | 25.0 | 139.0 | 574.0 | 14.0 | 98.0 | 322.0 |
| HC | | 51.1 | 0.0 | 1,174.0 | 3.9 | 0.0 | 90.0 |
| OFF/RD | | 3.1 | 0.0 | 62.0 | 13.3 | 0.0 | 266.0 |
| LI/IND | | 42.4 | 0.0 | 424.0 | 43.5 | 0.0 | 435.0 |
| PARK | | 15.2 | 0.0 | 0.0 | 46.0 | 0.0 | 0.0 |
| POS | | 82.0 | 0.0 | 0.0 | 79.0 | 0.0 | 0.0 |
| GREENWAYS | | 3.7 | 0.0 | 0.0 | 68.1 | 0.0 | 0.0 |
| AG | | 62.0 | 0.0 | 0.0 | 35.5 | 0.0 | 0.0 |
| LAKE | | 16.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | **698.5** | **2,393.0** | **3,128.0** | **580.1** | **1,696** | **2,115** |

| LAND USE | | PHASE 3 | | | PHASE 4 | | |
|---|---|---|---|---|---|---|---|
| | | ACRES | UNITS | JOBS[1] | ACRES | UNITS | JOBS[1] |
| RR | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RE | | 58.5 | 102.0 | 0.0 | 64.7 | 113.0 | 0.0 |
| RL | | 146.9 | 734.0 | 0.0 | 151.2 | 756.0 | 0.0 |
| RM | | 22.9 | 325.0 | 0.0 | 60.0 | 852.0 | 0.0 |
| RH | | 13.3 | 319.0 | 40.0 | 5.4 | 130.0 | 16.0 |
| MU | | 4.6 | 14.0 | 106.0 | 6.0 | 18.0 | 138.0 |
| PQ/WWT | | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SCHOOLS | Elementary | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 60.0 |
| | Middle | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | High | 40.0 | 0.0 | 172.0 | 0.0 | 0.0 | 0.0 |
| CG/RC | | 20.5 | 0.0 | 472.0 | 0.0 | 0.0 | 0.0 |
| CL/CC | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HC | | 17.4 | 0.0 | 400.0 | 35.7 | 0.0 | 821.0 |
| OFF/RD | | 37.1 | 197.0 | 742.0 | 49.6 | 156.0 | 992.0 |
| LI/IND | | 0.0 | 0.0 | 0.0 | 133.2 | 0.0 | 1332.0 |
| PARK | | 31.3 | 0.0 | 0.0 | 19.2 | 0.0 | 0.0 |
| POS | | 92.4 | 0.0 | 0.0 | 26.3 | 0.0 | 0.0 |
| GREENWAYS | | 36.8 | 0.0 | 0.0 | 59.6 | 0.0 | 0.0 |
| AG | | 0.0 | 0.0 | 0.0 | 105.4 | 0.0 | 0.0 |
| LAKE | | 12.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | **535.4** | **1,691.0** | **1,932.0** | **726.3** | **2,025.0** | **3,359** |

**Table 10.1: Summary of Land Use and Estimated Jobs by Phase, Continued**

| LAND USE | | EXISTING (X) | | | TOTAL OVERALL (Phase 1,2,3,4,EXISTING) | | |
|---|---|---|---|---|---|---|---|
| | | ACRES | UNITS | JOBS[1] | ACRES | UNITS | JOBS[1] |
| RR | | 332.0 | 332.0 | 0.0 | 332.0 | 332.0 | 0.0 |
| RE | | 0.0 | 0.0 | 0.0 | 213.0 | 371.0 | 0.0 |
| RL | | 17.1 | 0.0 | 0.0 | 663.8 | 3,319.0 | 0.0 |
| RM | | 25.8 | 366.0 | 0.0 | 179.9 | 2,555.0 | 0.0 |
| RH | | 1.4 | 34.0 | 4.0 | 55.5 | 1,332.0 | 168.0 |
| MU | | 0.6 | 0.0 | 14.0 | 57.5 | 124.0 | 1324.0 |
| PQ/WWT | | 19.2 | 0.0 | 0.0 | 32.6 | 0.0 | 59.0 |
| SCHOOLS | Elementary | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 240.0 |
| | Middle | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 76.0 |
| | High | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 172.0 |
| CG/RC | | 0.0 | 0.0 | 0.0 | 38.2 | 0.0 | 879.0 |
| CL/CC | | 13.1 | 0.0 | 301.0 | 52.1 | 237.0 | 1,197.0 |
| HC | | 0.0 | 0.0 | 0.0 | 108.1 | 0.0 | 2,485.0 |
| OFF/RD | | 0.0 | 0.0 | 0.0 | 103.1 | 353.0 | 2,062.0 |
| LI/IND | | 0.0 | 0.0 | 0.0 | 219.1 | 0.0 | 2,191.0 |
| PARK | | 6.2 | 0.0 | 0.0 | 117.9 | 0.0 | 0.0 |
| POS | | 0.0 | 0.0 | 0.0 | 279.7 | 0.0 | 0.0 |
| GREENWAYS | | 3.0 | 0.0 | 0.0 | 171.2 | 0.0 | 0.0 |
| AG | | 0.0 | 0.0 | 0.0 | 202.9 | 0.0 | 0.0 |
| LAKE | | 0.0 | 0.0 | 0.0 | 28.8 | 0.0 | 0.0 |
| **TOTAL** | | **418.4** | **818.0** | **319.0** | **2,958.7** | **8,623.0** | **10,853.0** |

Note: 1: Jobs calculation by phase does not include the pro-rata share of home based jobs.

## 10.4 FINANCING AND MAINTENANCE OF PUBLIC FACILITIES

The Public Facilities Financing Plan (PFFP), Appendix N, identifies all public facilities and backbone infrastructure improvements needed to serve the Plan Area, including roadways, sewer, water and drainage and describes the costs and financing mechanisms that will be used to fund the improvements in a timely manner. This section provides an overview of the approach and strategies to deliver these improvements.

### 10.4.1 Specific Plan Financing Methods

The construction of public improvements to serve the Plan Area will be funded by a variety of mechanisms. Financing methods may include, but are not limited to, the following:

#### 10.4.1.1 County Impact Fees

Yolo County has adopted a set of development fees to finance capital improvements related to law enforcement, criminal justice and social services. The DSP will finance a portion of its

infrastructure burden by paying these fees. Some of these programs may require updating following approval of the DSP due to increased need for facilities and changes in zoning.

#### 10.4.1.2 School District Impact Fees

Pierce Joint Unified School District has adopted fees, in accordance with State regulations, to be used to construct school facilities. Level 1 and level 2 school fees are collected by the County prior to the issuance of a building permit and are forwarded to the applicable school district for the construction of school facilities.

#### 10.4.1.3 Community Facilities District

One or more Community Facilities Districts ("CFDs") may be established to help fund the construction and/or acquisition of public facilities and backbone infrastructure. The Mello-Roos Community Facilities Act of 1982 enables public agencies to form CFDs and levy a special tax on property owners within the CFD. These special taxes may be used to pay debt service on CFD bonds or to finance public improvements directly on a pay-as-you-go basis. Public improvements financed with CFD revenues must have a useful life of 5 years or more.

The proceeds from a CFD bond sale may be used by the sponsoring agency to finance the construction of the improvements directly or to acquire facilities constructed by the developer. Special taxes may also be used to fund certain public services and development impact fees. To the extent it is consistent with the County's CFD Goals and Policies for land-secured financing, one or more DSP CFDs may wish to employ an extended-term concept (i.e., more than 30 years) facilitating greater ability to finance backbone infrastructure and public facilities for future DSP residents and employees.

#### 10.4.1.4 Revenue Bonds/Certificates of Participation

One or more series of Revenue Bonds and/or Certificates of Participation ("COPs") may be issued to finance additional public improvements. These debt instruments involve dedicating a revenue source or portion thereof to pay debt service and/or lease payments on tax-free bonds or COPs. The authorization for Revenue Bonds is contained in the Revenue Bond Law of 1941. COPs enjoy widespread use by public agencies throughout the State because they represent a lease payment structure and are not considered public debt. As a result, the issuance of a COPs series does not require registered voter approval. COPs may generally be secured by the same revenue streams as Revenue Bonds and finance the same types of facilities.

#### 10.4.1.5 Plan Area Fees

Public improvements not financed through other methods will need to be constructed by the developer and/or individual builders using other financing sources prior to the issuance of a building permit. An AB 1600 fee study will provide a nexus to spread these remaining costs to all contributing land uses based on a reasonable relationship. These fees may then be used to construct the facilities directly or to reimburse developers for the cost of constructing eligible improvements.

#### 10.4.1.6 Developer Financing

Individual developers may also use private financing to construct backbone infrastructure and other public improvements. If the improvements are contained in an AB 1600 fee program or a

CFD, the developer will be entitled to fee credits and/or a reimbursement according to the terms of the credit and reimbursement and/or acquisition agreement related to the financing program.

#### 10.4.1.7 State and Federal Grants and Loans

A number of State and Federal programs are available at this time to provide grants and/or low-interest loans to qualified projects. These programs include the American Reinvestment and Recovery Act ("ARRA"), Build America Bonds ("BABs"), Recovery Zone Facility Bonds, Recovery Zone Economic Development Bonds, Clean Renewable Energy Bonds, Qualified Energy Conservation Bonds, New Market Tax Credits, and several others. It is not known at this time whether these funding sources will be available at the time of development.

### 10.4.2 DSP Financing Strategy and Policies

**Objective:** Fund public facilities and backbone infrastructure required for DSP development utilizing an appropriate combination of public and private financing to maximize project feasibility and to apportion costs fairly among the various landowners and/or merchant builders.

**Policy 10-1:** The full costs of both on-site and off-site public infrastructure and public facilities required to support the DSP, that are not funded by other sources (both existing and future), will be funded from revenues generated by development within the Specific Plan Area.

**Policy 10-2:** Development projects within the Specific Plan will be required to fund and construct the costs of extending the backbone infrastructure to adequately serve and support their project, consistent with the various public facilities master plan(s) prepared for the DSP, subject to fee credits or future reimbursements. The costs for backbone infrastructure and public facilities will be allocated, to the extent possible, based on a project's fair share of required improvements. The overall backbone infrastructure and public facilities burden may be reduced using various other public financing methods, such as CFD financing, Revenue Bonds/COPs, and/or grants and loans.

**Policy 10-3:** Existing fee programs established by overlapping public agencies (including the County and the School District) shall be used to fund Specific Plan infrastructure to the extent the improvements are eligible for such funding.

**Policy 10-4:** A new Plan area fee will be established for those improvements that are not funded by existing fee programs, "pay-as-you-go" financing or some form of public or land-secured debt. A fair share cost allocation of the required public improvements will be established for all planned development based on land use type and according to the nexus requirements in AB 1600.

**Policy 10-5:** When using CFD financing, including extended-term CFDs, the total effective tax rate (including all special taxes and assessments) for developed property shall not exceed fiscally prudent standards consistent with the County's CFD Goals and Policies.

**Policy 10-6:** When using Revenue Bond and/or COPs financing, the debt service and/or lease payments will be structure such that the reduction in revenues does not have a negative fiscal impact on the general fund of any overlapping public agency, including the County, the School District and the Water District. Additionally, Revenue Bonds and/or COPs will only be issued based on a level debt service and/or lease payment structure. The maximum debt service and/or

lease payments will be no greater than the amount of revenues collected over the trailing twelve months.

**Policy 10-7:** "Pay-as-you-go" financing will be used to the extent possible to maximize public financing capacity beyond the limits established in local agency policies and state regulations.

**Policy 10-8:** To the extent that Federal and State grants and low-interest loans are available to help offset qualified public facilities and/or infrastructure burden, the overlapping public agencies will make their best effort to facilitate the application for these programs to the extent that the programs will not have a negative fiscal impact on the general fund of any overlapping public agency.

**Policy 10-9:** Before property may be included within a CFD or other special district or annexed to an existing district, property owner consent is required as provided by Proposition 13, Proposition 218 and the Mello-Roos Community Facilities Act. Participating landowners agree to annex a County Service Area ("CSA"), and other overlapping special or financing districts and provide funding for infrastructure improvements according to the infrastructure needs identified in this Specific Plan.

**Policy 10-10:** Any application for a discretionary approval (subsequent entitlement) that is filed by a non-participating landowner shall be conditioned upon the payment of a Specific Plan Fee pursuant to Government Code section 65456, in addition to the payment of applicable Plan Area Fees. The purpose of the Specific Plan Fee is to reimburse participating landowners (i.e., the Dunnigan Landowner Group) and the County for costs associated with the preparation, adoption and administration of this Specific Plan, as well as attorney fees and consultant costs incurred pursuant to CEQA. Properties owned by non-participating landowners will be required to annex into the CFD, CSA, and/or other overlapping special districts (including any zones of benefit), which have been established to fund services or improvements that benefit the property. Non-participating landowners will also be required to consent to any applicable provisions of the Specific Plan, which may include execution of a Development Agreement.

#### 10.4.2.1 Financing Strategy Overview

Development of the Specific Plan will be contingent upon the construction of public facilities and infrastructure necessary to support the projected development. In developing the PFFP, the various funding sources were chosen to spread the costs in a way that distributes costs equitably and maximizes project feasibility.

The existing impact fees collected by Yolo County and Pierce Joint Union School District will be used to construct a portion of the facilities necessary to support the Specific Plan's residents and businesses. These fees are based on an AB 1600 Fee Study that spreads the cost of necessary public facilities among new development based on benefit.

In addition to existing fee programs, additional mechanisms will be established to finance public facilities and backbone infrastructure. The most appropriate mechanism to finance these remaining costs is CFD financing. CFD bonds are secured by a lien on the underlying land and are non-recourse to the sponsoring public agency. Land-secured debt will be necessary to fund development impact fees and other costs during the early years of development, as well as at other strategic times when proceeds from Plan Area Fees, Revenue Bonds/COPs, and private financing sources are not readily available. CFD special taxes, bond amounts and "pay-as-you-

go" financing will be limited to prudent levels that are consistent with the County's established Goals and Policies.

Additional public improvements may be financed with the proceeds of tax-exempt municipal bonds secured by certain revenues generated by Specific Plan residents and businesses. Revenue bonds or COPs that are secured by a portion of the monthly sewer and water revenues will be used to finance sewer and water facilities. State and federal grant and loan programs are currently available from State and local governments to finance a variety of public facilities including sewer, water, parks, bridges, interchanges, and public safety. The availability of these grants and loans and the selection criteria vary from year to year. To the extent that improvements necessary for the development of the Specific Plan qualify for these programs at the time of development, the available funds will be used to finance the eligible facilities and reduce the infrastructure burden.

A Plan Area Fee program, based on an AB 1600 fee study, will be established to apportion the remaining public facilities costs among the planned residential and non-residential development within the Specific Plan. This financing method is the least preferred because the funds will not be available until after building permits are issued. It may be necessary for the developer or the public agency to construct the improvements utilizing other funding sources, such as private financing or other resources. The cost of the improvements will be reimbursed only after building permits have been issued and impact fees have been collected.

It is expected that costs will change over time and therefore, each funding mechanism should include a method for adjusting the amount of funding to reflect actual costs at the time of construction. Other financing mechanisms will also be used depending on availability and whether they are applicable to the improvements required for the development of the Specific Plan.

## 10.5 FINANCING OF PUBLIC SERVICES

The Dunnigan Public Services Financing Plan, Appendix P, has been prepared to address the manner in which public services delivery will be managed and financed. Maintenance of public infrastructure improvement is also addressed in the Public Services Plan. It is anticipated that the initial delivery of many of the urban services will be administered by a County Service Area (CSA).

Urban services will be administered by a separate entity under a County department, such as the County Administrator's Office or the Planning and Public Works Department, with an administrator and limited staffing to manage service contracting. The CSA could contract for services with outside service providers.

Properties will be required to annex into the newly formed CSA and/or any special districts established for maintenance of certain facilities that provide special benefit to the DSP, such as a Sewer Maintenance District, prior to receiving said services. Such facilities may include landscape corridors and medians, open space areas, trails, bike paths, drainage, detention and retention facilities, stormwater quality treatment facilities, and community, recreation, neighborhood and pocket parks.

In addition to County General Fund funding for service delivery and maintenance, funding may also be provided by one or more of the following methods:

- User fees;
- Special Tax Levies (which may include Mello Roos special taxes); and/or
- Assessments.

Other financing mechanisms may be also be used, including creation of private districts or associations to fund maintenance of certain facilities in the DSP area. Specific financing requirements, improvement obligations, fees, credits, reimbursements, land and easement dedications, conveyances, maintenance and other financing and improvement related obligations are detailed in the PFFP (Appendix N), PSFP (Appendix P), and Specific Plan Development Agreements.

# CHAPTER ELEVEN: ADMINISTRATION

## 11.1 OVERVIEW

This chapter of the Dunnigan Specific Plan (DSP) outlines the Specific Plan process and its relationship to the subsequent entitlement processes that are necessary to allow construction of individual projects. This chapter also describes the administrative procedures that will occur to implement, amend, interpret and enforce the Specific Plan.

## 11.2 SPECIFIC PLAN PROCESS AND SUBSEQUENT ENTITLEMENTS

This section describes the project entitlements and the relationship between the concurrent approvals which occurred with the adoption of the Dunnigan Specific Plan and the subsequent entitlement process to occur after Specific Plan adoption.

### 11.2.1 Specific Plan and Concurrent Approvals

The following entitlements have been approved as part of the Specific Plan project:

- **Final Environmental Impact Report (FEIR)**
  The Yolo County Board of Supervisors certified the FEIR addressing the Dunnigan Specific Plan and other related entitlements. The FEIR includes the Draft EIR and all appendices.

- **Dunnigan Specific Plan (DSP)**
  The Yolo County Board of Supervisors (the Board) adopted the Dunnigan Specific Plan and all Appendices by ordinance. The Board adopted the DSP Development Standards (Appendix S) by resolution.

- **Zoning**
  The Specific Plan and the Development Standards (Appendix S) constitute the zoning for the Plan Area. The County Zoning Map has been revised to rezone the Plan Area to "DSP". Prior to the start of each phase of development, affected landowners must consent to the Zoning by accepting the conditions, policies and requirements of the Specific Plan, as well as any Mitigation Measures. This requires non-participating landowners to participate in financing policies of the Specific Plan, including the requirement to pay the Specific Plan Fee (see Policy 10-10 in Chapter 10.4.2). The County must then approve certain subsequent entitlements and determine consistency with the applicable Goals, Policies, Standards, Strategies, and other requirements in the Specific Plan, as well as any applicable Mitigation Measures.

- **Public Facilities Financing Plan (PFFP) and Public Services Financing Plan (PSFP)**
  The Public Facilities Financing Plan (PFFP), Appendix N, identifies the estimated costs of public facilities and describes the mechanisms for funding these facilities. The Public Services Financing Plan (PSFP), Appendix N, identifies the level of public services expected in the Plan Area and describes the funding methods which may be used to deliver these services. These plans have been accepted by the Board and will be updated

and refined following Specific Plan adoption and prior to the recordation of the first large lot final map or the approval of the first small lot tentative map for any development project within the Plan Area.

- **Large Lot Tentative Subdivision Map**
  A large lot tentative subdivision map for a portion of the Plan Area was approved concurrently with the Specific Plan in order to create legal parcels which conform to the parcel configurations defined by the Land Use Plan.

### 11.2.2 Subsequent Plan Approvals

Additional actions or approvals must occur following the adoption of the Specific Plan, and prior to the development of the first Phase. One or more special districts (or financing districts) must be created or expanded to provide public services within the Plan Area, which may require action by the Yolo County Local Agency Formation Commission (LAFCO). Several plans and programs must be reviewed and accepted by the County for each Phase of development and prior to the recordation of the first large lot final map or the approval of the first tentative subdivision map or development permit for any development application within the Plan Area:

- Specific Plan Fee Ordinance
- Affordable Housing Plan
- Master Agricultural Mitigation Program
- Updates to PFFP and PSFP
- Implementing Plan Area Fee Ordinance
- Public Area Landscape Master Plan
- Recycling Plan
- VMT Reduction Plan[1]

### 11.2.3 Subsequent Entitlements

Individual development projects within the DSP are subject to review and approval of subsequent permits by Yolo County. Subsequent entitlements include subdivision or parcel maps; Rezoning, Site Plan Reviews, Use Permits, Lot Line Adjustments or Lot Mergers, building and grading permits, etc. Once the plans and programs described in Section 11.2.1 are completed, individual developers may submit and process applications for subsequent entitlements.

Application and processing requirements shall be in accordance with the Yolo Zoning Ordinance and other regulations, as otherwise modified by this Specific Plan. Any application for a subsequent entitlement shall be subject to the Planning Application Fee Schedule, Plan Area Fees and any other fees in effect at the time of the application submission. In addition to the foregoing, any application for a subsequent entitlement filed by a non-participating landowner shall be required to pay the Specific Plan Fee, pursuant to Policy 10-10 of this Specific Plan, prior to the approval of any subsequent entitlements.

All subsequent development projects, public improvements and other activities shall be consistent with this Specific Plan and accompanying Design Guidelines, the Specific Plan Development Agreements, and all applicable County policies, requirements and standards.

[1] Table 4.5 identifies the early implementation measures to be adopted following approval of the Specific Plan.

In acting to approve a subsequent project or permit, the County may impose conditions as are reasonably necessary to ensure that the project is in compliance with the Specific Plan and all applicable plans and regulations.

In conjunction with submittal of any required County application for a subsequent development entitlement, site specific information is required to be submitted to enable the County to make a determination of consistency with the Specific Plan and the EIR, including but not limited to the following:

- Biological Study
- Cultural Resources Study/Survey
- Traffic Study
- Geotechnical Report
- Water Quality/Stormwater BMP's
- Acoustical Analysis (if applicable)
- Infrastructure Checklist
- Agricultural Mitigation
- Habitat Mitigation

## 11.3 ENVIRONMENTAL REVIEW

An Environmental Impact Report (EIR) has been prepared for this Specific Plan and was certified by the Board of Supervisors concurrently with the approval of the Specific Plan. Section 65457(a) of the California Government Code and Section 15182(a) of the California Environmental Quality Act provides that no EIR or negative declaration is required for any residential project undertaken in conformity with an adopted Specific Plan for which an EIR has been certified. The EIR certified for this project has been written to qualify all residential projects for this exemption, assuming they are consistent with the adopted Specific Plan and fulfill all conditions and CEQA mitigation measures. Non-residential land uses may be able to rely on the EIR, pursuant to Section 15183 of the CEQA Guidelines, assuming the proposed projects are found consistent with the Specific Plan and fulfill all conditions and CEQA mitigation measures.

## 11.4 SPECIFIC PLAN AMENDMENTS AND MINOR REVISIONS

During the long-term build out of the Plan Area, amendments to the adopted Specific Plan may be necessary because of changing circumstances. Additionally, because of unforeseen circumstances, some design guidelines or development standards may not be feasible on a particular parcel. In these situations, the procedures listed below will be followed to amend the adopted Specific Plan.

### 11.4.1 Scope of Amendment

Any proposed changes to the Specific Plan can include but are not limited to changing land use designations, design criteria, development standards or policies. Changes proposed to this adopted Specific Plan shall be categorized by the Planning Director as either an amendment or a minor revision. Amendments require Planning Commission and Board of Supervisors approval. Minor revisions may be reviewed and acted upon by the Planning Director without Planning Commission or Board of Supervisors review, unless appealed. A request to change the Specific

Plan shall be accompanied by an application filing fee, a detailed justification statement which explains why an amendment or minor revision is warranted and any exhibits deemed necessary by the Planning Director. All requirements of CEQA will be applicable.

### 11.4.2 Specific Plan Amendments

An amendment is required when one of the following criteria is met:

- A new type of land use not specifically discussed in this Specific Plan is introduced.
- Significant changes to the distribution of land uses beyond that allowed by Section 3.10, Density Transfers, or other changes affecting land use are proposed which may substantially affect the Specific Plan.
- Changes to design guidelines and/or development standards, which, if adopted, would substantially change the physical character of the Plan Area as envisioned by the Specific Plan as determined by the Planning Director.
- Changes to the approved Phasing Plan are proposed which significantly increases or alters the area boundaries or units allocated by the proposed phasing schedule.
- Any change that would trigger the preparation of any form of negative declaration or environmental impact report.

### 11.4.3 Minor Revisions

A minor revision to the Specific Plan may be processed if determined by the Planning Director to be in substantial conformance with the following criteria:

- The Planning Director determines that the modification does not have a significant impact on the character of the Plan.
- The proposed adjustments to the development standards or design guidelines are offset by the merits of the design and do not significantly change the anticipated physical characteristics of the development.
- The proposed changes to the alignment of streets, which if adopted, would not substantially alter the land use or circulation concepts set forth in this Specific Plan.
- Adverse environmental impacts are not significantly increased by the proposal.
- The proposed change to the approved Phasing Plan boundaries will not result in increase of more than 10% in the total number of units proposed for a particular phase.
- The request is in compliance with Section 3.10, Density Transfers.

## 11.5 INTERPRETATIONS

In the event that the requirements and guidelines of the Specific Plan may appear to provide alternative guidance or differ from other adopted County policies, interpretations may be necessary. These would typically arise regarding specific issues and situations in the land use development process. Interpretations may be needed when the County is considering a discretionary development application, such as a subdivision map, or a ministerial application, such as a building permit. Interpretations for the Dunnigan Specific Plan shall be made as described in Section 8-2.304 (Zoning District boundary determinations) and Section 8-2.3215(Interpretation of Uses) of the Yolo County Land Development and Zoning Ordinance. Whenever the Planning Director determines that the meaning or applicability of any of the requirements of this Specific Plan is ambiguous, misleading, or unclear, the Director may issue an

official interpretation or refer the question to the Planning Commission for a determination. The Planning Department shall keep records of the official determinations on file for future reference and to ensure consistency of interpretations over time.

## 11.6 ENFORCEMENT

The Specific Plan includes a considerable number of development regulations and environmental mitigation measures. Assurances must be made that adequate enforcement mechanisms are in place to ensure that all adopted regulations and mitigation measures will be followed. Complaints of violations of any Specific Plan requirements will be investigated consistent with established enforcement procedures and due process. Enforcement of the Specific Plan shall be in accordance with Section 8-2.3101 – 8-2.3104 of the Yolo County Land Development and Zoning Ordinance.